

County of Orange
and
Orange County Operational Area



Unified Emergency Operations Plan
November 2023

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County of Orange and Orange County Operational Area
Unified Emergency Operations Plan

I. Board of Supervisors Promulgation Letter

To Be Inserted Upon Board Approval and Adoption.

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II. Board of Supervisors Resolution

To Be Inserted Upon Board Approval and Adoption.

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County of Orange and Orange County Operational Area
Unified Emergency Operations Plan

III. Emergency Management Council Letter of Approval and Promulgation



Members:

Orange County Board of Supervisors
Chief Executive Officer
Health Care Agency
John Wayne Airport
OC Community Resources
OC Public Works
OC Waste and Recycling
Orange County Fire Authority
Probation Department
Sheriff-Coroner Department
Social Services Agency

County of Orange Emergency Management Council

November 15, 2023

Members of the Board of Supervisors
County of Orange Department Heads
California Office of Emergency Services

Subject: County of Orange and Orange County Operational Area Unified
Emergency Operations Plan

Dear County of Orange Emergency Response and Recovery Officials:

Enclosed please find the County of Orange and Orange County Operational Area Unified Emergency Operations Plan (Unified EOP). The Emergency Management Council (EMC) approved this Plan on November 8, 2023 and concur with this Plan on behalf of the Emergency Management Council Members, respectively. The Unified EOP is linked to jurisdictions, discipline and mutual aid plans, hazard specific annexes, and standard operational procedures. While revisions to this Unified EOP may be made on a bi-annual basis, supporting plans, annexes, and standard operating procedures (SOP's) may be revised as determined necessary.

This Plan continues to build upon previous efforts to enhance the County's response and recovery capabilities and includes: the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), the Incident Command System (ICS), Whole Community planning and response, and the duties and responsibilities of the County and its departments in preparedness, response and recovery procedures.

This Plan is designed as a reference and guidance document. During a real-world incident, modifications to this Plan may be authorized through the Director of Emergency Services, the Emergency Operations Center Policy Group, the Board of Supervisors, or as needed by first responders to preserve life, property, and the environment.

All County departments are in agreement with this Plan and will execute their identified responsibilities. Such execution may include preparing and maintaining their own department-specific procedures and guidelines. The successful implementation of this Plan is dependent upon the skills and abilities of County personnel; County departments are directed to conduct or participate in trainings and exercises to ensure their personnel are aware of their responsibilities and capable to perform them. Implementation may also rely upon specialized services and equipment; County departments are directed to support such services and equipment.

Thank you for your support in the development and implementation of this Plan.

Sincerely,

Board of Supervisors
Chair, Emergency Management Council

Administrative Contact: Orange County Sheriff's Department Emergency Management Division
2644 Santiago Canyon Road, Silverado CA, 92676 Phone: (714) 628-7054 Fax: (714) 628-7154

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County of Orange and Orange County Operational Area
Unified Emergency Operations Plan

IV. Operational Area Executive Board Letter of Approval and Promulgation



Members:

Orange County Board of Supervisors
Chief Executive Officer
City Engineers & Public Works Directors
Association
City Manager's Association & League of Cities
Law Enforcement Mutual Aid Coordinator
Fire Chief's Association
Fire and Rescue Mutual Aid
Health Care Agency Mutual Aid
Independent Special Districts
Orange County Social Services Agency
Orange County Superintendent of Schools
Orange County Community College Districts
Orange County Transportation Authority
Police Chiefs' and Sheriff Association
Public Works Mutual Aid
Water/Wastewater Mutual Aid Coordinator

Orange County Operational Area Executive Board

November 15, 2023

Members of the Operational Area
Members of the Board of Supervisors
American Red Cross of Orange County
California Office of Emergency Services

Dear Operational Area Emergency Response and Recovery Officials:

Enclosed please find the County of Orange and Orange County Operational Area Unified Emergency Operations Plan (Unified EOP). The Orange County Operational Area Executive Board approved this Annex on November 8, 2023 and concur with this Plan on behalf of the Operational Area Members, respectively. This Plan is the foundation for the County's and Operational Area's response and recovery operations, and supersedes all previous versions of this Plan. The Unified EOP seeks to unify coordination among jurisdictional emergency plans, discipline-specific mutual aid plans, and standard operational procedures. The Unified EOP is the base to other emergency plans, procedures and hazard-specific and functional annexes and plans.

This Plan continues to build upon previous efforts to enhance the County's and Operational Area's response and recovery capabilities and includes: the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), the Incident Command System (ICS), Whole Community planning and response, and the duties and responsibilities of the jurisdictions within the Orange County Operational Area in preparedness, response and recovery procedures.

This Plan is designed as a reference and guidance document. During a real-world incident, modifications to this plan may be authorized through the Director of Emergency Services, the Emergency Operations Center Policy Group, the governing bodies of impacted jurisdictions, or as needed by first responders to preserve life, property, and the environment.

All jurisdictions within Orange County are encouraged to fully implement their identified responsibilities. Such execution may include preparing and maintaining their own jurisdiction-specific procedures and guidelines. The successful implementation of this Plan is dependent upon the skills and abilities of jurisdiction personnel; jurisdictions are encouraged to conduct or participate in trainings and exercises to ensure their personnel are aware of their responsibilities and capable to perform them. Implementation may also rely upon specialized services and equipment; jurisdictions are encouraged to support such services and equipment.

Thank you for your support in the development and implementation of this Plan.

Sincerely,

Orange County Fire Authority
Chair, Operational Area Executive Board

Administrative Contact: Orange County Sheriff's Department Emergency Management Division
2644 Santiago Canyon Road, Silverado CA, 92676 Phone: (714) 628-7054 Fax: (714) 628-7154

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V. Record of Changes

Date of Revision	Revision Description	Section/Component	Revision Completed by
November 2023	Updated title to reflect County of Orange and Orange County Operational Area Unified EOP	Throughout the document	Emergency Management Division
November 2023	Emergency Management Mutual Aid (EMMA) language included throughout document (Management and Logistics)	Throughout the document	Emergency Management Division
November 2023	Updated Scope removed information on Director of Emergency Services (DES)	Section 1.2 Scope	Emergency Management Division
November 2023	Updated planning assumptions	Section 1.3 Planning Assumptions	Emergency Management Division
November 2023	Updated language for Whole Community Strategy and Disaster Mitigation, Preparedness, Response and Recovery	1.4 Preparing and Responding with the Whole Community Strategy	Emergency Management Division
November 2023	Updated tables and statistical information	Section 2.2 Population and Demographics	Emergency Management Division
November 2023	Removed section	2.5 Planning During COVID-19	Emergency Management Division
November 2023	Updated hazard profiles and expanded possible community impacts	2.5 Hazard Assessment	Emergency Management Division

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Date of Revision	Revision Description	Section/Component	Revision Completed by
November 2023	Updated Table 4 for the Probability of Occurrence	2.5 Hazard Assessment	Emergency Management Division
November 2023	Update Drought Hazard Profile to include SB552 requirements	2.5.7 Drought	Emergency Management Division
November 2023	Updated tables on staffing	Chapter 3, Figure 7 & 8	Emergency Management Division
November 2023	Added the description of Agency Administrator (FEMA)	3.1 Sequence of Events During Disaster and Emergencies	Emergency Management Division
November 2023	Updated Roles and Responsibilities for various positions throughout the EOC	3.2	Emergency Management Division
November 2023	Updated Figure 8 – Updated County staffing numbers for EOC Support Pool Staffing	3.2 – Figure 8	Emergency Management Division
November 2023	Updated Management Section. Adding information on the DES	3.2.1 Management Section	Emergency Management Division
November 2023	Updated Management Section	3.2.1	Emergency Management Division
November 2023	Updated Resolution number & Line of Succession language	3.2.1.1 Director of Emergency Services	Emergency Management Division
November 2023	Updated Table-or DES Designation and updated the informal responsibilities and duties	3.2.1.1 Director of Emergency Services	Emergency Management Division

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Date of Revision	Revision Description	Section/Component	Revision Completed by
November 2023	Included a brief description of the Multi Agency Coordination (MAC) Group	3.2.1.2	Emergency Management Division
November 2023	Added Radiological Protection Officer Position	3.2.1.13	Emergency Management Division
November 2023	Added Applicant Agent Position	3.2.4.5	Emergency Management Division
November 2023	Added Emergency Worker Exposure Control Group in Operations Section	3.2.5	Emergency Management Division
November 2023	Moved the Behavioral Health Group to the Care and Shelter Branch-updated org chart	3.2.5	Emergency Management Division
November 2023	Incorporated shelter in place language	3.2.5.2	Emergency Management Division
November 2023	Updated WEROC responsibilities	3.2.5.23	Water Emergency Response of Orange County
November	Included FAC	3.2.5.24	Social Services Agency
November 2023	Updated the Homeless Liaison Coordinator position to reflect CEO-Office of Coordination and Care	3.2.5.28	Emergency Management Division
November 2023	Added the County/OA EOC Policy Group serves as a MAC Group	4.9.1	Emergency Management Division
November 2023	Updated Water and Wastewater section	4.9.5	Emergency Management Division

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Date of Revision	Revision Description	Section/Component	Revision Completed by
November 2023	Continuity of Government and Succession sections were removed and is now part of the Continuity of Government Plan	4.10.1 Continuity of Government & 4.10.2 Succession	Emergency Management Division
November 2023	Emergency Public Notification incorporated shelter in place language	4.12.3 Public Notifications and Alerts	Emergency Management Division
November 2023	Updated section on communicating with the public	4.12.4 Communication with the Public	Emergency Management Division
November 2023	Updated cities with IPAWS certificate & included reference to Alert & Warning Plan	4.12.3 Public Notifications and Alerts	Emergency Management Division
November 2023	Updated Emergency Alert System (EAS) Section	4.12.3 Public Notifications and Alerts	Emergency Management Division
November 2023	Included language to include All forms of communication should incorporate, as well as possible, accessible multi-lingual formats.	4.12.4	Emergency Management Division
November 2023	Updated Operational Area Radio	4.12.5	Emergency Management Division
November 2023	Plan Maintenance was updated.	5.2 Plan Maintenance	Emergency Management Division
November 2023	Training programs were updated	5.3.1 Training	Emergency Management Division
November 2023	Updated Authorities and References throughout Chapter 6	Chapter 6	Emergency Management Division

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Date of Revision	Revision Description	Section/Component	Revision Completed by
November 2023	Updated Acronyms List	7.1	Emergency Management Division
November 2023	Removed Vital Record Retention see Continuity of Government Section and Plan	7.4 Vital Record Retention	Emergency Management Division

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VI. Plan Distribution

The Orange County Sheriff's Department Emergency Management Division (OCSD-EMD) is responsible for developing, maintaining and distributing the County of Orange and Orange County Operational Area Unified Emergency Operations Plan.

OCSD-EMD will make the County of Orange and Orange County Operational Area Unified Emergency Operations Plan available to all County departments, OA jurisdictions, California Office of Emergency Services (Cal OES) and other partner organizations as necessary and upon request. An electronic version is available in PrepareOC. Additionally, hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

ORANGE COUNTY DEPARTMENTS	
Assessor	John Wayne Airport
Auditor-Controller	OC Community Resources
Child Support Services	OC Public Works
Clerk of the Board of Supervisors	OC Waste and Recycling
County Clerk-Recorder	Probation Department
County Board of Supervisors	Public Administrator/Public Guardian
County Counsel	Public Defender
County Executive Office	Registrar of Voters
District Attorney	Sheriff-Coroner Department
Health Care Agency	Social Services Agency
Human Resources	Superior Courts
Internal Audit	Treasurer-Tax Collector
CITIES	
Aliso Viejo	Laguna Beach
Anaheim	Laguna Hills
Brea	Laguna Niguel
Buena Park	Laguna Woods
Costa Mesa	Lake Forest
Cypress	Los Alamitos
Dana Point	Mission Viejo
Fountain Valley	Newport Beach
Fullerton	Orange
Garden Grove	Placentia
Huntington Beach	Rancho Santa Margarita
Irvine	San Clemente
La Habra	San Juan Capistrano
La Palma	Santa Ana

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CITIES	
Seal Beach	Villa Park
Stanton	Westminster
Tustin	Yorba Linda
SCHOOL DISTRICTS	
Department of Education	Laguna Beach Unified School District
Anaheim City School District	Los Alamitos Unified School District
Anaheim Union High School District	Lowell Joint School District
Brea-Olinda Unified School District	Magnolia School District
Buena Park School District	Newport-Mesa Unified School District
Capistrano Unified School District	North Orange County Community College District
Centralia School District	North ROP
Coast Community College District	Ocean View School District
Cypress School District	Orange Unified School District
Fountain Valley School District	Placentia-Yorba Linda Unified School District
Fullerton Joint Union High School District	Rancho Santiago Community College District
Fullerton School District	Saddleback Valley Unified School District
Garden Grove Unified School District	Santa Ana Unified School District
Huntington Beach City School District	Savanna School District
Huntington Beach Union High School District	South Orange County Community College District
Irvine Unified School District	Tustin Unified School District
La Habra City School District	Westminster School District
SPECIAL DISTRICTS	
Buena Park Library District	Orange County Fire Authority
Capistrano Bay Community Service District	Orange County Sanitation District
Costa Mesa Sanitary District	Orange County Transportation Authority
East Orange County Water District	Orange County Vector Control District
El Toro Water District	Orange County Water District
Emerald Bay Community Services District	Placentia Library District
Garden Grove Sanitary District	Rossmoor Community Service District
Irvine Ranch Water District	Santa Margarita Water District
Laguna Beach County Water District	Serrano Water District
Mesa Water District	Silverado-Modjeska Parks & Recreation District
Midway City Sanitary District	South Coast Water District
Moulton Niguel Water District	Sunset Beach Sanitary District
Municipal Water District of Orange County	Surfside Colony Community Service Taxation District
Orange County Cemetery District	Surfside Colony Storm Water District

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SPECIAL DISTRICTS	
Trabuco Canyon Water District	Water Emergency Response Organization of Orange County (WEROC)
Three Arch Bay Community Service District	Yorba Linda Water District
OTHER PARTNERS	
2-1-1 Orange County	Orange County Rescue Mission
American Red Cross of Orange County	Seal Beach Naval Weapons Station
California State University-Fullerton	University of California-Irvine Health & Safety
OneOC	

County of Orange and Orange County Operational Area
Unified Emergency Operations Plan

VII. Disclosure Exemptions

Portions of this document contain sensitive information pertaining to the deployment, mobilization, and operations of the County, OA and OA jurisdictions in response to emergencies. The majority of this document is available for public review; however, portions that include Personal Identifiable Information (PII) or information with significant implications on city, regional, state, or national security are placed in attachments that are exempt from public disclosure under the provisions of the California Public Records Act §6254.

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Chapter 1 INTRODUCTION

The EOP describes the fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities the County of Orange will use to guide and support emergency management efforts. Essential elements of this EOP include:

- A description of the emergency services provided by governmental agencies and how resources are mobilized;
- An outline of the methods for carrying out emergency operations and the process for rendering mutual aid;
- An overview of the system for providing public information.

These elements culminate with a comprehensive emergency management concept of operations that outlines the relationships and responsibilities of County government, its political subdivisions, and other participating organizations.

Functional Annexes: This EOP leverages County and Operational Area working groups, which develop functional annexes to describe discipline-specific goals, objectives, operational concepts, capabilities, organizational structures, and related policies and procedures. The functional annexes are developed and maintained separately from the EOP and reference existing agency and department plans and procedures. Supporting plans, procedures, processes, and documents are attached to each functional annex.

Annexes and Appendices: Subsequent plans and procedures developed in support of the EOP, such as hazard-specific plans, catastrophic plans, and related procedures, are incorporated by reference and maintained separately from this EOP. During each revision of the EOP, the list of such documents will be updated.

1.1 Purpose

The County of Orange and Orange County Operational Area Unified Emergency Operations Plan (EOP) provides guidance and procedures for the County and the County as the OA to prepare for and respond to and recover from natural, technological, conflict-related, and human-caused incidents creating situations requiring a coordinated response. It provides guidance for management concepts, identifies organizational structures and relationships and describes responsibilities and functions of the emergency organization to protect life and property.

The EOP incorporates and complies with the principles and requirements found in state and federal laws, regulations and guidelines in accordance with the Statewide Standardized Emergency Management System (SEMS) (Government Code Section 8607 (a)) and the National Incident Management Systems (NIMS) as defined by presidential executive orders for managing response to multi-agency and multi-jurisdictional emergencies. SEMS/NIMS incorporate the use of the Incident Command System (ICS), mutual aid, the operational area concept, multi-agency and inter-agency coordination. The Unified EOP incorporates the Federal Emergency Management Agency (FEMA) Comprehensive Preparedness Guide (CPG) 101 version 3.0 and the State of California Emergency Plan best practices.

This plan is designed to be read, understood and exercised prior to an emergency. The EOP describes the emergency organization and the process of preparing, responding to, and recovering from disasters. Use of the EOP will differ according to the needs of the reader. All response personnel need to be familiar with the EOP as a whole and those parts of the EOP specific to their needs, roles and responsibilities. The EOP provides the basis for developing jurisdiction and/or department-specific, detailed standard operating procedures and checklists.

By using this EOP, the County, OA jurisdictions, and external representatives supporting the County/OA EOC should:

- Know each organization's responsibilities.
- Know how to perform their assigned functions.
- Avoid inefficiencies, duplications, and oversights in performing functions.
- Be able to coordinate response and recovery operations across organizations and jurisdictions.

1.2 Scope

This EOP is applicable to all agencies and individuals having responsibilities for emergency preparedness, prevention, response, recovery, and/or mitigation in Orange County. This includes but may not be limited to the County, cities, school districts, special districts, utilities, non-government organizations, and State and Federal agencies. For the purposes of this EOP:

- The County of Orange refers to the unincorporated areas of the County, and County agencies in their role as countywide service providers.
- The Orange County Operational Area consists of the County and each of its political subdivisions, as documented in the Orange County Operational Area Agreement of the County of Orange and Political Subdivisions.

Each organization identified in this EOP is responsible for, and expected to develop, implement, and test policies, procedures, instructions, and standard operating guides (SOGs) or checklists that reflect cognizance of the emergency management concepts contained herein. Coordinated response and support roles must be defined by these organizations to facilitate the ability to respond to any given incident. The city governments within the County maintain their own emergency operations plans. The cities' plans should be consistent with the policies and procedures established by this EOP. During multi-jurisdictional emergencies, each jurisdiction retains responsibility for managing operations within its boundaries and for coordinating with any jurisdictions that have overlapping boundaries.

This EOP is in effect at all times and applies to any extraordinary emergency situation associated with any hazard, natural or human caused event, which may affect Orange County and that generates situations requiring planned, coordinated responses by multiple agencies or jurisdictions.

The intended audience for this EOP consists of County of Orange departments, elected officials, OA jurisdictions and private organizations that are responsible for staffing positions within the County and OA Emergency Operations Center (EOC). This EOP is also a reference for managers from other jurisdictions, state and federal agencies, and interested members of the public. It is intended as an overview of emergency management in the County of Orange and the Orange County Operational Area, and is not a detailed tactical document.

1.3 Planning Assumptions

This EOP was developed with the following assumptions:

- The California Emergency Services Act requires the County Board of Supervisors to establish an OA that includes all political subdivisions (cities, school districts, and independent special districts, etc.) The OA is an intermediate level of the State emergency organization and provides coordination and communication between and with political subdivisions and the State. The California Emergency Services Act also assigns the County as the responsible OA lead agency.
- County of Orange government is an OA jurisdiction and a separate entity from the OA. Although Orange County personnel operate the OA, the roles and responsibilities of those individuals may be different whether they are acting under the auspices of the OA or the County of Orange.
- For the sake of emergency planning and coordination at the OA level, OA jurisdictions shall consider the County/OA EOC one and the same.
- The County and OA use the precepts of the Incident Command System (ICS) as adopted by the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) in emergency response operations.
- Emergencies may occur at any time with little or no warning and may exceed capabilities of local, state, federal, tribal governments, and the private sector in the affected areas.
- Emergency response is best coordinated at the lowest level of government involved in the emergency.
- The resources of Orange County will be made available to the OA and to all OA jurisdictions to help mitigate the effects of disasters and emergencies in the area.
- Individuals with access and functional needs may require resources or assets such as durable medical equipment or assistive technology that are limited in number and difficult to procure without planning.
- Emergencies may result in casualties, fatalities, and displace people from their homes.
- The greater the complexity, impact, and geographic scope of an emergency, the more multi- agency coordination will be required.

- Local authorities maintain operational control and responsibility for emergency management activities within their jurisdictions, unless otherwise superseded by statute or agreement.
- Mutual aid agreements and systems exist to support the emergency response agencies of the OA. These agreements are reviewed and updated on a regular basis.
- OA jurisdictions will commit their own resources, to a reasonable degree, before requesting mutual aid assistance from the OA.
- The OA will commit the resources from within the OA, to a reasonable degree before, requesting mutual aid assistance from the region or state levels.
- The OA may be called upon by the State to support emergency operations in other OAs. Activation of the appropriate sections of the OA emergency response organization will follow this EOP as it would for an emergency situation within the Orange County OA.
- The County of Orange and Orange County Operational Area Unified EOP is not designed to address the recovery and subsequent resumption of the delivery of city and county department program services. Therefore, each County department and OA jurisdiction is expected to develop, publish, and maintain a department or jurisdiction continuity plan that addresses response, recovery, and resumption of department or jurisdiction functions.
- The Office of Immigrant and Refugee Affairs was created by the Board of Supervisors on April 25, 2023. It is not reflected in this EOP as it has not yet been fully developed and implemented.

1.4 Preparing and Responding with the Whole Community Strategy

The County of Orange strives to incorporate Whole Community perspectives in its disaster planning, response and recovery efforts and encourages Operational Area jurisdictions to do the same. The Whole Community¹ includes, but is not limited to:

- Individuals and families, including those with disabilities or other access and functional needs
- Businesses
- Faith-based, nonprofit and other community organizations
- Immigrant populations and communities
- Schools and academia
- Media outlets
- All levels of government, including state, local, tribal, territorial, and federal partners

¹<https://www.fema.gov/about/glossary/whole-community>, accessed 04/13/2023

By planning with and for the Whole Community, complexities in the diversity in Orange County are integrated into the County disaster planning, and response and recovery operations. Included in these considerations are Disabilities and Access and Functional Needs, Equity and Inclusion, and Cultural Diversity.

Disabilities and Access and Functional Needs

Orange County's definition of disabilities and access and functional needs is as follows:

Populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to: maintaining independence and the ability to perform the activities of daily living, communication, transportation, and medical care. Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures; who have limited English proficiency or are non-English speaking; or who may require transportation assistance.

The County of Orange is committed to complying with the Americans with Disabilities Act during all phases of disaster response and recovery. To accomplish this, the County works with stakeholder groups that include people with disabilities and disability service organizations to develop more inclusive and better informed plans. The County of Orange adheres to and encourages Operational Area jurisdictions to follow the principles below:

- Affected individuals will not be excluded from or denied benefits of any sort based on a disability or other access or functional need.
- Work to accommodate people with disabilities or other access and functional needs in the most integrated setting possible.
- During all phases of disaster response, make reasonable modifications to policies, practices and procedures, if necessary, to ensure programmatic and architectural access to all.
- Provide access to shelters to all affected community members including those with disabilities or other access and functional needs in the most integrated setting possible in order to keep families, friends and/or neighbors together.

Equity and Inclusion

Furthermore, the County of Orange is committed to the principle of equity - including the need for consistent and systematic fair, just and impartial treatment of all individuals in its emergency planning efforts. This approach includes a focus on understanding the needs of the population served and the recognition that many disasters disproportionately impact populations and communities that are historically disadvantaged. Through a more complete understanding of community needs, County officials and planners are better able to identify and overcome barriers to accessing services that could otherwise be overlooked.

Cultural Diversity

As part of its Whole Community Strategy, Orange County is committed to the integration of cultural competence into emergency mitigation and prevention, planning, response, and recovery efforts. In all phases of emergency management, this cultural competence may include:

- Drawing on community-based values and customs by incorporating into working groups and communication channels qualified representatives from diverse population groups in the community;
- The use of culturally appropriate resources and outreach techniques to educate and prepare community members for emergencies or disasters; and
- Providing opportunities for community engagement in geographically diverse locations in order to engage with culturally diverse communities within Orange County.

Where opportunities for engagement exist through established County working groups or committees, emergency management will strive to leverage these existing relationships. As outlined in California Government Code § 8593.3.5, the following definitions are incorporated into Orange County's Whole Community Strategy:

"Cultural competence" means the ability to understand, value, communicate with, and effectively interact with people across cultures in order to ensure that the needs of all community members are addressed, with priority given to "culturally diverse communities."

"Cultural competence" includes, but is not limited to, being respectful and responsive to the cultural and linguistic needs of diverse population groups.

"Culturally diverse communities" includes, but is not limited to, race and ethnicity, including indigenous peoples, communities of color, and immigrant and refugee communities; gender, including women; age, including the elderly and youth; sexual and gender minorities; people with disabilities; occupation and income level including low-income individuals and the unhoused; education level; people with no or limited English language proficiency; as well as geographic location.

Having recognized the need to be inclusive in its emergency planning, the County of Orange, Emergency Management Council and the Orange County Operational Area Executive Board formed the Orange County Disabilities and Access and Functional Needs (DAFN) Working Group in 2011 to strengthen partnerships with the disability community and others with access and functional needs. This team includes representatives from County agencies, local jurisdictions and nonprofit organizations serving people with disabilities and access and functional needs in Orange County. This group's instrumental efforts have turned the Operational Area towards more inclusive emergency planning for the Whole Community. This group reviewed the Emergency Operations Plan in September 2023 and provided valuable feedback.

Chapter 2 SITUATION OVERVIEW

2.1 Orange County Profile

The County of Orange was officially formed on August 1, 1889. It covers a total of 948 square miles: 789 square miles of land and 159 square miles of water.

Thirty-four incorporated cities in the County are responsible for emergency planning within their jurisdictions. The County of Orange is responsible for the emergency planning of 205 square miles of unincorporated area and all County owned facilities and properties.

Orange County is bordered on the west by the Pacific Ocean, on the north by Los Angeles County, on the south by San Diego County, on the northeast by both San Bernardino County and Riverside County. The northern part of the County lies on the coastal plain of the Los Angeles Basin and the southern half lies on the foothills of the Santa Ana Mountains. Most of Orange County's population resides in one of two shallow coastal valleys that lie in the basin, the Santa Ana Valley and the Saddleback Valley. The coastal plain gently rises into the Santa Ana Mountains, which lie within the boundaries of the County and of the Cleveland National Forest.

The Santa Ana River is the County's principal watercourse. The San Gabriel River also briefly crosses into Orange County and exits into the Pacific on the Los Angeles-Orange County line between Long Beach and Seal Beach. Laguna Beach is home to the County's only natural lake, Laguna Lakes, which are formed by water rising up against an underground fault.

Surface transportation in Orange County relies heavily on several major interstate highways:

Table 1 - Major Orange County Interstates and Highways

Interstate 5 (Santa Ana Freeway)	State Route 73 (San Joaquin Hills Transportation Corridor)
Interstate 405 (San Diego Freeway)	State Route 74 (Ortega Highway)
Interstate 605 (San Gabriel River Freeway)	State Route 90 (Imperial Highway)
State Route 1 (Pacific Coast Highway)	State Route 91 (Riverside Freeway)
State Route 22 (Garden Grove Freeway)	State Route 133 (Laguna Freeway)
State Route 39 (Beach Blvd.)	State Route 142 (Carbon Canyon)
State Route 55 (Costa Mesa Freeway)	State Route 241 (Foothill Transportation Corridor)
State Route 57 (Orange Freeway)	State Route 261 (Foothill Transportation Corridor)

Orange County is a tourist destination. It is home to attractions such as the Disneyland Resort and Knott's Berry Farm, professional sports teams like the Los Angeles Angels of Anaheim and the Anaheim Ducks, as well as beaches for swimming and surfing, harbors for sailing and pleasure boating, and extensive areas devoted to parks and open space for all types of recreation activities. It is also at the center of Southern California's Tech Coast, with Irvine as the primary business hub. Orange County is home to two military bases, the Los Alamitos Joint Forces Training Base, located in City of Los Alamitos, and the Seal Beach Naval Weapons Station, located in the City of Seal Beach.

2.2 Population and Demographics

As of May 2022, the California State Department of Finance estimates Orange County's population as 3,162,245.² Of those, about 132,437 live in the unincorporated areas of the County Community diversity is shown in Table 1 below:

Table 2 -Orange County Population by Race (July 1, 2022)

Percentage of Total Orange County Population	
White, alone	69.70%
White alone, Not Hispanic or Latino	38.50%
Hispanic or Latino	34.10%
Asian alone	22.80%
Black or African American alone	2.20%
American Indian and Alaskan Native alone	1.10%
Native Hawaiian and Other Pacific Islander alone	0.40%
Two or More Races	3.80%

Source: United States Census Bureau.³

This diversity of origin emphasizes the need for effective communication in languages other than English during disasters. Roughly 45.1% of Orange County residents (over age 5) speak a language other than English at home. Widely spoken languages other than English include Spanish, Vietnamese, Chinese (includes Mandarin, Cantonese) Korean, Tagalog, Persian, and Arabic.

The U.S. Census Bureau estimates that 10.6% of the non-institutionalized population in Orange County is living with a disability, which is defined as long-lasting physical, mental, or emotional conditions.⁴ Types of disabilities and population groups are shown in Table 3 below:

² E-5 Current Population Estimates - California Department of Finance. Center for Demographic Research, 2022 Orange County Progress Report Addendum, the discrepancy exists in the source data. Reconciliation of the numbers is outside the purview of the Orange County Sheriff's Department-Emergency Management Division. http://www.fullerton.edu/cdr/_resources/pdf/Addendum%202022%20Orange%20County%20Progress

³ U.S. Census Bureau. (2022-July). QuickFacts, Orange County, California. Retrieved June 16, 2023 from <https://www.census.gov/quickfacts/fact/table/orangecountycalifornia/PST120222#PST120222>

⁴ U.S. Census Bureau. (2022-July). QuickFacts, Orange County, California. Retrieved June 16, 2023 from <https://www.census.gov/quickfacts/fact/table/orangecountycalifornia/PST120222#PST120222>

Table 3 - Orange County Disability Characteristics

Age Range	0-4 years		5-17 years		18-64 years		65 + years	
Population	181894		516808		2000964		466637	
Disability	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Hearing Difficulty	1247	0.007	2903	0.006	23728	0.012	51727	0.111
Vision Difficulty	487	0.003	3250	0.006	22822	0.011	21472	0.046
Cognitive Difficulty	-	-	16588	0.032	50126	0.025	36836	0.079
Ambulatory Difficulty	-	-	2784	0.005	45044	0.023	86342	0.185
Self-Care Difficulty	-	-	6347	0.012	19642	0.01	39327	0.084
Independent Living Difficulty	-	-	-	-	43388	0.022	65686	0.141

Source: U.S. Census Bureau, Disability Characteristics, 2021 American Community Survey 5-Year Estimates, Table S1810⁵

2.3 Employment and Industry

The largest employers in Orange County in 2022 were the University of California, Irvine, the Walt Disney Company, County of Orange, and Providence Southern California.⁶ Small businesses employing less than 50 employees account for 96 percent of all Orange County businesses and employ approximately 44 percent of the County's workforce. Approximately 180 businesses in the region employ more than 500 workers and 62 businesses employ more than 1,000 workers.⁷ As of June 2022, the unemployment rate in Orange County was 2.9%.⁸

Millions of visitors visit Orange County annually, the number of people commuting from surrounding areas to industrial and business centers also adds to the dependency on roads, communications, accessibility, and emergency plans.

2.4 History of Disasters

Below is a table which lists the Orange County Federal Declared Disasters.

Table 4 - Orange County Federally Declared Disasters

Disaster Number	Year	Incident Type	Incident Title
EM-3592	2023	Winter Storms	WINTER STORMS – MARCH-JULY
EM-3591	2023	Winter Storms	WINTERS STORMS – JANUARY
FM-5439	2022	Fire	COASTAL FIRE

⁵ US Census Retrieved June 19, 2023

<https://data.census.gov/table?q=S1810&g=050XX00US06059&tid=ACSST5Y2021.S1810>

⁶ https://ocbc.org/wp-content/uploads/2022/10/FINAL_DIGITAL_CommunityIndicators22-Reduced.pdf

⁷ 2022-23 Orange County Community-Indicators Report pg 16

⁸ 2022-23 Orange County Community-Indicators Report pg 40

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Disaster Number	Year	Incident Type	Incident Title
FM-5383	2021	Fire	BOND FIRE
FM-5381	2020	Fire	BLUE RIDGE FIRE
FM-5380	2020	Fire	SILVERADO FIRE
DR-4482	2020	Pandemic	CALIFORNIA COVID-19 PANDEMIC
FM-5268	2018	Fire	HOLY FIRE
DR-4344	2017	Fire	WILDFIRES
DR-4305	2017	Flood	SEVERE WINTER STORMS, FLOODING, AND DEBRIS AND MUD FLOWS
DR-1952	2011	Flood	SEVERE WINTER STORMS, FLOODING, AND DEBRIS AND MUD FLOWS
FM-2792	2008	Fire	FREEWAY FIRE COMPLEX
DR-1810	2008	Fire	WILDFIRES
FM-2737	2007	Fire	SANTIAGO FIRE
FM-2683	2007	Fire	241 FIRE
EM-3279	2007	Fire	WILDFIRES
DR-1731	2007	Fire	WILDFIRES, FLOODING, MUD FLOWS, AND DEBRIS FLOWS
FM-2630	2006	Fire	SIERRA FIRE
DR-1585	2005	Severe Storm	SEVERE STORMS, FLOODING, LANDSLIDES, AND MUD AND DEBRIS FLOWS
EM-3248	2005	Hurricane	HURRICANE KATRINA EVACUATION
DR-1577	2005	Severe Storm	SEVERE STORMS, FLOODING, DEBRIS FLOWS, AND MUDSLIDES
FS-2405	2002	Fire	ANTONIO FIRE
DR-1203	1998	Severe Storm	SEVERE WINTER STORMS AND FLOODING
EM-3120	1996	Fire	SEVERE FIRESTORMS
DR-1046	1995	Severe Storm	SEVERE WINTER STORMS, FLOODING LANDSLIDES, MUD FLOW
DR-1044	1995	Severe Storm	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, MUD FLOWS
DR-1008	1994	Earthquake	NORTHRIDGE EARTHQUAKE
DR-1005	1993	Fire	FIRES, MUD/LANDSLIDES, FLOODING, SOIL EROSION
DR-979	1993	Flood	SEVERE WINTER STORM, MUD & LAND SLIDES, & FLOODING
DR-935	1992	Flood	RAIN/SNOW/WIND STORMS, FLOODING, MUDSLIDES
DR-812	1988	Flood	SEVERE STORMS, HIGH TIDES & FLOODING
DR-799	1987	Earthquake	EARTHQUAKE & AFTERSHOCKS

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Disaster Number	Year	Incident Type	Incident Title
DR-677	1983	Coastal Storm	COASTAL STORMS, FLOODS, SLIDES & TORNADOES
DR-657	1982	Fire	URBAN FIRE
DR-635	1980	Fire	BRUSH & TIMBER FIRES
DR-615	1980	Flood	SEVERE STORMS, MUDSLIDES & FLOODING
DR-547	1978	Flood	COASTAL STORMS, MUDSLIDES & FLOODING
DR-566	1978	Flood	LANDSLIDES
DR-253	1969	Flood	SEVERE STORMS & FLOODING

2.5 Hazard Assessment

A hazard assessment is a critical component of the County and Operational Area emergency planning process. For the purposes of the Orange County Operational Area, a hazard is any event that poses an uncommon threat to lives, property or the environment in Orange County. A hazard event will stress Orange County's public safety organizations and, in most cases, will require a multi-agency, interdisciplinary response effort supported by the activation of the Orange County Operational Area Emergency Operations Center and/or coordination by the Orange County Sheriff's Department Emergency Management Division. The hazard assessment conducted in conjunction with the 2023 Orange County and Operational Area Emergency Operations Plan update sought to build on previous local hazard assessments while also considering hazard lists available from the California Emergency Services Act, Federal Emergency Management Agency, and the National Fire Protection Association. From these lists, a primary hazard list was developed and hazard briefs were prepared to assess the probability and impact of each hazard. The hazard assessment matrix and hazard briefs below work in concert with hazard-specific Annexes to this EOP and the County of Orange and Orange County Fire Authority Local Hazard Mitigation Plan to fully describe the risks posed by various hazards to Orange County and its political subdivisions. See Attachment 1 for a discussion of the hazard identification process and Attachment 2 for the risk assessment process that is used consistently across all emergency management plans, including but not limited to the Hazard Mitigation Plan, the EOP, Continuity of Operations Plans, Continuity of Government Plan, the Recovery Plan, and each of the annexes supporting those plans. The County and OA jurisdictions will review and update the hazard analysis regularly in conjunction with the review of this EOP.

In accordance with CPG 101 and Hazard Mitigation guidance, hazards are assessed based on relative probability and impact.

Probability

- Likely: There may or may not have been historic occurrences of the hazard in the community or region but experts feel that it is likely that the hazard will occur in the community. Between 10% and 100% annual probability.
- Possible: There may or may not have been a historic occurrence of the hazard in the community or region but experts feel that it is possible that the hazard could occur in the community. Less than 10% annual probability.
- Unlikely: There have been no historic occurrences of the hazard in the community or region and both experts agree it is highly unlikely that the hazard will occur in the community. Less than 1% annual probability.

Impact

- High: Catastrophic/Critical. The consequences will be significant in terms of building damage and loss of life.
- Moderate: Limited. Consequences are thought to be modest in terms of building damage and loss of life, limited either in geographic extent or magnitude.
- Low: Negligible. Little building damage and trivial impact to infrastructure and critical facilities.

Table 5 – Hazard Analysis Results - Probability of Occurrence

		Likely	Possible	Unlikely
<u>Impact and Extent</u>	High	<ul style="list-style-type: none"> • Civil Unrest • Earthquake • Misinformation 	<ul style="list-style-type: none"> • Economic Collapse • Large Special Events • Product Contamination • Pandemic/High Consequence Diseases 	<ul style="list-style-type: none"> • Act of War • Dam/Levee/Reservoir Failure • San Onofre Nuclear Generating Station (SONGS) • Terrorism
	Moderate	<ul style="list-style-type: none"> • Aircraft Incident • Sea Level Rise • Wildland Fire and Urban Fire • Excessive Temperature Heat/Cold • Flood 	<ul style="list-style-type: none"> • Drought • Rail Incident • Oil Spill • Utility Failure 	<ul style="list-style-type: none"> • Tsunami
	Low	<ul style="list-style-type: none"> • Epidemic or Disease Outbreak (Large Scale) • Hazardous Materials Release • High Winds 	<ul style="list-style-type: none"> • Landslide/Mudslide/Debris Flow • Vector-Borne Diseases 	

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2.5.1 Act of War

Impact: **High**

Probability: **Unlikely**

Related Hazard(s): **Terrorism, Civil Unrest, Cyberattack**

Nature of Hazard

The term “act of war” means any act occurring in the course of (A) declared war; (B) armed conflict, whether or not war has been declared, between two or more nations; or (C) armed conflict between military forces of any origin.⁹ The California Emergency Services Act defines a “State of war emergency” as the condition which exists immediately, with or without a proclamation thereof by the Governor, whenever this state or nation is attacked by an enemy of the United States, or upon receipt by the state of a warning from the federal government indicating that such an enemy attack is probable or imminent.¹⁰

Probability

Probability of an “Act of War” impacting Orange County is dependent upon the international relationships, as well as the likelihood that targets within Orange County would be at risk, or that resources within Orange County or needed by Orange County would be called upon to respond. Military focus is returning to the Pacific Region where an “arc of instability” stretches from North Korea through the western Pacific and Indian Ocean to the Middle East. Residing within this arc are such long-term challenges as radical Islamists, regimes such as North Korea and Iran, and China’s growing military power. National security agencies are a significant employer in the State of California and a major source of business for numerous California industries. Potential incidents could include chemical, biological, radiological, nuclear, or explosive devices targeted at local critical infrastructure and key resources (CI/KR).

In addition to local CI/KR targets, there are potential military targets within Orange County. The Naval Weapons Station (NWS) Seal Beach is the Navy’s primary West Coast ordnance storage and loading facility. NWS Seal Beach covers 5,256 acres and has 80 miles of road used by trucks and trailers to transport ordinance. The installation loads and unloads about 100 Navy ships each year. Joint Forces Training Base Los Alamitos covers 1,319 acres, two runways, and an aquatics training center. The base is home to the California National Guard’s 40th Infantry Division which commands the 29th, 41st, and 79th Infantry Brigade, 81st Armored Brigade, and the Combat Aviation Brigade. Also located at the base are the California Office of Emergency Services Southern Region Emergency Operations Center., a California National Guard Aviation Battalion, an Army Reserve Aviation Battalion, the 9th Civil Support Team, a Defense Intelligence Agency Joint Regional Intelligence Center, a California Army National Guard Special Forces Company, the Sunburst Youth

⁹ 18 U.S. Code §2331

¹⁰ CGC §8558

Academy and STARBASE Academy. The facility operates the last two remaining military runways in the greater Los Angeles and Orange County region. The base employs over 300 full and part-time personnel.¹¹

Vulnerability, Assets, and Impact

The impact of Acts of War may range from minor inconveniences (e.g., commodity shortages) to health effects (e.g., casualties, fatalities), and security impacts like those arising from CBRNE attacks.

Depending upon the incident scope, impacts could include:

Public: The Public may be impacted physically, emotionally, and financially. Injuries and fatalities may occur. Emotional impacts may include loss of loved ones, loss of a sense of security, and mixed feelings about the cause of and resolution to the situation. Acts of War have the potential to generate social unrest and civil disobedience. Historically there have been attacks both on those not perceived to be supportive enough of war efforts (Zoot Suit Riots in Los Angeles in 1943) as well as by those not supportive of war efforts (Anti-Vietnam War Protests 1960's-70's).

Responders: The size, scope, and location of Acts of War within the geographic area of Orange County generate potential impacts associated with decontamination, mass evacuations, sheltering and fallout shelters. There may be responder shortages due to military deployments, as well as resource shortages due to re-allocation of resources to address threat.

Continuity of Operations: War has the potential to disrupt government operations. Government priorities may change, and associated budget allocation changes may impact the ability of government agencies to perform their normal missions. California has established a number of standing War Orders should an Act of War occur.¹²

Property, Facilities, Assets, and Critical Infrastructure: Impacts may include temporary and permanent closure of critical infrastructure if attacked. Properties may be re-assigned for prioritized activities. Increased security may be necessary for key resources and critical infrastructure.

Supply Chain: Impacts may include disruption due to downed infrastructure, re-prioritization for war efforts, and key ingredient/components being purposely withheld or embargoed.

¹¹ Military Council.ca.gov/s_californiamilitarybases

¹² State of California, California Emergency Plan

Environment: Impacts may vary based on the type and scope of the Act. These could include CBRNE releases that have a detrimental effect upon plants, animals, and water resources.

Economic and Financial Condition: Depending upon the size and scope, the local economy could be impacted by job losses, damaged infrastructure, increase in the service needs of those injured, and a loss of market confidence in stocks and bonds.

Public Confidence in the Jurisdiction: The public may have strong positive or negative reactions to how the County/OA prioritize resources and policies that are issued. Some actions taken by government in the past have been challenged in courts leading to ambiguity in their authority to undertake those actions.

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2.5.2 Aircraft Incident

Impact: **Moderate**

Probability: **Likely**

Related Hazard(s): **Fire, HAZMAT, Mass Casualty, Terrorism**

Nature of Hazard

This hazard includes the following categories: On-airport accidents (including runway overruns or undershoots); Off-airport accidents (in residential, business, industrial areas, or over water); In-air collisions involving other aircraft; general, commercial, public agency, or military owners.

Probability

Aircraft accidents are a significant threat to Orange County, where there is a high volume of commercial, military and general aviation flights. With a steady increase in the volume of air traffic over the Los Angeles Basin that includes Orange County, there is a constant possibility of aircraft accidents in Orange County. Regardless of the size or type of aircraft, local resources will be impacted. In February of 2019 a twin engine Cessna 414A, departed Fullerton general aviation airport enroute to Minden-Tahoe Airport in Minden Nevada. The National Transportation Safety Board (NTSB) reported that weather conditions were deteriorating and after climbing to approximately 7,800 feet above the ground, the aircraft then began a rapid descending right turn before impacting the ground. In addition to the private pilot, four persons in a single family home were also killed on the ground in the crash and subsequent fire.¹³ Also in February of 2018, a Robinson R-44 helicopter departing John Wayne Airport crashed shortly after take-off into a home in Newport Beach. There were three (3) fatalities and two (2) injuries associated with this incident and the response required resources and coordination between multiple agencies. In 2017, a Cessna 310 that was departing John Wayne Airport experienced complications that forced its return to John Wayne. This aircraft crashed in the southbound lanes of the 405 freeway resulting in two (2) injuries and the subsequent closure of the freeway for several hours. The airports/bases within and adjacent to Orange County that handle the greatest amount of air traffic are as follows:

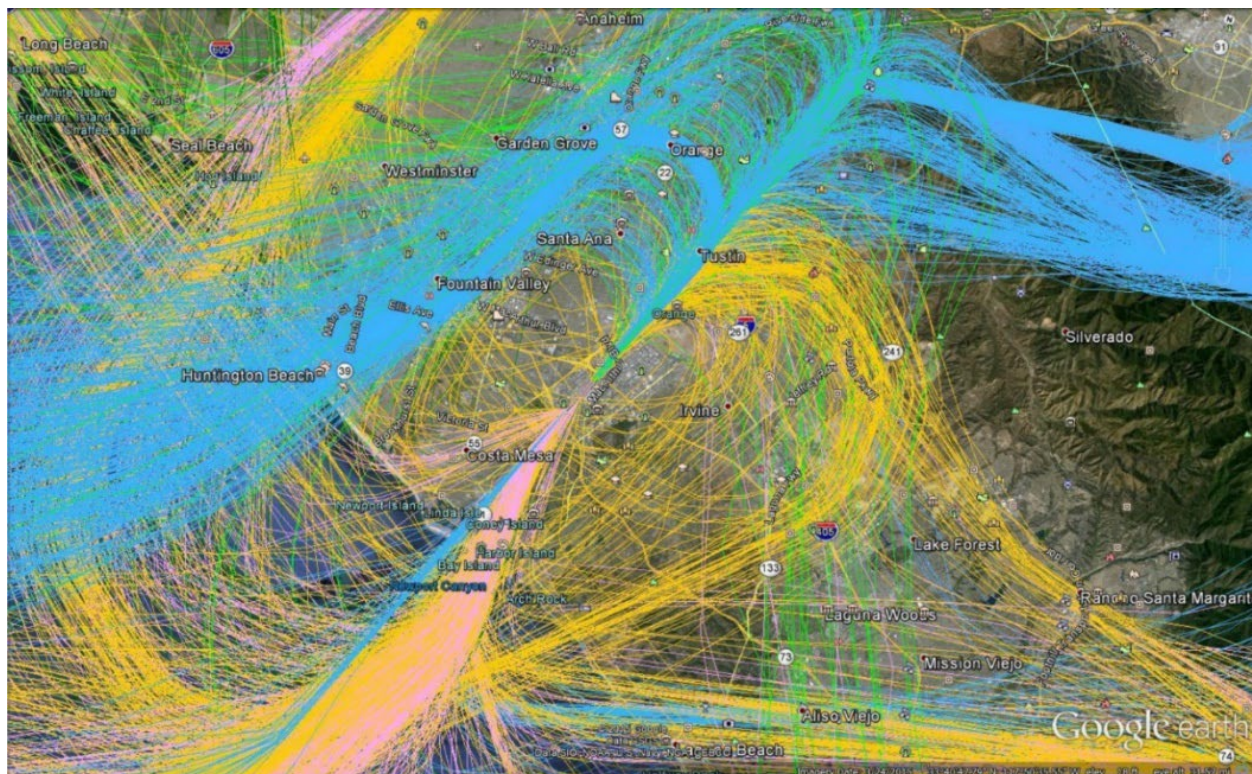
- **Fullerton Airport (FUL)** – Fullerton Airport services general aviation only and lies adjacent to the 5 and 91 freeways it has an aircraft parking capacity of 600 small, general aviation aircraft and serves as a base for Orange County Fire Authority (OCFA), Anaheim, and CHP helicopters.
- **John Wayne International Airport (KSNA)** –KSNA serves an average of over 11 million commercial passengers with several hundred thousand total flight

¹³ www.ocregister.com/2019/02/21/pilot-of-plane-that-crashed-in-yorba-linda-neighborhood-killing-5-was-warned-about-poor-flying-conditions-report-says/

operations. JWA limits commercial flight operations to the hours of 0700 – 2200 for compliance with noise pollution controls.

- **Joint Forces Training Base Los Alamitos** – This base is located in the northwest part of Orange County and is an active joint forces military base. Numerous flights depart and arrive on a daily basis.
- **Long Beach Airport (LGB)** – Long Beach has an average of 41 daily commercial flights and 25 commuter flights daily. LGB limits flight operations to the hours of 0700 – 2200 for compliance with noise pollution controls. Standard approach to LGB takes aircraft over several Orange County cities.
- **Los Angeles International Airport (LAX)** – LAX is the fourth busiest passenger airport. It also ranks eleventh in air cargo tonnage handled and its popularity shows no sign of decreasing. LAX averages more than 61 million passengers annually, with multiple daily flights. The LAX air cargo system handled more than 2.1 million tons of goods. LAX handles 70 percent of the passengers, 75 percent of the air cargo, and 95 percent of the international passengers and cargo traffic in the five-county Southern California region.

Figure 1: The image below displays a snapshot of daily air traffic associated with John Wayne Airport.



Vulnerability, Assets, and Impact

Orange County airports and military bases are embedded into the urban areas that surround these locations. Statistics show that aircraft related accidents are most likely to occur in the departure or approach phases of flights.

Depending upon the incident scope, impacts could include:

Public: The public may be impacted both as passengers as well as on the ground due to explosions and intense fires. There could be significant injuries and fatalities, and the need to reunite families or notify next of kin. Passengers on other flights may be delayed or re-routed. Traffic in neighboring areas may be impacted.

Responders: An aircraft accident will likely require support from local governments, private organizations, and state and federal agencies. Depending upon the aircraft and location, mutual aid resources may be called upon.

Continuity of Operations: No impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Critical infrastructure could be impacted depending upon where the accident occurs.

Supply Chain: Changes in airport operations could delay supply chain logistics.

Environment: There could be impacts to both air and water from toxic fumes and hazard liquids coming from the aircraft.

Economic and Financial Condition: There could be impacts to County and local business revenue depending upon if, and how long, airport operations were impacted.

Public Confidence in the Jurisdiction: If the accident is caused by local personnel or conditions, there could be a reduction in traveler willingness to use local airports.

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2.5.3 Civil Unrest

Impact: **High**

Probability: **Likely**

Related Hazard(s): **Fire, Labor Disputes, Transportation Disruption, Utility Failure**

Nature of Hazard

Civil disorder, also known as civil disturbance or civil unrest, is an activity arising from a mass act of civil disobedience (such as a demonstration, riot, or strike) in which the participants become hostile toward authority, and authorities incur difficulties in maintaining public safety and order, over the disorderly crowd. In the California Emergency Services Act, the terms “State of Emergency” and “Local Emergency” include riot but specifically exclude conditions resulting from a labor controversy.

Probability

In Orange County, civil disturbances may be triggered by a number of events:

- Spontaneous reactions to verdicts in high-profile trials (retaliation or celebration)
- Spontaneous reactions to organized sporting event outcomes
- Organized reactions or demonstrations
- Political rallies or demonstrations

Southern California has faced civil unrest in various forms since the Watts Riots of 1964, the Huntington Beach Surf riots of August 1986 and July 2013, the 1992 Rodney King verdict, the Westminster Little Saigon demonstration in February 1999, the Anaheim Civil Unrest during the summer of July 2012, the Fullerton Kelly Thomas trial in January of 2014, the Trump Rally in April 2016, and the nationwide protests in June of 2020.

In 2020, Orange County, among many other jurisdictions across the United States experienced unprecedented levels of civil unrest stemming from the death of a suspect in Minneapolis, Minnesota. Widespread looting, arson, vehicular assaults, and civil disobedience occurred for several weeks. Some metropolitan areas continued to deal with forms of civil unrest for months following the initial events. Local law enforcement, National Guard, and federal law enforcement entities were deployed to multiple areas across the nation to re-establish law and order. Hundreds of millions of dollars in property damage were attributed to these instances of civil unrest.

Vulnerability, Assets, and Impact

Civil unrest can range from minor to significant events that can disrupt the functioning of a community for days or even months. Involved citizens may target public facilities, target private highly visible establishments, and perform indiscriminate acts of arson and vandalism.

Depending upon the incident scope, impacts could include:

Public: The general population could serve as participants or targets in actions of civil unrest. Wide-spread unrest could cause fear amongst the populace and cause them to be absent from school or work activities. During an event, bystanders may be harmed because of the activities of participants.

Responders: Responses to civil unrest events are generally handled at the city level. In a large event, the resources of a city jurisdiction may be exceeded. In this instance, the OA, Mutual Aid Region, state, and potentially federal resources could be activated to fill the need. During an event, responders may become targets, which could hamper their effectiveness.

Continuity of Operations: The outbreak of widespread rioting or looting could have potential impact on local government agencies' abilities to provide services and conduct their normal operations. Protesters could occupy government buildings and interrupt the normal functions of government, or targeted attacks on government facilities could interrupt operations entirely.

Property, Facilities, Assets, and Critical Infrastructure: Private property, government facilities, and infrastructure often serves as targets in instances of civil unrest. Businesses can be targeted for looting or vandalism. If an event is particularly large, damage could reach millions of dollars and recovery could take years. Damage suffered during an event or the inability of a worker to enter a facility may greatly reduce a facility's effective capacity or close it completely. Damage to transportation, communications, or utilities infrastructure could further exacerbate the situation.

Supply Chain: Civil unrest make block roadways causing brief interruptions. Fear of violence may keep workers from reporting to work which may cause production and distribution delays.

Environment: Normally, an instance of civil unrest will have a minimal impact on the environment. However, if petroleum or other chemical facilities were a target for vandalism or large-scale fires occurred, the impact on the environment could be significant.

Economic and Financial Condition: Civil unrest could damage public and private property, as well as create fear for those considering visiting the area. Large-scale events are usually accompanied by widespread absenteeism and damage to private property.

Public Confidence in the Jurisdiction: If an event becomes prolonged or is perceived to be mismanaged, it could greatly decrease public confidence in the government agencies. If the response is seen to be inadequate, individuals may attempt to protect their property by their own means and further degrade the situation.

2.5.4 Cyber Threat (Intrusion / Attack)

Impact: **High**

Probability: **Possible**

Related Hazard(s): Nuclear Incidents, Act of War, Civil Disturbance, Misinformation, Terrorism

See Terrorism Annex for additional details. An electronic version is available through PrepareOC. Additionally, hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

Nature of Hazard

Cyber Threat: The possibility of a malicious attempt to damage or disrupt a computer network or system.

While all levels of government and the private industry rely on cyber networks and assets to provide national security, public safety, and economic prosperity, these operations depend on information systems that are maintained, and secured from exploitation and attack. The increasing frequency and sophistication of cyber-attacks and intrusions on Critical Infrastructure and Key Resources (CIKR) requires planning across all local, state, and federal homeland security components to develop strategies to prepare for and respond to cyber incidents.

A cyber-attack or intrusion may range from a single act to a sustained series of prolonged actions. All are designed to bring about some desired objective. Those objectives differ and may include stealing the data stored in a computer, using resources (storage and computation) available on the system or disrupting the system itself¹⁴.

Common examples of cyber-attacks are listed below:

- Denial of Service (DoS)
- Social engineering
- Phishing
- Hacking/Intrusion
- Website comprise
- Zero-Day exploits
- Ransomware
- Internet of Things (IoT) exploitation

¹⁴ FEMA The EOC's Role in Community Cyber Security MGT-384 (Apr 2011)

Probability

While the threat of a cyber-intrusion or attack is unlikely due to training and awareness in the area of cybersecurity. Several local government agencies, private businesses and municipalities have encountered cyber-attacks in recent years. These attacks can be broad in nature and may remain undetected for an undetermined amount of time.

While cyber-intrusions and attacks are often closely associated with Terrorism. These occurrences can often be tied to individual criminals or to foreign actors with the intent of personal gain as opposed to illicit terrorist activities.

Strong Cybersecurity programs provide some protection in mitigating that cyber-intrusion or attack hazard. Cybersecurity is defined as the ability to protect or defend the use of cyberspace from cyber-intrusions and attacks. Cybersecurity applies to individuals as well as organizations alike, typically encompassing people, processes, technologies and training. The goal of cybersecurity is to protect the confidentiality, integrity, and availability of information from unauthorized access, modification or disruption.

Vulnerability, Assets, and Impact

The threat of or an actual cyber-intrusion or attack may cause disruptions in social structures and material losses, economic and psychological burdens, and potentially loss of life. These occurrences can have extensive negative consequences, beginning with death and injury, property damage, and ordinary direct business interruption. However, negative impacts can be magnified greatly by a combination of ordinary multiplier effects, cascading infrastructure system failures, and behavioral responses stemming from fear¹⁵. The impacts from such an event may range from the theft of information to complete shutdown of entire networks, and capabilities.

Depending upon the incident scope, impacts could include:

Public: Impacts may include disruption in services and limited abilities to communicate with government employees. There may also be disruptions in the ability to file or access vital records. Personal information held by government agencies is also vulnerable depending upon the type of cyber-incident.

Responders: Responders may not be able to perform the normal duties that rely on technology, and may be cut off from state and federal systems needed to assist community members. They may not be able communicate internally or externally. Law enforcement, court, and legal services operations could be impacted as access to databases and sharing confidential information may be limited.

¹⁵ Retrieved on September 22, 2020, from <http://create.usc.edu/research/research-areas/economic-analysis>.

Continuity of Operations: Depending upon the extent of the cyber-incident, there may be limited resources to recover systems and restore services. Department may have competing priorities for system restoration. Department infrastructure programs (e.g., purchasing, scheduling, timesheets, and payroll) may not be accessible.

Property, Facilities, Assets, and Critical Infrastructure: Impacts could include telecommunications, electrical power systems, gas and oil storage facilities, transportation, water supply systems, wastewater systems, and government and emergency services. Facilities that store, use or produce hazardous materials (HazMat) are not only critical to the economy, but the HazMat substances themselves could be used as a weapon. On a municipal level, targets could include police agencies, fire agencies, hospitals, municipal offices, community centers, educational facilities, religious facilities, banks, power stations, transmission lines, telephone relays, drinking water supplies, and water treatment facilities.

Supply Chain: Impacts could include inability to communicate among vendors and disruption of delivery and payment systems. Shortages could result in items typically ordered on a just-in-time basis. The delivery of critical items (e.g., medications) could be delayed resulting in illness or death.

Environment: Vulnerabilities exist around water supplies and treatment facilities and hazardous material storage locations. Releases of chemicals into the environment due to cyber-incidents would negatively impact the environment depending upon what material was released.

Economic and Financial Condition: Financial systems are cyber-attack targets and can be vulnerable at both the government and private sector levels. Such attacks could impact the ability of individuals to access funds and make purchases, of businesses to operate (e.g., accept payments, pay vendors and employees), and of local government to collect tax revenue, pay social safety net benefits to vulnerable populations, and pay vendors and employees.

Public Confidence in the Jurisdiction: This type of incident has the potential to negatively impact the public's perception of the local government's competence.

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2.5.5 Dam/Levee/Reservoir Failure

Impact: **High**

Probability: **Unlikely**

Related Hazard(s): **Earthquake, Flood/Storm**

Nature of hazard

A dam is an artificial barrier that has the ability to store water, wastewater, or liquid-borne materials for many reasons (flood control, human water supply, irrigation, livestock water supply, energy generation, containment of mine tailings, recreation, or pollution control.) Man-made dams can be classified according to the type of construction material used, the methods used in construction, the slope or cross-section of the dam, the way the dam resists the forces of the water pressure behind it, the means used for controlling seepage, and, occasionally, according to the purpose of the dam. The materials used for construction of dams include earth, rock, tailings from mining or milling, concrete, masonry, steel, timber, miscellaneous materials (plastic or rubber), and any combination of these materials (Association of State Dam Safety Officials 2013).

Dam failures typically occur when spillway capacity is inadequate and excess flow overtops the dam, or when internal erosion (piping) through the dam or foundation occurs. Complete failure occurs if internal erosion or overtopping results in a complete structural breach, releasing a high-velocity wall of debris-filled waters that rush downstream damaging and/or destroying anything in its path (FEMA 1996).

Dam failures can result from one or a combination of the following reasons:

- Overtopping caused by floods that exceed the capacity of the dam
- Deliberate acts of sabotage
- Structural failure of materials used in dam construction
- Movement and/or failure of the foundation supporting the dam
- Settlement and cracking of concrete or embankment dams
- Piping and internal erosion of soil in embankment dams
- Inadequate maintenance and upkeep (FEMA 2013a)

The potential for catastrophic flooding caused by dam failures led to the passage of the National Dam Safety Act (Public Law 92-367). The National Dam Safety Program (NDSP) has been used for 30 years to protect Americans from dam failure. Led by FEMA, the NDSP is a partnership of the states, federal agencies, and other stakeholders that encourages individual and community responsibility for dam safety. Additionally, the United States Army Corps of Engineers (USACE) is responsible for safety inspections of some federal and non-federal dams in the United States that meet the size and storage limitations specified in the National Dam Safety Act.

Levees are man-made structures, usually an earthen embankment designed and constructed with sound engineering practices to contain, control, or divert the flow of water in order to provide

protection from temporary flooding. A levee is built parallel to a body of water, typically a river, to protect the lives and properties downstream from it. Currently, there are thousands of miles of levees across the United States. No levee provides full protection from flooding (FEMA 2013c). Levees are typically barriers between floodwaters and a nearby municipality. They include a series of culverts, canals, ditches, storm sewers, or pump stations, called “interior drainage” systems. These systems channel water from the land side of a levee over to the water side. When floodwaters exceed the height of a levee, overtopping occurs. As the water passes over the top, it can erode the levee, worsening the flooding and potentially causing an opening or breach in the levee. A levee breach occurs when part of a levee gives way, creating an opening through which floodwaters may pass. A breach can occur gradually or suddenly. The most dangerous breaches happen quickly during periods of high water. The resulting torrent can quickly swamp a large area behind the failed levee with little to no warning (American Society of Civil Engineers 2010). USACE operates, maintains, and evaluates levees to determine if they meet accreditation requirements. Most levees are owned by local communities and flood control districts that must ensure proper operation and maintenance of the levee system as well (FEMA 2013c).

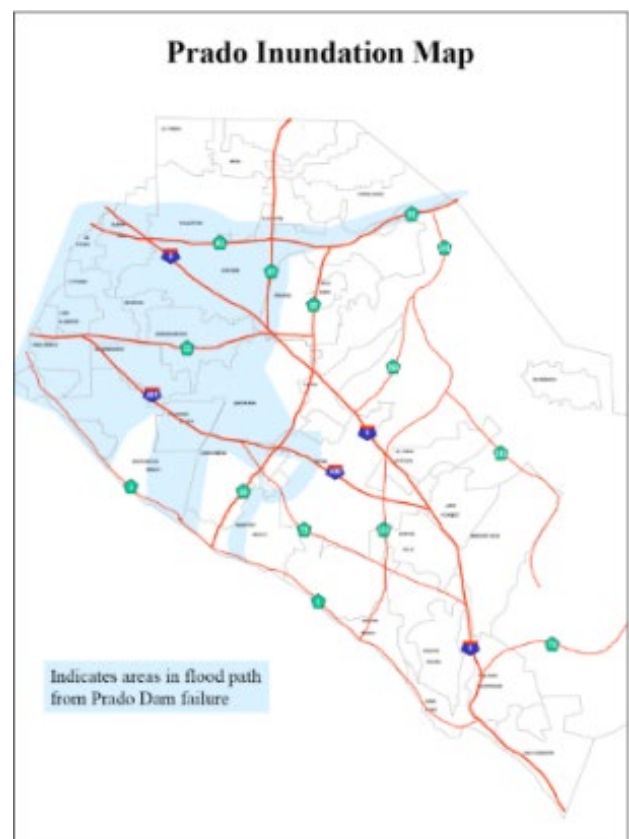
Probability

Dam and reservoir failures can result from a number of natural or man-made causes such as earthquakes, erosion of the face or foundation, improper siting, rapidly rising floodwaters, and structural/design flaws. Currently, there are 44 dams and reservoirs registered within or immediately adjacent to Orange County. They include reservoirs, which normally contain water from flood control facilities, which may be dry most of the time. Their capacity range from 18 acre-feet (Diemer No. 8) to 314,400 acre-feet (Prado Dam) holding capacity.

On September 21, 1998, at 5:47am, a 5 million-gallon precast concrete above ground water storage tank ruptured, sending a 6-foot high wave of water through a nearby fire station and the Hefley Square Townhomes in the City of Westminster. Six people were injured and 30 were left temporarily homeless after water gushed from the 22-foot high rupture in the tank. The fire station, 70 homes, 32 outbuildings, 2 businesses and 25 vehicles sustained damages or were destroyed. Gas, electric and telephone services were disrupted.

On January 13, 2005, the U.S. Army Corps of Engineers discovered minor seepage on the downstream face of Prado Dam. The seepage was located in an area that was under construction to build new outlet works as part of the overall flood control improvement to Prado Dam. As a precautionary measure, Corona city officials evacuated over 800 homes below the dam and

Figure 2: The image below is the Prado Dam Inundation Area



Orange County officials relocated campers in the Canyon RV Park because of their proximity to the adjacent floodplain.

Given the nature of the hazard, there is no reliable way to predict the probability of future occurrence. However, it can be said that incidence of failure is correlated with heavy storm and flooding activity as well as a possible correlation with occurrence of earthquakes.

Vulnerability, Assets and Impact

While the failure of any of the 44 dams in Orange County would have some impact on infrastructure, by far the greatest threat is from Prado Dam. With more than ten times the capacity of the next largest dam on the list, it is the primary concern when it comes to dam and reservoir failure planning in Orange County. Shown above, the area that could be inundated during a Prado Dam failure constitutes much of central and western Orange County. Such an event could be truly devastating to assets and populations in the affected area.

On December 14, 1963, the Baldwin Hills Reservoir, in the Los Angeles County City of Baldwin Hills, experienced a sudden failure and sent water flooding through the downstream communities. The event destroyed 277 homes and killed 5 people. For context, Prado Dam's capacity is more than 300 times greater than that of the Baldwin Park Dam when it failed.

On March 12, 1928, the St. Francis Dam, located just north of the City of Santa Clarita, failed. With a capacity forty times larger than the Baldwin Hills Dam, the ensuing flooding killed hundreds of people (exact casualty numbers are unknown) and destroyed 1200 homes. This was the second deadliest event in the history of California behind the 1906 San Francisco Earthquake.

Depending upon the incident scope, impacts could include:

Public: Impacts could include evacuations of those in the inundation zone. Unhoused populations might need temporary and long term shelters, and assistance in restoring vital records.

Responders: Impacts could include increased calls for service in the inundation zone. Critical response routes may be destroyed or damaged in and around the inundation zone.

Continuity of Operations: No impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Please refer to each dam plan for a descriptive analysis of the property found within its inundation zone.

Supply Chain: No impact is expected from a supply chain perspective.

Environment: The unexpected release could cause widespread damage by altering the land, injuring or killing plants and animals, and changing the water composition downstream from the dam.

Economic and Financial Condition: Homes and businesses within the inundation zones may not have insurance to cover damages. Without assistance, it may be difficult to rebuild homes and re-establish businesses.

Public Confidence in the Jurisdiction: Depending upon the incident cause, impacts may include the public questioning the leadership and investment in public infrastructure.

2.5.6 Disease Outbreak (Large Scale) or Epidemic

Impact: **Low**

Probability: **Likely**

Related Hazard(s): **Pandemic/High Consequence Diseases**

See Disease Outbreak Response Annex (DORA) for additional detail. Hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

Nature of Hazard

A disease outbreak arises when the incidence of disease within a defined community or geographical area/region during a specified time period (e.g. influenza season) exceeds what would normally be expected. An outbreak may occur with a single case of a disease long absent from a population (e.g. smallpox), an agent (e.g. bacterium or virus) not previously recognized in that community or geographical area, a previously endemic disease for which immunity has decreased due to lack of wild-type circulation and decreased immunization rates, or the emergence of a previously unknown disease within a community. The outbreak may occur in a restricted or specific geographical area, may extend over several countries and continents; may occur naturally, be introduced intentionally (e.g. bioterrorism); and may last for a few days, weeks, or for several years.

Vaccines, antibiotics, and improved living conditions have resulted in dramatic declines in communicable diseases in the latter part of the 20th Century. However, infectious diseases have become an increasing threat to all persons in Orange County over the past decades due to a variety of factors such as: population growth (crowding, aging, migration), methods of food production (large scale, wide distribution, importation), environmental changes (drought, encroachment of humans on wild areas, global warming), microbial adaptation (resistance to antibiotics, re-assortment of genetic material), changes in health care (drugs causing immunosuppression, widespread use of antibiotics), and human behavior (travel, diet, sexual behavior, compromised immune systems, immunization rates).

Orange County has programs within the Health Care Agency (HCA) that monitor the occurrence of communicable diseases and work to prevent their occurrence. Under California law, certain communicable diseases are required to be reported to local health departments. An on-call system utilizing Orange County Public Health Nurses allows urgent reports to be received 24 hours per day, 7 days a week. HCA staff investigates individual cases of reported communicable diseases and outbreaks, analyzes trends in disease occurrence, and makes recommendations to prevent spread. More information is available at <https://ochealthinfo.com/about-hca/public-health-services/communicable-disease-control-division>.

Probability

Although transmission of communicable diseases occurs daily in every community, most instances are not of the severity or magnitude to be considered a county-wide hazard. However, an outbreak, epidemic, or pandemic, or the introduction of a novel disease, could pose a large threat to the health of the community. An outbreak is an increase, usually sudden, of occurrences of a particular disease over the baseline occurrence, for a specific time period and place. An epidemic is an outbreak that spreads quickly and widely through a given community or location over a relatively short period of time.

Select examples of endemic diseases of recent relevance will be discussed further in this section. See Pandemic / High Consequence Disease section for discussion of novel or pandemic influenza, emerging pathogens such as MERS-CoV or Ebola, and bioterrorism agents.

Current epidemic threats include:

- Foodborne illness, including norovirus
- Influenza, including seasonal, or novel strains
- Childhood vaccine-preventable diseases, such as measles and pertussis
- Vector-borne diseases including mosquito-borne, and flea-borne diseases
- Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2)/COVID-19
- Hepatitis A

Foodborne Illness, Including Norovirus

The Centers for Disease Control and Prevention (CDC) estimates that every year approximately one (1) in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases in the United States. Extrapolated to the Orange County population, that would suggest approximately 500,000 people get sick with foodborne illness each year. Examples of reportable infections that may potentially be food-borne include bacteria such as Salmonella, Campylobacter, and shiga-toxin producing Escherichia coli (STEC). In Orange County, in a non-COVID pandemic year, on average approximately 400 cases of Salmonella, 500 Campylobacter, and 70 STEC are reported each year. Not all foodborne illness is reportable and even the diseases that are reportable are under-reported and under-diagnosed. We do not have exact numbers of how many people are affected. In general, foodborne illnesses cause symptoms such as diarrhea, vomiting, and/or abdominal cramps. Some people may also have fever. Complications of foodborne illnesses include dehydration and spread of the infection to the blood or other parts of the body, especially if bacteria is involved.

Influenza

Influenza is a respiratory viral infection that can cause mild to severe illness, with hospitalizations and deaths, especially in young children, older people, and people with certain health conditions. Seasonal influenza epidemics occur every year. Factors that may affect the severity of the season include the predominant influenza virus strains that are circulating, immunity of the population to

those strains, the match and effectiveness of the vaccine to the circulating strains, and vaccine uptake. In 2018-2019, the Centers for Disease Control and Prevention (CDC) estimates there were 35.5 million people sick with influenza, 16.5 million medical visits, 490,561 hospitalizations and 34,157 deaths from influenza in the U.S. This was a decrease from the 2017-2018 season. The CDC recommends that everyone 6 months of age and older are vaccinated every year against influenza and that people with influenza stay home for at least 24 hours after their fever is gone without the use of fever-reducing medicine.

Childhood Vaccine-Preventable Diseases, such as Measles and Pertussis

Before the middle of the last century, life-threatening diseases such as Haemophilus influenzae, diphtheria, polio, measles and rubella affected hundreds of thousands of infants, children, and adults in the United States, with thousands dying every year. Since the advent and widespread use of vaccines, these diseases have declined dramatically and nationally, vaccine-preventable disease levels are at or near record lows. Vaccinations for chickenpox, diphtheria, Haemophilus influenzae type B, hepatitis A, hepatitis B, influenza, measles, mumps, pertussis, polio, pneumococcus, rotavirus, and rubella are now routinely available for infants and children. However, this is not the case throughout the world and outbreaks of diseases such as polio and measles still occur regularly. Even though most children in the U.S. have received the recommended vaccines by age 2 years, many under-immunized children remain, leaving the community vulnerable to outbreaks of these diseases. The California Department of Public Health compiles data annually on immunization rates at kindergarten entry by school and makes it available on an interactive website (<http://www.shotsforschool.org/k-12/how-doing/>). For Orange County-specific data on vaccination rates for the MMR (measles, mumps, rubella) vaccine by school district, see <https://media.ocgov.com/civicax/filebank/blobdload.aspx?BlobID=41625>.

- **Measles** - Measles is one of the most contagious of all infectious diseases with over 90% of exposed people developing infection if they are not already immune, either by previous infection or immunization. In the pre-vaccination era, there were on average over 500,000 cases in the U.S. and almost 500 deaths reported annually. Cases dropped dramatically after vaccination against measles was introduced in the 1960's and a second dose of vaccine was routinely recommended in 1989. In 2000, measles was declared eliminated in the U.S., meaning there was no ongoing transmission, but cases and outbreaks continue to occur from visitors or returning travelers from countries where measles is still common introducing the virus into unvaccinated or under-vaccinated communities. Outbreaks can occur when measles is imported into a community in the U.S. where groups of people are unvaccinated. Between 0-3 cases of measles are generally reported each year in Orange County residents, however there were 35 cases in 2015 and 23 cases in 2014 associated with the outbreaks below:
 - 2015: The United States experienced a large, multi-state measles outbreak linked to an amusement park in California [Orange County]. The outbreak likely started from a traveler who became infected overseas with measles, then visited the amusement park while infectious; however, no source was identified. Analysis by CDC scientists showed that the measles virus type in this

- outbreak (B3) was identical to the virus type that caused the large measles outbreak in the Philippines in 2014.
- The estimated public health cost in California for the 2015 outbreak is \$1.56-\$3.91 million dollars. This does not include costs to health care facilities participating in contact investigations, lost work or school for cases and quarantined persons and their caregivers. Total hospitalization costs are estimated to be about \$500,000 for the 21 hospitalized patients.
- **Pertussis** - Pertussis (whooping cough) is a highly contagious respiratory infection caused by a bacteria *Bordetella pertussis*. Although symptoms may be mild and resemble an ordinary "cold" in some people, the infection may become more serious, particularly in infants, and cause hospitalizations and even death. Infections in the U.S. decreased dramatically with the advent of the whole-cell DTP (diphtheria, tetanus, pertussis) vaccine in the 1940's, but have increased over the past 20-30 years, partially because of increased awareness, improved testing, better reporting, and waning immunity from the acellular pertussis vaccine (DTaP) used since the 1990's. California has had particularly large outbreaks since 2010 with numbers as high as those in the 1940's. Over 9,000 pertussis cases and 10 infant deaths were reported with disease onset in 2010 and over 11,000 cases and 3 infant deaths were reported with disease onset in 2014. In Orange County, 467 pertussis cases were reported in 2010 and 397 in 2014.

Serve Acute Respiratory Syndrome Coronavirus (SARS-CoV-2)/COVID-19

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2) also known as Coronavirus (COVID-19) is a new disease first identified in Wuhan China in 2019. It is caused by a novel (or new) coronavirus that has not previously been seen in humans. The virus mainly spreads from person to person when they are in close contact (within 6 feet of for at least 15 minutes within a 24-hour period during the infectious period). Although most people who have COVID-19 have mild symptoms, COVID-19 can also cause severe illness and even death. Some groups, including older adults and people who have certain underlying medical conditions, are at increased risk of severe illness. Severity of illness may require hospitalization, including intensive care, and may result in death. The CDC recommends COVID-19 for everyone 6 months and older as Immunization against COVID-19 continues to offer protection against more serious illness, hospitalization, and death.

The global COVID-19 pandemic has spread to 223 countries, areas, or territories with over 100 million cases and millions of deaths reported worldwide. The United States has over 30 million cases and over 500,000 COVID-19 associated deaths. As of April 2023, there have been 717,154 cases reported and 8,090 deaths in Orange County. There were 322,881 cases were reported in 2022.

Hepatitis A

Hepatitis A is a highly contagious liver infection caused by the hepatitis A virus, which is spread mainly person-person through the fecal-oral route or consumption of contaminated food or water. Although young children often have no or mild symptoms, most adults have signs and

symptoms of illness, which include low appetite, tiredness, stomach pain, nausea, and jaundice (yellow skin). Symptoms resolve on their own, generally within 2 months of infection. Vaccination against hepatitis A is the best way to prevent infection and is part of the routine childhood schedule with the first dose at 1 year of age and the second dose 6 months after the first. Catch-up vaccination of adolescents is recommended at any time. Adults at increased risk of hepatitis A infection are also recommended to get vaccinated; this include persons traveling or working in countries where hepatitis A is common; family and caregivers of adoptees from countries where hepatitis A is common; men who have sexual encounters with other men; users of recreational drugs, whether injected or not; people with chronic or long-term liver disease, including hepatitis B or hepatitis C; people with clotting-factor disorders; people with direct contact with others who have hepatitis A; people who are homeless; and any person wishing to obtain immunity (protection). Hepatitis A vaccine can also be used to prevent infection after exposure if given within 2 weeks. Immune globulin is also available for post-exposure prophylaxis in infants or persons with immune compromise or chronic liver disease.

Hepatitis A outbreaks have occurred several times over the past decade associated with foodborne sources. In 2013, a large multistate outbreak of hepatitis A linked to pomegranate seeds from Turkey infected 165 people, included 79 in California. Orange County had also received the contaminated product in a frozen berry blend sold at chain warehouse stores and several exposed persons needed post-exposure prophylaxis. In 2016, another multistate outbreak was linked to frozen strawberries from Egypt and affected 143 persons in 9 states.

Since March 2017, outbreaks of hepatitis A have been reported in several states including California that have primarily affected persons who use injection and non-injection drugs, and/or persons who are homeless, and their close direct contacts. Although Orange County did not have its own related hepatitis A outbreak and only had two cases associated with the San Diego outbreak in 2017-2018, many outreach and prevention activities were conducted in our County. The outbreak in San Diego continued from November 2016 to October 2018 and resulted in 592 cases and 20 deaths. A local health emergency was declared on September 1, 2017 and ended on January 23, 2018. Between March 2017 and October 3, 2018, 203,850 hepatitis A vaccines were given in San Diego in response to the outbreak. In addition to vaccination, response included street washing, installation of portable toilets and hand-washing stations, and erection of temporary shelters for the homeless. The cost of San Diego County's response was estimated to be approximately \$12.5 million as of the end of April 2018.

Vulnerability, Assets, and Impact

The impact of a large disease outbreak is highly variable and will depend on many factors including severity of disease and type of care needed, number of cases, number exposed, and type of investigation/follow-up measures needed.

Additional considerations are discussed in more detail in the Pandemic/High Consequence Disease Section.

Depending upon the incident scope, impacts could include:

Public: Aside from healthcare costs, morbidity and loss of work/school days associated with illness, patients and their contacts may also be required by public health to stay home during proscribed periods (isolation or quarantine, respectively) to decrease the risk of transmission. Businesses, schools, or organizations may similarly be affected if cases occurred in their facility and exposures need to be followed-up.

Responders: Healthcare facilities may experience a surge in patients but even with just one or a few cases, may be adversely affected due to exposures at the facility necessitating patient and/or staff follow-up, testing, and/or furlough. In addition to large numbers of cases and or contacts needing interview, evaluation, testing, and follow-up and institution of additional surveillance mechanisms, large groups may also need administration of some sort of treatment or vaccination (medical countermeasures) that will be coordinated through public health. Dissemination of health information and education of medical providers will also be essential to any outbreak response.

Continuity of Operations: Government agencies may struggle with staffing shortages if staff and their families become ill. There may be an increased demand for services that challenges how system support is prioritized.

Property, Facilities, Assets, and Critical Infrastructure: Health care facilities may exceed capacity. Demand for patient-support equipment and supplies may exceed available resources. Operations of critical infrastructure may be impacted if individuals with specialized training or knowledge become sick or unavailable.

Supply Chain: There may be significant shortages of both critical and basic supplies as both public and private sector operations deal with staffing shortages and resources are re-allocated to address prioritized needs. There may be a shortage of supplies normally stocked on a just-in-time basis.

Environment: Increased trash may be generated by increased use of personal protective equipment (e.g., masks, gloves, etc.) and testing. If not appropriately tested for and mitigated against, diseases may be traced into the environment through wastewater.

Economic and Financial Condition: Depending upon safety measures, there could be lost wages for sick individuals and their families. Business and tax revenues could decline as individuals reduce work hours and reduce spending. Simultaneously, there could be an increased demand for social service benefit programs to aid community members.

Public Confidence in the Jurisdiction: Some community members could question government policy choices (e.g., protective action recommendations) and become concerned on how the medical establishment is addressing the disease.

2.5.7 Drought

Impact: **Moderate**

Probability: **Possible**

Related Hazard(s): **Climate Change**

Nature of Hazard

Unlike most natural hazards, drought is not a sudden, catastrophic occurrence. Because drought can occur over several years, it is difficult to define when a drought begins and ends. A drought is characterized by a prolonged period of abnormally low levels of precipitation that has adverse impacts on people, vegetation, and animals. A drought is a temporary phenomenon and as such, it is distinct from aridity, which is a climatic feature of a particular region. Droughts occur periodically in every climatic zone, although some areas are more drought-prone than others.

There are a number of indices which measure the severity of drought with varying degrees of accuracy due to local variability. The most common index used to monitor drought is the Palmer Drought Severity Index (PDSI) which includes indicators like: levels of precipitation, soil conditions (moisture), and temperature. Weekly maps of PDSI for the United States are available at: <https://www.cpc.ncep.noaa.gov/> particular interest in California, is the impact of evapotranspiration (ET) whose exacerbation of drought conditions is experimentally monitored through Evaporative Stress Index (ESI) and Evaporative Demand Drought Index (EDDI)¹⁶.

There are four categories of drought:

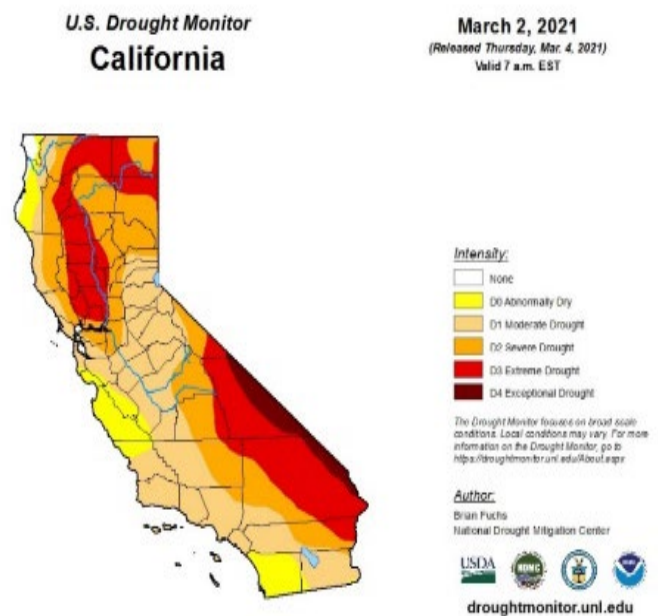
Meteorological – When there is a measurable departure of precipitation from normal, adjusted for regional climate differences.

Agricultural – When the amount of moisture in the soil no longer meets the needs of crops.

Hydrological – When surface and subsurface water supplies are below normal.

Annual Indicators – In California, when the Department of Water Resources assesses water conditions based upon annual averages of snowpack, precipitation, and reservoir storage.

Figure 3: U.S. Drought Monitor for California



¹⁶ <https://psl.noaa.gov/eddi/>

Regulatory Environment

Federal

In October 2020, a Presidential Executive Order¹⁷ created the Interagency Water Subcabinet (a.k.a. Water Policy Committee), co-chaired by the Secretary of the Interior and the Administrator of the Environmental Protection Agency (EPA), and including the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Energy, the Secretary of the Army. Two of the Water Cabinet goals are to implement:

The “Priority Actions Supporting Long-Term Drought Resilience” document issued on July 31, 2019, by the National Drought Resilience Partnership; and actions identified in the “Federal Action Plan for Improving Forecasts of Water Availability” issued on October 18, 2019, by the Department of the Interior and the Department of Commerce pursuant to section 3 of the Presidential Memorandum of October 19, 2018 (Promoting the Reliable Supply and Delivery of Water in the West).¹⁸

These activities include coordinating drought activities through the National Integrated Drought Information System (drought.gov). Within this framework the U.S. Department of Commerce, the National Oceanic and Atmospheric Administration (NOAA) leads monitoring. Agencies such as the U.S. Geological Survey and National Aeronautics and Space Administration (NASA) contribute data. The U.S. Department of Agriculture leads drought response efforts, and the EPA regulates water quality.

California

Additional sources of California-specific information include the 2018 California Water Plan¹⁹, 2018 Safeguarding California Plan: California’s Climate Adaptation Strategy²⁰, 2014-2018 California Water Action Plan Implementation Report²¹, and 2020 California’s Most Significant Droughts: Comparing Historical and Recent Conditions²².

The 2015 California Drought Contingency Plan was prepared in conjunction with the California Water Plan and both documents are updated every five years. The purpose of the plan is to minimize drought impacts by improving agency coordination, enhancing monitoring and early warning capabilities, conducting water shortage impact assessments, and implementing preparedness, response, and recovery programs. The California Water Plan presents strategic plan

¹⁷ <https://www.whitehouse.gov/presidential-actions/executive-order-modernizing-americas-water-resource-management-water-infrastructure/>

¹⁸ <https://www.whitehouse.gov/presidential-actions/presidential-memorandum-promoting-reliable-supply-delivery-water-west/>

¹⁹ <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/California-Water-Plan-Update-2018.pdf>

²⁰ <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>

²¹ https://resources.ca.gov/CNRALegacyFiles/wp-content/uploads/2019/01/CWAP_Implementation_Report_Finalpdf.pdf

²² https://cawaterlibrary.net/wp-content/uploads/2017/05/CalSignificantDroughts_v10_int.pdf

elements including a vision, mission, goals, guiding principles, and recommendations for current water conditions, challenges, and activities. The plan includes future uncertainties and climate change impacts, scenarios for 2050, and a roadmap for improving data and analytical tools.

Orange County

Localized regulations for drought are mentioned in local municipal codes. The County of Orange, Code of Ordinances Section 3 provides the definition of a drought emergency. Section 7 defines use of water and landscaping during conservation times under the state model, and Article 1 outlines water conservation and the governance over well water use in Orange County. All retail water utilities have drought ordinances that specify use of drinking water during the various phases of drought.

Additionally, as directed by SB552, the County is developing a draft Orange County Domestic Well Resilience Plan for small water systems and rural communities. These new requirements are expected to improve the ability of Californians to manage future droughts and help prevent catastrophic impacts on drinking water for communities vulnerable to impacts of climate change.

As required by this Bill, the County has establish a Drought Task Force which will be headed by OC Public Works in coordination with the Water Emergency Response of Orange County (WEROC). The function of the Task Force will be to facilitate drought and water shortage preparedness for local small water systems (serving 5 to 14 connections), domestic wells and other privately supplied homes within the County's jurisdiction.

The County is in the process of developing an Orange County Domestic Well Resilience Plan which will demonstrating the potential drought and water shortage risk and proposed interim and long-term solutions for local small water systems and domestic wells within the County.

In the early 1800's, laws were enacted to determine water rights, and by the mid-1800's, the California Gold Rush inspired a population surge. During this time, Orange County communities relied heavily on surface water provided by the Santa Ana River to meet their basic needs, and with just a single source of water to rely upon, residents here were severely impacted by periods of drought and flood. The introduction of groundwater as a water source released the region from the limitations of the Santa Ana River, allowing Orange County to grow faster than ever before. With a significant portion of the county now pulling water out of the ground, the aquifer quickly became over-pumped. Soon, it became clear that Orange County cities needed to seek alternative sources of water.

In 1928, Anaheim, Fullerton, and Santa Ana joined ten other Southern California cities in the formation of the Metropolitan Water District of Southern California (Metropolitan). The aim was to import water from the Colorado River for the thirsty region. The supplemental water supplies of Metropolitan encouraged other Orange County water providers to collaborate, creating the Coastal Municipal Water District (Coastal) in 1941, and Orange County Municipal Water District (OCMWD) in 1951. OCMWD would go on to change its name to Municipal Water District of Orange County (MWDOC).

Today, MWDOC serves nearly 3.2 million Orange County residents through 27 retail water agencies. MWDOC's service area covers all of Orange County with the exception of the cities of Anaheim, Fullerton and Santa Ana. As a wholesale water supplier and resource planning agency.

Orange County water agencies include 11 independent special districts and 16 city water department along with 1 private which is Golden State Water Company. Water supplies in Orange County come from both local and imported sources. Local supplies in Orange County vary regionally and include groundwater, recycled wastewater, and surface water. North Orange County is primarily located within Orange County Groundwater Basin (Basin) managed by the Orange County Water District (OCWD). In the Basin managed by OCWD, groundwater supplies in approximately 80 percent of the water supply. There are limited ground water supplies in south Orange County, which relies primarily metropolitan 70 % is imported water, 25% recycles and other water resources.

Figure 4: Source of Water Supplies in Fiscal Year 2022/2023

Agency	Imported Water Use	Local Water Use	Recycled Water (Direct Non- Potable)
Anaheim	70.28%	29.59%	0.14%
Brea	0.06%	99.94%	0.00%
Buena Park	11.08%	88.92%	0.00%
East Orange CWD RZ	100.00%	0.00%	0.00%
El Toro WD	79.04%	5.73%	15.23%
Fountain Valley	9.84%	79.72%	10.44%
Fullerton	39.17%	60.83%	0.00%
Garden Grove	18.54%	81.46%	0.00%
Golden State WC	43.15%	56.46%	0.39%
Huntington Beach	14.81%	85.19%	0.00%
Irvine Ranch WD	14.42%	59.65%	25.93%
La Habra	2.96%	97.04%	0.00%
La Palma	0.25%	99.75%	0.00%
Laguna Beach CWD	84.91%	15.09%	0.00%
Mesa WD	0.07%	94.92%	5.01%
Moulton Niguel WD	76.84%	4.06%	19.09%
Newport Beach	16.74%	79.85%	3.41%
Orange	14.69%	85.31%	0.00%
San Clemente	86.71%	0.00%	13.29%
San Juan Capistrano	79.09%	10.91%	10.00%
Santa Ana	25.78%	73.38%	0.84%
Santa Margarita WD	73.70%	3.77%	22.53%
Seal Beach	21.49%	78.51%	0.00%
Serrano WD	0.00%	100.00%	0.00%
South Coast WD	75.28%	13.92%	10.80%
Trabuco Canyon WD	60.58%	16.51%	22.91%
Tustin	44.72%	55.28%	0.00%
Westminster	10.76%	89.24%	0.00%
Yorba Linda WD	16.32%	83.68%	0.00%
Orange County	34.96%	56.50%	8.54%

Probability

Droughts are a recurring feature of California's climate, but climate change is projected to increase the frequency, intensity, and duration of droughts²³. Current information on drought conditions in California, visit: <https://water.ca.gov/Current-Conditions>.

Historically, California has experienced severe drought conditions. In the last century, the most significant statewide droughts occurred from 1929 to 1934, from 1975 to 1977, from 1987 to 1992, and from 2012 to 2017. The 2012-2017 drought was one of extreme proportions, with record-high temperatures and record-low levels of snowpack and precipitation. The approved 2018 State Hazard Mitigation Plan (SHMP) includes comprehensive statewide statistics on these droughts and related emergency proclamations.²⁴ Orange County has been included in two emergency proclamations: 2002 and 2012-2017. The Governor issued a statewide emergency proclamation which, when it was lifted in April 2016, retained clauses that prohibit wasteful practices and advances measures to make conservation a way of life. The latest 2021 drought, brought a statewide emergency proclamation and governor executive order. Water agencies were required to activate their Urban Water Use Contingency plan which contain water shortage protocols in which drought is a consideration. Most agencies plans were activated to a level two which required limitations or restrictions to certain uses of water.

Assessments of drought probability should also take into account droughts occurring in other regions which may impact water conditions in Orange County. For example, the great drought of the 1930s, coined the "Dust Bowl," was geographically centered in the Great Plains yet ultimately caused water shortages in California. The drought conditions in the Plains resulted in a large influx of people to the west coast. Approximately 350,000 people from Arkansas and Oklahoma immigrated mainly to the Great Valley of California. As more people moved into California, increases in intensive agriculture led to overuse of Santa Ana River watershed and groundwater resulting in regional water shortages.

Vulnerability, Assets, and Impact

Drought's impacts result from the interplay between the natural event (less precipitation than expected) and the demand people place on water supply; human activities can exacerbate the impacts of drought. Drought produces a complex web of impacts that spans many sectors of the economy and reaches well beyond the area experiencing physical drought. This complexity exists because water is integral to our ability to produce goods and provide services. The magnitude of the drought's impact will be directly related to the severity and length of the drought.

Depending upon the incident scope, impacts could include:

Public: There may be voluntary and mandatory water restrictions enacted to conserve water. In extreme cases, water systems may no longer function and water may be distributed at designated locations.

²³ <https://advances.sciencemag.org/content/1/1/e1400082>

²⁴ https://www.caloes.ca.gov/wp-content/uploads/002-2018-SHMP_FINAL_ENTIRE-PLAN.pdf

Responders:

- Water agencies: Water Supply and Quality - Drought negatively impacts both the quantity and quality of water supplies. While a reduction in water supply is generally a temporary phenomenon, it can be permanent in some instances. Groundwater overdraft, for example, can cause land to sink, resulting in a permanent loss of groundwater storage. Drought can also compromise water quality, such as by concentrating salts and other contaminants, reducing dissolved oxygen levels, and increasing water temperatures. Water quality problems can exacerbate water supply problems.
- Other responders: In extreme drought, agencies that depend on water for firefighting or health-related (e.g., dialysis) purposes, may have to identify alternative response and operations protocols to adapt to low/no water conditions.

Continuity of Operations:

- Rural Communities: Rural communities are often dependent on a single water source, which increases vulnerability to water scarcity. Declining water supplies and water quality problems may force communities to switch to bottled water, dig deeper wells, and truck in water to refill holding tanks. These actions can impose local economic hardships on those living in rural areas, many of whom are among the most disadvantaged communities.
- Urban Areas: Large urban areas are rarely at risk of running out of water. These often have multiple water sources, and their water needs are typically prioritized over other uses. Urban water utilities can implement a range of voluntary and mandatory water conservation programs, including education programs, incentives to install water-efficient appliances and gardens, and restrictions on discretionary water uses, such as watering lawns. Impacts may include increased water utility costs and increasing prices for those goods and services that are dependent upon water, like groceries. In extreme cases, some businesses, like hotels, may add a surcharge to accommodate increased water costs.

Property, Facilities, Assets, and Critical Infrastructure: Drought can strain the energy system. The generation of hydroelectricity may drop dramatically as streamflow declines, increasing electricity prices as electricity production shifts to the more expensive fossil fuel (e.g., natural gas). Electricity generation from thermoelectric plants may also be curtailed if insufficient cooling water is available or if temperature limits in receiving waters are exceeded. Additionally, higher temperatures associated with drought reduce the efficiency of thermal power plants and of transmission and distribution lines while increasing energy demand for cooling and air-conditioning systems.

Additionally, increased groundwater pumping during times of drought can contribute to land subsidence problems, leading to damaged roads and sinkholes. However, the basins

in Orange County are managed basins, restricting over-pumping and managing recharge operations.

Supply Chain: Dependencies on water exist across industries; thus, drought could disrupt supply chains broadly. This includes disrupting normal agricultural functions and supply chains, industrial processes (e.g., fabricating, processing, etc.), and water-borne transportation operations.

Environmental: Environmental impacts include damages to plant and animal species, wildlife habitat, and air and water quality; forest and range fires; degradation of landscape quality; loss of biodiversity; and soil erosion. Some of the effects are short-term and conditions quickly return to normal following the end of the drought. Other environmental effects linger for some time or may even become permanent. The degradation of landscape quality, including increased soil erosion, may lead to a more permanent loss of biological productivity of the landscape. Droughts also bring increased problems with insects and diseases to forests and reduce growth. The incidence of forest and range fires increases substantially during extended droughts, which in turn places both human and wildlife populations at higher levels of risk. Although environmental impacts are difficult to quantify, growing public awareness and concern for environmental quality has forced public officials to focus greater attention and resources on these effects.

- **Fish and Wildlife:** During times of drought, political pressures often increase diversions of water away from ecosystems. As water levels in streams, rivers, and lakes decline, fish and wildlife are at risk of dying, potentially causing regional extinctions. Ecosystems under severe pressures due to water diversions, saltwater intrusion, and other stresses are especially vulnerable. Wildlife habitat, for example, may be degraded through the loss of wetlands, lakes, and vegetation. However, many species will eventually recover from this temporary aberration.
- **Agriculture:** Some farmers and water districts with junior water rights may see water allocations from state and federal irrigation projects cut during a drought. Farmers facing a water shortage may seek temporary water transfers from other users, increase groundwater pumping, change the types of crops they grow, move towards drought-resilient irrigation, or leave some lands fallow. Farmers may see reduced yields in crop and livestock production, increased insect infestations, plant disease, and wind erosion.

Economic and Financial Condition: Businesses, water utilities, and individuals are financially impacted by drought. For businesses that are reliant on water, including some medical facilities, the inability to access water or high water prices may impact their ability to provide services. For most water utilities, fixed costs (e.g., debt service on past water system investments) are relatively high and variable costs (e.g., energy and chemical costs) are relatively low. Reducing water use cuts variable costs but has no impact on fixed costs (at least in the short term). As water use declines, revenue from the sale of water also

declines and may not be sufficient to recover the fixed costs. In response, water utilities may enact drought surcharges or draw from reserves. While surcharges increase the water rate (i.e., the price per gallon), those using less water may actually see their bills go down. Furthermore, conservation lessens the impact of the drought on water bills by avoiding the purchase of more expensive water supplies. Some water utilities may have to adjust their treatment processes or supply based on availability, resulting in higher operating costs and, at times, damage to their filters over long periods of time.

During the drought that affected California from 2012-2016, some areas of the state experienced an increase in groundwater wells going ‘dry’ (groundwater pumping from the well ceasing because of declining groundwater elevations). In response to the drought, in 2013, the state began collecting data on ‘dry’ domestic (household) groundwater wells. Figure 1 shows the distribution of reported dry household wells in California for the period from year 2013 to March 25, 2022. During this time period, a total of 3,797 dry household wells were reported to the California Department of Water Resources (DWR) and reported through DWR’s Household Water Supply Shortage Reporting System (<https://mydrywell.water.ca.gov>). A relatively large number of the reported dry household wells in Figure 1 occurred in the Central Valley of California. Of the 3,797 reported dry wells, none were located in Orange County. Figure 2 is similar to Figure 1 but focuses on southern California and indicates there were no reported dry household wells in Orange County. A review of the database provided through <https://mydrywell.water.ca.gov> also indicates there were two reported dry wells in Orange County from year 2013 to March 25, 2022.

Figure 5: Dry Household Wells Reported by CA Department of Water Resources

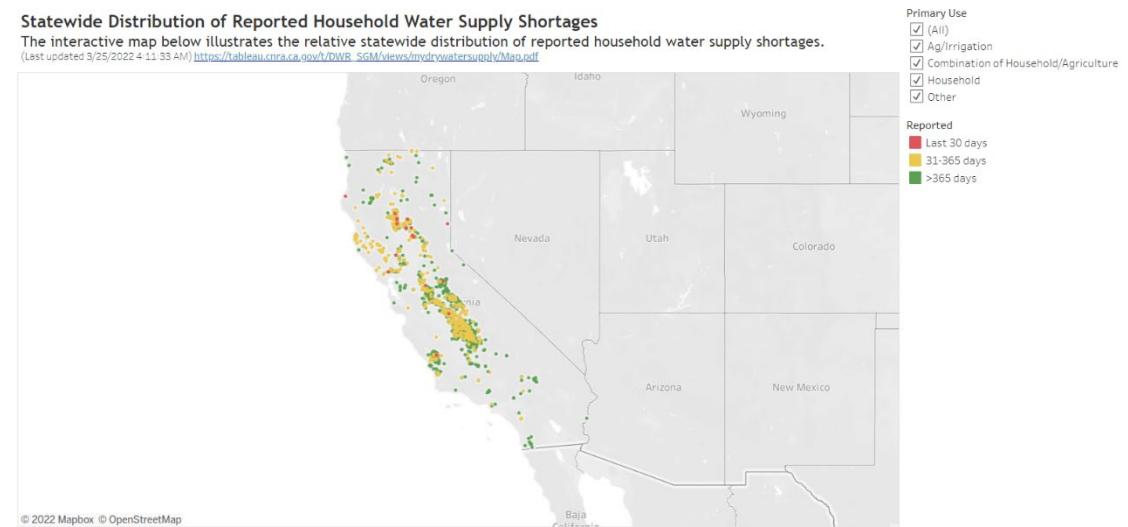
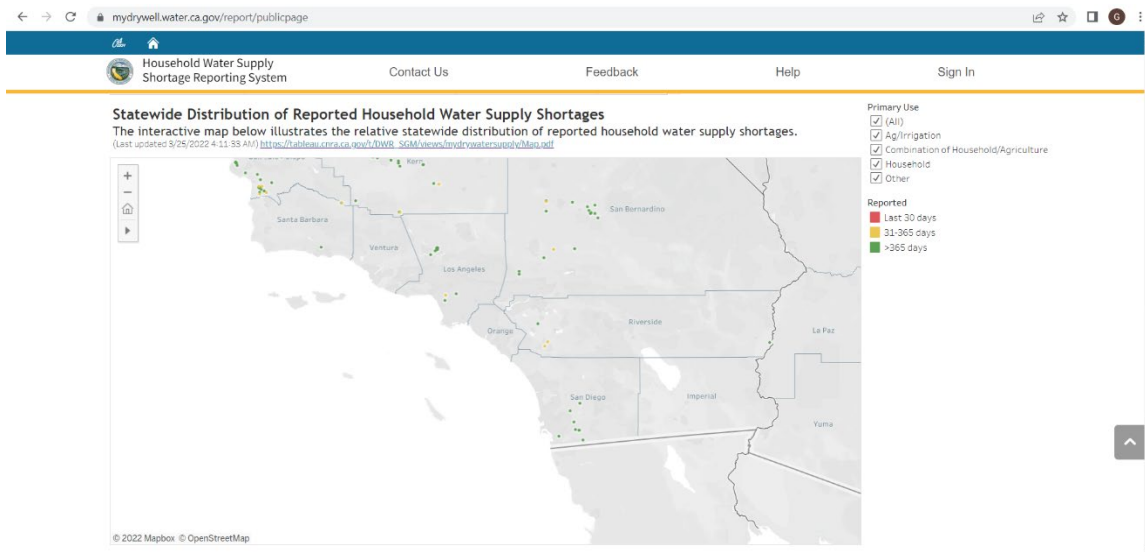


Figure 6: Dry Household Wells Reported in Southern California



Public Confidence in the Jurisdiction: Depending on how visible the impacts of the drought are, and how proactive government entities may be in responding to the drought, the public may react negatively to mitigation actions. For example, the public may not support restrictions on water use, zoning to prevent pools and fountains, water audits, restrictions on vehicle washing, or non-residential use restrictions. The public may respond positively to proactive programs like DIY kits, showerhead swaps, rainwater tank collection rebate programs, and appliance swaps.

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2.5.8 Earthquake

Impact: **High**

Probability: **Likely**

Related Hazard(s): Mass Casualty, Fire, Hazardous Materials Release, Evacuations, Tsunami, Oil Spill, Debris Management, Utility Failure, Business / Economic Failure

See Southern California Catastrophic Earthquake Plan (2022) for additional detail. An electronic version is available in PrepareOC. Additionally, hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

Figure 7: Orange County Fault Zones



Nature of Hazard

An earthquake is the sudden movement of the earth's surface caused by the release of stress accumulated within or along the edge of the earth's tectonic plates, a volcanic eruption, or by a manmade explosion. Most earthquakes occur at the boundaries where the earth's tectonic plates meet (faults); less than 10% of earthquakes occur within plate interiors.

According to the United States Geological Survey (USGS) Earthquake Hazards Program, an earthquake hazard is any disruption associated with an earthquake that may affect residents' normal activities. This includes surface faulting, ground shaking, landslides, liquefaction, tectonic deformation, tsunamis, and seiches. Ground shaking is the primary cause of earthquake damage to man-made structures.

Seismic waves are the vibrations from earthquakes that travel through the earth and are recorded on instruments called seismographs. The magnitude or extent of an earthquake is a measured value of the earthquake size, or amplitude of the seismic waves, using a seismograph. The Richter magnitude scale (Richter scale) was developed in 1932 as a mathematical device to compare the sizes of earthquakes. The Richter scale is the most widely known scale that measures the magnitude of earthquakes. It has no upper limit and is not used to express damage. An earthquake in a densely populated area, which results in many deaths and considerable damage, may have the same magnitude and shock in a remote area that did not experience any damage.

Probability

Orange County lies in an area that is seismically active with multiple documented fault lines. The largest and most impactful fault that runs near this area is the San Andres fault that is approximately 40 to 60 miles east of Orange County. This fault is capable of producing an estimated magnitude 8.1 earthquake that has the potential to not only have significant impacts to Orange County, but could have large-scale impacts to the entire region. The 2019 Ridgecrest earthquakes that hit on July 4 and July 5 with a magnitude of 6.4 and 7.1 respectively stressed the Garlock Fault and the effects were felt across Orange County. If it ruptured in a large shock, it would likely trigger a San Andreas earthquake north of Los Angeles.

There are five known fault zones that run through Orange County and they could pose hazards to the county. The largest of these faults is the Newport-Inglewood fault that runs roughly 47 miles from Downtown Los Angeles to North San Diego. This fault zone has the potential of producing an estimated magnitude 7.3 earthquake or greater. The most recent significant earthquake on this fault was the Long Beach quake in 1933. This quake of 6.3 magnitude caused an estimated 40 million dollars in damage throughout the region and there were 115 -120 fatalities.

While earthquakes remain unpredictable, the USGS has repeatedly stated that the San Andreas Fault is “long overdue” for a major quake. A new California earthquake study by the USGS, California Geological Survey, and the Southern California Earthquake Center estimates for the likelihood that California will experience a magnitude 8 or larger earthquake in the next 30 years has increased from about 4.7% to about 7%.²⁵

Vulnerability, Assets, and Impact

A significant earthquake (5.0 or greater) in the Orange County area or the region can strike without warning, and may create cascading effects. These may include:

- Landslides and mudslides: Any steep slope is vulnerable to slope failure, often as a result of loss of cohesion in clay-rich soils.
- Dam failures: The most common mode of earthquake-induced dam failure is slumping or settlement of earth-fill dams where the fill has not been properly compacted. If the slumping occurs when the dam is full, then overtopping of the dam, with rapid erosion leading to dam failure is possible. Dam failure is also possible if strong ground motions heavily damage concrete dams. Earthquake-induced landslides into reservoirs have also caused dam failures.
- Liquefaction: Liquefaction is the conversion of water-saturated soil into a fluid-like mass. This can occur when loosely packed, waterlogged sediments lose their strength in response to strong shaking. Liquefaction effects may occur along the shorelines of the ocean, rivers, and lakes and they can also happen in low-lying areas

²⁵ Retrieved from <https://www.conservation.ca.gov/cgs/Pages/Earthquakes/UCERF3.aspx>

away from water bodies in locations where the ground water is near the earth's surface.

- Tsunamis: A large earthquake can lift large portions of the seafloor which will cause the formation of huge waves.

Impact consideration resources include:

- USGS Earthquake Faults Mapping: <https://www.usgs.gov/programs/earthquake-hazards/faults>
- Scenario maps and impact modeling: <https://earthquake.usgs.gov/data/shakemap/>
- Earthquake Liquefaction Mapping: <https://www.usgs.gov/programs/earthquake-hazards/science/liquefaction-hazard-maps>
- Tsunami Inundation Mapping: https://nctr.pmel.noaa.gov/inundation_mapping.html

Depending upon the incident scope, impacts could include:

Public: Many families could be separated should the earthquake occur during working hours. Normal transportation routes and modes may be impacted preventing people from getting to their loved ones. Damage to communications infrastructure may prevent individuals from connecting with loved ones. Other impacts to the public could include losses of shelter, income sources, healthcare access, and access to food and water.

Responders: Following major earthquakes, extensive search and rescue operations may be required to assist trapped or injured persons. Emergency medical care, food and temporary shelter would be required for injured or displaced persons. In the event of a truly catastrophic earthquake, identification and burial of the fatalities would pose difficult problems. Mass evacuation may be essential to save lives, particularly in areas below dams. Emergency operations could be seriously hampered by the loss of communications and damage to transportation routes within, to and out of the disaster area and by the disruption of public utilities and services. Unless properly secured, hazardous materials can be released, causing significant damage to the environment and people. Extensive federal assistance could be required and could continue for an extended period.

Continuity of Operations: Key personnel and facilities may be impacted by the earthquake challenging the County/OA ability to re-establish operations. Personnel may also have lost loved ones or homes, so that they cannot report to work.

Property, Facilities, Assets, and Critical Infrastructure: Multiple locations and systems may be structurally compromised, or their essential facility services (e.g., power, water, and wastewater) may be disrupted making the facilities unusable. Prioritization of inspection and repair services may delay restoration of those facilities and services.

Supply Chain: Supply chain interruptions can be the result of impacts to roads, buildings, and people. Re-routing of supply chains through alternative transportation nodes or methods may be necessary. Re-prioritization of resources to address critical response and recovery efforts may also strain the supply chain.

Environment: Impacts can include natural changes (e.g., topography, liquefaction, and landslides) to human-related impacts (e.g., fires at industrial locations, release of hazardous materials, pipeline ruptures).

Economic and Financial Condition: Earthquakes have significant economic and financial impacts at individual, business, and local government levels. Initial impacts include the cost of repairing buildings and infrastructure. Jobs may be lost as businesses wait to rebuild facilities and utilities are repaired. Longer term, impacts include the lost business opportunities and increased insurance premiums.

Public Confidence in the Jurisdiction: The public will look to government leaders to provide them with current situational information and, when they encounter problems as they rebuild, expect local leaders to intervene on their behalf. If government does not respond with a sense of urgency and facilitate community recovery, the public could lose confidence in their leaders.

2.5.9 Economic Collapse

Impact: **High**

Probability: **Possible**

Related Hazard(s): **All**

Nature of hazard

An economic collapse is an extraordinary event that can occur in any point of a standard economic cycle where an economy is in complete distress for months, years or possibly decades. A total economic collapse is characterized by social chaos, social unrest, bankruptcies, reduced trade volumes, currency volatility, and breakdown of law and order. Due to the magnitude of the economic distress, government interventions for economic recovery can be slowed causing greater disorganization of the economy.²⁶ This profile discusses the probability and impacts of Economic Collapse as an independent, human-caused hazard; other hazard profiles discuss economic impacts that result from individual hazards.

Orange County Bankruptcy

\$1.6 billion lost,

\$7.6 billion frozen

Impacted agencies

Orange County

32 cities

All school districts

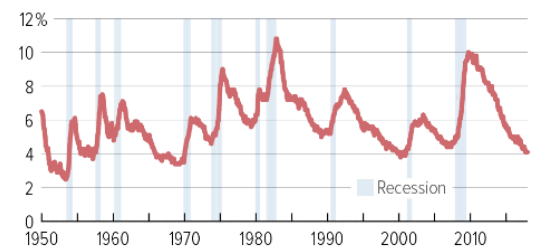
Most transportation,
sanitation, and water

Figure 8: Cycle of Depressions & Unemployment Rate

Probability

Given the size and interdependencies of the Orange County economy, and historical cyclical economic fluctuations (Figure 1), the probability of economic instability is likely, although total collapse is unlikely. Orange County's 2022 Estimated Gross County Product (equivalent to Gross Domestic Product) was \$288.5 billion. As of December 2022, its employed population is estimated to be 1,597,500 and correlates to a 3% unemployment rate.²⁷

Unemployment Rate



Sources: Bureau of Labor Statistics and National Bureau of Economic Research.

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

Economic disaster as an independent hazard has previously struck Orange County to varying degrees. The most infamous is perhaps the Orange County bankruptcy. Historically, from 1950 through 2012, the California Office of Emergency Services reports six (6) State Emergency Proclamations, two (2) of which included Orange County, related to economic crisis, and one (1) of which resulted in a Federal Disaster Declaration.²⁸ Orange County also has been subject to the cyclical economic crisis: 1929-30's Great Depression, 1970's OPEC embargo, 1980's recession, 1987 Black Monday, 2001 Dot-com crash, and the 2008 Great Recession. Impacts from the COVID-19 pandemic are still being felt and represent a continued recovery process for the effects it has

²⁶ [Economic Collapse - Overview, Causes, and Scenarios \(corporatefinanceinstitute.com\)](https://corporatefinanceinstitute.com)

²⁷ Center for Demographic Research, Cal State University Fullerton, <https://www.fullerton.edu/cdr/ocff.pdf>

²⁸ California State Hazard Mitigation Plan, 2013.

had on local business. The pandemic hit Orange County especially hard given the significance of tourism. The Walt Disney Company remains the largest employer in the region, and the Anaheim resort district is a critical driver to entertainment and retail markets across Orange County. The parks' reopening was a crucial component of recovery and will continue to be significant for employment and growth due to the multiplier-effects of the tourism and entertainment industry. Tourism is a meaningful driver of brick-and-mortar retail, which provides a significant part of Orange County's tax revenue.²⁹

Vulnerability, Assets, and Impact

Figure 9: Indirect Losses from the 2007 Santiago Fire

An economic collapse triggered either independently or as a consequence of a disaster could have significant long-term impacts on Orange County. Economic collapse impacts are comprised of direct losses (e.g., destruction of capital producing resources like people and stores) and indirect losses (e.g., loss of jobs results in reduced spending).

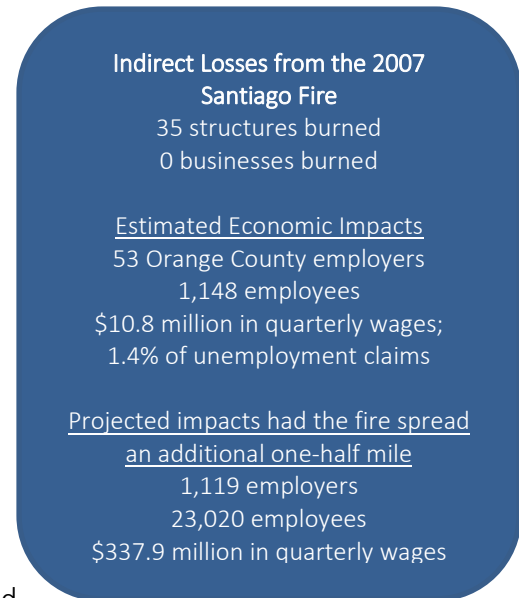
Depending upon the incident scope, impacts could include:

Public: The impact of economic collapse upon Orange County citizen's may range from: loss of housing; shortages of food leading to malnutrition; lowered school attendance and increase in school drop-out rates; and increased health-related issues as people are unable to afford medical care and pharmaceuticals.

Responders: Responders for economic collapse are primarily the social services and public benefit agencies. Increased needs may strain their fiscal resources and challenge their existing workforce to meet the increased applicants for assistance.

Continuity of Operations: Impacts on local government agencies may include an inability to provide services to citizens, pay government employees, vendors, and meet debt obligations.

Property, Facilities, Assets, and Critical Infrastructure: Property may go under- or unmaintained. Some assets may be leveraged for loans or financing purposes, or be sold outright.



²⁹ Orange County Business Council – Mar 21, 2022

Supply Chain: Suppliers may go out of business, leaving breaks in the supply chain. Vendors of customized software or equipment going out of business could leave the County/OA vulnerable to system outages that they are unable to remedy.

Environment: While no direct impacts to the environment are anticipated, indirect impacts may occur such as the loss of funding for environmental mitigation and remediation projects.

Economic and Financial Condition: A macroeconomic collapse has down-stream impacts to the local economy across all fiscal mechanisms. For example, freezing credit markets, drops in currency, and rising job losses impact local community members, businesses and local government. In extreme cases, local governments seek state and federal financial assistance to stave off bankruptcy.

Public Confidence in the Jurisdiction: In its most extreme form, economic collapse is accompanied by social chaos, civil unrest and a breakdown of law and order. Policies at federal, state, and local levels to address the underlying issues causing economic collapse are critical for re-establishing security and community trust.

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2.5.10 Excessive Temperature (Heat/Cold)

Impact: **Moderate**

Probability: **Likely**

Related Hazard(s): **Climate Change, Drought, Flood / Storm, High Winds**

Nature of hazard

Extreme temperature includes both heat and cold events, which can have significant impact to human health, commercial/agricultural businesses, and primary and secondary effects on infrastructure (e.g., burst pipes and power failures). What constitutes as extreme cold or extreme heat can vary across different areas of the United States, based on what the population is accustomed to. Both excessive heat and cold events have impacted the Southern California region in recent history. According the Centers for Disease Control and Prevention (CDC) there are an average of 67,512 emergency room visits, 9,235 hospitalizations and 702 deaths that occur each year due to due to heat.

See Extreme Temperature Annex for additional detail. An electronic version is available through in PrepareOC. Additionally, hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

Probability

Excessive temperatures can be dangerous to segments of the population unable to take adequate measures to protect themselves. Excessive temperatures increase the number of heat- and cold-related illness and injuries, and can cause death. The July 2006 excessive heat event in California was responsible for the death of 140 people over a 13-day period. While this emergency did not include major damage to infrastructure like the 1989 Loma Prieta and the 1994 Northridge earthquakes, approximately twice the number of human deaths were credited to the excessive heat event. Between the years of 2017 and 2022, Orange County reached temperatures requiring implementation of the Excessive Temperature Annex 7 times for a heat events.

While cold weather is regarded as a rarity in Southern California, it does occur and poses a hazard to various populations. When coupled with heavy rain and wind, these low temperatures can pose significant health risks. Cold weather poses an additional challenge in that people can be affected by cold more quickly based on other underlying factors, including but not limited to age, health, and other items. From 2017 to 2022, Orange County implemented the Excessive Temperature Annex 12 times for a cold events reaching temperatures close to freezing.

Vulnerability, Assets and Impact

An excessive heat or cold event could impact any region of Orange County. Historical temperature statics show inland Orange County areas are more susceptible to temperature events than the coastal region.

Cold Impacts

Public/Individuals: Exposure to cold temperatures can lead to serious or life-threatening health problems such as hypothermia, cold stress, frostbite or freezing of the exposed extremities such as fingers, toes, nose, and ear lobes. Hypothermia occurs when the core body temperature is <95°F. If persons exposed to excessive cold are unable to generate enough heat (e.g., through shivering) to maintain a normal core body temperature of 98.6°F, their organs (e.g., brain, heart, or kidneys) can malfunction. When brain function deteriorates, persons with hypothermia are less likely to perceive the need to seek shelter. Signs and symptoms of hypothermia (e.g., lethargy, weakness, loss of coordination, confusion, or uncontrollable shivering) can increase in severity as the body's core temperature drops (CDC 2005).

Responders: Field-based first responders may be impacted like the public on a personal, physical basis. There may be a need to open warming centers and an increase in calls for services related to cold-related health issues.

Continuity of Operations: No impact is expected from a continuity of operations perspective.

Property, Facilities, Assets, and Critical Infrastructure: Extremely cold temperatures can accompany a winter storm, which can cause power failures and icy roads. Some homes may be too cold—either due to a power failure or because the heating system is not adequate for the weather. The use of space heaters and fireplaces to keep warm can increase the risk of household fires and carbon monoxide poisoning (CDC 2007). Some Orange County critical infrastructure/key resources is located in areas subject to the lowest temperatures in Orange County. Special care should be taken to ensure impacts of freezing minimized.

Supply Chain: No impacts to the supply chain are anticipated based on historical incidents.

Environment: Extremely cold temperatures can impact animals and plants, although historically these impacts have been minor and of short duration.

Economic and Financial Condition: Economic impacts have historically been limited to damages to agricultural crops.

Public Confidence in the Jurisdiction: Care of vulnerable populations (e.g., homeless, outdoor workers) has been a concern voiced by the public; jurisdictions failure to meet these needs could result in a loss of public support.

Heat Impacts

Public/Individuals: Prolonged or intense exposure to hot temperatures can cause heat-related illnesses such as heat exhaustion, heat cramps, and heat stroke (also known as sun stroke). As the body works to cool itself under extreme or prolonged heat, blood rushes to the surface of the skin. As a result, less blood reaches the brain, muscles, and other organs. This can interfere with both a person's physical strength and mental capacity, leading, in some cases, to serious danger³⁰.

Heat-related illness can affect anyone but chronic alcoholics, the elderly, the young, the obese, and individuals whose immune systems may be compromised are at greater risk, as are individuals taking certain drugs, such as antihistamines, antipsychotic medications, and cocaine. High humidity also increases the risk of heat illness because it interferes with the evaporation of sweat, the body's way of cooling itself³¹.

Heat exhaustion occurs when the body loses large amounts of water and salt through excessive sweating, particularly through hard physical labor or exercise. This loss of essential fluids can disturb circulation and interfere with brain function. Individuals who have heart, lung, or kidney problems or are on low-sodium diets may be particularly susceptible to heat exhaustion.

As in heat exhaustion, heat cramps can strike when the body loses excessive amounts of fluids and salt. This deficiency, accompanied by the loss of other essential nutrients such as potassium and magnesium, typically occurs during heavy exertion.

Heat stroke, the most serious of the heat-related illnesses, occurs when the body suffers from long, intense exposure to heat and loses its ability to cool itself. In prolonged, extreme heat, the

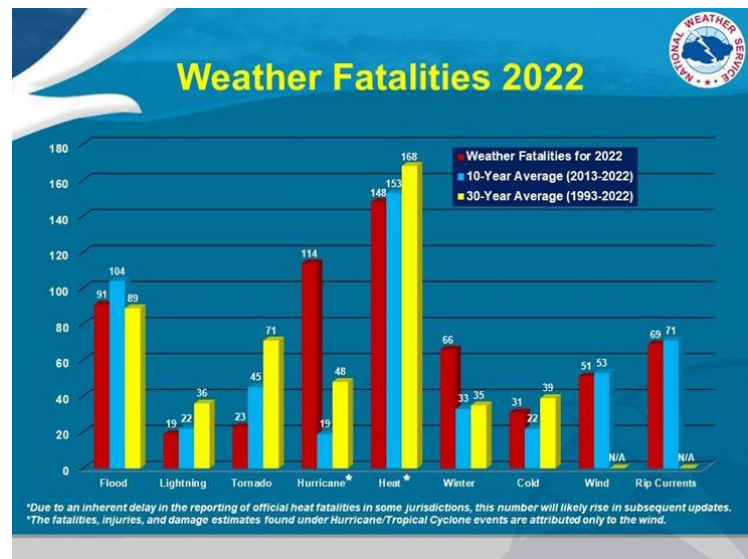


Figure 10: The U.S. Natural Hazard Statistics provide statistical information on fatalities, injuries and damages caused by weather related hazards. These statistics are compiled by the Office of Services and the National Climatic Data Center from information contained in Storm Data, a report comprising data from NWS forecast offices in the 50 states, Puerto Rico, Guam and the Virgin Islands.

³⁰ Retrieved on December 6, 2018, from <https://www.webmd.com/first-aid/understanding-heat-related-illness-basics>;

³¹ Retrieved on December 6, 2018, from <https://www.webmd.com/first-aid/understanding-heat-related-illness-basics>;

part of the brain that normally regulates body temperature malfunctions. There is a decrease in the body's ability to sweat and, therefore, cool down. Those who have certain medical conditions that decrease the body's ability to sweat -- such as scleroderma or cystic fibrosis -- may be at greater risk of developing heat stroke³².

Responders: Field-based first responders may be impacted like the public on a personal, physical basis. There may be a need to open cooling centers and an increase in calls for services related to heat-related health issues.

Continuity of Operations: No impact is expected from a continuity of operations perspective.

Property, Facilities, Assets, and Critical Infrastructure: Depending on severity, duration and location; extreme heat events can create or provoke secondary hazards including, but not limited to: dust storms, droughts, wildfires, water shortages, and power outages. Impacts could include: significant loss of life and illness; economic costs in transportation, agriculture, production, energy and infrastructure; and losses of ecosystems, wildlife habitats, and water resources.

Supply Chain: No impacts to the supply chain are anticipated based on historical incidents.

Environment: Extremely hot temperatures can impact animals and plants, although historically these impacts have been minor and of short duration.

Economic and Financial Condition: Economic impacts have historically been limited to damages to agricultural crops.

Public Confidence in the Jurisdiction: Care of vulnerable populations (e.g., homeless, outdoor workers) has been a concern voiced by the public; jurisdictions failure to meet these needs could result in a loss of public support.

³² Retrieved on December 6, 2018, from <https://www.webmd.com/first-aid/understanding-heat-related-illness-basics>

2.5.11 Flood

Impact: **Moderate**

Probability: **Likely**

Related Hazard(s): **Climate Change, Dam/Levee/Reservoir Failure, Debris Flow**

Nature of hazard

Flood hazard includes riverine (inland) flooding, coastal flooding, and storm-water flooding. Flooding caused by dam and levee failure, or tsunamis is discussed under those separate hazard profiles. Although there is a countywide system of flood control facilities, the majority of these are inadequate for conveying runoff from major storms. The County's rapid growth and transformation from an agricultural based community to an urban community has changed flood control of large flows from mountains and hills to include control of additional runoff produced by development of the plains.

Probability

Orange County's 948 square miles are comprised of mountain terrain and floodplain. The infrequency of very large floods further obscures the County's flood hazard. Storms labeled "severe" have occurred in less than 10 of the past 175 years. Major floods in Orange County have occurred in 1810, 1815, 1825, 1884, 1891, 1916, 1927, 1938, 1969, 1983, 1993, 1995, 1998, 2005, 2011, 2017, 2019 and 2023. The greatest flood in terms of water flow was in 1862 with an estimated flow rate of 317,000 cubic feet per second.

Vulnerability, Assets and Impact

The Santa Ana River, flowing through the heart of Orange County to the Pacific Ocean, is the county's greatest flood threat. Research of flooding in Orange County illustrates these flood hazard issues, citing loss of life as well as damage to personal and public property.

One such flood occurred in 1938, wiping out roads, bridges, and railroads near the river when an 8-foot wall of water swept out of the Santa Ana Canyon. Anaheim, Santa Ana, and Garden Grove were hardest hit and 34 lives were lost because of the flood. Government officials estimated that today without the protection of Prado Dam, a flood of this magnitude would cause as many as 3,000 deaths and top \$25 billion in damages. More than 110 acres would be flooded with 3 feet of water and 255,000 structures damaged.

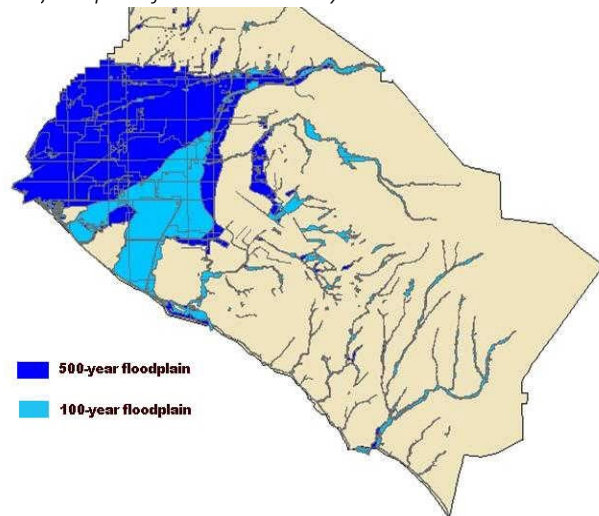
Figure 11: Federal Declarations for Flood/Storm

Federal Declarations for Flood/Storm Incidents in Orange County	
Date	Declaration Number
2017	DR-4305
2011	DR-1952
4/2005	DR-1585
2/2005	DR-1577
1998	DR-1203
3/1995	DR-1046
1/1995	DR-1044
1993	DR-1005
1993	DR-979
1992	DR-935
1988	DR-812
1983	DR-677
1980	DR-615
1978	DR-547
1978	DR-566
1969	DR-253

Other areas subject to flooding during severe storms include areas adjacent to Bolsa Chica Channel, Anaheim-Barber, Stanton Storm Channel, Santa Ana-Santa Fe, Cañada, Paularino, Westminster, Trabuco, Borrego, Serrano, Laguna Canyon, Atwood Channel, Brea Creek Channel, Fullerton Creek Channel, Carbon Creek Channel, San Juan Creek Channel, and East Garden Grove-Wintersburg Channel. Areas adjacent to Santiago Creek and Collins Channel in the central portion of the County and large portions of the San Diego Creek watershed in the City of Irvine and unincorporated areas of the County are also subject to inundation. In the southern portion of the county, canyon areas are subject to flooding. However, with increased development in these areas the flood hazard becomes even greater.

Flood damages within the Westminster-East Garden Grove Watershed, along the East Garden Grove-Wintersburg Channel and Westminster Channel affect residential, commercial, and industrial development within the cities of Westminster, Garden Grove, Santa Ana, Huntington Beach, Seal Beach, and Fountain Valley. The hundreds of homes in the downstream segment of the channel system would be subjected to an estimated 8-foot depth of flooding if a 100-year storm event occurred today. The winter storms of 2005 in this area severely eroded the maintenance roads and levee banks.

Figure 12: Provides an overview of the possible floodplain for 500 and 100 years



Depending upon the incident scope, impacts could include:

Public: Impacts could include evacuations of those in the inundation zone. Unhoused populations might need temporary and long term shelters, and assistance in restoring vital records.

Responders: Impacts could include increased calls for service in the inundation zone. Critical response routes may be destroyed or damaged in and around the inundation zone.

Continuity of Operations: No impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Impacts could include damage to water infrastructure and adjacent properties. Co-located utility towers could be impacted by large volumes of fast-moving water.

Environment: Coastal flooding can have many of the same impacts as riverine flooding but also pose problems like beach erosion; loss or submergence of wetlands; loss of coastal

recreation areas and beaches; and damage to or loss of coastal structures like piers or sea walls.

Supply Chain: No impact is expected from a supply chain perspective.

Environment: Floods could cause widespread damage by altering the land, injuring or killing plants and animals, and changing the water composition along ocean-rover interfaces. Large volumes of water may also rinse urban contaminants and debris into waterways.

Economic and Financial Condition: Homes and businesses within the inundation zones may not have insurance to cover damages. Without assistance, it may be difficult to rebuild homes and re-establish businesses.

Public Confidence in the Jurisdiction: Depending upon the incident cause and the speed with which services are restored, impacts may include the public questioning the leadership about response priorities and investment in public infrastructure.

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2.5.12 Hazardous Materials Release

Impact: **Low**

Probability: **Likely**

Related Hazard(s): **Earthquake, Rail Accident, Terrorism, Wildland and Urban Fire**

Nature of Hazard

Virtually all sectors of the County's economy are users of hazardous materials that, if improperly handled, stored, transported, or disposed of, can pose health and environmental problems. Orange County faces the potential for incidents from the stationary hazardous materials users, as well as transportation accidents, pipeline ruptures, and illegal dumping. The significance of the effects on the environment, property, or human health is dependent on the type, location, and quantity of hazardous material released. The level of exposure to hazardous materials can be understood by examining Orange County's type of businesses, commercial traffic routes, and highways.

Hazardous Materials Disclosure Program

The Hazardous Materials Disclosure Program began as a direct result of two major incidents: the tragedy in Bhopal, India in December 1984, and the three-day fire at the Larry Fricker pesticide warehouse in Anaheim in June 1985. On November 5, 1985, the Orange County Board of Supervisors adopted an ordinance relating to hazardous materials disclosure (Orange County Code, Title 4. Division 3, Article 4).

- Chemical Inventory: Title 42, Section 11022 of the United States Code and Chapter 6.95 of the California Health and Safety code require the reporting of hazardous materials when used or stored in certain quantities. These regulations require that businesses to complete and file a chemical inventory to disclose hazardous materials stored, used or handled on site. This disclosure information assists emergency responders in planning for and handling emergencies, which involve hazardous materials. The program objective is to safeguard lives and minimize property loss.
- Business Emergency Plan (BEP): Chapter 6.95 of the California Health and Safety code also requires that businesses which use, store or handle hazardous materials file an emergency plan indicating their preparations for and actions in an emergency. The information is also shared with emergency response personnel to mitigate a release and to minimize harm or damage to human life, the environment, and property.

The information disclosed by the industrial community is stored in a computerized database and is made available to fire and police response personnel, OCHCA, and all hazardous materials response teams in Orange County.

Hazardous Materials-Transportation

Highways and freeways are the major transportation routes in Orange County. Over 250 miles of interstate highway, including the third busiest highway transportation corridor in the country (Highway 5), and 719 miles of other major transportation routes run through Orange County. The California Highway Patrol (CHP) has designated these highways as hazardous materials transportation corridors. In addition to the freeway system, Orange County's major transportation routes include surface streets and railroads. These routes are used daily to transport hazardous materials from suppliers to users. On these routes, transportation accidents involving hazardous materials can occur. The threats posed by a transportation accident involving hazardous materials include explosions, physical contact by emergency response personnel, and exposure to the public via airborne exposure. In the late '70s and again in the early '90s large freight trains in the Cajon Pass lost their ability to slow down as they came down the grade into San Bernardino. In both instances, the trains derailed resulting in hazardous materials spills and associated damage.

The Federal Department of Transportation (DOT) is the primary regulatory authority for the interstate transport of hazardous materials. The DOT regulations establish criteria for safe handling procedures (e.g., packaging, marking, labeling, placarding, and routing). Criteria also exist regarding personnel qualifications and training, inspection requirements, and equipment specifications. The CHP enforces regulations related to the intrastate transport of hazardous materials and hazardous wastes.

Another major hazardous materials transportation mode in Orange County is that of underground pipelines. These pipelines predominately transport crude or refined petroleum, gasoline, and jet fuel. The major threats posed by this transportation method include explosions, fire, and contamination of groundwater potentially used as a source of drinking water. The regulatory agency responsible for enforcement as well as inspection of pipelines transporting hazardous materials is the California State Fire Marshal's Office, Hazardous Liquid Pipeline Division.

Under mandate from Title 49 of the Code of Federal Regulation, the agency is charged with compliance review of:

- Inspection and enforcement
- Pipeline failure and investigation
- Pipeline training and certification

The local municipal fire departments have emergency response authority for responding to hazardous materials incidents in Orange County.

Probability

Orange County faces the potential for hazardous material incidents from stationary hazardous materials users, as well as transportation accidents, pipeline ruptures, and illegal dumping. The significance of the effects on the environment, property, or human health is dependent on the type, location, and quantity of hazardous material released. The County's level of exposure to

hazardous materials can be understood by examining the County's type of businesses, commercial traffic routes, storm sewers, sanitary sewers, and highways.

In June 1985, over 7,500 people were evacuated due to a fire at the Larry Fricker Company in Anaheim, a sales firm that stocked various chemicals and fertilizers including ammonium nitrate. The fire smoldered for several days and motivated the Orange County Board of Supervisors to develop the Orange County Hazardous Materials Disclosure Program.

Vulnerability, Assets, and Impact

A hazardous substance poses a threat due to its inherent characteristics. Its actual impact, however, depends on where the incident occurs, weather, geography, population, and other site-specific conditions that influence its behavior in the environment. Incidents may occur at fixed facilities where the opportunity for development of site-specific contingency plans is great. They may also occur at any place along any land, water, or air transportation route, and (in the case of vessel mishaps, aircraft accidents, agricultural chemicals and illegal dumping) may occur in unpredictable areas, relatively inaccessible by ground transportation. Further, hazardous material incidents often cause some type of transportation problem within the vicinity of the incident and may even require localized evacuation. For example, train derailments in Orange County involving hazardous materials could result in the closure of freeways and surface streets, an extreme hazard to the public and the first responders, and evacuation of large areas.

Risk levels are variable and change from incident to incident. Factors that influence the level of risk include the following: hazardous nature of the material(s) involved, quantity of the material involved, containment system and type of stress applied to the container, proximity of exposures, and level of available resources. In Orange County, the majority of hazardous material incidents are handled prior to becoming a disaster. Hazardous material incidents require specialized technical expertise that varies depending on the materials involved and the type of incident. The resources and personnel required to react to a hazardous materials incident may involve various local, special district, state, and federal agencies. First responders are usually fire or law enforcement services followed by HCA Environmental Health. Other local agencies may include OC Public Works, HCA Emergency Medical Services, Epidemiology, Orange County Sheriff's Department Control One (hereafter referred to as Control One), OC Waste and Recycling Department and the Orange County Agricultural Commissioner. A long list of state and federal agencies may be included as well as districts such as South Coast Air Quality Management District, Orange County Sanitation Districts, Orange County Water & Irrigation Districts and private agencies, associations and companies. Each agency is expected to provide on-scene assistance consistent with its operational capabilities, when requested.

Potential outcomes of a Hazardous Material release include, but are not limited to: fatalities, injuries, system disruption, economic impacts, environmental damage, and property damage.

Depending upon the incident scope, impacts could include:

Public: Impacts to the public may include casualties and fatalities. Shelter-in-place or evacuation orders may be needed. Incidents may cause short- and long- term emotional and health impacts.

Responders: Responders may be required to use personal protective equipment. Incidents may cause short- and long- term emotional and health impacts.

Continuity of Operations: Non-critical services may be paused while addressing local impacts.

Property, Facilities, Assets, and Critical Infrastructure: Depending upon the material and scope, property and critical infrastructure could be shut down while clean-up occurs, disrupting business and government services.

Supply Chain: This hazard is not anticipated to have a significant supply chain impact in Orange County.

Environment: The impact to the environment could include both short and long term contamination of the environment, and the death of plants and animals. Some hazard materials may have water- or air-borne plumes that carry contaminants long distances. Historical and cultural areas of significance could be impacted by contamination.

Economic and Financial Condition: The impacts of historic incidents have not had long-term, widespread impacts on the Orange County economy, although they may be devastating to individuals and business owners.

Public Confidence in the Jurisdiction: Impacts may include the public's perception of the jurisdiction's ability to detect incidents before they occur, enforce regulations, and respond quickly and effectively. Public trust may be impacted if long-term health impacts are not clearly communicated.

2.5.13 High Winds

Impact: **Low**

Probability: **Likely**

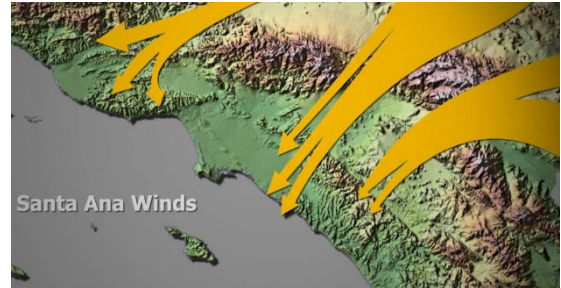
Related Hazard(s): **Wildland and Urban Fire, Tornado**

Nature of Hazard

Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore). These winds occur below the passes and canyons of the coastal ranges of southern California and in the Los Angeles basin.

Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon (the canyon from which it derives its name). Forecasters at the National Weather Service (NWS) in Oxnard and San Diego use the term "Santa Ana Winds" for winds greater than 25 knots.

Figure 13: Provides a graphic of how the winds flow from the Santa Ana Mountains to the ocean



The complex topography of Southern California combined with various atmospheric conditions creates numerous scenarios that may cause widespread or isolated Santa Ana events. Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah). Clockwise circulation around the center of this high-pressure area forces air downslope from the high plateau. The air warms as it descends toward the California coast at the rate of 5 degrees Fahrenheit per 1000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. The air is dry since it originated in the desert, and it dries out even more as it is heated.

Probability

The Santa Ana winds occur annually in Orange County. Santa Ana winds commonly occur between October and February with December having the highest frequency of events. Summer events are rare. Wind speeds are typically north to east at 35 knots through and below passes and canyons with gusts to 50 knots. Stronger Santa Ana winds can have gusts greater than 60 knots over widespread areas and gusts greater than 100 knots in favored areas. Frequently, the strongest winds in the basin occur during the night and morning hours due to the absence of a sea breeze. The sea breeze, which typically blows onshore daily, can moderate the Santa Ana winds during the late morning and afternoon hours. Santa Ana winds are an important forecast challenge because of the high risk of fire associated with them. Also, unusually high surf conditions on the northeast side of the Channel Islands normally accompany a Santa Ana event.

The majority of catastrophic wildfires in Orange County of the past 20 years have occurred during strong Santa Ana Wind events. Between 2021 to 2022 there were 32 Santa Ana wind events.

Vulnerability, Assets and Impact

Santa Ana wind conditions can result in two general disaster conditions.

- The most common is fire fanned by the high winds. For examples include the 2007 Santiago Fire, the 2008 Freeway Complete fire and the 2020 Silverado-Blue Ridge-Bond fires. Excessive winds with gusts up to 90 MPH contributed to both Fire's unpredictable behavior and rapid progression. Hot, dry winds continued to fan the fire for several days forcing large evacuations of the population.
- The second form of wind-related disaster would be direct infrastructure, utility or building damage as a result of the high winds. This can include downed trees and power lines; turbulence and low-level wind shear for aircraft; and high wind dangers for boaters. Normal routines and operations for individuals, businesses, and government agencies may be impacted by such wind events.

Depending upon the incident scope, impacts could include:

Public: Individuals across the County may be impacted by high winds that down trees and power outages.

Responders: Responders may be placed on heightened alert during wind events, in order to quickly deploy to downed trees, downed lines, or wildfires.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Impacts may include pre-emptive power line de-energization, although critical infrastructure may be buffered from these actions.

Supply Chain: No large-scale impact is expected from a supply chain perspective.

Environment: This is a natural occurrence so no unusual levels of environmental impact are anticipated.

Economic and Financial Condition: No large-scale impact is expected from an economic perspective.

Public Confidence in the Jurisdiction: No large-scale impact is expected from a public confidence perspective

2.5.14 Large Special Events

Impact: **High**

Probability: **Possible**

Related Hazard(s): **Terrorism, Civil Unrest, Cyberattack**

Nature of Hazard

A non-routine activity within a community that brings together a large number of people. Emphasis is not placed on the total number of people attending but rather the impact on the community's ability to respond to a large-scale emergency or disaster or the exceptional demands that the activity places on response services. A community's special event requires additional planning, preparedness, and mitigation efforts of local emergency response and public safety agencies.

Figure 14: Angel Stadium



Probability

Throughout Orange County, at any given time of year, there are concerts, sporting events, festivals, fairs, and many other large and small events that gather or have the potential to gather large crowds. Under normal conditions, these events go on with few or no problems. When something goes wrong, however, either as a result of a natural hazard or a manmade hazard, then local emergency management becomes involved. These mass gatherings are also potential targets for terrorists.

Multiple deaths and injuries at large public events have occurred consistently and over a wide spectrum of countries and types of events. Certain highly competitive sports events, particularly baseball, concerts, and festivals tend to produce spectator-generated incidents, while air shows and auto races tend to produce more participant-generated occurrences.

Vulnerability, Assets, and Impact

Not every planned special event runs as scheduled. Large events can create a number of concerns including traffic and transportation issues. A large special event could have a significant impact on community resources as well as the ability to respond to the unique demands that the activity would place on response services.

Special events and mass gatherings are a concern due to the large number of people, news media coverage, and the high-profile impact if an incident were to occur. Once an event transpires cascading events can unfold. Two examples are civil unrest and terrorism. Civil unrest can absorb available personnel and diminish equipment availability quickly. While, a terrorist or single suspect could target a large event causing a great number of injuries which could overwhelm

medical services rapidly. Disease outbreak could also impact the ability for the medical community to provide basic services and can place severe strain on medical capacity.

To ensure the safety of the community and visitors, first responders have the responsibility to protect and minimize the impacts of an emergency at a planned special event. In order to lower the impact emergency management must plan, evaluate, and respond.

Depending upon the incident scope, impacts could include:

Public: Impacts could include the need to mass evacuate and offer sufficient sheltering. Some of the potential consequences are overcrowding, missing persons, unaccompanied minors, and separated family members.

Responders: First responders may encounter large number of persons injured or deceased. There may be confusion as to the cause of the incident and difficulty in quickly neutralizing the hazard/threat. There may be unidentified individuals and unaccompanied minors that need reunification services, as well as a need for multi-lingual translators with little deployment time.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Impacts may include closure of the impacted venue and the cancellation of future events.

Supply Chain: No large-scale impact is expected from a supply chain perspective

Environment: No large-scale impact is expected from an environmental perspective

Economic and Financial Condition: No large-scale impact is expected from an economic perspective, although it may be devastating to individuals and businesses involved.

Public Confidence in the Jurisdiction: Impacts may include concern over whether government agencies could have detected or prevented the incident. The public could question how well first responders addressed the incident.

2.5.15 Misinformation

Impact: **High**

Probability: **Likely**

Related Hazard(s): **Acts of War, Civil Unrest, Cyber/Hacking, Terrorism**

Nature of Hazard

Misinformation refers to false or misleading information that is spread intentionally or unintentionally, often via social media and other online platforms. Misinformation can take many forms, including hoaxes, conspiracy theories, propaganda, and false news stories. The spread of misinformation can have significant impacts on individuals, communities, and society as a whole, and has become a growing concern in recent years.

Probability

While the spread of both intentional and unintentional misinformation has always occurred, the rise of social media platforms has greatly increased the opportunity to spread misinformation, as well speed with which it can be transmitted, the distance it can travel, and the number of individuals exposed to it. In 2020, Pew Research conducted multiple surveys assessing the use of traditional news media versus social media by the American public, juxtaposed with the public's perception of the bias and manipulation of the media and social media, whether intentional or unintentional. For example:

- 71% of Americans had heard of a conspiracy theory that alleges that powerful people intentionally planned the coronavirus outbreak.
- 59% of Americans indicated that made-up information that is intended to mislead caused a "great deal" of confusion about the 2020 presidential election.
- 73% of Americans expressed little or no confidence in tech companies to prevent the misuse of their platforms to influence the 2020 election.

Vulnerability, Assets, and Impact

Emergencies and normal operations can be susceptible to misinformation in the form of both communication errors and intentional misinformation. Misunderstandings, mistrust, and simple mistakes may cause conflicting messaging to emerge. For crisis communicators, it is important to understand when and how wrong messages should be corrected in order to minimize impacts.

During a disaster, some messaging errors might have little to no impact on people affected, while other rumors and misinformation can be very destructive. Independently, misinformation can cause a usually benign incident to become unstable and require mobilization of emergency response organizations.

³³ <https://www.pewresearch.org/topics/misinformation/>

Misinformation can have a range of impacts on Orange County, including:

Public: Misinformation can lead to confusion, anxiety, and mistrust among individuals, particularly when it comes to issues related to health, safety, and security. In some cases, misinformation can also lead to harm, such as when false information about treatments or cures for diseases leads individuals to forego necessary medical care.

Misinformation can impact activities that are important to the local community, such as public events, social gatherings, and religious ceremonies. False information about the safety or legality of such activities can lead to confusion and potentially even legal consequences.

Depending upon the incident scope, impacts could include:

Responders: Impacts may include more tense interactions with the public when trying to respond to an incident, distrust of protective actions recommended by first responders. Responders may expend increased resources countering misinformation.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: No large-scale impact is expected from a property perspective, although individual facilities and structures may require additional security.

Systems: Misinformation can impact critical systems such as public health, emergency response, and law enforcement. False information about outbreaks or disasters can lead to panic and confusion, while misinformation about the safety and efficacy of vaccines or treatments can undermine efforts to control the spread of diseases.

Supply Chain: No large-scale impact is expected from a supply chain perspective, although hoarding may result from misinformation about supply chain disruptions.

Environment: Misinformation can impact natural and historic resources by promoting false narratives or conspiracy theories about environmental issues, leading to a lack of action or ineffective policies. In addition, false information about the historical significance of sites or events can lead to the erosion of cultural heritage.

Economic and Financial Condition: No large-scale impact is expected from an economic perspective that would require emergency management involvement.

Public Confidence in the Jurisdiction: Misinformation can undermine public trust in institutions and systems, such as the healthcare system, law enforcement, and the electoral process. This can lead to a breakdown in social cohesion and potentially even violence, as individuals become more polarized and distrustful of one another.

2.5.16 Landslide/Mudslide/Debris Flow

Impact: **Low**

Probability: **Possible**

Related Hazard(s): **Wildland Fire, Flood / Storm, Earthquake**

Nature of hazard

A landslide is defined as the movement of a mass of rock, debris, or earth down a slope. Landslides are a type of "mass wasting," which denotes any down-slope movement of soil and rock under the direct influence of gravity. The term "landslide" encompasses five modes of slope movement: falls, topples, slides, spreads, and flows. These are further subdivided by the type of geologic material (bedrock, debris, or earth). Debris flows (commonly referred to as mudflows or mudslides) and rock falls are examples of common landslide types.³⁴

Figure 15: Provides a list of the landslides/debris flows from 1993-2023

Probability

There are numerous areas within Orange County that are susceptible to landslides and debris flows. Recent cases of landslides occurred in Anaheim Hills and Mission Viejo following the rainstorms of 2005 and the Bluebird Landslides in Laguna Beach that same year. Most, but not all, landslides in southern California begin to move when the soils have become saturated during heavy rains. In Anaheim Hills, several homes located at the crest of the hill began to slide and had to be evacuated. These structures were deemed unsafe for continued habitation.

Year	Area	Event
2023	San Clemente	Geological Landslide
2023	Newport Beach	Geological Landslide
2021	Silverado Canyon	Post Fire Debris Flow
2018	Trabuco Canyon	Post Fire Debris Flow
2014	91 Freeway	Post Fire Debris Flow
2011	San Clemente	Geological Landslide
2010	Santiago/Modjeska Canyon	Post Fire Debris Flow
2008	Modjeska Canyon	Post Fire Debris Flow
2007	Modjeska Canyon	Post Fire Debris Flow
2005	Anaheim Hills	Geological Landslide
2005	Mission Viejo	Geological Landslide
2005	Laguna Beach	Geological Landslide
1998	Laguna Beach	Post Fire Debris Flow
1998	Laguna Niguel	Geological Landslide
1993	Anaheim Hills	Geological Landslide

Information related to mapped landslide areas is available at the California Department of Conservation web page: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=landslides>. By selecting any mapped landslide area, one can download historical reports.

Past landslide events have caused major property damage o/Mudslide/Debris Flow significantly impacted county residents:

1998 Laguna Niguel, Orange County Landslide

During the 1997/1998 El Nino Season heavy rainfall increased movement on the site of an ancient landslide in Laguna Niguel. The storms in December 1997 had accelerated its movement and in

³⁴ Retrieved from https://www.usgs.gov/faqs/what-a-landslide-and-what-causes-one?qt-news_science_products=0#qt-news_science_products

early 1998, a crumbling hillside forced the evacuation of 10 hilltop homes and more than 10 condominium units resting below. Ultimately four of the hilltop homes collapsed, falling down hillside into the void created by the slide area. The condominium complex has since been demolished and the site sits as open space.

2005 Bluebird Canyon Landslide

In the early morning of June 1, 2005, a landslide began moving in the Bluebird Canyon area of Laguna Beach, California in same location as previous landslide in 1978. No rainfall or earthquake activity occurred during or immediately before the landslide movement. This movement is a most likely related the extremely heavy winter rains that occurred from December through February.

2023 Newport Beach and San Clemente Landslides

In early March of 2023 two significant landslides began to occur Galaxy Drive Newport Beach and Buena Vista Street in San Clemente, California which impacted several residential structures. No earthquake activity occurred during or immediately before the landslide movement. This movement is a most likely related to the extremely heavy winter rains that occurred from December through February.

Figure 16: The 2005 Blue Bird Canyon landslide, Laguna Beach



Figure 17: The 2023 Buena Vista Landslide, San Clemente



Wildfires can also generate the potential for debris flows from the area burned into adjacent communities. Assessing potential post-fire debris flows is unique to each fire and information about the process can be found at https://landslides.usgs.gov/hazards/postfire_debrisflow/. Typically a Burned Area Emergency Response (BAER) Report produced by United States Forest Service (USFS) or a Water Emergency Response Team (WERT) Report produced by Cal Fire are generated to identify specific areas as high risk for landslides and debris movement within burn scar areas. Most recent following the 2020 Bond Fire a post fire debris flow plan was developed and activated several times between 2020 and 2023. Similar post fire debris flow plans were developed following the 2018 Holy Fire, 2017 Canyon 2 Fire, 2014 Silverado Canyon Fire and 2007 Santiago Fire and were activated multiple times during winter storms.

2021 Silverado Canyon Debris Flow

In March and December a strong winter storms hit Orange County including areas of the Bond Fire Burn Scar. Multiple debris flows occurred in area of Silverado Canyon damaging several residential structures, property and infrastructure.

2018 Trabuco Creek Debris Flow

On December 6, 2018 a strong winter storm hit Orange County including areas within the Holy Fire Burn scar. A large debris flow occurred within Trabuco Canyon area damaging a bridge, roadway and nearby O'Neil Regional Park.

Figure 18: The 2018 Debris Flow, Trabuco Canyon



Figure 19: The 2021 Debris Flow, Silverado Canyon



2010 Modjeska Canyon Debris Flow

On December 21, 2010 a strong winter storm hit Orange County including areas within unincorporated canyon communities that were surrounded by 2007 Santiago Fire burn scar. Multiple debris flows damaged several homes in Modjeska Canyon.

Vulnerability, Assets and Impact

With continued development in the urban interface of Orange County, the threat will only worsen in the coming years, particularly in the areas of South, and Northeast Orange County.

The impact of fire-related debris flows may vary depending upon the scope of the impacted area and what communities and infrastructure are adjacent to it. The impact of these debris flows must be assessed immediately following a fire so that appropriate mitigation measures can be developed and implemented and community members can prepare themselves, their loved ones, and their property.

Depending upon the incident scope, impacts could include:

Public: Individuals and their animals may be evacuated from their homes or businesses and be unable to return until areas are stabilized.

Responders: Responders may have to find alternative routes or use specialized equipment to respond to impacted areas. Continued instability of the impacted area may pose an ongoing risk to responders.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Roads, bridges, power poles, and other infrastructure may be destroyed as a result of this hazard. Homes, businesses, and public facilities that lie in the impacted area may be destroyed or severely damaged. Concerns may arise as to whether rebuilding is possible.

Supply Chain: No large-scale impact is expected from a COOP perspective, although there may be short-term disruptions to roads and railways.

Environment: Water quality may be impacted as debris makes its way into waterways and potentially into coastal waters. Sensitive habitats and animals may be impacted by the destruction of land and plants.

Economic and Financial Condition: If landslides impact major traffic routes or other infrastructure, it could negatively impact the economy.

Public Confidence in the Jurisdiction: The public may be concerned if the jurisdiction is unable to prevent or detect these events before they occur. For fire-related incidents, the public may question the adequacy or over-reach of recommended protective actions.

2.5.17 Oil Spill

Impact: **High**

Probability: **Possible**

Related Hazard(s): **Hazardous Materials Release**

See 2022 Los Angeles-Long Beach Area Contingency Plan Volume I (v 2019.3) for additional details.³⁵

Nature of Hazard

An oil spill is a release of liquid petroleum hydrocarbon into the environment due to human activity or technological error that results in pollution of land, water, and air. Oil releases also occur naturally through oil seeps either on land or under water. Marine oil spills can result from the release of crude oil from offshore oil platforms, drilling rigs, wells, underwater pipelines, tank trucks, and marine tank vessels (tankers) and even supply pipelines on land. Refined petroleum products such as gasoline, diesel, and heavier fuels such as bunker fuel used by cargo ships are also sources of potential oil spill releases.

Probability

The complex array of petroleum-related industries and distribution networks throughout the state of California makes the majority of the state vulnerable to oil spills. Currently, there are 26 production platforms, 1 processing platform, and 6 artificial oil and gas production islands located in the waters offshore of California. Of the 27 platforms, 4 are located in state waters offshore of Santa Barbara and Orange counties, and 23 are located in federal waters offshore of Santa Barbara, Ventura, and Los Angeles counties. There are also 80 marine terminals in state waters and numerous land-based oil production, transportation, and storage facilities.^{28F28F³⁶}

The platforms and artificial islands off California each have multiple wells, the number of which varies from fewer than 10 to more than 50. The amount of oil produced by each structure varies from a few hundred to more than 20,000 barrels per day.

Platforms in federal waters are regulated by the Bureau of Safety and Environmental Enforcement (BSEE). The facilities located in state waters less than three nautical miles from shore are regulated by the California State Lands Commission and the California Department of Oil, Gas, and Geothermal Resources.

Under the Lempert Keen Oil spill Prevention and Response Act, the State Lands Commission exercises oversight for the prevention of oil spills from off- shore oil platforms; and on- shore and

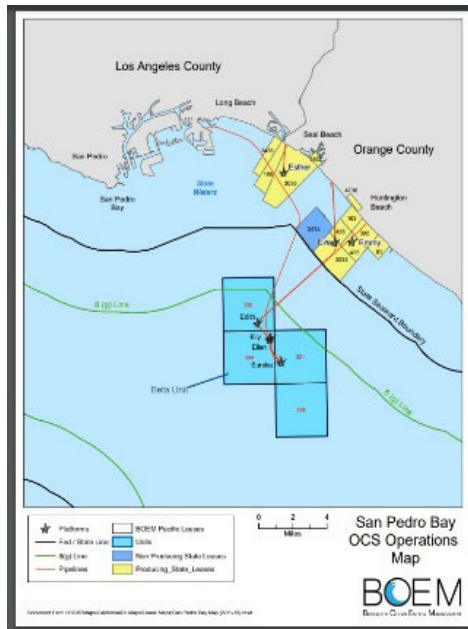
Figure 20: The pipelines off the Orange County Coast

³⁵ Retrieved from <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=170557&inline> on July 6, 2023

³⁶ Retrieved from <http://www.caloes.ca.gov/for-individuals-families/hazard-mitigation-planning/state-hazard-mitigation-plan>

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³⁷off- shore marine oil terminals. At these marine facilities, large oceangoing tank vessels and smaller barges transfer oil between shore and the tank vessel. Due to numerous interfaces and interactions, there is great propensity for human-caused oil spills, fire and/or explosion.

The California Resources Agency maintains data sets on the number, location, owner/operator, lease, and other characteristics of oil and gas wells. Currently the data catalog has information on nearly 200,000 oil and gas wells in California.

Major spills that have impacted state and federal laws and response protocols include but are not limited to: Exxon Valdez, Guadalupe Dunes, Cosco Busan, and Deepwater Horizon. Orange County has experienced spills from both ships and pipelines.

American Trader

On February 7, 1990, off Huntington Beach, California, the oil tanker American Trader ran over its anchor, puncturing its hull and spilling an estimated 416,598 gallons of crude oil. An estimated 3,400 birds were killed as well as an unknown number of fish, and recreational beach use was seriously disrupted. The biological component of the resulting litigation was settled out of court for \$3.45 million for bird and fish- related injuries, plus an additional \$360,000 for water monitoring projects, while the recreational component was eventually settled, following a jury trial, for \$11.6 million. (<http://www.dfg.ca.gov/ospr/NRDA/american-trader.aspx>)

October Pipeline P00547 Incident

The County of Orange EOC was activated to coordinate with the local jurisdictions impacted by the Pipeline P00547 Incident. The Director of Emergency Services was the Orange County Chief Executive Officer's delegate. A Unified Command, consisting of representatives from the United States Coast Guard (USCG), California Department of Fish and Wildlife's Office of Spill Prevention and Response (CDFW-OSPR), and BETA Offshore (the responsible party (RP)), and Orange and San Diego counties was established to mitigate a reported oil spill due to a breach in a pipeline off the Orange County Coast.

The Cities of Huntington Beach, Laguna Beach, Newport Beach, the County of Orange, and the State of California issued emergency proclamations. The final day of a large annual airshow hosted by the City of Huntington Beach was cancelled, affecting thousands of Southern California residents who had made plans to attend the event.

³⁷ Retrieved on July 6, 2023 <https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Leasing/Regional-Leasing/Pacific-Region/Leasing/San-Pedro-Bay-Map-%282-11-19%29.pdf>

The primary objectives of this effort were:

- Protection of life, property, and the environment
- Protection and safety of EOC responders
- Identify Operational Area conditions and needs
- Communicate with Unified Command for Situational Awareness

Several Cities, County, State Beaches and Harbors were closed due to the spill until efforts to clean the affected areas could be performed.

A Health Advisory by the Orange County Health Care Agency was issued for residents exposed to oil contaminants, and onshore fishing was closed for a period with offshore fishing being closed until the determination that byproducts of the oil spill were no longer affecting seafood caught in the area. In addition, commercial and recreational fishing was suspended until the source seafood could be cleared of possible contamination.

Following the prevailing currents and weather patterns, the oil moved in a southeasterly direction, eventually reaching the shores of San Diego County as well as the country of Mexico. Shoreline Cleanup Assessment Teams conducted clean-up activities on Orange and San Diego counties' beaches. This process of shoreline cleanup, inspection, sign-off, and monitoring continued into 2022.

December Pipeline P000919 Incident

During the response to the P000547 Incident, multiple on-water sheens were noted. A source was eventually identified and a Unified Command, consisting of representatives from the United States Coast Guard (USCG), California Department of Fish and Wildlife's Office of Spill Prevention and Response (CDFW-OSPR), and DCor, the responsible party (RP), and the County of Orange was established. The County EOC was not activated; there were no beaches, marina, or fisheries closed. This response continued into 2022.

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Summary of California and Other Significant Oil Spills

Spill	Date	Area Affected	Estimated Amount	Wildlife Impacts (estimated deaths)	Estimated Costs
Lakeville Gusher - Kern County	5/14/1910 – 9/1911	Not available	378,000,000 gallons (9,000,000 barrels)	Unknown	Unknown
Santa Barbara	1/28/69 – 2/8/69	35 mainland coastline, 800 square mile slick	3,000,000 gallons (102,620 barrels)	3,600 birds, seals, dolphins, fish, intertidal invertebrates	\$17 million in lawsuit settlements for property damage
Exxon Valdez - Point William Sound, Alaska	3/24/89	1,300 miles of shoreline	11,000,000 gallons (257,000 barrels)	250,000 seabirds, 2,800 sea otters, 300 harbor seals, 250 bald eagles, 33 killer whales, billions of salmon and herring eggs	\$2.1 billion for clean-up by Exxon
American Trader - Huntington Beach, CA	2/7/90	About 13 miles of coastline plus offshore area	416,598 gallons	3,400 birds, fish	\$3.45 million settlement for bird and fish related injuries; \$360,000 for water monitoring projects; \$11.6 million for recreational damage
Guadalupe Oil Field – San Luis Obispo	1950s – 1994	2700 acres	9,000,000-12,000,000 gallons (212,570 barrels)	Soil and water contamination, dune habitat, wetlands, groundwater and intertidal habitat	\$44 million in penalties to Unocal, \$9 million for restoration
Cosco Busan – San Francisco Bay	11/7/07	200 miles of coastline	58,000 gallons (1,375 barrels)	2,225 birds, seals, herring eggs	\$2.1 million for ship damage \$1.5 million for bridge damage \$70 million for cleanup
Deepwater Horizon – Gulf of Mexico	4/20/10 – 7/15/10	2,500 square mile slick	180,000,000 gallons (4,900,000 barrels)	4,642 birds, 540 sea turtles, 75 mammals (as of 8/22/10)	\$20 billion response fund established
Santa Barbara County – Refugio	5/19/2015	8 miles of coastline	142,800 gallons (3,400 barrels)	202 dead birds; 99 dead animals	\$96 million in company cleanup costs; estimated \$74 million lost revenue to County and residents
Marine Oil Spill Pipeline P00547	10/01/2021	Seal Beach, Huntington Beach, Newport Beach, Dana Point	120,000 – 150,000 gallons	12 cetaceans	

Figure 21: Summary of California and Other Significant Oil Spills

Vulnerability, Assets, and Impact

Factors affecting the impact of an oil spill include:

- Weather and season (for example bird migration, nesting, or fish spawning);
- Type of bank or shoreline such as sand beach, tidal flat, or vegetated riparian;
- Exposure to wave, tidal energy and river flow or turbulence;
- Types, abundance, and sensitivity of living resources;
- Human activities conducted along the shoreline or in the area.

Depending on the origin, size, and duration of the release, Clean up and recovery is time and cost consuming, and dependent on weather conditions such as wind and rain.

Depending upon the incident scope, impacts could include:

Public: Individuals may be restricted from enjoying ocean-based activities, resulting in both reduced enjoyment by locals and reduced tourism. Fish and shellfish from the local area may be unsafe for humans to eat.

Responders: The complex interdependencies of oil spill response require federal, state, and local government response agencies work in close collaboration with one another. There may be some confusion at incident onset if these relationships do not already exist.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Boats and marine-adjacent properties may be damaged or restricted from using impacted waterways. Individuals and businesses that own land, buildings, and bridges along the impacted area may temporarily lose access to those properties and need to undertake decontamination efforts as part of recovery.

Supply Chain: No large-scale impact is expected from a supply chain perspective.

Environment: An oil spill can have serious impacts on air and water quality, public health, plant and animal habitat, and biological resources. The largest impacts may be to the environment, especially animals and plant life. Impacts to the environment can include toxic chemicals like benzene and other particulates being released into the air. Oil also destroys the insulating ability of fur-bearing mammals, such as sea otters, and the water repellency of a bird's feathers, thus exposing these creatures to the harsh elements. Without the ability to repel water and insulate from the cold water, birds and mammals will die from hypothermia. Areas of high potential impact are captured through an assessment process conducted by the California Department of Fish and Wildlife's Office of Spill Prevention and Response (OSPR), which maintains maps of Environmentally Sensitive Sites on an ongoing basis, available at: <https://www.wildlife.ca.gov/OSPR/Contingency>

Economic and Financial Condition: A marine oil spill could have a deep impact on the Orange County coastal communities' economy. Impacts could include loss of tourism revenue for coastal businesses and loss of revenues from fishing activities (both commercial and tourism).

Assessing these impacts is done somewhat differently than assessing impacts of other disasters because the "Responsible Party" is required to pay for restoration projects to return the environment and wildlife to pre-spill conditions. A team of environmental scientists, wildlife biologists, lawyers and others from the state and federal government, as well as representatives for the responsible party, work together in this process. California Department of Fish and Wildlife (CDFW) biologists will respond to evaluate the threat, assist with response operations, and document the injury in a process known as a Natural Resources Damage Assessment (NRDA). The goal of an NRDA is to examine the natural resource injuries from oil spills, toxic waste sites, and other pollution events to quantify the damages, seek compensation from the responsible parties, and both restore the injured resources and compensate the public for the lost interim ecological benefits and uses of these resources.

Public Confidence in the Jurisdiction: The impact can include a loss of confidence in the jurisdiction's ability to regulate or monitor the industry.

2.5.18 Pandemic/High Consequence Diseases

Impact: **High**

Probability: **Possible**

Related Hazard(s): **Epidemic or Disease Outbreak**

See Disease Outbreak (Large Scale) for discussion of the more likely probability but low impact outbreaks and vector-borne diseases, respectively.

Nature of Hazard

Although communicable disease outbreaks of varying magnitudes occur regularly and often only affect a small segment of the population, certain diseases may cause pervasive illness, may be highly lethal, and/or may be of unknown origin, and may cause significant stress to the resources of the health care system, public health, and/or government. Diseases included in the Pandemic / High Consequence Diseases category include, but are not limited to:

- Novel and/or pandemic influenza strains
- Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2)/COVID-19
- Middle East Respiratory Syndrome Coronavirus (MERS-CoV), and viral hemorrhagic fevers such as Ebola
- Centers for Disease Control and Prevention (CDC) Bioterrorism Agents

Pandemic is defined as a disease occurring over a wide geographic area and affecting a high proportion of the population. A pandemic may cause sudden, pervasive illness in all age groups on a local or global scale. A pandemic is likely to stress the resources of both the local, state, and federal government, as well as the resources of the private healthcare system. **Outbreaks are expected to occur simultaneously throughout much of the County and the State, which may limit the availability of mutual aid assistance and resources from other areas.**

Probability

Although transmission of communicable diseases occurs daily in every community, most instances are not of the severity or magnitude to be considered a county-wide hazard. However, a pandemic or the introduction of a novel disease, could pose a large threat to the health of the community.

Select examples of pandemic / high consequence diseases of recent relevance will be discussed further in this section. See Epidemic or Disease Outbreak section for discussion of endemic diseases of recent relevance.

Novel, and/or Pandemic Influenza Strains

Influenza is a contagious respiratory illness caused by influenza viruses. Although many illnesses are self-limited and mild, complications of seasonal influenza cause on average more than

200,000 hospitalizations and up to 49,000 deaths each year in the United States. In Orange County, severe influenza cases (defined as persons who have influenza and are admitted to the intensive care unit or die) in persons less than 65 years of age are reportable. The last severe influenza season, excluding the 2009 pandemic, was 2017-2018, where Orange County investigated 104 severe cases of influenza.

A pandemic occurs when a new (novel) virus that humans have not encountered before, and therefore have no immunity to, begins circulating, causes infections and spreads quickly from person to person, causing substantial morbidity and mortality across geographic areas. Orange County HCA routinely does surveillance for seasonal influenza as well as enhanced surveillance for novel strains and human infections.

An influenza pandemic is likely to occur in “waves” of infection, each lasting approximately 8 to 12 weeks and separated by weeks of inactivity. In total, it could last from 18 months to several years. Influenza pandemics have occurred in 2009, 1968, 1957 and 1918. The 1968 pandemic (H3N2) resulted in an estimated 1 million deaths worldwide and 100,000 in the U.S. The 1957-1958 pandemic (“Asian Flu”) was caused by an influenza A (H2N2) virus originating in East Asia and resulting in an estimated 1.1 million deaths worldwide and 116,000 in the U.S. The “Spanish Flu” was the most severe influenza pandemic in recent history, causing about 500 million infections and 60 million deaths worldwide, with 675,000 in the U.S. It was caused by an H1N1 influenza virus with genes of avian origin.

In 2009, an H1N1 influenza pandemic spread quickly across the world and led to an estimated 60.8 million infections in the U.S., with 274,304 hospitalizations, and 12,469 deaths. In Orange County, 57 deaths associated with the pandemic strain were reported. The 2009 H1N1 influenza virus quickly established itself as a seasonal influenza strain and has continued to cause illnesses and deaths in Orange County over the years.

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2)/COVID-19

COVID-19 was first identified in December 2019 in Wuhan, Hubei, China. The first cases in North America were reported in the United States in January 2020. As of April 1, 2023, there have been more than 761 million cases reported with more than 6.8 million deaths worldwide.

COVID-19 is a very contagious respiratory illness spread through the SARS-CoV-2 coronavirus. SARS-CoV-2 is spread through droplets and virus particles released into the air. Larger droplets may fall to the ground, but tiny particles can linger in the air in indoor places, especially where many people are gathered and there is poor ventilation.

Signs and symptoms of coronavirus disease 2019 (COVID-19) may appear 2 to 14 days after exposure. This time after exposure and before having symptoms is called the incubation period. You can still spread COVID-19 before you have symptoms (presymptomatic transmission).

The severity of COVID-19 symptoms can range from very mild to severe. Some people may have only a few symptoms. Some people may have no symptoms at all but can still spread it

(asymptomatic transmission). Some people may experience worsened symptoms, such as worsened shortness of breath and pneumonia, about a week after symptoms start. In some cases, COVID-19 can lead to respiratory failure, lasting lung and heart muscle damage, nervous system problems, kidney failure or death.

COVID-19 vaccines available in the United States are effective at protecting people from getting seriously ill, being hospitalized, and dying. As with other vaccine-preventable diseases, you are protected best from COVID-19 when you stay up to date with the recommended vaccinations, including recommended boosters.

February 26th, 2020, the County of Orange proclaimed a local emergency due to COVID-19 and subsequently on March 13th, 2020 the state of California declared a state of emergency for COVID-19. From 2020 to 2023 there were health orders regarding the county response and protective measures for COVID-19. During this time there were over 700,000 confirmed COVID-19 cases and 8,058 deaths (as of March 31st, 2023.)

Access to vaccines have lessened the impact to county residents and visitors, but there is an ongoing impact to the medical system and health threat from the disease. The full cost is still unknown but estimates currently place the cost of COVID-19 for the Federal Government at 16 trillion dollars and the cost to the state of California at 12.3 billion dollars.

Vulnerability, Assets, and Impact

Impact Analysis Note: Because of the size and scope of this hazard, an alternative format has been used to assess the standard categories of impacts (i.e., Public, Responders, Continuity of Operations, Property, Facilities, Assets, and Critical Infrastructure, Supply Chain, Environment, Economic and Financial Condition, Public Confidence in the Jurisdiction). These impact categories are addressed within the separate groupings below.

Influenza and COVID-19 pandemics are likely to affect everyone in Orange County at some point and can greatly impact “business as usual” in any sector of society or government. Severe influenza seasons increase diversion hours at local emergency rooms, increase in hospital admissions in person with underlying health conditions, and death occurring amongst individuals under the age of 65. A pandemic will place a great strain on existing health care resources and may exceed available resources. Personnel, supplies, equipment, and pharmaceutical responses (e.g., vaccination and antivirals) may be in short supply and/or unavailable and non-pharmaceutical responses (e.g., strict adherence to respiratory hygiene, hand washing, self-isolation, and social distancing) will be the most effective strategies to limit transmission.

During a pandemic wave in a community, during a six to eight-week outbreak, between 25% and 30% of persons will become ill. Among working-aged adults, illness attack rates will be lower than in the community as a whole. A CDC model suggests that at the peak of pandemic disease, about 10% of the workforce will be absent because of illness or caring for an ill family member. Outbreaks are expected to occur simultaneously throughout much of the County and the State,

which may limit the availability of mutual aid assistance and resources from other areas. Impacts will likely vary between communities and work sites and may be greater if significant absenteeism occurs because persons stay home for fear of becoming infected. If transportation is compromised in the region or country, food and other essentials may be unavailable as well. Maintaining an active surveillance allows public health to make timely recommendations to intervene on the widespread transmission of influenza.

Emerging Pathogens such as Middle East Respiratory Syndrome Coronavirus (MERS-CoV), and Ebola

With advances in travel, diseases can quickly spread throughout the world. Orange County with its diverse population and large tourism industry is particularly at risk for importation of diseases that may previously have been localized to other countries or continents. These diseases pose a significant hazard if they are highly transmissible from person to person and if they have significant morbidity or mortality. Although these diseases may have different modes of transmission, symptoms, and natural history, the approach to handling the threat of an emerging or novel communicable disease is similar.

Middle East Respiratory Syndrome (MERS-CoV)

Middle East Respiratory Syndrome (MERS) is an illness caused by a virus (more specifically, a coronavirus) called Middle East Respiratory Syndrome Coronavirus (MERS-CoV). Most MERS patients developed severe respiratory illness with symptoms of fever, cough and shortness of breath. About 3 or 4 out of every 10 patients reported with MERS have died.

Health officials first reported the disease in Saudi Arabia in September 2012. Through retrospective investigations, they later identified that the first known cases of MERS occurred in Jordan in April 2012. So far, all cases of MERS have been linked through travel to, or residence in, countries in and near the Arabian Peninsula. The largest known outbreak of MERS outside the Arabian Peninsula occurred in the Republic of Korea in 2015. The outbreak was associated with a traveler returning from the Arabian Peninsula.

MERS-CoV has spread from ill people to others through close contact, such as caring for or living with an infected person and MERS can affect anyone. MERS patients have ranged in age from younger than 1 to 99 years old.

The CDC continues to closely monitor the MERS situation globally. They are working with partners to better understand the risks of this virus, including the source, how it spreads, and how to prevent infections. The CDC recognizes the potential for MERS-CoV to spread further and cause more cases globally and in the U.S.

Ebola Virus Disease (EVD)

Ebola was first discovered in 1976 near the Ebola River in what is now the Democratic Republic of the Congo. Since then, outbreaks have appeared sporadically in Africa. Between 2014-2016, the largest Ebola epidemic in history occurred in West Africa, specifically Guinea, Liberia, and Sierra Leone. It was caused by the *Zaire ebolavirus* and resulted in 28,610 reported cases and 11,308

(39%) deaths. The World Health Organization declared the situation a Public Health Emergency of International Concern. Since then, smaller outbreaks have occurred in the Democratic Republic of Congo, including in 2018 and Uganda in September 2022.

Ebola is a rare and deadly disease caused by infection with one of the Ebola virus species. Ebola can cause disease in humans and nonhuman primates (monkeys, gorillas, and chimpanzees).

Ebola is caused by infection with a virus of the family *Filoviridae*, genus *Ebolavirus*. There are six identified Ebola virus species, of which the first four listed below are known to cause disease in humans:

- Ebola virus (Zaire ebolavirus);
- Sudan virus (Sudan ebolavirus);
- Taï Forest virus (Taï Forest ebolavirus, formerly Côte d'Ivoire ebolavirus);
- Bundibugyo virus (Bundibugyo ebolavirus).
- Reston virus (Reston ebolavirus) [has caused disease in nonhuman primates, but not in humans];
- Bombali virus (Bombali ebolavirus) [recently identified in bats; unknown if causes disease].

The natural reservoir host of Ebola virus remains unknown. However, on the basis of current evidence, researchers believe that the virus is animal-borne and that bats are the most likely reservoir. Humans can get infected through direct contact with the blood, body fluids and tissues of infected fruit bats or primates.

Ebola spreads from person-to-person by direct contact with an infected person's blood or body fluids (such as saliva, vomit, urine, feces, semen, breast milk, or sweat) with broken skin or mucous membranes (i.e., in eyes, nose or mouth). Ebola can also be spread by infected objects, like needles, that have been contaminated with body fluids. Ebola can also spread after death, from contact with body fluids when preparing the patient's body for burial. Ebola can't spread through the air, in food (except contaminated bush meat), or water. Symptoms may develop an average of 8–10 days after infection (range, 2–21 days) and include fever, headache, muscle pain, weakness, diarrhea, vomiting, stomach pain and unexplained bleeding or bruising. Patients can spread the virus while they have a fever or other symptoms. People who haven't had symptoms yet can't spread Ebola.

Centers for Disease Control and Prevention (CDC) Bioterrorism Agents

Bioterrorism Disease Agents

Bioterrorism is a significant concern throughout the country. The intentional release of anthrax, smallpox or other highly communicable and/or virulent diseases would tax all available medical resources within the County. Such an incident could have a significant impact to life, safety, and the economy of Orange County.

The Centers for Disease Control and Prevention (CDC) has categorized various biological agents, including some pathogens that are rarely seen in the U.S., that the public health system and primary healthcare providers must be prepared to address and respond to promptly if encountered. The categories and agents are classified as:

Category A – High-priority agents include organisms that pose a risk to national security because they:

- Can be easily disseminated or transmitted from person to person;
- Result in high mortality rates and have the potential for major public health impact;
- Might cause public panic and social disruption; and
- Require special action for public health preparedness.

Category A Agents include:

- Anthrax (*Bacillus anthracis*)
- Botulism (*Clostridium botulinum* toxin)
- Plague (*Yersinia pestis*)
- Smallpox (variola major)
- Tularemia (*Francisella tularensis*)
- Viral hemorrhagic fevers (filoviruses [e.g., Ebola, Marburg] and arenaviruses [e.g., Lassa, Machupo])

Category B - Second highest priority agents include those that:

- Are moderately easy to disseminate;
- Result in moderate morbidity rates and low mortality rates; and
- Require specific enhancements of CDC's diagnostic capacity and enhanced disease surveillance.

Category B Agents include:

- Brucellosis (*Brucella* species)
- Epsilon toxin of *Clostridium perfringens*
- Food safety threats (e.g., *Salmonella* species, *Escherichia coli* O157:H7, *Shigella*)
- Glanders (*Burkholderia mallei*)
- Melioidosis (*Burkholderia pseudomallei*)
- Psittacosis (*Chlamydia psittaci*)
- Q fever (*Coxiella burnetii*)
- Ricin toxin from *Ricinus communis* (castor beans)
- Staphylococcal enterotoxin B
- Typhus fever (*Rickettsia prowazekii*)

- Viral encephalitis (alphaviruses [e.g., Venezuelan equine encephalitis, eastern equine encephalitis, western equine encephalitis])
- Water safety threats (e.g., *Vibrio cholerae*, *Cryptosporidium parvum*)

Category C - Third highest priority agents include emerging pathogens that could be engineered for mass dissemination in the future because of their:

- Availability
- Ease of production and dissemination
- Potential for high morbidity and mortality rates and major health impact

Category C Agents include emerging infectious diseases such as Nipah virus and hantavirus.

The CDC does not prioritize these agents in any order of importance or likelihood of use. Whether used as potential bioterrorism agents or occurring naturally, these agents are often suspected only upon recognition of unusual disease clusters or symptoms. Rapid response to a bioterrorism related disease outbreak requires prompt identification of the agent and potential treatment options. Due to the rapid onset of disease illness, it may not be practical to await diagnostic laboratory confirmation. Instead, it will be necessary to initiate a response based on the recognition of high-risk syndromes. Fact sheets describing the Category A agents and what to do upon suspected exposure can be accessed at: <https://emergency.cdc.gov/bioterrorism/>.

Pandemic / High Consequence Disease Assumptions

- An outbreak of a new disease or one uncommon to the area will likely require public health assistance for diagnosis and clinical management.
- A large disease outbreak, pandemic or response to an emerging disease, bioterrorism event may require the coordination of county, public and/or private sector partners.
- Increased mortality may impact Coroner operations; including handling, identification and final disposition of the deceased.
- The ability of the federal and state government to support local jurisdictions may be limited at the onset of the disease outbreak based on scale (i.e. statewide/worldwide), and may continue to be limited for an extended period.
- Coordination with local, state, and federal agencies and representatives is essential for an effective response.
- Contagious disease outbreaks may occur simultaneously throughout much of the region and nation, limiting mutual assistance and resources from others.

Time Period

- The first detected case of infection in the state or country may occur within Orange County.
- Because of high rates of international travel and many ports of entry, there may be very little time between the identification of a disease agent in another country and the first identified human case in Orange County.

Healthcare Surge

- A pandemic or response to a novel pathogen or bioterrorism event may place a great strain on existing health care and public health resources.
- The healthcare system will need support in addressing shortages in:
 - Personnel
 - Space
 - Medications/Vaccinations
 - Medical equipment, supplies, and other resources (i.e. medical transport)
- Additional resources from mutual aid and volunteer groups may not be available to assist in the Orange County response.
- Utilization of Disaster Service Workers, Medical Reserve Corps, and other affiliated volunteers to work outside of their normal scope of work may be required to deal with staffing shortages.
- To support the healthcare surge, the healthcare community must plan for:
 - Triage to mitigate the number of people seeking medical care
 - Effective outpatient management
 - Cancellation of elective procedures
 - Transfer of patients into alternate existing healthcare community settings (e.g., outpatient clinics, home health or hospice, long term care facilities)
 - Establishment of ancillary or alternate care sites
 - Rationing and prioritization of equipment and services
 - Laboratory and pharmacy operations
 - Altering of standards of care

Prophylaxis and Treatment

- Prophylaxis and/or treatment in response to a disease outbreak, pandemic, or other high consequence disease may require the administration of antibiotics, antitoxins, antivirals and/or vaccines, collectively referred to as Medical Countermeasures (MCM).
- Patients may require access to MCM within 24-48 hours of symptom onset or suspected disease exposure.
- However, for some diseases, MCM may not be effective to treat or protect against a novel disease agent or may be in very limited supply with distribution occurring in phases.
- MCM shipments may arrive through state and regional mutual aid sources (e.g. Strategic National Stockpile (SNS)).
- If sufficient quantities of MCM are not available at disease outbreak onset, prioritization may be required and will be allocated according to federal and state guidance, recommendations or requirements.

- Targeted prophylaxis and treatment methods may need to be conducted on a smaller scale using specialized distribution methods.
- Mass prophylaxis/vaccination may require the activation of Point of Dispensing (POD) sites within the OA to provide large groups of the population with the necessary medical countermeasures.
- If not readily available, a vaccine may take months after a novel disease agent is detected to be manufactured, tested, and distributed. Supplies to administer the vaccine may also be limited.
- Multiple doses of vaccine administered over weeks, or months, apart may be required to develop maximal immunity to a novel disease agent.
- Local health departments may be required to manage the receipt, storage, distribution, tracking, and use of drugs and vaccines, as well as monitoring of their adverse events, in consultation with state and federal authorities.

Essential Services

- Essential services may need to be defined and re-defined over the course of the response, and continuity of operations plans will need to be implemented.
- Critical goods and services provided by vendors, contractors, and consultants may be erratic and stressed.
- During a large disease outbreak response there may be competing emergency transportation requirements and requests for prioritization, both for people and for supplies and equipment. Safe transportation may require increased cleaning and protective equipment, and decisions may be needed regarding whether transportation systems should be closed.
- In a prolonged disease outbreak response, interruption in the transportation and delivery of supplies may lead to a need for public/private partnerships to support resource distribution.

Public Information

- There will be a significant surge in the need for messages and public communications.
- Information provided to the public from OA jurisdictions must come from Orange County HCA and/or County and OA Emergency Operations Center (EOC), if activated. During a disease outbreak the overall situation could change very quickly. Dissemination of information must be a coordinated effort with consistent messaging.
- Different types of communications (e.g., where to go for prophylaxis, how to prevent infection, community mitigation measures, or where to go for food and water) will need to occur simultaneously to varied populations and community partners.

Security

- Multiple security requirements could result during a large disease outbreak response, including security during:
 - The receipt, storage, and transport of SNS assets
 - POD site operations
 - Possibly healthcare and alternate care site operations

Measures to Protect Public

- Non-pharmaceutical community mitigation strategies, such as social distancing and school dismissals may be effective to limit transmission and slow the spread of a communicable disease agent especially while medical countermeasures are unavailable.
- Early in an outbreak of a communicable disease with significant morbidity or mortality, containment measures including isolation of ill and quarantine of exposed may be necessary to limit transmission.
- Increased environmental cleaning may be needed, including public facilities and transport vehicles.

Staffing

- High absenteeism levels may reduce available services within the community.
- Absenteeism will be the result of workers becoming ill, staying home to care for children or family members, or refusing to go to work due to fear of becoming ill.
- Persons may be absent from work for extended periods, depending on the agent.

Animal Care

- Depending on the disease, there may be concerns regarding infection in or from pets, or exposure of pets to infected persons.
- A severe disease outbreak could result in an increase in strays, an increase in individuals unable to care for pets, and increased ectoparasites (e.g., fleas).
- Animal shelter capacity in existing facilities will likely be exceeded and infection control risks from ill animals will limit the ability to shelter some animals.

2.5.19 Product Contamination

Impact: **High**

Probability: **Possible**

Related Hazard(s): **Disease Outbreak, Economic Failure, Terrorism**

Nature of Hazard

Product contamination, also known as intentional adulteration, is the purposeful introduction of potentially harmful biological, chemical agents, or radio-nuclear substances into items either purchased by or distributed to others for the purpose of causing injury or death to civilian populations and/or disrupting social, economic or political stability.³⁸

Probability

The Food Protection and Defense Institute, a Department of Homeland Security Center of Excellence, continually assesses the probability of food product contamination. In collaboration with private sector partners, they have identified that industrial control systems potentially create cybersecurity vulnerabilities, which can be exploited. To successfully tamper with a food or consumer product, the aggressor must have access to it for a sufficient time, be technically capable of introducing a suitable contaminant, and be able to commit the crime without discovery. In addition, the aggressor must have the behavioral resolve (desire) to contaminate food and the technical feasibility (appropriate materials) to succeed.³⁹ In March 2020, US-based violent extremists encouraged followers online to contaminate US food supplies including food retailers such as grocery stores with COVID-19 by coughing on food. In March 2020, ISIS supporters distributed an online magazine encouraging attacks, including poisoning food and water.⁴⁰ Incidents of product contamination occurring in the U.S. have included:

- In 2020, during the COVID-19 pandemic, the Food and Drug Administration (FDA) developed a warning list of over 400 companies whose hand sanitizers included toxic ingredients like methanol and 1-propanol.⁴¹
- In 2020, during the COVID-19 pandemic, there was concern about how long the virus could live on different surfaces, including those of supplies and meals being shipped to hospitals, first responders, seniors, children, and those with disabilities, access, and functional needs.
- In 2007, the FDA placed an import ban on toothpaste from China when it was discovered that multiple brands had been laced with DEG (diethylene glycol).

³⁸ Retrieved from <http://www.fao.org/tempref/docrep/fao/Meeting/008/j3110e.pdf>

³⁹ Retrieved from <https://www.fda.gov/downloads/Training/ForStateLocalTribalRegulators/UCM218900.pdf>

⁴⁰ Retrieved from [here](#)

⁴¹ <https://www.fda.gov/drugs/drug-safety-and-availability/fda-updates-hand-sanitizers-consumers-should-not-use#products>

- In 2003, a Michigan supermarket employee was indicted for intentionally contaminating 200 pounds of ground beef with nicotine. The Centers for Disease Control and Prevention released the information that 92 individuals became ill after purchasing and consuming the ground beef.
- In 1989, a threat was made to Chilean grown grapes intended for the US. The threat started when a terrorist group phoned the US Embassy in Santiago, Chile claiming to have laced Chilean grapes with cyanide. The grapes were used for the purpose of wine production and table use, and the threat was directed towards US consumers, US wine companies, and the Chilean economy.⁴²
- In 1982, the Chicago Tylenol murders were a series of poisoning deaths resulting from drug tampering in the Chicago metropolitan area. The victims had all taken Tylenol-branded acetaminophen capsules that had been laced with potassium cyanide. A total of seven people died in the original poisonings, with several more deaths in subsequent copycat crimes.⁴³

To reduce the likelihood of intentional adulteration, the FDA implemented the Final Rule for Mitigation Strategies to Protect Food against Intentional Adulteration, which requires FDA-registered food facilities to identify specific vulnerabilities in their facilities that could allow someone with bad intentions to deliberately introduce an adulterant. Food companies must also create a food defense plan to prevent or mitigate those vulnerabilities at the actionable process steps.

Vulnerability, Assets, and Impact

The potential impact of an actual product contamination may vary widely and can be devastating and even deadly. The effects may cause major health problems, loss of life and economic losses.

- In the Chilean grapes case, the FDA worked in concert with the press and other major stakeholders in the marketing chain to assess the severity of the threat and to pull Chilean imported fruit off the shelves. The event had a major impact in the US economy. Growers, exporters and other companies later sued the FDA, claiming \$212 million in damages.⁴⁴
- The Tylenol tampering inspired hundreds of copycat incidents across the U.S. The FDA tallied more than 270 different incidents of product tampering in the month following the Tylenol deaths.⁴⁵ It also changed the way the consumers purchase and

⁴² Retrieved from <https://www.fda.gov/media/78973/download>

⁴³ Retrieved from https://en.wikipedia.org/wiki/Chicago_Tylenol_murders

⁴⁴ Retrieved from http://articles.latimes.com/1994-12-31/news/mn-14948_1_california-grapes

⁴⁵ Retrieved from <http://content.time.com/time/nation/article/0,8599,1878063,00.html>

consume over-the-counter medications and new tamper-proof packaging protections soon became the industry standard for all medications.⁴⁶

Depending upon the incident scope, impacts could include:

Public: There may be loss of life or illness. Children may not be able to attend school and parents may not be able to work as they are ill or become caretakers. There may be a loss of trust in businesses' commitment to provide safe products.

Responders: Depending upon the contaminant, some first responders may be exposed to the contaminated product as well and so be unable to respond. When responding, emergency workers may also have to employ protective actions to avoid exposure to the contaminants.

Continuity of Operations: Organizations may need to increase their scrutiny of incoming products to ensure contamination does not impact operations.

Supply Chain: The logistics supply chain for critical supplies may need to be altered to avoid contamination and re-establish distribution routes.

Property, Facilities, and Infrastructure: Food processing facilities, distribution centers, and local stores could be impacted.

Environment: There may be environmental impacts if contaminated products are not disposed of properly.

Economic Condition of the County: There may be direct economic losses attributable to the costs of responding to the act. There may also be indirect multiplier effects from compensation paid to affected producers and the losses suffered by affiliated industries, such as suppliers, transporters, distributors, and restaurant chains. There may also be a loss of consumer confidence in supply chain safety.

Public Confidence in the Jurisdiction's Governance: There may be a loss of trust in the ability of government to safeguard the public. The public may mobilize in support of passing regulatory changes to intervene in the product contamination. There may be an increased need to provide public information on government recommendations and actions related to the product contamination

⁴⁶ Retrieved from <https://www.pbs.org/newshour/health/tylenol-murders-1982>

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2.5.20 Rail Incident

Impact: **Moderate**

Probability: **Possible**

Related Hazard(s): **Mass Casualty, Hazardous Materials Release, Fire, Evacuations**

Nature of Hazard

This hazard profile includes passenger and freight trains operating within or through Orange County. It does not include single person accidents but rather focuses on complex derailments and collisions.

Probability

Orange County rail lines carry multiple passenger and freight trains daily. By 2025, the Orange County Transportation Authority estimates that these lines will carry 125 -150 freight trains coupled with increased passenger/commuter train traffic.

Likely accidents can range in size from singular fatalities to derailments or collisions which involve mass casualties or fatalities. Any rail related incident has the potential for cascading impacts that can quickly absorb local resources. For example, in April 2002, an eastbound Burlington Northern/Santa Fe Railway freight train collided head on with a standing westbound Southern California Regional Rail Authority passenger train at Control Point Atwood in Placentia, California. Emergency response agencies reported that 162 persons were transported to local hospitals. There were two fatalities. Damage was estimated at \$4.6 million.⁴⁷ A similar incident occurred in 1990 in neighboring Corona when two freight trains collided. As a result of the collision, the entire crew of ATSF 818 was killed and four locomotives and three rail cars were derailed. The engineer and conductor of train 891 sustained serious injuries and the brakeman was killed, all three locomotives and five railcars were derailed. The total damage was estimated to be \$4,400,000.⁴⁸

Vulnerability, Assets, and Impact

A major train derailment occurring in a heavily populated area can result in considerable loss of life and property damage. As a train leaves its track, there is no longer any control as to the direction it will travel. Potential hazards could be overturned rail cars, direct impact into a building, or entering into normal street traffic. Each of these hazards encompasses many threats, such as hazardous materials incident, fire, severe damage to adjacent buildings or vehicles, and loss of life of those on the train or in either adjacent buildings, vehicles, or pedestrians.

⁴⁷ Retrieved from <https://www.nts.gov/investigations/AccidentReports/Pages/RAR0304.aspx>

⁴⁸ Retrieved from <https://www.nts.gov/investigations/AccidentReports/Pages/RAR9103.aspx>

Depending upon the incident scope, impacts could include:

Public: There may be significant numbers of injured or deceased people, requiring either reunification or identification respectively. There may be unaccompanied minors who need to be reunited with family. There may be train cancellations that impact workers and tourists.

Responders: Impacts may be compounded based on what the derailed train was carrying, especially if hazardous materials are present. There may be unsafe conditions in accessing the derailed cars, and confusion over jurisdiction.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Impacts may include structural concerns over railway and adjacent transportation modes (e.g., freeways).

Supply Chain: Extended closure of local rail lines has the potential to adversely impact supply chains due to the reliance on rail traffic as a transportation mechanism for goods.

Environment: Impacts may include the release of hazardous materials through both air and water plumes. These plumes may carry materials far from the location and require special monitoring and testing.

Economic and Financial Condition: Extended closure of local rail lines has the potential to adversely impact national and local economies due to the reliance on rail traffic as a transportation mechanism for both people and goods.

Public Confidence in the Jurisdiction: The public may question the regulation and oversight of rail carriers, as well as policies regarding what rail cars are allowed to transport through communities.

2.5.21 Sea Level Rise

Impact: **Moderate**

Probability: **Likely**

Related Hazard(s): **Flood, Tsunami**

Nature of Hazard

Sea level rise is the gradual increase in the level of the ocean's surface, resulting from the melting of the polar ice caps and thermal expansion of seawater. The California Legislative Analyst's Office estimates sea level rise in California could be at least half of one foot in 2030 and as much as seven feet by 2100⁴⁹. Storm surges, exceptionally high "king tides," or El Niño events could produce notably higher water levels than sea level rise alone.

Probability

Although variable at different points along the coast due to regional factors, sea levels are rising globally due to climate warming including expansion of ocean water and melting of land ice. The National Oceanic and Atmospheric Administration maintains data at <https://tidesandcurrents.noaa.gov/sltrends/>. In Orange County, the Newport Beach observation point has recorded a relative sea level trend is 2.22 mm/year with a 95% confidence interval of +/- 1.04 mm/year based on monthly mean sea level data from 1955 to 1993 which is equivalent to a change of 0.73 feet in 100 years.

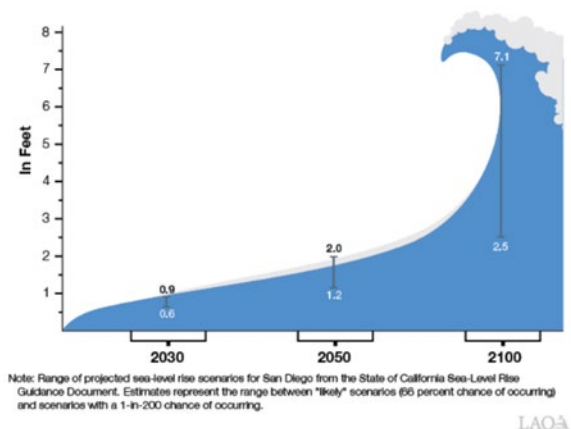
A recent review of different calculation approaches by the National Academy of Sciences reported estimated global sea level rise. This review also projected that sea level in Southern California, which is slightly higher than the global average because of land subsidence, and will be approximately (relative to year 2000) 2 to 12 inches by 2030, 5 to 24 inches by 2050 and 17 to 66 inches by 2100. Numerous studies have been done that will report different results as each are based on different methodologies. Future sea level rise estimates will vary based on future greenhouse gas emissions and projections.

Vulnerability, Assets, and Impact

In the short term, the major impact of sea level rise will be its effect on other tidal hazards. Even minor increases in sea level will have a significant intensifying effect on coastal flooding and erosion as a result of very high tides, tsunami and storm events. While sea level rise is already

Figure 22: The graph shows the projected California sea level rise

California Sea Levels Are Projected to Rise Significantly



⁴⁹ <https://lao.ca.gov/Publications/Report/4261>

impacting the coastal jurisdictions, it is a developing threat that may take years or decades to mature into a major hazard. Its impact will be most significant in the flatter coastal areas in Northern Orange County and in the harbor areas. Over the next one hundred years, sea level rise will also make permanent changes to the Orange County coastline, impacting residential and commercial property and critical infrastructure. Impacts to particular sectors are described below.

Depending upon the incident scope, impacts could include:

Public: Sea level rise poses a threat to the safety and well-being of people living in low-lying areas. Floods and storm surges can displace residents, damage property, and disrupt daily life. Sea level rise can impact activities that are important to the local community, such as recreation, tourism, and fishing.

Responders: No large-scale impact is expected from a responder perspective, although an increase in frequency for smaller incidents due to coastal erosion and flooding may occur.

Continuity of Operations: No large-scale impact is expected from a COOP perspective.

Property, Facilities, Assets, and Critical Infrastructure: Sea level rise can damage or destroy buildings and infrastructure, leading to economic losses and disruption of services. Coastal structures such as piers, marinas, and seawalls may also be impacted by rising sea levels, compromising their effectiveness and safety.

Supply Chain: No large-scale impact is expected from a supply chain perspective in Orange County as there are alternative transportation routes away from the coastal area.

Environment: Coastal ecosystems such as wetlands, estuaries, and coral reefs are at risk of being inundated by rising sea levels, leading to the loss of critical habitat and ecosystem services. In addition, historic structures and sites located in low-lying areas may be impacted by sea level rise, compromising their integrity and cultural value.

Economic and Financial Condition: Beaches, piers, and other coastal infrastructure may be damaged or destroyed, impacting the local economy and quality of life. Insurance on coastal properties and infrastructure may become more expensive.

Public Confidence in the Jurisdiction: The public may consider whether local jurisdictions have implemented appropriate zoning measures in coastal areas.

2.5.22 Nuclear Incidents, Including San Onofre Nuclear Generating Station (SONGS)

Impact: **High**

Probability: **Unlikely**

Related Hazard(s): **Terrorism, Civil Unrest, Cyberattack**

Nature of Hazard

There is one nuclear facility located in Orange County, the University of California Irvine. This reactor is used for research purposes only. The other nuclear facility near Orange County is the decommissioning nuclear power plant, San Onofre. This plant is located just south of the Orange County border in San Diego County. While this plant is no longer an active nuclear generation facility, possible impacts from spent fuel still remains. Due to the close proximity to Orange County residents, the County of Orange maintains response procedures.

The San Onofre Nuclear Generating Station (SONGS) is currently in the decommissioning process; all fuel has been removed from the reactor core and spent fuel pools and placed in dry storage. This facility is onsite and is known as the Independent Spent Fuel Storage Installation or ISFSI. SONGS stores uranium fuel and other highly radioactive contaminated materials on site using sealed stainless steel canisters that are housed in reinforced concrete structures, known as dry cask storage. The spent fuel storage will remain on site for the foreseeable future until a suitable permanent off-site nuclear storage facility can be determined out of State.

The UCI Nuclear Reactor Facility is part of the Chemistry Department for use in radiochemical applications that pertain to spent nuclear fuel, delayed neutron classifications of uranium and plutonium, medical isotopes, and classification of branching decay ratio for specific isotopes. The reactor is a Mark 1 TRIGA (Training, Research, Isotopes General Atomics) that runs at a steady-state power level of 250 kilowatts. This reactor also has the capability to pulse up to 1000 megawatts due to the inherently safe nature of the fuel used in TRIGA reactors.

Probability

Southern California Edison (SCE) states the risk of an incident at a permanently shut down and defueled reactor is much less than the risk from an operating reactor. In addition, since reactor operation is no longer authorized at SONGS, there are no events that would require the stabilization of reactor conditions after an accident. SCE provided a detailed analysis of hypothetical beyond-design basis accidents that could result in a radiological release at SONGS in its March 31, 2014, submittal to the NRC.

The UCI reactor is comprised of up to 20% enriched Uranium that is mixed with Zirconium-Hydride, which allows for safe operation of the reactor. As the temperature increases from the fission process, the fuel elements heat up and become less efficient at creating more fission events effectively reducing the reactivity.

Vulnerability, Assets, and Impact

The increasing volume and variety of radioactive materials that are generated, stored, or transported in Orange County has created potential nuclear incident threats. Radioactive material is any material that emits radiation spontaneously. It may significantly contribute to or cause an increase in mortality and an increase in serious illness.

Among the possible causes of a nuclear incident are earthquakes, dam failures, transportation accidents, civil disturbances including terrorism, and problems within a nuclear facility. A nuclear incident may trigger one or more secondary events, including blasts, explosions, radioactive fallout, fires, power failures, transportation disruptions, building collapse, food and water supply contamination, or disruption of distribution systems.

The County of Orange Nuclear Power Plant Emergency Plan for SONGS and its associated procedures have been developed to reflect the policies and concepts under which the County of Orange will operate during an emergency involving the spent nuclear fuel.

The County has two large gamma ray sterilization facilities. Almost six million curies of radioactive cobalt 60 are stored in pools of water behind eight-foot thick concrete walls. The general public and industrial operations would be threatened if the concrete containment cracked and the pools lost their water supply. There could be up to a six-mile evacuation as a result of the opening of the containment. No contamination from the water would result.

Orange County has over 200 specific licensees who use sealed and unsealed sources of radiation. The hazards range from a small spill inside a facility to a radioactive plume of smoke from a major fire. Exposure to the smoke would cause both internal and external exposure hazards.

Depending upon the incident scope, impacts could include:

Public: Short and long term health issues, and an increase in anxiety about the safety of nuclear materials within Orange County.

Responders: A draw-down on specially trained personnel and equipment. State and federal resources would likely be called in to assist. Responder health would likely be monitored on an ongoing basis to assess for any related health concerns.

Continuity of Operations: Nearby government locations may have to identify alternative locations to operate.

Property, Facilities, Assets, and Critical Infrastructure: Nearby facilities and infrastructure may be closed until radiation monitoring can be performed and areas cleaned.

Supply Chain: No large-scale, lasting impacts are anticipated from a supply chain perspective.

Environment: Radioactive releases could harm plant and animal life.

Economic and Financial Condition: Nearby business could be closed for lengthy periods resulting in a loss of jobs and business revenues. Local government could incur large costs in responding to this type of incident.

Public Confidence in the Jurisdiction: The public may question the regulation and oversight of those possessing radioactive material. Policies regarding what materials are allowed to be stored and used within local communities may be questioned.

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2.5.23 Terrorism

Impact: **High**

Probability: **Unlikely**

Related Hazard(s): Cyber-Incident/Attack, Nuclear Incidents

See Terrorism Annex for additional details. An electronic version is available in PrepareOC. Additionally, hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

Nature of Hazard

6 USC 101 defines the term “terrorism” to mean any activity that involves an act that is dangerous to human life or potentially destructive of critical infrastructure or key resources; and is a violation of the criminal laws of the United States or of any State or other subdivision of the United States; and appears to be intended to intimidate or coerce a civilian population; to influence the policy of a government by intimidation or coercion; or to affect the conduct of a government by mass destruction, assassination, or kidnapping.

Terrorism is the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.⁵⁰ Terrorism affects through fear, physical injuries, economic losses, psychological trauma, and erosion of faith in government. Terrorism is not an ideology; it is a strategy used by individuals or groups to achieve their political goals.

- Domestic terrorism are those acts described above performed by U.S. citizens to further ideological goals stemming from domestic influences, such as those political, religious, social, racial, or environmental.
- International terrorism are those acts described above performed by groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state sponsored).

The U.S. Department of Homeland Security defines critical infrastructures as the physical and cyber systems and assets that are so vital to the United States that their incapacity or destruction would have a debilitating impact on our physical or economic security or public health or safety.

This hazard encompasses incidents which were previously categorized as “weapons of mass destruction”, “CBRNE” (chemical, biological, radiological, nuclear, and explosive), and cyber-

⁵⁰ Chris, C. (8-Apr-2014) Definition of Terrorism. Retrieved on September 18, 2020, February 22, 2018, from <http://www.secbrief.org/2014/04/definition-of-terrorism/>.

attacks or intrusions. For purposes of California SB 468 (Dodd) and CGC § 8570.6, this hazard encompasses electromagnetic pulse attacks which could have significant impacts on the region.

Probability

The threat of domestic and international terrorist groups/organizations has continued to evolve since the September 11, 2001 terror attacks. Orange County remains a possible target with its economic resources, tourism, and populations.

The Orange County Intelligence Assessment Center (OCIAC) maintains ongoing assessment of potential terrorism both by Orange County targets and by potential perpetrators within Orange County. The OCIAC designates Terrorism Liaison Officers (TLOs) who are trained in reviewing and assessing local reporting and conducting outreach to other public safety agencies, critical infrastructure operators, and community groups. The TLO is the local agency point of contact for all terrorism related alerts, requests for information, warnings, and other notifications from regional, state, or federal homeland security agencies.

Vulnerability, Assets, and Impact

The threat of or an actual terrorist attack may cause disruptions in social structures and material losses, economic and psychological burdens, and loss of life. Terrorist acts can have extensive negative consequences, beginning with death and injury, property damage, and ordinary direct business interruption. However, negative impacts can be magnified greatly by a combination of ordinary multiplier effects, cascading infrastructure system failures, and behavioral responses stemming from fear.⁵¹

Depending upon the incident scope, impacts could include:

Public: Individuals could be injured or killed. Emotionally, individuals may develop fear of conducting normal activities. Homes and business could be damaged or destroyed.

Responders: Multiple layers of government would be tasked with coordinating response. Complex incident scenes with multiple layers of government responders could cause information to be restricted to specific roles and clearances. Responders may not initially know what has happened or who triggered the incident.

Continuity of Operations: If government facilities or systems are targeted, there could be a delay in providing services and benefits to the public. If government personnel are targeted, staff could require alternative work arrangements or resign.

Property, Facilities, Assets, and Critical Infrastructure: Critical infrastructure/key resources impacts could include against telecommunications, electrical power systems, gas and oil storage facilities, transportation, water supply systems, wastewater systems, and

⁵¹ Retrieved on September 22, 2020, from <http://create.usc.edu/research/research-areas/economic-analysis>.

government and emergency services. Facilities that store, use or produce hazardous materials (HazMat) are not only critical to the economy, but the HazMat substances themselves could be used as a weapon. The OCIAC has a Critical Infrastructure Protection Unit that assesses impacts on potential critical infrastructure and key resources that may be targets of terrorism. On a municipal level, terrorist targets could include police stations, fire stations, hospitals, municipal offices, community centers, theaters, sport arenas, educational facilities, religious facilities, banks, shopping centers, power stations, transmission lines, telephone relays, drinking water supplies, water treatment facilities, restaurants, and grocery stores.

Supply Chain: If critical infrastructure or manufacturers are targeted, there could be delays in production and transportation of goods. If regional transportation hubs are targeted, regional supply chains can be impacted.

Environment: CBRNE incidents have the capacity to contaminate the environment, endangering plants and wildlife.

Economic and Financial Condition: Immediate impacts to nearby businesses could include loss of jobs and revenue if the facility is damaged, contaminated, or destroyed. In extreme cases, whole communities could be financially impacted by damages to large businesses or critical industries.

Public Confidence in the Jurisdiction: The public could question the jurisdiction's investment in preventing such incidents.

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2.5.24 Tsunami

Impact: **Moderate**

Probability: **Unlikely**

Related Hazard(s): **Earthquake, Flood**

See Tsunami Annex for additional detail. An electronic version is available through WebEOC in PrepareOC. Additionally, hard copies are available at the EOC and EMD staff have remote access to all plans and annexes.

Nature of Hazard

A tsunami (seismic sea wave) is a series of waves most commonly caused by an earthquake beneath the sea floor or by a large undersea landslide. In the open ocean, tsunami waves travel at speeds of up to 600 miles per hour but their wave height is generally too small to be observed. As the waves enter shallow water, they slow down and may rise to several feet or, in rare cases, tens of feet.

Probability

Since 1812, the California coast has had 14 tsunamis with wave heights higher than three feet; six of these were destructive. The Channel Islands were hit by a damaging tsunami in the early 1800s. The worst tsunami resulted from the 1964 Alaskan earthquake was the result of a 9.2 earthquake, the world's second largest recorded temblor and caused 12 deaths and at least \$17 million in damage to northern California. Two general types of tsunamis could affect the coastal areas of California:

Local tsunami (also called near-source): If a large earthquake or undersea landslide occurs at or near the California coast, the first waves may reach coastal communities within minutes. There may be little or no time for authorities to issue a warning. Mitigation requires an understanding of areas at risk, areas of safety, evacuation routes, trained first responders and a trained public that understands the need to immediately move inland or to higher ground. Though infrequent, California has experienced local tsunamis in the past and paleo tsunami evidence show major tsunami impact in the recent geologic past. Risk is considered high along the north coast of California, from Crescent City to Cape Mendocino; moderate south of Cape Mendocino to north of Monterey; high south of Monterey to Palos Verdes; and moderate south of Palos Verdes to San Diego.

An offshore earthquake or landslide with a magnitude of 6.8 has the potential to create a local source tsunami, which could reach the Orange County coast in 15 minutes.

Distant tsunami (also called distant-source): Very large earthquakes in other areas of the Pacific Rim may also cause tsunamis, which could impact California's coast. The first waves would reach

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Orange County's coastline many hours after the earthquake occurred. Tsunami Warning Centers are responsible for alerting local officials and it is the local officials who may order evacuations.

Effective mitigation requires an understanding of the tsunami warning system, local areas of risk, public education and evacuation planning and exercises.

There is concern that an event originating in the Cascadia subduction zone may have significant impact on Southern California, similar to those experienced in Crescent City after the 1964 Alaskan earthquake, since the distance between Cascadia and Southern California is about the same as the distance from Alaska to Crescent City. Several poorly documented local tsunamis caused some damage to southern California communities in the 1800s. Historic records suggest that three tsunamis produced flooding in the Santa Barbara area during this period.

In addition, the Working Group on California Earthquake Probabilities of the Southern California Earthquake Center (SCEC) had identified the Palos Verdes, Santa Cruz Island and Santa Rosa Island faults as active and potentially tsunamigenic.

Figure 23: Notable Tsunamis in Orange County

Run-up amplitude, in feet, above normal tide conditions	Date	Magnitude-Source area	Tsunami location	Run-Up/Amp	Remarks
OBS = observed tsunami activity NR = No damage or severe conditions reported	7/10/1855	multiple local earthquakes	Dana Point	OBS	"...considerable commotion in the water, attended by a strong rushing sound..."
	4/1/1946	M8.8 – Aleutian Islands	Newport Beach	1 ft	"...furious eddy between Balboa and Little Island..."
	3/9/1957	M8.6 - Aleutian Islands	Newport Beach	1 ft	NR
- Distant Source - Tsunamis without felt earthquakes	5/22/1960	M9.5 - Chile	Alamitos Bay	2 ft	NR
			Dana Point	3 ft	cabin cruiser sunk
	3/28/1964	M9.2 – Alaska	Alamitos Bay	1 ft	NR
			Newport Beach	1 ft	NR
- Local Source - Earthquake and tsunami together	2/27/2010	M8.8 – Chile	Huntington Beach	2 ft	NR
			Newport Beach	2 ft	NR
			Dana Point	2 ft	Bait barge severed
	3/11/2011	M9.0 - Japan	Huntington Beach	2 ft	Boat pulled off mooring
			Newport Beach	1 ft	NR
			Dana Point	2 ft	Pylon damaged when hit by boat

Coastal jurisdictions within Orange County that could be directly impacted by a tsunami include:

- Seal Beach
- Huntington Beach
- Newport Beach
- Laguna Beach
- Emerald Bay (County unincorporated area)
- Dana Point
- San Clemente
- County Beaches

Other potentially impacted jurisdictions or agencies include:

- State of California Parks and Recreation
- Orange County Sanitation District
- Orange County Water District

Vulnerability, Assets, and Impact

Tsunamis can cause great loss of life and property damage where they come ashore. The first wave is almost never the largest; successive waves may be spaced tens of minutes or longer apart and continue arriving for many hours. Field surveys and modeling (1992-1996) by Professor Costas Synolakis of the University of Southern California have projected a 4 meter (13 feet) tsunami that would cause extensive damage and flooding along flat coastlines such as those in Santa Monica Bay or in Orange and San Diego Counties. Communities that are sandwiched between the ocean and other bodies of water such as wetlands, river inlets, or salinas are at very high risk due to the possible overland flow and simultaneous tsunami attacks from multiple directions.

As shown on the tsunami run-up maps (see Tsunami Annex), the entire 43 miles of the Orange County coastline could be impacted. Coastal communities are densely populated, making evacuations especially difficult. Local jurisdictions must determine the number of residents who will require evacuation. Other factors impacting evacuation include the time of day, the time of year, road conditions, tourist population, and sporting and social events.

Life and Property

Tsunamis cause damage in three ways: inundation, wave impact on structures, and erosion. Orange County has southwestern facing beaches that are vulnerable to tsunamis or tidal surges from the south and from the west.

Strong, tsunami-induced currents lead to the erosion of foundations and the collapse of bridges and sea walls. Flotation and drag forces move houses and overturn railroad cars. Considerable damage is caused by the resultant floating debris, including boats and cars that become dangerous projectiles that may crash into buildings, break power lines, and may start fires. Fires from damaged ships in ports or from ruptured coastal oil storage tanks and refinery facilities can cause damage greater than that inflicted directly by the tsunami.

Known risk areas include, but are not limited to:

- City, County and State Beaches.
- All buildings and apartments to the west of Pacific Coast Highway (PCH).
- Buildings that are on the inland side of PCH facing the ocean.
- Vehicles and pedestrians on PCH in low-lying areas.
- Harbor areas.
- Low-lying areas adjacent to the coast.

Depending upon the incident scope, impacts could include:

Public: The impact could cause loss of life, destroy thousands of homes, greatly affect coastal businesses, and impact tourism. Even if all residents and visitors were safely evacuated, the damage to property in this densely populated, high property value area would still be tremendous. Roads blocked by objects during a tsunami may have severe consequences to people who are attempting to evacuate or who need emergency services.

Responders: Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted.

Continuity of Operations: Government operations along coastal areas (e.g., harbor patrol) or in low lying areas may have to find alternative facilities from which to operate. This would include needing to re-establish computer and communications systems.

Property, Facilities, Assets, and Critical Infrastructure: Tsunamis (and earthquakes) can damage buildings, power lines, and other property and infrastructure due to flooding. Tsunamis can result in collapsed or damaged buildings or blocked roads and bridges, damaged traffic signals, streetlights, and parks, among others. Damage to public water and sewer systems, transportation networks, and flood channels would greatly impact daily life for residents.

The dense land use in Southern California and the continued development in areas exposed to coastal and riverine inundations have increased the risk of property damage and loss of life from future tsunamis. Even in locales where the tsunami hazard may be low, the land use development in areas subject to inundation and ground subsidence increases the overall risk. The rapid arrival of waves from a local event and the long duration of tsunami wave action intensify the risk from local events.

Supply Chain: Localized supply chain challenges could be created by impassable roads, damaged buildings, shuttered businesses, and loss of utilities (e.g., power, water, gas, etc.)

Environment: Additional risk is posed by the potential release of toxic pollutants due to the failure of marine oil-transfer facilities and terminals.

Economic and Financial Condition: Local governments rely heavily on tourism and sales tax generated by coastal communities. Future tsunamis may cause economic losses in coastal communities' dependent on marine or harbor commerce. Losses to the tourist industry, harbor facilities in the Ports of Los Angeles, Long Beach, and San Diego as well as small craft harbors in Orange County could be very high, even in small events. Industry and commerce can suffer losses from interruptions in electric services and from extended road closures. They can also sustain direct losses to buildings, personnel, and other vital equipment. There are direct consequences to the local economy resulting from tsunamis related to both physical damages and interrupted services.

Public Confidence in the Jurisdiction: Impacts could include scrutiny over alert and warning, evacuations, and response activities.

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2.5.25 Utility Failure

Impact: **Moderate**

Probability: **Possible**

Related Hazard(s): Dam/Levee/Reservoir Failure, Earthquake, Excessive Temperature, Flood/Storm, High Winds, Landslide/Mudslide/Debris Flow, Act of War, Civil Unrest, Rail Accident, Terrorism (Including Electromagnetic Pulse), Wildland and Urban Fire,

Nature of Hazard

Power: During a disaster, losing power could be the difference between life and death. There are two primary types of energy loss that impact California consumers: a disaster (natural or manmade) or power grid system failures. Natural disasters impacting power range from wind events to, earthquakes, wildfires, and geomagnetic storms (CGC §8570.6). Manmade can range from general maintenance issues to electromagnetic pulse attacks (CGC §8570.6). Power plants are expected to sustain some damage due to factors such as liquefaction and the intensity of an earthquake or water intrusion which will damage vulnerable equipment. A certain percentage of the electrical grid system load may be interrupted following the immediate disaster.

The power grid system deficiencies include unplanned and controlled rotating outages. In controlled outages, the California Independent System Operator (CAISO) orders the State's investor-owned utilities, including Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E) to reduce electrical load immediately by a specific amount of megawatts. To reduce the load, SCE and SDG&E will initiate plans for controlled rotating outages throughout its service territory that has been ordered and approved by the California Public Utilities Commission (CPUC). The Public Safety Power Shutoff (PSPS) Program was initiated as a last resort public safety measure intended to mitigate wildfire risk. As part of this program, power utilities will be making decisions to de-energize certain power grid circuits during extreme fire weather conditions and Red Flag Warnings issued by the National Weather Service. When forecasts indicate dangerous weather conditions, power utility companies will begin predictive modeling to assess potential impact and will communicate decisions with local governments.

Water: During a large scale disaster, water supplies are likely to be affected. Earthquakes and their possible cascading affects can cause the most widespread disruption to water utilities. The extent of water and wastewater losses can vary due to the intensity of an earthquake, the epicenter location, and the geology/soils underlying the facilities. Power outages can disrupt services for water utilities and are typically associated with hazards such as wildfire and high winds. Additionally, power utility programs such as SCE's and SDG&E's Public Safety Power Shutoff program can unexpectedly shut off power to critical water and wastewater infrastructure. In a widespread and prolonged outage, water utilities would need alternate sources of power to continue operations. In some cases, water and wastewater facilities may have access to generators to help sustain operating systems.

Water and wastewater infrastructure (including treatment plants, reservoirs, tanks, pump stations, lift stations, and dam facilities) are within the high risk wildland fire zones. These facilities often provide drinking water, water for fire suppression, and collection of wastewater. Wildland fires can threaten the physical facilities, power supply, and supervisory control systems (SCADA), resulting in the potential for loss of drinking water, water quality notifications, wastewater spills, and reduction in water pressure for fire suppression. More recently, water utilities are also learning about the potential for benzene contamination of drinking water systems following intense wildfires.

Probability

Power: The electrical grid in California has been constructed to minimize cascading outages or transmission emergencies, however, with the shutdown and decommissioning of the San Onofre Nuclear Power Plant and the increase of vehicles dependent on electricity, residents and businesses seem to face continued uncertainty of electricity certainty especially during extreme temperatures. Power shortages occur when the demand for electricity approaches the capacity to produce power. To reduce the potential for a sudden demand surge exceeding production capabilities, the State of California has instituted a series of alerts to warn consumers as demand begins to rise. This condition is most likely to occur during the hotter months between late morning and early evenings.

When CAISO forecasts an energy shortage, affected areas may encounter rotating outages. These are short periods of time when the power to a geographic area is either cut off or limited to reduce overall demand on the grid. The public is notified in advance of the rotating outages so measures can be taken to minimize the impact. During these periods, critical and essential facilities may have to operate on emergency generators.

Extreme weather may also increase the chances for the utility companies to use the PSPS program and de-energize electrical lines to assist in the reduction of possible wildfire ignitions.

Widespread power outages can occur at any time, unannounced and without warning. In 2011, Southern California was impacted by a widespread power outage affecting most of southern Orange County. Another example is when SCE used the PSPS program and de-energized power lines due to extreme high winds in late 2020. The result was a resident-caused wildfire (Bond Fire) due to fuel leaking during a generator refueling. In August of 2020, during an unusually extended heat wave impacting most of the State, CAISO implemented rotating outages to assist the electrical grid ease the increase in demand during peak usage. Power outages happen frequently, being prepared and knowing the resources available to public safety agencies will assist in a quick response.

Water: Water utilities have planned and built their infrastructure to minimize the effects of hazards; however water outages are possible and have occurred more frequently due to the increase in disasters. Power outages have the most frequent impacts to water utilities. Power outages usually occur during wildland fires or high wind impact power utilities' infrastructure, but they can also occur when power utilities experience unplanned power outages. Overall, water

agencies have prepared for all hazards, but impacts may vary depending on where in Orange County the incident is occurring, coupled with the size of the water utility. The loss in power can impact a water utilities ability to monitor systems and continue pumping water to its customers and for firefighting purposes. Different scenarios of impacts may include low flow, backflow, and low pressure. Plans are in place to support agencies during power interruptions.

SCE and SDG&E's PSPS program can affect various water utilities in urban wildland interface areas. The program can provide water utilities with very little notification of the plan being activated and does not guarantee notification prior to the power being shutoff. This could result in losing power at critical water and wastewater facilities. During fire and wind seasons and with the impacts of climate change, this program has the ability to impact water and wastewater utilities more frequently.

Earthquakes will have the highest impact on water and wastewater infrastructure. The aging water infrastructure can experience significant disruptions due to fault ruptures and ground shaking. The impact of an earthquake in regard to no losing pressure on the entire system is not likely. Orange County water agencies have worked to increase its ability to continue to provide water services with planning efforts such as: Urban Area Water Use plans, Emergency Water Distribution Plans, Emergency Water Intertie Plans, and Water Wheeling and the ability to water wheel and intertie water distribution lines. Secondary impacts, such as wildfire and power outages may intensify the disruption by lowering water pressure and taking out power supplies to critical infrastructure. Certain events occurring on the system may trigger a boil water notice, or do not use dependent on the severity, water agencies are legally required to issue and coordinate with the County Health Officer following the issuance of any water use orders.

Vulnerability, Assets, and Impact

Utility failure can lead to significant consequences, including service disruption, disruption to infrastructure operations, and loss of heat or cooling that can cause further disturbance or injury. The public, first responders, government agencies, and businesses may all be impacted by the utility failure, depending upon the scope and duration. Additionally, weather may increase the negative impacts of a utility outage if it occurs during extreme weather.

Depending upon the incident scope, impacts could include:

Public: Individuals with disabilities, access and functional needs may be particularly susceptible to secondary impacts of utility failures; for example, medical device power back-ups may fail.

Responders: During an emergency, EOC's will need to develop a policy for maximum public safety response prioritization. Restoration of utility services is dependent on other factors including the utility's ability to restore power or water to that section of the distribution system. As detailed below resource response and utility restoration must be prioritized during utility outages.

Figure 24: Provides a chart for notifications for critical facilities

Critical Facility Response Priority	Examples of the Types of Critical Facilities Which May Be Included
Initial Response: <ul style="list-style-type: none"> • Highest priority for response under any disruption conditions • Potential for immediate, serious impacts • Most of these high-priority facilities will have or should have power backup capability 	<ul style="list-style-type: none"> • Emergency services facilities: <ul style="list-style-type: none"> • Police • Fire • Medical facilities: <ul style="list-style-type: none"> • Hospitals (Level one trauma centers) • Long-Term Care • Skilled Nursing • Populations on life support equipment • Critical Infrastructure: <ul style="list-style-type: none"> • Road intersections • Railroad crossings
Response in First 2 Hours: <ul style="list-style-type: none"> • High priority for response for all disruptions up to two hours • Contact is initiated with all facilities in this category to determine needed response 	<ul style="list-style-type: none"> • Medical facilities: <ul style="list-style-type: none"> • Hospitals • Long-Term Care or Skilled Nursing • School facilities • High-rise buildings
Response in First 6 Hours: <ul style="list-style-type: none"> • Priority for response when disruptions last longer than two hours • Response needed within six hours • Contact is initiated with all facilities in this category to determine the necessary response 	<ul style="list-style-type: none"> • Water facilities: <ul style="list-style-type: none"> • Potable water • Wastewater • Critical Infrastructure <ul style="list-style-type: none"> • City owned and operated Public Works Fuel Pumps • Communications Systems: <ul style="list-style-type: none"> • Wireless and wireline Central Offices or switch centers • Cell sites • Broadband data service providers

****This chart is a guideline and does not illustrate potential response times to the listed facilities during a power outage.**

Continuity of Operations: Local government facilities may have to use back-up power sources. They may identify critical functions to sustain while suspending other, less critical functions.

Property, Facilities, Assets, and Critical Infrastructure: Loss of power, water, or wastewater could render facilities, including critical infrastructure, unusable. Critical operations may have to move to other locations outside of the area of impact.

Supply Chain: There may be delays in production, distribution, and retail sales of goods and services. Businesses may not be able to operate if they are unable to track inventory, charge for goods and services, or provide basic sanitation at their facilities.

Environment: Where infrastructure relies on water and power to support the environment (e.g., water oxygenators, containment sumps, monitoring devices, etc.), there may be detrimental impacts to the plants and animals those remediation devices support.

Economic and Financial Condition: The loss of power, water, wastewater, gas, and natural gas can cripple individual businesses ability to generate revenue. Individuals may be laid off if such businesses cannot operate.

Public Confidence in the Jurisdiction: The public may question the regulation and oversight of utility companies. Policies regarding how utilities are organized and operate may be questioned.

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2.5.26 Vector-Borne Diseases

Impact: **Low**

Probability: **Possible**

Related Hazard(s): **Disease Outbreak**

Nature of Hazard

According to the Centers for Disease Control and Prevention (CDC), vector-borne diseases are among the most complex of all infectious diseases to prevent and control due to the difficulty of predicting habits of vectors like mosquitoes, fleas, and ticks. These vectors transmit viruses, bacteria, or other pathogens that infect animals as well as humans.

Information for this assessment was obtained from the Orange County Mosquito and Vector Control District (OCMVCD). The OCMVCD is an independent special district charged with protecting the citizens of Orange County from vectors and vector-borne disease under the California Health and Safety Code (CAL. HSC. § 2000-2910). OCMVCD operates year-round to provide service to all 34 cities within Orange County as well as unincorporated areas, federal, and state lands.

OCMVCD utilizes an Integrated Vector Management (IVM) Program strategy to control populations of mosquitoes, filth flies and black flies, red imported fire ants (RIFA), and rats. Every year there are more than 700,000 deaths from diseases such as malaria, dengue, schistosomiasis, human African trypanosomiasis, leishmaniasis, Chagas disease, yellow fever, Japanese encephalitis and onchocerciasis, globally.

Probability

The probability of a Vector Borne Disease outbreak is based on the presences of vectors capable of transmitting the virus. Any event which may increase the vector population such as earthquakes, fires, and floods, may also increase the probability of a Vector Borne Disease outbreak.

Mosquito-borne Disease

The District's surveillance and mosquito control efforts are focused on the following mosquito-borne diseases; 1) West Nile virus (WNV), 2) Saint Louis encephalitis (SLE), 3) invasive *Aedes* diseases (chikungunya, dengue, Zika, yellow fever), and 4) malaria. In 2015, two invasive *Aedes* mosquito species were detected in multiple locations in Orange County. The presence of *Aedes albopictus* (Asian tiger mosquito) and *Aedes aegypti* (yellow fever mosquito) in the County indicates that chikungunya, dengue, Zika, and yellow fever viruses could possibly be transmitted in Orange County. The District has seen an explosive expansion of these mosquitoes in recent years and expects their distribution will continue to expand in Orange County.

West Nile Virus (WNV)

West Nile virus (WNV) has been present in Orange County since 2003. West Nile virus, which is primarily a disease of birds, can be transmitted to humans and other animals by the bite of an infected mosquito and has been responsible for infecting 755 people, including 33 deaths, in Orange County since its introduction. In response to intense back-to-back epidemics of WNV in 2014 (280 infections, 9 deaths) and 2015 (97 infections, 8 deaths), the District expanded the adult mosquito control program in urban areas to include the use of backpacks, trucks, and airplanes to control infected, adult mosquitoes in Orange County. 2022 had 12 reported cases of West Nile Virus in Orange County.

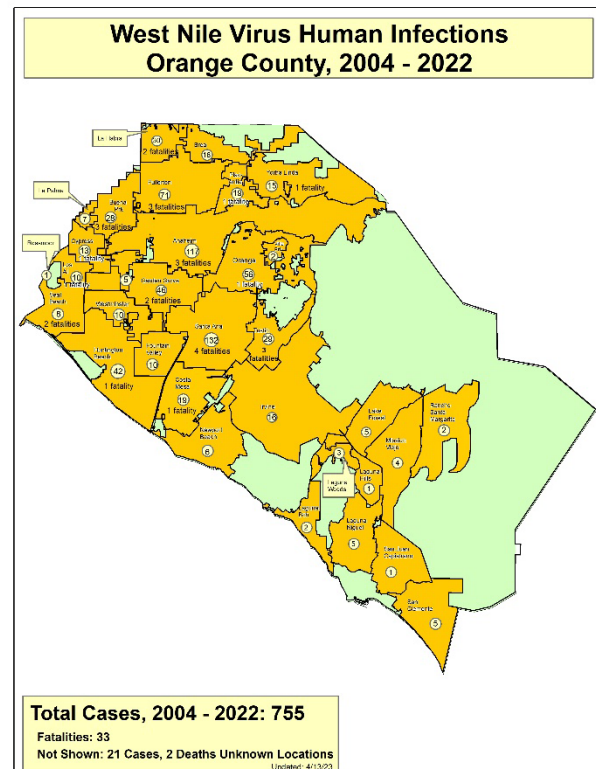
Saint Louis encephalitis (SLE)

Saint Louis encephalitis (SLE) was the first (1933) recognized neuroinvasive arbovirus in the United States. Sporadic human cases have been diagnosed in southern California, and the virus and antibodies have been recovered from wild birds during surveillance studies. The most recent, large-scale outbreaks of SLE occurred in southern California in 1983-1984 (26 cases, five in Orange County), the San Joaquin Valley in 1989 (29 cases), with sporadic cases reported in the Los Angeles Basin from 1990-1997. St. Louis encephalitis virus re-emerged in California in 2015, with the detection of positive mosquito and sentinel chicken samples near the Salton Sea in Riverside County. This was the first detection of SLE virus activity in California since 2003. Since 2015, there have been 8 human cases of SLE including 1 death in California. SLE virus activity was detected in mosquitoes in Orange County most recently in 2019.

Dengue, Chikungunya, Yellow Fever, and Zika

The detections of *Aedes albopictus*, in 2011 in Los Angeles County, and discoveries of *Aedes aegypti* in 2013 in urban areas of Fresno, Madera, and San Mateo counties demonstrated that California is vulnerable to colonization by these highly invasive mosquitoes. By the end of 2017, detections of one or both species had been made in 22 counties including Orange County. Both species are vectors of exotic arthropod-borne viruses (arboviruses) including dengue, chikungunya, Zika, and yellow fever. Travel-associated human cases of dengue, chikungunya, and Zika have been reported in California, but none of these viruses are known to be transmitted locally by mosquitoes at present. Established invasive *Aedes* mosquito populations increase the potential for local transmission to occur. As of December 2022, invasive *Aedes* mosquitoes have been detected in all 34 cities and 4 unincorporated areas in Orange County (see map below).

Figure 25: Provides an overview of the cases of West Nile virus in Orange County from 2004-2022



Dengue is a viral disease characterized by fever, headache, joint and muscle pain, which can progress to bleeding and shock in some people. Dengue transmission is common in much of the tropics, and outbreaks have occurred in areas of the United States where *Aedes aegypti* and *Aedes albopictus* are established, including Florida, Texas, and Hawaii. Presumably, infected visitors or returned travelers to these areas imported dengue virus and served as sources for these outbreaks. Orange County has had 73 cases of Dengue during the period of 2015 through 2022.

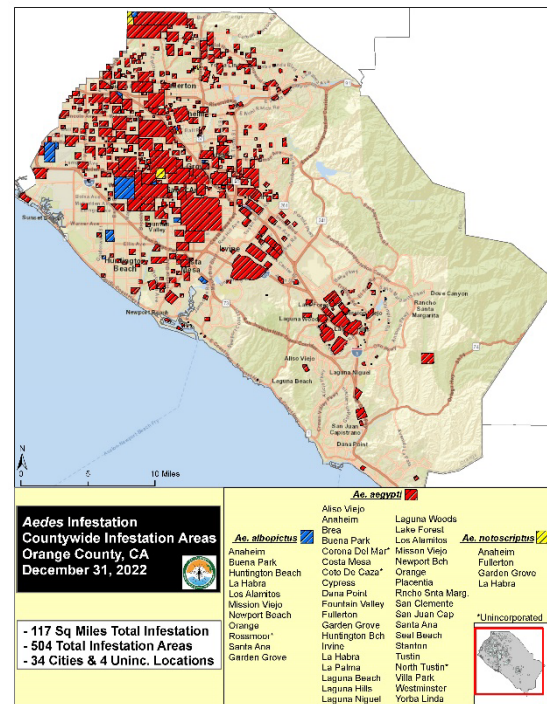
Chikungunya is another viral disease with fever and severe joint pain, and outbreaks had been identified in countries in Africa, Asia, Europe, and the Indian and Pacific Oceans. In late 2013, the first local transmission of chikungunya virus in the Americas was identified in the Caribbean Islands, and the disease has since spread rapidly to other countries in South and Central America and continues to spread. Orange County has had 30 cases of Chikungunya.

Zika is another viral disease with fever, rash, and joint pain, and, before 2015, outbreaks had occurred in areas of Africa, Southeast Asia, and the Pacific Islands. In May 2015, human cases were detected for the first time in Brazil, and Zika spread rapidly to other countries in Latin America and the Caribbean Islands. In 2016, the CDC designated Miami-Dade County, Florida and Brownsville, Cameron County, Texas as a Zika cautionary areas, due to reported mosquito-borne spread of the Zika virus. Orange County has had 45 cases of Zika during the period of 2015 through 2022.

Zika was initially considered a mild disease, but there is now an association between Zika infection during pregnancy and the development of birth defects such as microcephaly, the development of abnormally small head and brain. In adults, Zika infection has been associated with Guillain-Barré syndrome, an autoimmune neurological disease. Zika virus can be sexually transmitted or acquired via blood transfusion; thus, all blood products in California are screened for Zika virus.

The behavior and habitat preferences of *Aedes aegypti* and *Aedes albopictus* differ substantially from the indigenous *Culex* mosquito species that are the primary targets of control programs in California's urban areas. Adult *Aedes aegypti* and *Aedes albopictus* are active during the day, have short flight ranges, and females are aggressive and persistent biters of mammals, especially humans. What is most distinctive is their preference for small, artificial water-holding containers for laying eggs and larval development; hence, they are known as "container-breeding"

Figure 26: Map of Orange County and the location of the *Aedes* mosquitos

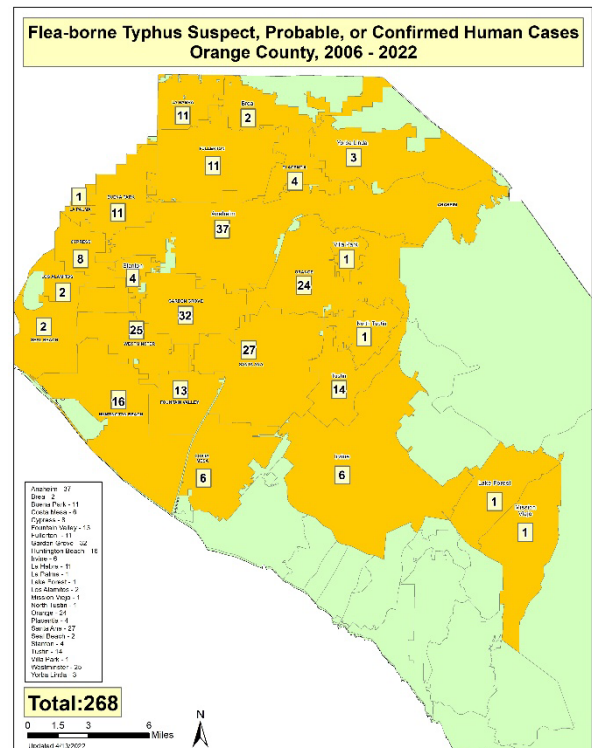


mosquitoes. Their close association with and dependence on humans to provide larval habitat, particularly within residential properties, results in a widespread but often patchy distribution, making effective surveillance and control a challenge. Detection and control are further complicated by eggs that resist desiccation and can remain viable for months on dry surfaces of containers.

Flea-borne typhus is caused by *Rickettsia felis* and/or *R. typhi*, two closely-related gram-negative bacteria. The cat flea, *Ctenocephalides felis*, commonly found on cats, dogs, opossums, and outdoor wildlife, is considered the primary vector of the flea-borne typhus bacteria in Southern California. Testing of small mammals and the fleas they carry by the District has demonstrated a high prevalence of flea-borne typhus bacteria in fleas (> 40%) collected from areas with human cases. From 2001-2022, over 268 human cases of flea-borne typhus were reported in Orange County. The District maintains a surveillance and education program for flea-borne typhus, but does not routinely conduct flea abatement or animal removal.

Plague is a naturally occurring bacterial disease associated with wild rodents and fleas. The causative organism *Yersinia pestis* can be transmitted to humans through the bite of an infected flea, causing swelling (“buboes”; i.e., bubonic plague), but also infection of the bloodstream and even lungs. Plague has a very high fatality rate in humans if cases are not diagnosed and treated with antibiotics in a timely manner. Plague remains endemic in ground squirrel populations in many areas of California. Outbreaks of bubonic plague have been linked to rodent die-offs in California. If multiple dead ground squirrels, rabbits, or rats are detected in Orange County, they should be reported to the District immediately for testing. The California Department of Public Health, Vector-Borne Disease Section lists the Santa Ana Mountains as a plague endemic area. Plague has been detected in Orange County sporadically. In the early 1980s, ground squirrels in Tonner Canyon and Anaheim Hills tested positive for plague, and in 1998 a roof rat in the city of Orange tested plague positive. Plague in Southern California is typically associated with ground squirrels and wood rats is only rarely associated with roof rats. The District routinely traps and tests ground squirrels and fleas, as well as roof rats, from residential areas near historically positive plague detection sites. Rats, squirrels, and other small mammals from Orange County tested by the District laboratory have all tested negative since 1998.

Figure 27: A map of Orange County and the location of flea-borne suspected Typhus cases from 2006-2022



Hantavirus Pulmonary Syndrome (HPS) is a human disease caused by a viral pathogen found in rodent urine and excrement that affects humans by attacking the lungs and producing a fatal pneumonia in nearly 40% of cases. Humans become infected with the virus when they inhale aerosol particles contaminated from deer mouse fecal pellets (droppings) and urine. The two strains of hantaviruses encountered locally are the Sin Nombre Virus (SNV) and El Morro Canyon Virus. Although these strains have been found in local deer mice, no residents have been diagnosed with hantavirus in Orange County. The deer mouse is widely distributed in neighborhoods of Orange County that border natural areas. To prevent infection with hantavirus, the California Department of Public Health recommends spraying deer mouse droppings and urine with a 10% bleach and water disinfection solution prior to clean up.

Other Vector-Borne Diseases

Although less prevalent than West Nile virus and flea-borne typhus, other vector-borne diseases have the potential to re-emerge or emerge in Orange County should environmental conditions change or new competent vector species successfully become established. These diseases are not considered a major health hazard in Orange County at this time, but include tick-borne diseases such as Lyme disease, Pacific Coast tick fever, and tularemia, and rodent-borne diseases such as hantavirus. OCMVCD is constantly monitoring local vector populations in order to detect the presence of these diseases and mitigate the potential for these hazards.

Vulnerability, Assets, and Impact

Impact Analysis Note: Because of the size and scope of this hazard, an alternative format has been used to assess the standard categories of impacts (i.e., Public, Responders, Continuity of Operations, Property, Facilities, Assets, and Critical Infrastructure, Supply Chain, Environment, Economic and Financial Condition, Public Confidence in the Jurisdiction). These impact categories are addressed within the separate groupings below.

The impact of a vector borne disease outbreak is highly variable and will depend on many factors including severity of disease and type of care needed, number of cases, number exposed, type of investigation/follow-up measures needed, and prevalence of infected vectors. Aside from healthcare costs, morbidity and loss of work/school days associated with illness, patients and their contacts may also be required by public health to stay home during proscribed periods (isolation or quarantine, respectively) to decrease the risk of transmission. Healthcare facilities may experience a surge in patients but even with just one or a few cases, may be adversely affected due to exposures at the facility necessitating patient and/or staff follow-up, testing, and/or furlough. Businesses, schools, or organizations may similarly be affected if cases occurred in their facility and exposures need to be followed-up. In addition to large numbers of cases and or contacts needing interview, evaluation, testing, and follow-up and institution of additional surveillance mechanisms, large groups may also need administration of some sort of treatment or vaccination (medical countermeasures) that will be coordinated through public health. Dissemination of health information and education of medical providers will also be essential to any outbreak response. Additional considerations are discussed in more detail in the Pandemic/High Consequence Disease Section.

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2.5.27 Wildland Fire/Urban Fire

Impact: **Moderate**

Probability: **Likely**

Related Hazard(s): **Climate Change, Debris Flow, Drought, Earthquake, High Winds**

Nature of hazard

Wildfires are a significant threat to Orange County, where a regular pattern of warm, dry conditions in the summer are followed by periods of high speed winds with even lower humidity in the fall, creating prime conditions for wildfires to grow quickly and exhibit extreme fire behavior. Most recently, the 2022 Coastal Fire burned 200 acres and damaged/destroyed 31 structures. In 2020, the Bond Fire burned 6,585 acres destroying 51 structures damaged/destroyed. The 2017 Canyon 2 Fire burned 9,217 acre with over 50 structures damaged or destroyed. In 2008, the Freeway Complex Fire burned over 30,000 acres, damaging or destroying over 300 structures and in 2007, the Santiago Fire burned for 31 days, charring over 28,000 acres and destroying homes. In 1993, the Laguna Beach Fire burned 14,337 acres and 441 structures. In all the majority of cases above, the fire burning in Orange County was one of several major wind-driven fires burning in Southern California. Looking back further, Orange County has had a history of even larger fires that pre-date much of the development that occurred in the last part of the 20th century. The 1958 Steward Fire burned nearly 70,000 acres in Southeastern Orange County and the Cleveland National Forest, its footprint covering much of what is now the community of Coto de Caza. The 1948 Green River Fire burned over 50,000 acres in Northeastern Orange County, its footprint covering most of what is now Anaheim Hills

Probability

Although communities without Wildland Urban Interface are much less likely to experience a catastrophic fire, urban fires, potentially as a cascading impact of high winds or major earthquake, are a real, if more unlikely threat. The 1989 Loma Prieta Earthquake, the 1991 Oakland Hills Fire, and Japan's recent Hokkaido Nansei-oki Earthquake all demonstrate the possibility of a large fire developing into a conflagration. In Orange County, the April 1982 apartment fires in the City of Anaheim illustrated the capability for urban conflagration in Orange County. The fire broke out shortly before dawn and, fueled by Santa Ana winds, quickly swept through a four-block area

Figure 28: Largest Orange County Wildfires since 1914

Source: Cal Fire FRAP Fire Perimeters		
Largest Orange County Wildfires since 1914		
Year	Fire Name	Acreage
1958	Steward Fire	68,100
1948	Green River Fire	53,080
1967	Paseo Grande Fire	51,070
2008	Freeway Complex Fire	30,305
1980	Indian Fire	28,940
2007	Santiago Fire	28,476
1993	Ortega Fire	21,384
2018	Holy Fire	21,136
1982	Gypsum Fire	20,142
1980	Owl Fire	18,332
1993	Laguna Fire	17,000

near Cerritos Avenue and Euclid Street, ultimately destroying several hundred apartment units as well as other homes and businesses.

Vulnerability, Asses and Impact

Continued development in the Wildland Urban Interface means the wildland fire threat will only worsen in the coming years. More than 160,000 acres are designated as being in High or Very High Fire Hazard Severity Zones by County and State fire agencies, not including federal response areas within the Cleveland National Forest. These zones also intersect with over 67,000 single-family residential parcels in the Orange County Land base.

Depending upon the incident scope, impacts could include:

Public: The public may have to evacuate, including pets and large animals. They may lose their homes, personal belongings, and businesses.

Responders: Fast-breaking, wind-driven fires may overwhelm resources initially responding; mutual aid resources may be needed across all disciplines. Dispatch centers may receive overwhelming numbers of calls requesting assistance. First responders may develop fatigue in extended incidents.

Continuity of Operations: Local governments may need to activate their COOP if they are forced to evacuate an area. During elections, alternative voting locations may need to be identified.

Property, Facilities, Assets, and Critical Infrastructure: Damage to infrastructure is also a primary concern with urban and wildland fire, with utility assets throughout the county, clustered in the Wildland Urban Interface and networks often extending into the wildland itself. Furthermore, major urban and wildland fires have the potential to cause road closures, evacuations, unhealthy air quality, business closures and other issues. Although it is still being investigated, it is now believed that when there is a loss of properties and water system pressure losses due to wildland fires the probability of benzene contamination within drinking water systems is high.

Supply Chain: If roads, bridges, businesses, and utilities are impacted by the wildfire, there may be delays in the supply chain.

Figure 29: State Responsibility Area Fire Hazard Severity Zones



Environment: Wildfires have both beneficial and negative impacts to the vegetation, depending upon their location and cause. Animals may be injured and driven from their normal habitats.

Economic and Financial Condition: wildfire events can have major economic impacts on a community from the initial loss of structures and the subsequent loss of revenue from destroyed business and decrease in tourism. Wildfires can cost thousands of taxpayer dollars to suppress and control and involve hundreds of operating hours on fire apparatus. There are also many direct and indirect costs to local businesses that excuse employees from work to evacuate their homes, check on their families and pets, and recover from any losses.

Public Confidence in the Jurisdiction: Trust and confidence can be either bolstered or damaged depending on the response to the incident. The public may call for changes in zoning laws or land management techniques following an incident.

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Chapter 3 CONCEPT OF OPERATIONS

The EOP addresses a spectrum of contingencies, ranging from relatively minor incidents to large-scale disasters, such as an earthquake. Some emergencies are preceded by a buildup or warning period, providing time to warn the public and implement measures designed to reduce loss of life, property damage, and effects on the environment. Other emergencies occur with little or no advanced warning, requiring immediate implementation of the EOP the mobilization and deployment of resources. All departments of the County and OA jurisdictions must be prepared to respond to any foreseeable emergency, taking all appropriate actions, including requesting and providing mutual aid.

The phases of emergency management are:

Mitigation	Mitigation occurs before and after emergencies or disasters. Pre-disaster mitigation improves community resiliency before a disaster causes loss of life, damage to property and adversely affects the environment. Post-disaster mitigation is part of the recovery process. This includes eliminating or reducing the impact of hazards that exist within a jurisdiction.
Preparedness	The preparedness phase involves activities taken in advance of an emergency or disaster. These activities develop County and OA capabilities for response to disasters. Disaster plans are developed and revised to guide response efforts and manage resources. Planning activities include developing hazard analyses, training and exercising response personnel, purchasing equipment and improving public information and communications systems.
Prevention	The prevention phase includes activities, tasks, programs, and systems intended to avoid or intervene in order to stop an incident from occurring. Prevention applies to human-caused incidents (such as terrorism, vandalism, sabotage, or human error) as well as to naturally occurring incidents.
Response	The response phase includes actions taken, before, during or after an emergency situation to reduce casualties, save lives, minimize damage to property and promote recovery.
Recovery	Recovery activities involve the restoration of services to the public and returning the affected area(s) to pre-emergency conditions. Recovery activities may be short-term and long-term, ranging from restoration of essential utilities such as water and power, to mitigation measures designed to prevent or minimize future occurrences of a given threat.

3.1 Sequence of Events During Disaster and Emergencies

The Unified EOP Concept of Operations Section focuses on the three mission areas associated with an impending or active disaster: prevention, response and transitioning to recovery.

Prevention: Before the Event

Routine monitoring for alerts, advisories, watches and warnings

Local emergency management and response officials monitor events and the environment to identify threats that may affect their jurisdiction and increase the awareness level of the emergency organization and the community when a threat is approaching or imminent.

Increased readiness

Sufficient warning allows response organizations to increase readiness and their ability to effectively respond as the emergency occurs, actions include:

- Briefing local officials
- Reviewing plans and procedures
- Preparing and disseminating information to the community
- Testing systems such as communication and warning systems
- Updating resource lists
- Precautionary activation of the Emergency Operations Center(s) and Department Operations Centers

When an event is deemed as highly likely, warning systems are activated, resources are mobilized, and evacuations may be initiated.

Response: During the Event

Alert and Notification

Response agencies are alerted about an incident by the public through the 9-1-1 system, or by the California State Warning Center, the National Weather Service, or another agency or method.

Resource Mobilization

Response agencies activate personnel and mobilize to support the incident response. As the event escalates and expands, additional resources are activated and mobilized as a continuous process throughout the event. This includes resources from within the affected jurisdiction, or when resources are exhausted, from unaffected jurisdictions.

Incident Response

Immediate response to an incident is the responsibility of the affected local jurisdiction(s). First responders arrive at the incident and function according to field level plans and procedures. Responding agencies manage all incidents in accordance with ICS doctrine and procedures.

Establishing Incident Command

First responders and affected jurisdictions establish Incident Command to direct, order and control resources. Initial actions are coordinated through the on scene Incident Commander (IC). The IC develops an initial Incident Action Plan (IAP), which sets priorities for the incident, assigns resources and includes a common communications plan. If multiple jurisdictions or agencies are involved, the first responders will establish a Unified Command (UC) to facilitate multi-jurisdictional and multi-agency policy decisions. The IC may implement an Area Command to oversee multiple incidents that are managed by separate ICS organizations or to oversee the management of large or evolving incidents.

One element of establishing Incident Command is for impacted jurisdictions to identify the Agency Administrator. An Agency Administrator is the official responsible for administering policy for an agency or jurisdiction.

Local EOC Activation

Local jurisdictions activate their EOC based on the magnitude or need for more coordinated management of the emergency. When activated, local EOCs form a common operating picture of the incident by collecting, analyzing and disseminating emergency information. The local EOC can also improve the effectiveness of the response by reducing the amount of external coordination of resources by the IC by providing a single point of contact to support multi-agency coordination. When activated the local EOC notifies the OA.

Department Operations Center (DOC)

Individual agencies may activate their Department Operations Center (DOC) as their central point of communication and coordination. A DOC is responsible for both assessing the status of their agency and its core functions and establishing their agency's ability to provide resources to the response to the incident itself, usually through coordination with the County EOC.

Operational Area EOC Activation

As described more fully in section 4.9 the County EOC acting as either the County, OA, OA and County EOC activates for incidents involving unincorporated County area or more complex and sustain incidents. Once activated, the OA EOC coordinates information and resource requests from the affected jurisdictions. If resources are not available within the OA, the OA EOC forwards the resource requests to the Cal OES REOC and to mutual aid coordinators.

Regional Emergency Operations Center (REOC) Activation

Whenever an OA EOC is activated, the Cal OES Regional Administrator activates the REOC and notifies Cal OES Headquarters. The REOC coordinates information and resource requests from the affected OA(s). If resources are not available within the affected region, the REOC forwards resource requests to the State Operations Center (SOC) for coordination.

The State Operations Center (SOC)

The SOC is activated when the REOC activates in order to:

- Process resource requests between the affected regions, unaffected regions and state agencies.
- Process requests for federal assistance and coordinate with Federal Incident Management Assistance Teams when established.
- Coordinate interstate resource requests as part of the Emergency Management Assistance Compact (EMAC).

FEMA Regional Response Coordination Center (RRCC)

The FEMA RRCC activates to provide federal support for activities in response to federally declared disasters. This will be completed by the FEMA Region IX RRCC.

Sustained Operations

As the incident continues, further emergency assistance is provided to victims of the disaster and efforts are made to reduce the likelihood of secondary damage.

Recovery: Transition

As the initial and sustained operational priorities are met, emergency management officials consider the recovery phase needs. Short-term recovery activities include returning critical infrastructure and key resources to minimum operating status. Long-term recovery activities are designed to return to normal operations. Recovery planning includes strategies to avert or mitigate future effects of hazards and threats. During the recovery phase, damage is assessed, local assistance centers and disaster recovery centers may be opened and hazard mitigation surveys are performed. Additional information is found in the County of Orange and Orange County Operational Area Recovery Plan.

3.2 County and OA EOC Organization and Assignment of Responsibilities

This section describes the organization of the County and OA EOC, outlining each position's roles and responsibilities and identifying those organizations and individuals responsible for staffing each position or serving as successors or alternates.

The requirement to use SEMS, NIMS and ICS includes fulfilling the management and coordination role of local government, and providing for the five essential functions: Management, Operations, Planning and Intelligence, Logistics and Finance and Administration.

It is important to note that the organizational structure described in this section describes the County and Operational Area's ultimate capability and full staffing of all potential EOC positions. Figure 30 depicts the anticipated organizational structure within the County and OA EOC. The Incident Command System is flexible, modular by nature; it will be rare that every position and organizational element identified in this section will be active simultaneously. Additionally branches or position can be created as needed. The incident will dictate which elements require staffing. In addition, it may be determined by the DES, in consultation with the Section Chiefs, that one element of the organization can manage the responsibilities of those elements under it. For

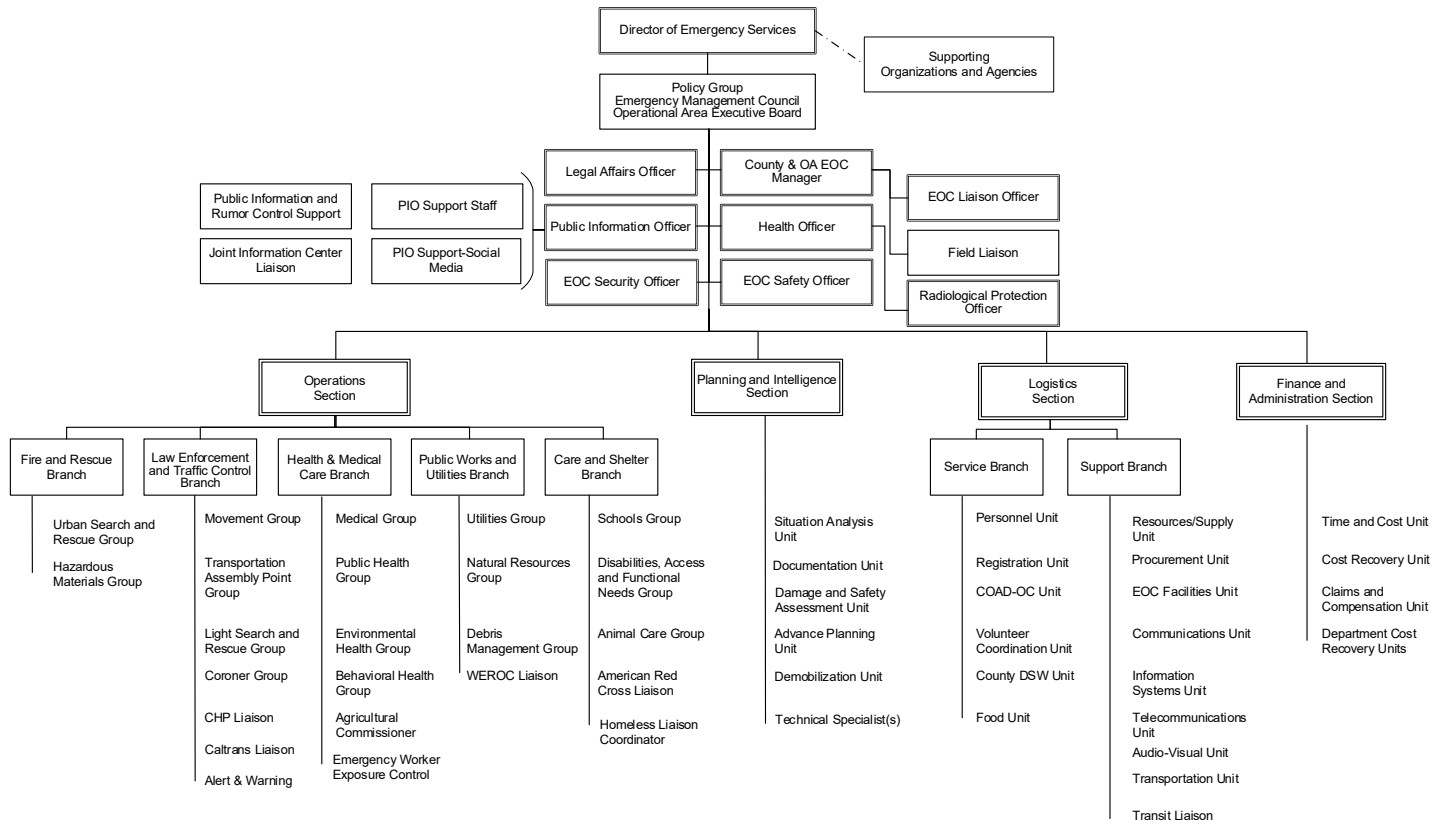
example, the Finance and Administration Section Chief may be able to handle the responsibilities of the Claims and Compensation and Time and Cost Units. In that case, the supporting Units will not be staffed, but the Finance and Administration Section Chief will have responsibility for performing the functions of those Units, as necessary. If the organization is not fully expanded, then supervisory positions are responsible for performing the functions of the un-staffed Units, Groups, Branches, or Sections (as applicable) they oversee.

Figure 31 identifies which agencies or departments have primary and secondary responsibility for each position.

Figure 32 provides additional detail on the anticipated number of Support Pool staff members each agency or department is anticipated to provide to support the EOC within a 24-hour activation period. This number is in addition to any positions identified for specific positions.

Note: In reading the Assignment of Primary Responsibility and Position Successors in each Position Description, it should be noted that the assignments represent the individual position titles provided to each person by their department. Position titles (e.g., supervisor, leader, director, etc.) in those sections have no relation to ICS and no implications on the EOC organizational structure.

Figure 30: County and Operational Area EOC Organization Chart



**Figure 31: Operational Area EOC
Assignment of Responsibilities Matrix**

C=Contingent Upon the Hazard for DES and Section Chief Staffing P=Primary Responsibility S=Support Responsibility	Management Section													
	DES	Policy Group	County/OA EOC Manager	County Field Liaison	Public Health Officer	EOC Liaison Officer	Legal Affairs Officer	Public Information Officer	PIO Support Staff	Joint Information Center Liaison	PIO Support-Social Media	Public Information Hotline &	EOC Safety Officer	EOC Security Officer
Assessor									S					
Auditor-Controller									S					
Board of Supervisors		P							S					
CEO	C	P						C	S	C	S		C	
Child Support Services									S					
Clerk of the Board									S					
Clerk/Recorder									S					
County Counsel							P		S					
District Attorney									S					
Health Care Agency		P			P			C	S		S			
John Wayne Airport		P							S					
OC Community Resources		P							S					
OC Public Works		P						C	S		S			
OC Waste & Recycling		P							S					
Probation		P							S					
Public Defender									S					
Registrar of Voters									S					
Sheriff/Emergency Management Division			P	P		P			S	C	P			
Sheriff-Coroner	C	P						C	S		S			P
Social Services Agency		P							S					
Treasurer/Tax-Collector									S					
American Red Cross									S		S			
Department of Education									S					
OC Fire Authority	C	P						C	S	C	S			
OC Transportation Authority		P							S					
Superior Court of California, Orange County									S					
WEROC									S					
COAD-OC									S					
211									S			S		

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C=Contingent Upon the Hazard for DES and Section Chief Staffing P=Primary Responsibility S=Support Responsibility	Planning and Intelligence Section										Finance & Administration Section					
	Planning and Intelligence Section Chief	Situation Analysis Unit	Situation Analysis Support Staff (SASS)	GIS Specialist	SASS-Resource Status & Tracking	Documentation Unit (EOC and Offsite)	Messengers	Damage and Safety Assessment Unit	Demobilization Unit	Advanced Planning Unit	Finance and Administration Chief	Time and Cost Unit	Cost Recovery Unit	EOC Cost Recovery Group	Claims and Compensation Unit	Department Cost Recovery (offsite)
Assessor			S		S	S	S	S							S	P
Auditor-Controller			S		S	S	S	S				P	P		S	P
Board of Supervisors																
CEO						S		S			P				P	P
Child Support Services			S		S	S	S	S							S	P
Clerk of the Board			S		S	S	S	S							S	P
Clerk/Recorder			S		S	S	S	S							S	P
County Counsel						S		S							S	P
District Attorney			S		S	S	S	S							S	P
Health Care Agency	C	C	S		S	S	S	S	C	C					S	P
John Wayne Airport						S		S							S	P
OC Community Resources			S		S	S	S	S							S	P
OC Public Works	C	C	S	S	S	S	S	P	C	C					S	P
OC Waste & Recycling			S		S	S	S	S							S	P
Probation			S		S	S	S	S							S	P
Public Defender			S		S	S	S	S							S	P
Registrar of Voters			S		S	S	S	S							S	P
Sheriff/Emergency Management Division			S		S	S	S	S						P	S	P
Sheriff-Coroner	C	C	S	S	S	S	S	S	C	C					S	P
Social Services Agency			S		S	S	S	S							S	P
Treasurer/Tax-Collector			S		S	S	S	S							S	P
American Red Cross		S				S		S							S	S
Department of Education						S		S							S	P
OC Fire Authority	C	C				S		S	C	C					S	P
OC Transportation Authority						S		S							S	P
Superior Court of California, Orange County			S		S	S	S	S							S	P
WEROC		S				S		S							S	S
COAD-OC		S				S		S							S	S
211																

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C=Contingent Upon the Hazard for DES and Section Chief Staffing P=Primary Responsibility S=Support Responsibility		Operations Section															
	Operations Section Chief	Fire and Rescue Branch	Urban Search and Rescue Group	Hazardous Materials	Law Enforcement and Traffic Control Branch	Alert & Warning Group	Movement Group	Light Search and Rescue Group	Transportation Assembly Point Group	Coroner Group	CHP Liaison	Caltrans Liaison	Public Works and Utilities Branch	Utilities Group	Debris Management Group	Natural Resources Group	WEROC Liaison
Assessor																	
Auditor-Controller																	
Board of Supervisors																	
CEO																	
Child Support Services																	
Clerk of the Board																	
Clerk/Recorder																	
County Counsel																	
District Attorney																	
Health Care Agency	C																
John Wayne Airport																P	
OC Community Resources																P	
OC Public Works	C												P	P	P	S	
OC Waste & Recycling															S		
Probation																	
Public Defender																	
Registrar of Voters																	
Sheriff/Emergency Management Division																	
Sheriff-Coroner	C				P	P	P	P	P	P							
Social Services Agency																	
Superior Court of California, Orange County																	
Treasurer/Tax-Collector																	
American Red Cross																	
Department of Education																	
OC Fire Authority	C	P	P	P													
OC Transportation Authority																	
WEROC																	P
COAD-OC																	
Caltrans												P					
California Highway Patrol											P						
211																	

C=Contingent Upon the Hazard for DES and Section Chief Staffing P=Primary Responsibility S=Support Responsibility	Operations Section											
	American Red Cross Liaison	Homeless Liaison Coordinator	Disabilities, Access & Functional Needs Group	Animal Care Group	Schools Group	Care & Shelter Branch	Agricultural Commissioner	Behavioral Health Group	Environmental Health Group	Public Health Group	Medical Group	Medical & Health Care Branch
Assessor												
Auditor-Controller												
Board of Supervisors												
CEO												
Child Support Services												
Clerk of the Board												
Clerk/Recorder												
County Counsel												
District Attorney												
Health Care Agency		P						P	P	P	P	P
John Wayne Airport												
OC Community Resources				P								
OC Public Works						P						
OC Waste & Recycling												
Probation												
Public Defender												
Registrar of Voters												
Sheriff/Emergency Management Division												
Sheriff-Coroner												
Social Services Agency			P									
Superior Court of California, Orange County												
Treasurer/Tax-Collector												
American Red Cross												S
Department of Education							P					
OC Fire Authority												
OC Transportation Authority												
WEROC												
COAD-OC												S
211												

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C=Contingent Upon the Hazard for DES and Section Chief Staffing S=Support Responsibility P=Primary Responsibility	Logistics Section															
	Logistics Chief	Service Branch	Personnel Unit	Registration Unit	County DSW Unit	Volunteer Unit	COAD-OC Unit	Food Unit	Support Branch	Resources and Support Unit	Procurement Unit	Donations Mngmt Unit	EOC Facilities Unit	Communications	Information Systems Unit	Telecommunications Unit
Assessor								S								
Auditor-Controller								S								
Board of Supervisors								S								
CEO	P	P	P		P	P		S	P	P	P	S	S		S	P
Child Support Services								S								
Clerk of the Board								S								
Clerk/Recorder								S								
County Counsel								S								
District Attorney								S								
Health Care Agency								S								
John Wayne Airport								S								
OC Community Resources								S								
OC Human Resources								S								
OC Public Works								S								P
OC Waste & Recycling								S								
Probation								S								
Public Defender								S								
Registrar of Voters								S								
Sheriff/Emergency Management Division				P				P				P	S		S	S
Sheriff-Coroner								S					P	P	P	S
Social Services Agency								S								
Superior Court of California, Orange County																
Treasurer/Tax-Collector								S								
American Red Cross																
Department of Education																
OC Fire Authority																
OC Transportation Authority																P
WEROC																
COAD-OC						S	P									
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Figure 32: EOC Support Pool Staffing Assignments by Agency per 24 Hour Period

	Total Agency/ Department Employees (OCHR 7/2023)	Pool Distribution for a 24 hour period (1 support staff per every 100 agency employees)	Primary EOC Positions (Low/High Staffing)	Level Three EOC Activation	Level Two EOC Activation	Level One EOC Activation
Assessor	243	3	0	0	1	3
Auditor-Controller	400	4	2	0	1	2
Board of Supervisors (all districts)	40	1	1	0	0	1
County Executive Office	557	5	2	1	0	1
Child Support Services	334	3	0	0	1	4
Clerk of the Board	24	1	0	0	1	1
Clerk Recorder	107	1	0	0	1	1
Community Resources*	909	9	2	0	2	4
County Counsel	98	1	1	0	0	0
District Attorney	813	8	0	0	1	7
Health Care Agency*	2303	23	6	0	4	14
John Wayne Airport	106	1	1	0	0	0
Probation	867	8	1	0	5	10
Public Defender	427	4	0	0	1	3
Public Works*	799	8	4	0	1	1
Registrar of Voters	60	1	0	0	1	1
Sheriff Department*	3641	36	7 but as much as 18**	0	9	18
Social Services Agency*	4325	43	2	0	7	30
Superior Court	1524	15	0	0	4	14
Treasurer-Tax Collector	67	1	0	0	1	1
Waste & Recycling	266	2	1	0	1	1
Total	18,090	178	30/41**	0	4 2	117
*Denotes Agencies/Departments that may have field response activities based upon the emergency/incident.						
** Denotes Departments/Agencies staffing levels based upon the emergency/incident and designated lead department/agency						
***The Office of Immigrant and Refugee Affairs was created by the Board of Supervisors on April 25, 2023. It is not reflected in this EOP as it is in development						

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3.2.1 Management Section

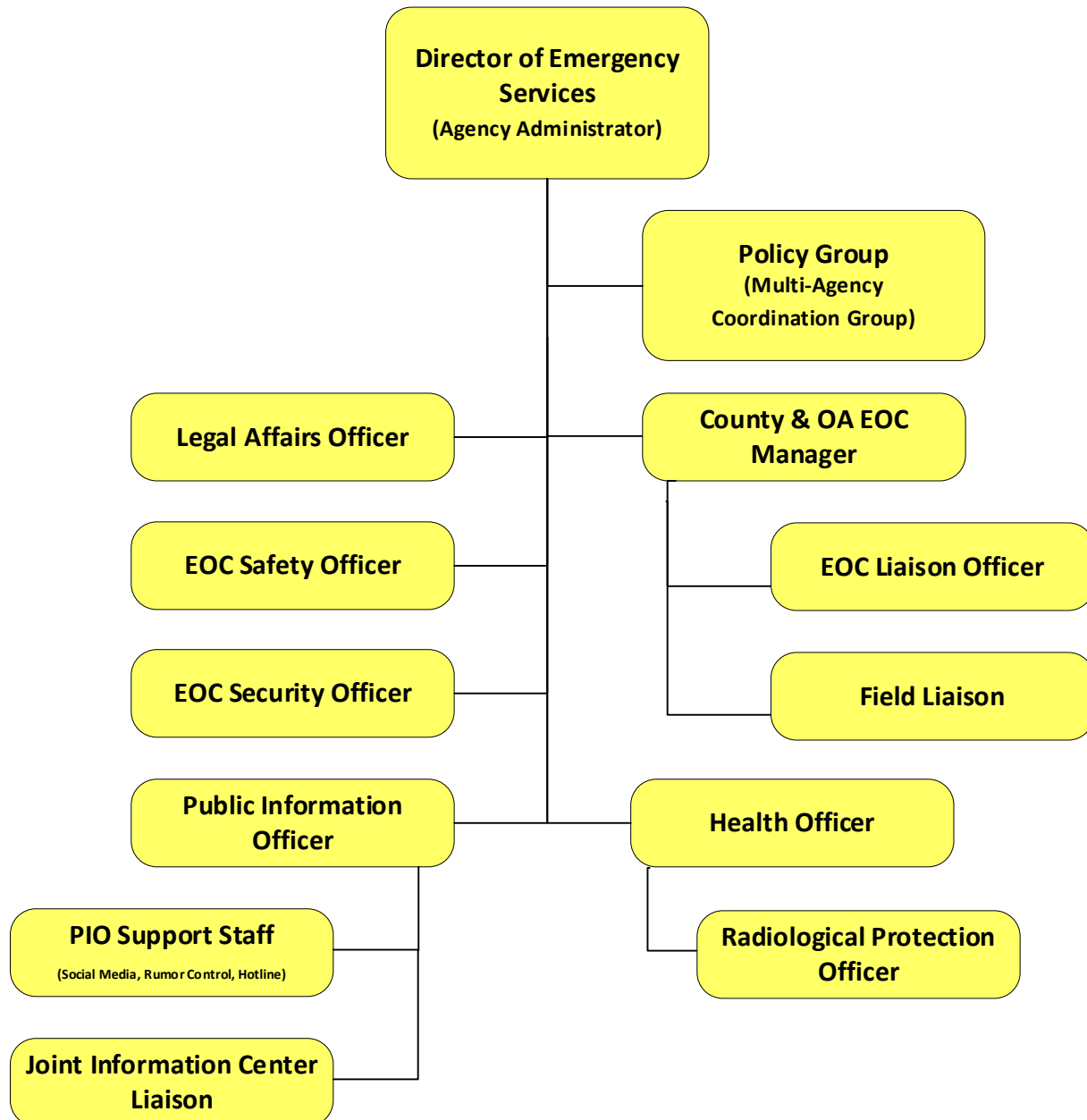


Figure 33: Org chart for the Management Section

In Orange County, the Management Section can be broken into two components both overseen by the Director of Emergency Services (DES): the Policy Group and the Management Support. The Management Section positions pre- identified for the County/OA EOC are:

- Director of Emergency Services
- Legal Affairs Officer
- EOC Safety Officer
- EOC Security Officer

- Public Information Officer
- PIO Support staff
- Joint Information Center Liaison
- County & OA EOC Manager
- EOC Liaison Officer
- Field Liaison
- Health Officer
- Radiological Protection Officer
- Policy Group Members

3.2.1.1 Director of Emergency Services (DES)

Assignment of Primary Responsibilities

If a disaster occurs in the unincorporated areas of the county or if use of County resources are required or impacted, the Director of Emergency Services will direct and coordinate the County's response efforts, in conformance with its Emergency Services Ordinance.

If a disaster occurs in more than one jurisdiction, the DES will act as the Operational Area Coordinator (OAC) and serve as the key decision-maker in the County/OA EOC by providing the direction and coordination necessary to accomplish the objectives specified in the OA Agreement and the responsibilities will be assigned to the OA Lead as specified in the California Code of Regulations, Title 19, Section 2409 (or §2409).

The Director of Emergency Services (DES) is designated by the County of Orange and will direct the County emergency organization during times of emergency. By agreement with the Operational Area jurisdictions, the County of Orange DES will also serve as the Orange County Operational Area Coordinator (OAC), the primary point for coordination of mutual aid assistance, and information sharing between jurisdictions. The DES will normally operate from and be supported by the County and Operational Area Emergency Operations Center. Per Resolution 22-001, the Director of Emergency Services will direct the emergency organization during times of emergency. The designated DES will direct the County's emergency organization during an emergency that impacts the unincorporated areas of the county. Based on the type of disaster described below, the Director of Emergency Services will be the incumbent of the position see below:

Director of Emergency Services Designation

EMERGENCY	DES	EMERGENCY	DES
Act of War	Sheriff-Coroner	Flood	County Executive Officer
Air Quality	County Executive Officer	Hazardous Materials Release	OCFA Fire Chief
Aircraft Accident	OCFA Fire Chief	Marine Oil Spill	County Executive Officer
Civil Disturbance	Sheriff-Coroner	Rail Accident Incident	OCFA Fire Chief
Dam and Reservoir Failure	County Executive Officer	Nuclear Power Plant or Storage Facility Emergency	Sheriff-Coroner
Debris Flow/Landslide	County Executive Officer	Severe Weather (Storms/High Winds/Excessive Temperatures)	County Executive Officer
Disaster Recovery	County Executive Officer	Terrorism (Active Shooter, Cyber)	Sheriff-Coroner
Drought	County Executive Officer	Threat of an Epidemic or a Declared Epidemic	County Executive Officer
Earthquake	Sheriff-Coroner	Threat to Animals and/or Livestock	County Executive Officer
Energy Crisis and Power Outages	Sheriff-Coroner	Tsunami	Sheriff-Coroner
Fire (Urban and Wildland)	OCFA Fire Chief		

*Mass casualty is incorporated into the above hazards as a consequence of the hazard.

Responsibilities of the Director of Emergency Services

The Director of Emergency Services has both formal duties (i.e., outlined by law, ordinance, or agreement) and informal duties (i.e., outlined herein based upon SEMS, NIMS, and past activations and exercises).

Formal Responsibilities

County Ordinance 3-1-6: In the event of a proclamation of Local Emergency as herein provided, the proclamation of a state of emergency by the Governor or the Director of the State Office of Emergency Services, or the existence of a "state of war emergency," the Director of Emergency Services is empowered to:

- Rules and regulations. Make and issue rules and regulations on matters reasonably related to the protection of life and property as affected by such emergency.
- Obtain supplies and equipment. Obtain vital supplies, equipment, and any other properties found lacking and needed for the protection of life and property and to bind the County for the fair value thereof and, if required immediately, to commandeer the same for public use.
- Command the aid of citizens. Require emergency services of any County officer or employee and, in the event of a state of war emergency, state of emergency, or local emergency, command the aid of as many citizens of this County as (s)/he deems necessary in the execution of his/her duties; such persons shall be entitled to all privileges, benefits, and immunities as are provided by state law for disaster services workers.
- Requisition county personnel and material. Requisition necessary personnel or material of any County agency/ department.
- Initial emergency measures. All emergency measures taken by the Director of Emergency Services prior to the issuance of an official proclamation of emergency, or prior to any decision of the Board not to issue such proclamation, shall be legal and binding upon the County.

County Resolution 22-001

- Direction and Control: Serve as a key decision-maker in the emergency organization providing direction and control necessary to accomplish the purpose of the resolution.
- County Representative: Represent the County in all dealings with the public or private agencies on matters pertaining to emergencies as defined.
- Emergency Public Information: Appoint a Public Information Officer to coordinate the dissemination of all emergency information, press releases, and public initiation of rumors, as appropriate to the type of emergency confronting the County.

Operational Area Agreement

Per the Orange County Operational Area Agreement, when the emergency impacts Operational Area (OA) jurisdictions the designated Director of Emergency Services (DES) is assigned additional duties as the Operational Area Coordinator and is also responsible for ensuring direction, coordination and communication of policy decisions, resource needs and priorities between OA jurisdictions and the State throughout the emergency. Note: Individual disciplines (e.g., law, fire, health) have Operational Area Coordinator positions defined by law with limited powers within their discipline for coordinating between the local government and the State; the DES role as OAC is specifically within the boundaries of Orange County and not discipline specific.

- Direction and Coordination: Serve as key decision maker, in the County and OA Emergency Operations Center providing direction and coordination necessary to accomplish the purposes of the Operational Area Agreement and responsibilities of the Operational Area Lead as specified in Title 19 California Code of Regulations Section 2409 (e).
- Operational Area Representative: Represent the Operational Area in all dealings with the public or private agencies on matters pertaining to emergencies.
- Appoint a Public Information Officer to coordinate the dissemination of all emergency information, news media releases, and public statements, and to manage conflicting information, misinformation, and the initiation of rumors, as appropriate to the type of emergency confronting the County of Orange.

Informal Responsibilities

- Serve as key decision maker in the County and Operational Area EOC providing direction and coordination.
- Ensures Whole Community strategy is incorporated across the emergency response and recovery efforts.
- Authorizes the activation and deactivation of the County/OA EOC.
- Establishes the appropriate level of organization and staffing necessary to support operations and continuously monitor the effectiveness of that organization.
- Working with the EOC Manager appoints all Section Chiefs.
- Ensure that the County Board of Supervisors and elected officials or their representatives are briefed on the status of the emergency and the EOC Action Plan.
- Requests that the County Board of Supervisors proclaim the existence or threatened existence of a Local Emergency in the County if necessary.
Provides status update reports to Board of Supervisor on need to continue or terminate Local Emergency Proclamation.
- Authorizes communications and alert and warning systems including AlertOC, WEA, and EAS; in conjunction with Unified Command/Incident Commander.
- Approves all EOC news media releases.

- Serves as the lead official for the State Multi-Agency Coordination System (MACS) ensuring multi-agency and inter-agency coordination.
- In conjunction with the Policy Group and Section Chiefs, sets priorities for emergency response efforts and ensures all organizational actions are accomplished as established.
- Approves EOC Action Plan and Situation Summary Reports.
- Responsible for all resources, services, and operations.
- Ensures collection of, evaluation, and dissemination of damage assessments and other essential information.
- Coordinates with County Counsel and Board of Supervisors on establishing, delineating, or describing the demobilization of policy making authority for extended response and recovery.
- Transitions role and authorities to the Recovery DES when appropriate.

Alternates to the DES

The lines of succession for the DES are outlined in Board Resolution No. 22-001. Each incumbent of a position eligible to act as Director of Emergency Services will annually designate, by name and in writing, a minimum of three alternates. This designation will be filed with the County Emergency Manager no later than January 15th of each year.

Line of Succession. In the event that the designated Director of Emergency Services and the designated alternates from that agency/department are not available to serve in the capacity of the Director of Emergency Services, the following line of succession will be used to ensure continuity of government during time of emergency.

- Sheriff-Coroner and a minimum of three designated alternates.
- Fire Chief, Orange County Fire Authority and a minimum of three designated alternates.
- County Executive Officer and a minimum of three designated alternates.
- Director, OC Public Works and a minimum of three designated alternates.
- Director, Health Care Agency and a minimum of three designated alternates.
- Director, Social Services Agency and a minimum of three designated alternates.

3.2.1.2 Policy Group

The Policy Group represents the Multi Agency Coordination Group for the County of Orange and the Orange County Operational Area. Whether composed of the EMC or OA Executive Board as described below, the individuals filling these roles must be able to set and establish policy for their respective discipline, and advise the DES on critical issues before, during, and after incidents. There is no minimum or maximum number that must be present or consulted during an incident, and combinations of the two groups may be activated depending upon the nature and scope of the incident.

Assignment of Primary Responsibility

The Policy Group consists of representatives of organizations with direct (functional) emergency response responsibilities. Their function is to establish response policies for the County and OA and to establish priorities for the allocation of resources. The Policy Group is composed of the following members:

County of Orange Emergency Management Council

1. A member of the Orange County Board of Supervisors
2. A representative from the County Executive Office
3. A representative from Orange County Health Care Agency
4. A representative from John Wayne Airport
5. A representative from Orange County Community Resources
6. A representative from Orange County Public Works
7. A representative from Orange County Waste and Recycling
8. A representative from Orange County Fire Authority
9. A representative from Probation Department
10. A representative from Sheriff-Coroner Department
11. A representative from Social Services Agency

The Policy Group may also be expanded to include key representatives from the OA Executive Board.

Orange County Operational Area Executive Board

1. The Chair of the Orange County Board of Supervisors
2. The County Executive Officer
3. The OA Law Enforcement Mutual Aid Coordinator, the Orange County Sheriff
4. The OA Fire & Rescue Mutual Aid Coordinator, as selected by the Orange County Fire Chiefs Association
5. The OA Public Works Mutual Aid Coordinator, the Orange County Public Works Director
6. The OA Health Care Mutual Aid Coordinator, the Orange County Health Care Agency Director
7. The OA Water/Wastewater Mutual Aid Coordinator
8. The Orange County Social Services Agency Director
9. A representative selected jointly from the Orange County City Managers Association

10. A representative from the Orange County Chiefs of Police and Sheriff's Association
11. A representative from the Orange County Fire Chiefs Association
12. A representative from the Orange County City Engineers and Public Works Directors Association
13. A representative from Independent Special Districts of Orange County
14. The Orange County Superintendent of Schools, representing Orange County K-12 School Districts
15. A representative selected jointly from Orange County Community College Districts
16. The Orange County Transportation Authority Chief Executive Officer

Responsibilities of the Policy Group

- Establishes basic policies, which govern the manner and means in which the County and OA will respond to an anticipated or actual disaster.
- Provides support to the DES.
- Advise DES, furnishing them with critical data to view the incident from different perspectives.
- Assists in making executive decisions based on policies of the Board of Supervisors.
- Assists the DES in the development of rules, regulations, proclamations, and orders.
- Represents the County and Operational Area in other discipline specific multi/interagency coordination groups as appropriate.
- Serve as discipline specific Operational Area Coordinator when designated by California Government Code.
- Serve as discipline specific policy liaison to the organization they represent.
- Establishes demobilization plan of policy making functions.
- Specific to the Board of Supervisor member present (not designee):
 - May directly communicate with State and Federal officials on behalf of the County for resource prioritization.
 - Coordinates information flow on behalf of other BOS members and with the assistance of County Counsel, assess Brown Act compliance.

Position Alternates and Successors

Organizations with assigned positions on the Policy Group are responsible for developing protocols for position succession within their organizations.

3.2.1.3 County and Operational Area EOC Manager

Assignment of Primary Responsibility

The OCSD Emergency Management Division Director serves as the County and Operational Area Emergency Manager and EMMA Coordinator. Upon activation of the County and OA EOC, the County and OA Emergency Manager becomes the County and OA EOC Manager and assigns the role of EMMA Coordinator to the Logistics Section Chief.

Responsibility of the County/OA EOC Manager

- Determine if primary or alternate EOC location is appropriate, with assistance of Logistic Section Chief. See alternate EOC SOP.
- Advises DES on EOC activation levels and staffing.
- Ensures physical set-up for and staffing of support staff in the County/OA EOC.
- Serves as the 24-hour contact for the County and OA, including that for the State, OA jurisdictions, and Mutual Aid Coordinators.
- Advises the DES, Policy Group, Management, and General Staff regarding emergency management issues, legislation, and previous (historical) actions.
- Develops and maintains all plans and procedures pertaining to emergency response and recovery involving the County and OA.
- Manages requests from other agencies for sending liaison personnel to other EOCs.
- Conducts Business Process Meeting (Attachment 3) during the outset of an activation, to establish the documentation and purchasing ability for the EOC during its activation.
- Coordinates with County CEO's office to obtain job code information for the financial tracking of personnel, services, supplies, and equipment assigned to the activation.
- When requested by Financial and Logistics Section Chiefs, sign out Cal Cards using established procedure (Attachment 4).
- Oversees and coordinates with County and OA Field Liaisons deployed amongst OA jurisdictions.
- Directs and coordinates EOC support staff and EOC personnel.
- Acts as coordination point for internal and external management points of all disciplines.
- Ensures demobilization of Recovery transition plan are established.
- Delegate EMMA Coordinator duties, if needed.

Position Alternates and Successors

The Orange County Sheriff's Department, Emergency Management Division has protocols in place for the position of the County/OA EOC Manager succession. This position will be filled with an EMD team member.

3.2.1.4 EOC Liaison Officer

Assignment of Primary Responsibility

Orange County Sheriff's Department, Emergency Management Division

Responsibilities

- Acts as a point of contact for the following types of agencies and external organizations:
 - Cities
 - County Agencies/Departments
 - American Red Cross
 - Businesses
 - Operational Area(s)
 - State agencies
 - NGOs/COAD-OC
 - Federal agencies
 - Special Districts
 - Others
- Establishes and maintains contact with impacted jurisdictions.
- Functions as a central point of contact for incoming agency representatives, provides workspace, and arranges for support as necessary.
- Ensures all developed guidelines, directives, EOC Action Plans, and appropriate situation information is disseminated to agency or external representatives.
- Coordinates with Planning and Intelligence, Situation Analysis Unit on information received from external agencies.
- Works with the EOC Sections to ensure up-to-date information is posted to WebEOC® and other information sharing boards or systems.

Position Alternates and Successors

Agency Representative(s) from non-impacted jurisdiction(s) in Orange County.

3.2.1.5 Field Liaison

Assignment of Primary Responsibility

Orange County Sheriff's Department, Emergency Management Division

Responsibilities

- Provides and relays information between County departments, Department Operation Centers, OA Jurisdictions and Incident Command Post (ICP) and the County/OA EOC in relation to policy matters, priorities, and jurisdiction-specific information.
- Communicates the status of activities at the assigned location to the County/OA EOC.
- Monitors activities at the assigned location for potential conflicts of strategy or information, discrepancies, or other concerns.

3.2.1.6 Legal Affairs Officer

Assignment of Primary Responsibilities

County of Orange, County Counsel

Responsibilities

- Advises the DES, Board of Supervisors, and the Policy Group on legal implications of emergency actions.
- Drafts local emergency proclamations.
- Drafts requests for a Governor's Proclamation of a State of Emergency.
- Advises on legal implications prior to and during response and recovery operations.
- Maintains documentation of advice given by Legal Affairs Officer with respect to the incident.
- Commences legal proceedings as needed.
- Drafts mutual aid agreements, and coordinate their approval by DES or BOS.
- Coordinate DSW policy actions and language for County personnel.
- Coordinate with Logistics on Emergency purchase contracts and FEMA rules.
- Coordinate with Logistics to ensure EMMA resources are appropriately requested and agreements are established.

Position Alternates and Successors

County Counsel is responsible for developing protocols for EOC position succession, including the Legal Affairs Officer position.

3.2.1.7 Public Information Officer

Assignment of Primary Responsibility

The Public Information Officer should be from the same discipline and agency as the DES as determined by the type of incident.

Responsibilities

- Establishes contact and coordinates with the Field PIO, affected OA jurisdiction PIOs, Cal OES and other jurisdictions.
- Evaluates the incident and public information immediate needs, including EOC PIO support.
- Evaluates and determines activation of the Joint Information Center (JIC), structure and personnel needs, based on EPI Plan.
- Leads the operation of the Joint Information System (JIS) and JIC, maintains contact in order to coordinate information gathering and dissemination.
- Serves as the arbitrator on all public information related issues when conflicts or discrepancies arise.
- Develops, coordinates, and distributes in a timely manner emergency public information and warnings to the public and news media, using any appropriate and available channels.
- Ensure public information is produced and disseminated in accessible formats such as American Sign Language and specific language requirements of the impacted communities.
- Identify when incident requires specialized hotline personnel (e.g. terrorism=law enforcement reserves) or handling (e.g. HIPAA) and adjust staffing, training, and documentation accordingly.
- Identifies which jurisdictions have established and disseminated hotline or email info to public and aligns efforts.
- Ensures all public information releases are distributed to 2-1-1 Orange County.
- Establishes with the DES if there are any limits on information release.
- Obtains approval for news media releases and public messaging from DES.
- Establishes contact with pre-identified community partners, which serve the non-English speaking, culturally diverse, and people with disabilities and those with access and/or functional needs groups to allow them to initiate their communications protocols.
- Establishes contact with the news media to release lifesaving and health preservation instructions, taking into account the languages and cultures of impacted communities.
- Provides information on what is being done to respond to the emergency.
- Monitors news media reporting for accuracy.
- Monitor and respond to approved social media sites and accounts.

- Responds to news media inquiries.
- Keeps all EOC staff apprised of public information releases.
- Analyzes other sources of emergency information.
- Provides hotline stats and important information for situation summary reports.

The PIO will coordinate with the following:

- Coordinates with CEO, DES, and Policy Group for dignitary services for observes, visitors, dignitaries, and experts not involved in the assisting in the emergency response (e.g., tours of damaged areas, County/OA EOC briefings, meetings with decision makers, and functional coordinators, etc.).
- Coordinates with the Logistics Section for logistical issues regarding dignitary services.
- Coordinates with the Law Enforcement and Traffic Control Branch and the Health Care Branch regarding security, and health and safety issues for dignitaries.
- Coordinates the interaction of dignitaries with the news media in accordance with the overall public information strategy and protocols.

Position Alternates and Successors

The successors to the Public Information Officer will be designated by the department with primary responsibility for serving as DES during the emergency. If the lead agency or department is unable to staff the position, that responsibility will fall to a trained individual within one of the other DES eligible departments (Orange County Sheriff's Department, Orange County Fire Authority, CEO, OC Public Works, or Health Care Agency).

3.2.1.8 Public Information Officer (PIO) Support Staff

Assignment of Primary Responsibility

The Public Information Officer(s) Support Staff supports the PIO at the County and OA EOC and JIC, as needed. PIO Support Staff members will be requested from County departments and OA jurisdictions that are least affected by the emergency. In addition, PIOs from affected external organizations may be integrated as Support PIOs into the OA's JIC during emergencies. For example, PIOs from major businesses or non-governmental agencies affected by the incident may be asked to participate in the OA JIC at this level. The Support PIOs may share many of the same responsibilities as the PIO as assigned.

Responsibilities

- Coordinates and disseminates all information to the public for County/OA EOC operations.
- Supervises the Public Information Hotline/Rumor Control Supervisor and support staff at the County/OA EOC.
- Provides the news media and public with the County and OA official information being released.

- Ensures the PIO, DES and members of the Policy Group, and County/OA EOC staff are kept apprised of emergency public information issues concerning the emergency.
- Coordinates with the Operations Section Chief and Alert & Warning for the drafting, approval and dissemination of alert and warning messages and official news media releases for the Orange County.
- Obtains approval for news media releases and messaging from PIO.
- Ensures dissemination on all alert and warning messages, news media releases and notifications with the Operations Section Alert and Warning Unit Leader.
- Maintains contact with the County departments, OA jurisdictions, Department Operation Centers (DOCs), Incident Command Post (ICP) and Joint Information Center (JIC) in order to coordinate information gathering and dissemination.
- Establishes contact with pre-identified community partners, which serve the non-English speaking, and people with disabilities and those with access and/or functional needs to allow them to initiate their communications protocols.
- Establishes contact with news media, and begins releasing lifesaving and health preservation instructions.
- In accordance with this EPI Plan, develops and implements a public information plan for news media releases, development of briefings, dignitary coordination and coordination of public information with County departments, OA jurisdictions, ICP, and people with disabilities and those with access and/or functional needs.
- Uses fax, WebEOC or EOC-to-EOC radio to coordinate and communicate public information with the County departments and OA jurisdictions.
- Analyzes other sources of emergency information.
- Responds to news media inquiries.
- Monitor and respond to approved social media sites and accounts.
- Ensures all public information releases are distributed to 2-1-1 Orange County.
- Ensures Public Information Hotline/Rumor Control staff are tracking rumors and trends.
- Ensures Public Information Hotline/Rumor Control Supervisor tracks calls received and provide reports on a regular basis.

3.2.1.9 Public Information Officer Support-Social Media

Assignment of Primary Responsibility

The Public Information Officer(s) Support – Social Media supports the PIO at the County and OA EOC and JIC, as needed. The Public Information Officer selects the PIO Support - Social Media from County departments and OA jurisdictions that are least affected by the emergency. The selected people should be familiar with website design software, Internet protocols, social media policies, and website accessibility issues (Section 508 of the Rehabilitation Act of 1973).

Responsibilities

- Monitors and responds to social media sites and accounts.
- Maintains and update incident website and incident social media accounts:
- X formerly known as Twitter: @OrangeCountyEOC
- Facebook: Orange County, California-Emergency Operations Center
- Other County websites and social media accounts, as directed
- Ensures approval of all items prior to posting on incident website.
- Ensures all items posted to the incident website are Section 508 compliant.
- Coordinates with web support personnel for all agencies represented, to ensure website meets individual agency requirements.
- Coordinates news media and community distribution lists.
- Determines newspaper, radio, television and internet outlets to monitor.
- Monitors blogs and social networking sites.
- Gathers perceptions from the news media, public and other stakeholders about the progress of the response efforts.
- Identifies potential detrimental rumors and provide the PIO with effective ways to deal with them.
- Monitors news media, social media for use of text crawls, and sign language interpreters.

3.2.1.10 Public Information Hotline and Rumor Control Supervisor

Assignment of Primary Responsibility

The Public Information Hotline/Rumor Control Supervisor will be an OCSD staff member. When this option is not available, it will be staffed by a County or OA jurisdiction employee with appropriate training and experience.

Responsibilities

- Ensures all information disseminated to the public is authorized for release by the PIO or PIO support staff.
- Serves as the liaison between the hotline staff, PIO Support Staff and PIO.
- Coordinates with the Orange County 2-1-1 services to ensure the objectives, messages, and approach for hotline and rumor control are the same and integrated amongst both entities.
- Monitors news media reporting for accuracy; reports any discrepancies to PIO.
- Tracks calls received and provide the PIO with hourly statistical reports.
- Tracks rumors and trends received three times or more by hotline staff; provides relevant information to the PIO.

3.2.1.11 Public Information Hotline and Rumor Control Support Staff

Assignment of Primary Responsibility

Staffing for the Public Information Hotline and Rumor Control will be provided by County departments and OA jurisdictions. Consideration use of County affiliated volunteers to staff the hotline.

Responsibilities

- Serves as an alternative to the emergency 9-1-1 system for non-life-threatening circumstances and redirects emergency calls that come to the hotline.
- Provides information to the public related to the emergency including, but not limited to:
 - Evacuation routes
 - Shelter locations
 - Transportation logistics
 - Protective actions to follow
 - People with disabilities and those with access and/or functional needs information
 - Road closures or impairments
 - Geographical boundaries of known disaster areas
 - General safety and disaster information
 - Referral and telephone numbers of agencies that can provide additional public assistance
- Receives emergency calls or inquiries, collects information, and forwards information to the appropriate Branch or Unit to handle.
- Tracks the number of calls received and what type of call.
- Identifies and tracks common questions and rumor trends heard from callers.
- Clarifies rumors and inaccuracies presented by callers.
- Directs calls from the news media to the PIO Support Staff and/or PIO.

3.2.1.12 Health Officer

Assignment of Primary Responsibilities

The Health Officer must be a physician employed by Orange County Health Care Agency who has been appropriately deputized.

Responsibilities

- Determines and initiates appropriate public health-related protective actions upon recommendation from County departments, OA jurisdictions, California Department of Public Health (CDPH) and or other criteria.
- Directs programs deemed necessary for public and emergency worker health and safety in consultation with Cal OES and appropriate state and federal agencies.

- Coordinates with the OA jurisdictions, OC Public Works, Water Emergency Response of Orange County (WEROC) and HCA regarding the protection, purification, and distribution of potable water and consumable food.
- If necessary, declares a local health emergency in the County and/or OA.

Position Alternates and Successors

The responsibility of the County to appoint an appropriate alternate or successor when deemed necessary.

3.2.1.13 Radiological Protection Officer

Assignment of Primary Responsibility

Orange County Health Care Agency, Environmental Health HazMat

Responsibilities

- Ensure the Health Officer is kept apprised of radiological protection issues.
- Recommend radiological safety criteria to the Health Officer.
- Coordinate radiological monitoring, assessment and decontamination activities with the Health Officer, Medical and Health Care Branch, Care and Shelter Branch as well as State and Federal agencies.
- Provide information to all sections of the emergency organization on radiological protection measures.
- Supervise the Emergency Worker Exposure Control Coordinator (EWECC) and management of the emergency worker exposure under the direction of the county control and the issuance and tracking of dosimetry.
- Provide information to the County Health Officer on mission limits which have exceeded established guidelines and/or the needs for emergency worker decontamination.
- Supervise the County Dosimetry Coordinator and personnel performing water, food and agricultural inspections.
- Provide analysis of food and water supplies.
- Protect the public from radiological hazards.

Position Alternates and Successors

The responsibility of the Orange County Health Care Agency to appoint an appropriate alternate or successor when deemed necessary.

3.2.1.13 EOC Safety Officer

Assignment of Primary Responsibility

CEO, Office of Risk Management

Responsibilities

- Ensures EOC personnel use appropriate safety precautions during an emergency.
- Ensures all facilities used in support of EOC operations have healthy and safe operating conditions and meet the Americans with Disabilities Act (ADA) requirements.
- Reviews the EOC Action Plan for safety implications and provides safety messages to the Planning and Intelligence Section for inclusion in the EOC Action Plan.
- Exercises emergency authority to stop any activity deemed unsafe or to prevent unsafe acts.
- Develops on-site safety plans.
- Identifies and mitigates safety hazards and situations of potential County liability within the EOC.
- Investigates accidents that have occurred within the EOC sites or facilities supporting EOC operations.
- Coordinates with Finance Section on any Disaster Service Worker or Disaster Service Worker-Volunteer incident related accidents that may have OSHA or workers compensation impacts.

Position Alternates and Successors

The Office of Risk Management is responsible for developing protocols for EOC position succession, including the EOC Safety Officer position.

3.2.1.14 EOC Security Officer

Assignment of Primary Responsibilities

Orange County Sheriff's Department

Responsibilities

- Provides 24-hour security for EOC facilities.
- Controls personnel access to facilities in accordance with policies established by the DES or County and Operational Area EOC Manager.
- Provides advice and guidance to the DES on EOC security matters.
- Coordinates with the EOC Facility Unit to ensure parking and vehicle access is conducive to EOC operations.

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC Security Officer succession.

3.2.2 Planning and Intelligence Section

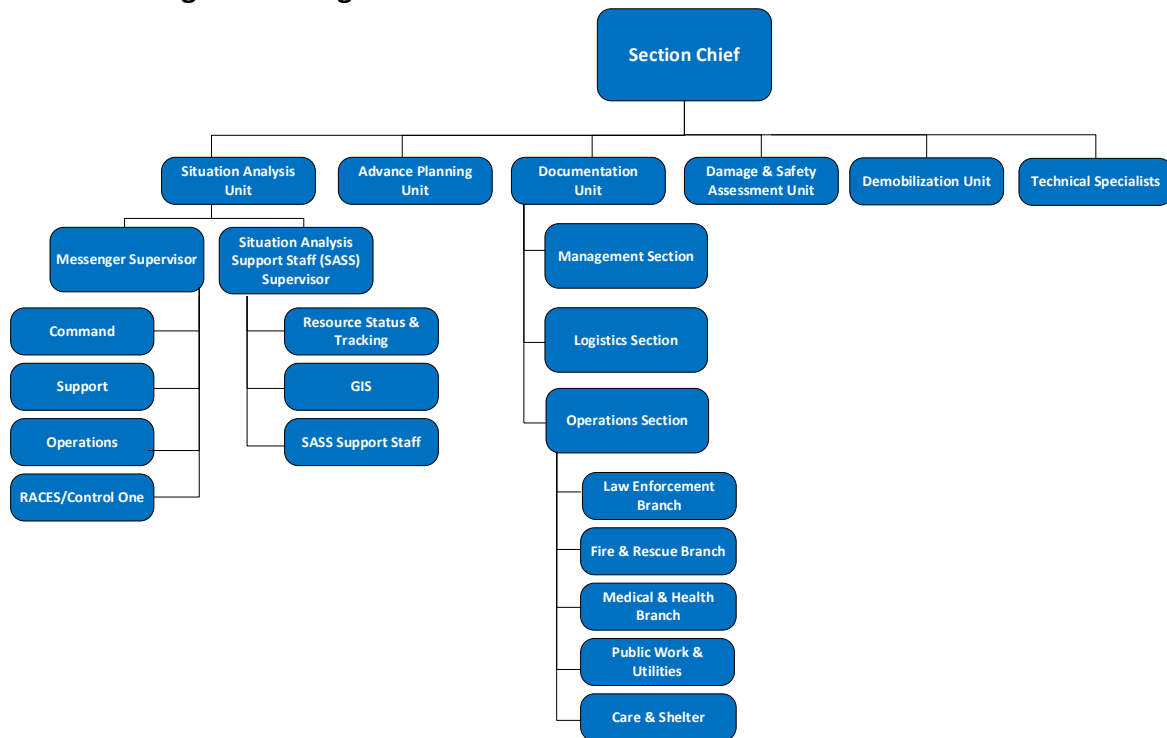


Figure 34: Org chart for the Planning and Intelligence Section

The Planning and Intelligence Section is responsible for collecting, evaluating, and disseminating situational information pertaining to the incident. In addition, this Section prepares and develops the EOC Action Plans (EAP), situation status reports and incident maps. This Section is headed by a Planning and Intelligence Section Chief and is divided into several units, depending upon the needs of the incident. Situation Analysis, Documentation, and Damage Assessment are examples of the kinds of units that may be formed within this section. The Planning and Intelligence staff positions and units pre- identified for the County EOC are:

- Planning and Intelligence Section Chief
- Situational Analysis Unit Leader
- Situation Analysis Unit Assistant(s)
- Situation Analysis Support Staff Supervisor
- Situation Analysis Support Staff
- Situation Analysis-Resource Status and Tracking
- Geographical Information System Specialist (GIS)
- Messenger Supervisor
- Messengers
- Advance Planning Unit Leader
- Documentation Unit Leader
- Documentation Support Staff-Operations Section
- Documentation Support Staff-Public Works and Utilities Branch

- Documentation Support Staff-Medical and Health Care Branch
- Documentation Support Staff-Fire and Rescue Branch
- Documentation Support Staff-Law Enforcement and Traffic Control Branch
- Documentation Support Staff-Care and Shelter Branch
- Documentation Support Staff-Logistics Section
- Damage and Safety Assessment Unit Leader
- Demobilization Unit Leader
- Technical Specialist(s)

3.2.2.1 Planning and Intelligence Section Chief

Assignment of Primary Responsibility

The Planning and Intelligence Section Chief should be from the same discipline and agency as the DES as determined by the type of incident.

Responsibilities

- With the DES, establishes initial objectives and priorities.
- Establishes the appropriate level of organization within the Section, assigns section duties, and continuously monitors the effectiveness of that organization.
- With the DES and EOC Manager, establishes “Battle Rhythm” (Attachment 5) for the incident.
- Ensures the Planning and Intelligence function is performed consistent with SEMS and NIMS guidelines, including:
- Collecting, analyzing all data regarding the status and operations of the Operational Area.
- Preparing periodic situation reports.
- Initiating and documenting the EOC’s Action Plan and After-Action Report.
- Advance planning for future operational periods and recovery operations.
- Planning for demobilization.
- Provides Geographic Information Services (GIS) and other technical support services to the various organizational elements within the EOC.
- Coordinates with counterpart Planning and Intelligence Section Chiefs in other active EOCs and DOC’s, and ICP to ensure the OA priorities and strategies comply with County and OA needs.
- Coordinates directly with Section Chiefs of other EOC’s and ICP to gather situational and operational status of the incident.
- Tracks the incident and provides information to the DES, Policy Group on the overall effectiveness of the policies established.
- Establishes Documentation Collection Plan (Attachment 6) and disseminates it to the EOC responders.
- Collects and maintains event documents for all activities.

- Collects and reports damage assessment information.
- Facilitates meetings with the other section chiefs and key EOC positions in accordance with the Planning “P.”
- Provides briefings to General Staff as well as situation information from management meetings.
- Oversees the activation of appropriate Technical Specialists for the response.

Position Alternates and Successors

The successors to the Planning and Intelligence Section Chief will be designated by the department that has primary responsibility for serving as the DES during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organization.

3.2.2.2 Situation Analysis Unit Leader

Assignment of Primary Responsibility

The Situation Analysis Unit Leader should be from the same discipline and agency as the DES as determined by the type of incident.

Responsibilities

- Directs the collection, collation, organization and display of incident situational information.
- Monitors, assesses, and evaluates situation and operational information.
- Ensure OA jurisdictions report their status to the County/OA EOC.
- Ensures situational awareness and a common operating picture is maintained amongst all EOC stakeholders.
- Assists with the development of EOC Action Plans.
- Notifies the Planning and Intelligence Section Chief of new information, unusual events, information discrepancies, etc.
- Coordinates with counterpart Situation Analysis Units and/or Planning and Intelligence Sections within the County and OA to ensure the collection of information for a complete and accurate common operational picture.
- Coordinates damage information for use in the Preliminary Damage Assessment (PDA).
- Maintains charts, display boards, and records of situation information, coordinates the information to be displayed or plotted, such as:
 - Personnel status information.
 - Maps.
 - Records of situation information.
 - Location and status of incidents and resources.
 - Coordinates situational and status information in WebEOC®.
- Provides situational and status information into Cal OES web portal Cal EOC.

- Prepares situation summaries and meeting minutes from briefings.
- Prepares maps and gathers and disseminates information and intelligence for use in the EAP.
- Supervises Situation Analysis Support Staff/Plotter and GIS Specialist responsible for displaying information in the Command, Operations and Support Center within the County/OA EOC.
- Supervises the Messenger Supervisor.
- Identifies emerging trends and anticipates emerging needs.

Position Alternates and Successors

The successors to the Situation Analysis Unit Leader will be designated by the department with primary responsibility for serving as the DES during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for positions succession within their organization.

3.2.2.3 Situation Analysis Unit Assistant(s)

Assignment of Primary Responsibility

The Situation Analysis Unit Assistant(s) should be from the same discipline and agency as the DES as determined by the type of incident.

Responsibilities

- Supports the collection, collation, organization and display of incident situational information.
- Monitors and assesses situation and operational information.
- Ensures situational awareness and a common operating picture is maintained amongst all EOC stakeholders.
- Evaluates information and assists in the development of EOC Action Plans.
- Notifies the Situation Analysis Unit Leader of important information, unusual events, information discrepancies, etc. that need to be brought to the attention of the Planning and Intelligence Section Chief, DES, County/OA EOC Manager, and Policy Group and Section Chiefs.
- Coordinates closely with counterpart Situation Analysis Units or Planning and Intelligence Sections within the County and OA to ensure the collection of information for a complete and accurate common operational picture.
- Coordinates information for use in the Preliminary Damage Assessment (PDA).
- Maintains charts, display boards, and records of situation information, coordinates the information to be displayed or plotted, such as:
 - Personnel status information
 - Relevant maps
 - Records of situation information
 - Current location and status of incidents and resources

- Coordinates the relevant event incident situational and status information in WebEOC®.
- Coordinates the situational and status information into Cal OES web portal Cal EOC.
- Prepares situation summaries and meeting minutes from briefings.
- Identifies emerging trends and anticipates emerging needs.

Position Alternates and Successors

The successors to the Situation Analysis Unit Assistant will be designated by the department with primary responsibility for serving as the DES during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for positions succession within their organization.

3.2.2.4 Situation Analysis Support Staff (SASS) Supervisor

Assignment of Primary Responsibility

Staffing for the SASS Supervisor will be provided by County departments or OA jurisdictions.

Responsibilities

- Assigns staff to ensure status displays (projection displays) are maintained and monitored in Operations, Command and Support Centers.
- If technology fails, assigns, personnel to serve as Plotters to manually update whiteboards in each room.
- Assigns staff to monitor specific situational status information in WebEOC.
- Ensures situational status information is gathered and displayed.
- Monitors, updates, collects, processes, and organizes ongoing situation information.
- Notifies the Situation Analysis Unit Leader of important information, unusual events, information discrepancies, etc. that need to be brought to the attention of the Planning and Intelligence Section Chief, County/OA EOC Manager, DES, Policy Group, and other Section Chiefs.
- Coordinates with County departments, OA jurisdictions, DOCs, ICP Situation Analysis Units or Planning Sections to ensure the collection of information for a complete and accurate common operational picture.
- Coordinates information and reporting systems including the Initial Damage Estimates (IDE).
- Coordinates with Documentation Unit to ensure relevant event summaries and status sections are being documented in hard copy.
- Gathers and maintain charts, display maps, and records of situation information.
- Assists in developing projections and forecasts of future events related to the incident.
- Gathers and disseminate information and intelligence for use in the EOC IAP.

- As part of the Planning process, coordinate with other sections to ensure that for the next operational period the following are occurring:
 - Assists in the identification of resources immediately available and accessible to meet short-term needs.
 - Assists in the identification of resources that can be expected to be or become available during mid- and long-term response.
 - Maintain a master list of all resources committed to incident operations.
 - Identifies resources immediately available and accessible to meet short-term needs.
 - Identifies resources that can be expected to be or become available during mid- and long-term response.
 - Tracks resources committed and available.
 - Establishes a resource status display within the EOC.
 - Supports the Operations Section Chief to ensure that incident resources being tracked in the EOC are accounted for.
- Works closely with the Demobilization Unit Leader and assists with development of demobilization plan.
- Assists in the identification of emerging trends and anticipates emerging needs.

3.2.2.5 Situation Analysis Support Staff (SASS)

Assignment of Primary Responsibility

Staffing for the SASS support staff will be provided by the County departments or OA jurisdictions.

Responsibilities

- Collects, processes, organizes and updates ongoing situational information.
- Notifies the Situation Analysis Support Supervisor of important information, unusual events, and information discrepancies.
- Coordinates with OA jurisdictions, County department DOCs, ICP Situation Analysis Units or Planning Sections, private sector, non-governmental agencies to ensure the collection of a complete and accurate common operational picture.
- Gathers and maintains charts, display maps, and records of situation information. These items are used to gather and disseminate information and intelligence for use in the EOC EAP.
- Ensures the relevant event summaries and situation status information are documented in WebEOC®.
- Assists in the developing projections and forecasts of future events related to the incident.
- Assists in the identification of resources immediately available and accessible to meet short-term needs.
- Assists in the identification of resources that can be expected to be or become available during mid- and long-term response.

- Assists in the identification of emerging trends and anticipates emerging needs.

3.2.2.6 Situational Analysis Support Staff-Resource Status and Tracking

Assignment of Primary Responsibility

Staffing for the SASS-Resource Status and Tracking support staff will be provided by the County departments or OA jurisdictions.

Responsibilities

- Coordinates with the Logistics Section, Resource and Support Unit to track incident resources ordered, available and deployed from the EOC:
 - Equipment
 - Personnel
 - Services
 - Supplies
- Processes resource status change information, including location of resources.
- Coordinates with Logistics Section, Resource and Support Unit in maintaining a real-time inventory control database for all donated goods.

3.2.2.7 GIS Specialist

Assignment of Primary Responsibility

Staffing for the GIS Unit will be provided by OC Public Works and/or other County departments or OA jurisdictions.

Responsibilities

- Prepares maps and gathers and disseminates information and intelligence for use in the EOC Action Plan.
- Gathers and maintains charts, display maps, and records of situation information.
- Collects, processes, organizes and updates ongoing situational information for use in maps and other spatial products.
- Develops and maintains spatial datasets related to the incident
- Validate and use information recorded in WebEOC to produce maps and other decision- making tools for EOC Operations.
- Notifies the Situation Analysis Unit Leader of important information, unusual events, and information discrepancies.
- Coordinates with OA jurisdictions, County department DOCs, ICP Situation Analysis Units or Planning Sections, private sector, non-governmental agencies to ensure the collection of a complete and accurate common operational picture.
- Prepares maps and gathers and disseminates information and intelligence for use in the EOC IAP.

3.2.2.8 Messenger Supervisor

Assignment of Primary Responsibility

Staffing for the Messenger Supervisor will be provided by County departments or OA jurisdictions.

Responsibilities

- Ensures accurate and coordinated flow of incident information within the County/OA EOC.
- Assists with reproduction of charts, display maps, and records of situation information.
- Manages messengers assigned in the Command, Operations, and Support Centers by providing guidance and answering questions.
- Ensures accuracy and completeness of message forms used for communication within the County/OA EOC.
- Ensures the timely delivery of time sensitive information such as an Emergency Alert Systems release message, AlertOC, or responder safety messages.

3.2.2.9 Messenger

Assignment of Primary Responsibility

Staffing for the Messenger Support Staff will be provided by County departments or OA jurisdictions.

Responsibilities

- Ensures accurate and coordinated flow of incident information within County/OA EOC.
- Assist with photocopying and facsimile support.
- Assists with reproduction of charts, display map, and records of situation information.
- Reviews messages for completeness, use of acronyms, or missing information.
- Delivers time sensitive information such as an Emergency Alert Systems release message, AlertOC, WEA, and responder safety messages to the appropriate personnel.

3.2.2.10 Documentation Unit Leader

Assignment of Primary Responsibility

Staffing for the Documentation Unit Leader will be provided by County departments or OA jurisdictions.

Responsibilities

- With the PSC, establishes and disseminates a Documentation Collection Plan (Attachment 6).
- Coordinates with the Planning and Intelligence Section Chief and Situation Analysis Unit Leader to assist in the development of the EOC Action Plan (EAP), and

maintains the files, and records that are developed as part of the overall EAP and planning function.

- Assigns and supervises Documentation Support Staff that have been assigned to Sections and/or Branches, as appropriate.
- Supervises Documentation Support Staff assigned to Sections and Branches
- Maintains accurate and complete incident files for legal, analytical, and historical purposes.
- Assists in financial recovery and maintains official records and reports related to recovery activities.

3.2.2.11 Documentation Support Staff

Assignment of Primary Responsibility

Staffing for the Documentation support staff will be provided by County department or OA jurisdictions.

Responsibilities

- Coordinates with Documentation Unit Leader with messages, and incident activities, to ensure complete documentation is maintained.
- Maintains all files and paperwork for the Section, Branch, Unit or Group support staff is assigned to.
- Assists Sections, Branches and Units in completing Status Reports.
- Participates in the development of the EOC Action Plan (EAP) and maintains the files and records that are used as part of the overall EAP and planning function.
- Monitors, maintains and updates situational information in WebEOC® for the assigned Section, Branch, Unit or Group.
- Records all actions taken and decisions made within the Section, Branch, Unit or Group and properly secures all documents for future filings and legal actions.

3.2.2.12 Damage and Safety Assessment Unit Leader

Assignment of Primary Responsibility

OC Public Works

Responsibilities

- Collects and documents safety assessments (evaluation of structures to determine whether or not they can continue to be occupied) from County departments and OA jurisdictions.
- Collects and documents damage assessments (process of determining how badly a facility or structure has been damaged and provides an estimate of what it will cost to repair) from County departments and OA jurisdictions.
 - This information documents the impacts of the disaster and is used for obtaining public disaster assistance and individual assistance from the State and/or Federal government.

- Assists in evaluating damage to County facilities, county unincorporated areas and OA jurisdictions. This may include public buildings, public infrastructure (roads, bridges, flood control channels), and private structures.
- Provides damage and safety assessment reports to the Finance and Administration Section and Situation Analysis Unit Leader for tracking of overall costs and situation status reports.
- Assists in the determination of whether a Local Emergency should be proclaimed and whether a Gubernatorial Proclamation and/or Presidential Declaration is requested.
- Assists in identifying the extent of assistance needed from State and Federal agencies, to expedite disaster assistance.
- Coordinates with Operations on reconciling identified structures impacted by the incident.
- Coordinates with the Situation Analysis Unit to estimate property losses to be included in the Initial Damage Estimate.
- Coordinates in the assessment of impacts to damaged facilities and their ability to function (e.g., impact on customers), and the cost to repair or replace it.

Position Alternates and Successors

OC Public Works is responsible for developing protocols for EOC position succession, including the Damage Assessment Unit Leader position.

3.2.2.13 Advance Planning Unit Leader

Assignment of Primary Responsibility

The Advance Planning Unit Leader should be from the same discipline and agency as the DES as determined by the type of incident.

Responsibilities

- Identifies issues and requirements for future operational periods, typically 36 to 72 hours.
- Consults with Operations for projected strategies and tasks for the next 36 to 72 hours.
- Prepares reports and briefings for strategy and planning meetings.
- Monitors action-planning activities to identify the transition in operational objectives from response to recovery.
- Identifies considerations and develops strategies to support a transition to recovery.
- Coordinates with the Demobilization Unit Leader.

Position Alternates and Successors

The successors to the Advance Planning Unit Leader will be designated by the department that has primary responsibility for serving as the DES during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organizations.

3.2.2.14 Demobilization Unit Leader

Assignment of Primary Responsibility

The DES and Demobilization Unit Leader will be from the same discipline agency as determined by the type of incident.

Responsibilities

- Prepares the demobilization plan for the County/OA EOC to ensure an orderly, safe, and cost-effective release of personnel and equipment.
- Supports counterpart Demobilization Units within active County departments and OA jurisdictions in developing strategies for demobilization.
- Provides input to the Planning and Intelligence Section Chief on timeline for demobilization as outlined in the demobilization plan.
- Ensures personnel reviews are completed and documentation maintained.
- Ensures safety and behavioral health resources are provided to responders as part of the Demobilization Plan.

Position Alternates and Successors

The successors to the Demobilization Unit Leader will be designated by the department that has primary responsibility for serving as DES during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organizations.

3.2.2.15 Technical Specialist (s)

Assignment of Primary Responsibility

Designated by functional capability and responsibility.

Responsibilities

Technical Specialists are advisors with special skills and are activated only when needed. Specialists may serve anywhere within the organization, including the Management Section. No minimum qualifications are prescribed, as technical specialists normally perform the same duties during an incident that they perform in their everyday jobs, and they are typically specially certified in their fields or professions.

Technical specialists assigned to the Planning and Intelligence Section may report directly the Section Chief, may report to any function in an existing unit, or may form a separate unit within the Planning and Intelligence Section, depending on the requirements of the incident and the needs of the organization. Technical specialists may also be assigned to other parts of the organization (e.g., to the Operations Section to assist with tactical matters or to the Finance and

Administration Section to assist with fiscal matters). Generally, if the expertise is needed for only a short period and normally involves only one individual, that individual should be assigned to the Situation Analysis Unit. If the expertise will be required on a long-term basis and may require several personnel, it is advisable to establish a separate Technical Specialist Unit in the Planning and Intelligence Section.

- Provides technical expertise, i.e., terrorism and cyber-security specialist, to the Planning and Intelligence Section and others as required.
- Provides support specific to a field or function not addressed elsewhere or by any other discipline in the EOC.

3.2.3 Logistics Section

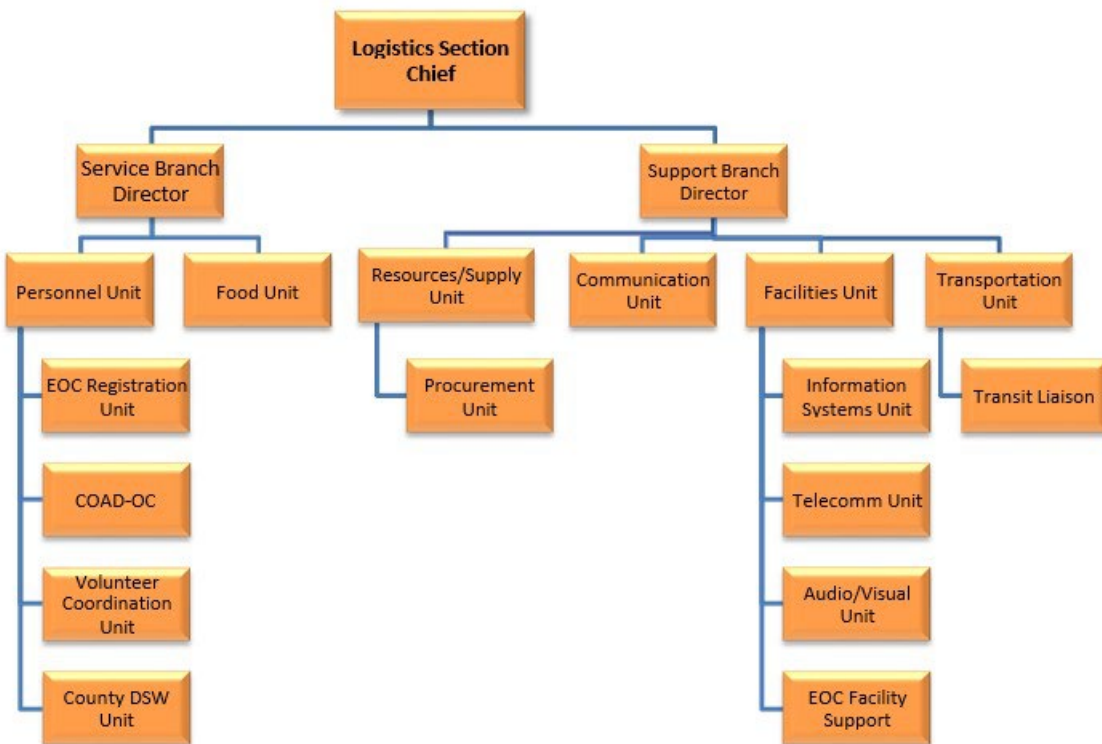


Figure 35: Org chart for the Logistics Section

The Logistics Section is responsible for providing facilities, services, transportation, personnel, equipment, food service, communications and other materials to the County/OA EOC operation to ensure that its role as a coordination point can continue without interruption. In addition, the Logistics Section will support the resource needs of any regional resource mobilized and directed by the County/OA EOC Operations Section. This may include ordering resources through appropriate procurement authorities, distribution resources, and monitoring and managing resources in support of County/OA EOC objectives. The Logistics staff positions and units pre-identified for the County/OA EOC are:

- Logistics Section Chief
- Service Branch Director
- Personnel Unit Leader
- EOC Registration Unit
- COAD-OC Liaison
- Volunteer Coordination Unit
- County DSW Unit
- Food Unit

- Support Branch Director
- Resources and Supply Unit Leader
- Procurement Unit
- Communications Unit Leader
- Facilities Unit Leader
- Information Systems Unit
- Telecommunications Unit
- Audio and Visual Unit
- EOC Facility Support Unit
- Transportation Unit Leader
- Transit Liaison

3.2.3.1 Logistics Section Chief

The Logistics Section Chief manages all Logistics Section activities in support of the EOC and field activities and implements the EAP. The Logistics Section Chief may have one or more assistants. Assistants will be qualified to a similar level as the Logistics Section Chief. The Logistics Section Chief should be designated for each operational period and will have direct involvement in the preparation of the EOC IAP for the period of responsibility.

Assignment of Primary Responsibility

The Logistics Section Chief will be from the County Executive Office, Purchasing Unit Management.

Responsibilities

- With the EOC Manager, determine if primary or alternate EOC location is appropriate for response.
- Provides situational and resource status information to Section Chiefs and Management.
- Provides logistical support for EOC, field and shelter operations, such as:
- Personnel, in coordination with DOCs and mutual aid coordinators
 - Food and water
 - Facilities
 - Services and supplies
 - Transportation
 - Fuel
 - Communications
 - Donated goods
 - Volunteer coordination
- Coordinates and tracks all incident resources procured by the Logistics Section.
- Implements management decisions with respect to priorities and EOC Action Plan.
- Monitors incident activities and recommends course of action, as necessary.

- Coordinates directly with Section Chiefs in the EOC, ICP to gather situational and resource status of the incident.
- When delegates by the EOC Manager, this position becomes the EMMA Coordinator, with primary responsibility for ordering, vetting, receiving, and demobilizing EMMA resources.
- Obtain and use, as appropriate, EOC petty cash, Cal Card, and checks (Attachment 4).

Position Alternates and Successors

The County Executive Office is responsible for developing protocols for EOC position succession, including the Logistics Section Chief position.

3.2.3.2 Service Branch Director

The Service Branch Director will be from the County Executive Office, Purchasing Unit Management.

Responsibilities

- Supports the incident by acquiring and coordinating resources as needed.
- Oversees and supports Personnel Unit Leader in fulfillment of their duties and assignments.
- Oversees and supports Food Unit Leader in fulfillment of their duties and assignments.
- Coordinates directly with other Branches, Units and Groups in the EOC, ICP and with representatives at Department Operation Center (if activated), for personnel status and deficiencies.

Position Alternates and Successors

The County Executive Office is responsible for developing protocols for EOC position succession, including the Service Branch Director.

3.2.3.3 Personnel Unit Leader

Assignment of Primary Responsibility

County Executive Office, Human Resources Services

Responsibilities

- Supports the incident by staffing, coordinating and providing County/OA EOC personnel related operations.
- Ensures the EOC Registration Unit position is staffed.
- Ensures all responders sign out at end of their shift.
- Ensures shift change registration is ready for next shift.
- Provides status report of filled and unfilled EOC positions to the County/OA EOC Manager and Planning and Intelligence Section Chief.

- Requests support staff to assist with activities and tasks.
- Coordinates with the Security Officer on any issues related to EOC security.
- Coordinates with Transportation Unit Leader for transportation support for EOC responders, if offsite parking has been implemented.
- Identifies the best strategy for sharing, acquiring and distributing County/OA EOC personnel.
- Manages personnel issues and addresses personnel policies during emergency situations.
- Activates the Volunteer Coordination Unit and Collaborative Organizations Active in Disasters (COAD-OC) Liaison as required.
- Coordinates with COAD-OC Sector Leadership and COAD-OC members to determine needs and capabilities of the COAD-OC.
- Coordinates the Volunteer Coordination Unit on requests for spontaneous volunteers and coordination with OneOC.
- Coordinates use of County Human Resources and County Counsel in implementing the California's Disaster Service Worker authorities.
- Coordinates the activation of Community Emergency Response Team (CERT) Mutual Aid Program (CMAP) through the Operation Area, if required.
- Ensures the general welfare and safety of all volunteers used.
- Addresses volunteer issues during incident.
- Documents and maintains records on volunteer requests, assignments and generates reports for distribution Planning and Intelligence Section Chief.
- Documents and maintains records of personnel used for the incident, generates reports for distribution to Management and Section Chiefs.
- Manages County Disaster Service Workers.

Position Alternates and Successors

OC Human Resources Department is responsible for developing protocols for EOC position succession, including the Personnel Unit Leader position.

3.2.3.4 EOC Registration Unit

Assignment of Primary Responsibility Orange County Sheriff's Department Responsibilities

- Ensures all EOC responders have picture identification, sign in, and direct them to the appropriate position or supervisor.
- Ensures all responders sign out at end of their shift.
- Ensures all responder sign into their specific positions in WebEOC.
- Ensures shift change registration is ready for next shift.
- Provides copies of each shifts sign in sheets to the Personnel Unit Leader.

- Provides status report of any unfilled positions to the Personnel Unit Leader or EOC Manager if the Personnel Unit Leader is not activated.
- Assists with the Personnel Unit Leader for the call out of additional personnel.
- Coordinates with the Security Officer on any issues related to EOC security.

3.2.3.5 COAD-OC Liaison

Assignment of Primary Responsibilities

COAD-OC Leadership Council

Responsibilities

- Identifies the best strategy for sharing, acquiring and distributing COAD-OC resources and personnel.
- Supports the incident by coordinating and providing services and resources during an emergency.
- Supports the County/OA EOC with identifying and addressing any reported unmet needs in the community.
- Coordinates with COAD-OC Sector Leadership and COAD-OC members to determine needs and capabilities of the COAD-OC.
- Coordinates the Volunteer Coordination Unit on requests for spontaneous volunteers and coordination with OneOC.
- Supports and provides information to the Planning and Intelligence Section for inclusion in situation status reports and the EAP.
- Documents and maintains records of costs for volunteer personnel and resources used for the incident, generates reports for distribution to Management and Section Chiefs.
- Will serve as a liaison for donations management, when assigned.

Position Alternates and Successors

The COAD-OC Leadership Council is responsible for developing protocols for EOC position succession, including the COAD-OC Liaison position.

3.2.3.6 Volunteer Coordination Unit

Assignment of Primary Responsibility

Orange County Sheriff's Department, Emergency Management Division

Responsibilities

- Establish communication with key non-government organizations and government Citizen Corps programs.
- Implements the CERT Mutual Aid Plan (CMAP) as required.
- Supports the incident by coordinating affiliated and spontaneous volunteers.
- Coordinates with OneOC on events where an Emergency Volunteer Center is established.

- Ensures officially requested volunteers fill out the appropriate Disaster Service Worker Volunteer Program paperwork, and are administered the Disaster Service Worker Oath under the Disaster Service Worker Volunteer (DSW-V) Program authority.
- Establish and maintain documentation of DSW-V paperwork, used.
- Reports any volunteer injuries to the Personnel Unit Leader and Finance & Administration, Claims and Compensation Unit.
- Addresses volunteer issues during incident.
- Documents and maintains records on volunteer requests, assignments and generates reports for distribution to Personnel Unit Leader and Planning and Intelligence Section Chief.

Position Alternates and Successors

The successors to the Volunteer Unit Leader will be provided by other OA jurisdictions with volunteer coordination responsibilities.

3.2.3.7 County Disaster Service Worker Unit Leader

Assignment of Primary Responsibility

The County Disaster Service Worker (DWS) Unit Leader will be from the County Human Resource Agency Management.

Responsibilities

- Activates the County DSW website and informs County managers.
- Reviews and coordinates established DSW requests and assignments through coordination with home agency supervisors.
- Supports requests from the Operational Area by gathering validated requests and posting appropriate jobs via the Orange County DSW job website.
- Monitors and assists in the processing of DSW in staffing for Operational Area needs.

Position Alternates and Successors

The successors to the County Disaster Service Worker Unit Leader will be provided by the CEO – Human Resource Services.

3.2.3.8 Food Unit

Assignment of Primary Responsibility

The Food Unit staff will be identified and assigned at the time of the incident based on the availability of staff with applicable experience, expertise, and capability. Staffing for the Food Unit will be provided by the County departments or OA jurisdictions.

Responsibilities

- Determine location of working assignments, and number of personnel assigned to EOC, shelters, and other facilities.
- Determine method of feeding to best fit each situation.

- Activate and monitor contracts and agreements to obtain necessary equipment and supplies to provide food catering service facilities.
- Obtain necessary equipment and supplies to operate food service facilities at EOC, shelters, and /or other facilities.
- Sanitize work area.
- Set up Food Unit equipment.
- Verify menus to ensure incident personnel of well-balanced meals and food sensitivities allergies.
- Ensure that sufficient potable water is available to meet all incident needs.
- Maintain casual meal invoicing and documentation process.
- Ensure that all appropriate health and safety measures are taken.
- Supervise cooks and other Food Unit personnel.
- Keep inventory of food on hand, and check in food orders.
- Preplan food for several days out.
- Provide Supply Unit Leader with food supply orders.
- Demobilize Food Unit in accordance with Incident Demobilization Plan.

3.2.3.9 Support Branch Director

Assignment of Primary Responsibility

The Support Branch Director will be from the County Executive Office, Purchasing Unit Management.

Responsibilities

- Supports the incident by acquiring and coordinating resources as needed
- Oversees and supports the Resources/Supply Unit in the completion of their duties and assignments.
- Oversees and supports the Communications Unit in the completion of their duties and assignments.
- Oversees and supports the Facilities Unit in the completion of their duties and assignments.
- Oversees and supports the Transportation Unit in the completion of their duties and assignments.
- Coordinates directly with other Branches, Units and Groups in the EOC, ICP and with representatives at Department Operation Center (if activated), for incident needs.
- Supports and coordinates with facilities to address EOC needs.

Position Alternates and Successors

All County Department and Agencies through Support Pool assignments

3.2.3.10 Resource and Support Unit Leader

Assignment of Primary Responsibility

County Executive Office, Purchasing Unit, Buyer II or Buyer I

Responsibilities

- Supports the incident by acquiring and coordinating resources as needed.
- Coordinates and tracks incident resources and works with the Planning and Intelligence Section, Situation Analysis Support Staff (SASS)-Resource Status and Tracking for tracking of personnel, services and supplies.
- Identifies the best strategy for sharing, acquiring, and distributing response resources and personnel.
- Provides resources, technical support and maintenance to the County/OA EOC as necessary.
- Receives, stores, and deploys delivered supplies to the County/OA EOC.
- Assists in determining facility requirements for the incident.
- Supports the acquisition and distribution of food for incident responders.
- Supports the Care and Shelter Branch in supplying food, water and supplies to incident victims at shelters or reception centers.
- Coordinates with Medical and Health Care Branch to address food security and safety concerns.
- Coordinates with the Public Information Officer to ensure donation needs, information on the availability of donated goods and pertinent information on donations are provided to the public.
- Assists with the establishment of a central reception area for donated goods, for inventorying and redistribution.
- Coordinates with Planning and Intelligence Section, SASS-Resource Status and Tracking in maintaining a real-time inventory control database for all donated goods
- Coordinates security with Law Enforcement and Traffic Control Branch for donated goods.
- Assesses the condition of and returns donated goods to their original owners when applicable.
- Coordinates directly with Branches, Units and Groups in the EOC, ICP and with representatives at Department Operations Center (if activated), for resource and personnel status and deficiencies.

Position Alternates and Successors

The County Executive Office is responsible for developing protocols for EOC position succession, including Resource and Support Unit Leader position.

3.2.3.11 Procurement Unit Leader

Assignment of Primary Responsibility

County Executive Office Real Estate, Purchasing Unit, Buyer II or Buyer I

Responsibilities

- Administers all financial matters pertaining to vendor contracts.
- Coordinates with County departments and Operational Area jurisdiction to identify sources for resources.
- Leverages the Disaster Purchasing website for needed resources (Attachment 7).
- Prepares and signs equipment rental agreements, and processes all administrative requirements associated with resource rental and supply contracts.
- Purchases necessary equipment, materials and supplies in support of the County/OA EOC and field operations.
- Maintains resource listings of vendors.
- Coordinates delivery of supplies and materials to designated sites.
- Coordinate properties or agreement for property management.

Position Alternates and Successors

The County Executive Office is responsible for developing protocols for EOC position succession, including the Procurement Unit Leader position.

3.2.3.12 Communications Unit Leader

Assignment of Primary Responsibility

Orange County Sheriff's Department, Technology Division

Responsibilities

- Develops the Communications Plan (ICS 205) to ensure effective use of the communications equipment and facilities assigned to the incident.
- Identifies the best strategy for sharing, acquiring and distributing EOC radio, data and telephone needs.
- Monitors all communication systems to ensure they are operational.
- Coordinates the installation of communication equipment used to support the incident.
- Implements procedures for the distribution and recovery of communication equipment assigned to incident personnel and locations.
- Coordinates the maintenance and repair of communications equipment at the County/OA EOC and in the field.
- Coordinates telephone, radio and data communications support for the field response, ICP, Department Operations Center, shelters, etc.
- For RACES activation refer to section 4.12.5.

Position Alternates and Successors

The Orange County Sheriff's Department, Technology Division is responsible for developing protocols for EOC position succession, including the Communications Unit Leader position.

3.2.3.13 Facilities Unit Leader

Assignment of Primary Responsibility

CEO Real Estate

Responsibilities

- In coordination with Resources and Support Unit obtains additional facilities, including but not limited to:
- Alternate EOC
- Joint Information Center
- Local Assistance Centers
- Points of Distribution Locations
- Shelter Locations

Position Alternates and Successors

Research and Development Facility Operation Unit. The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the EOC Facilities Unit Leader position.

3.2.3.14 EOC Facility Support

Assignment of Primary Responsibility

Orange County Sheriff's Department, Research and Development Division, Facilities Operations

Responsibilities

- Coordinates the setup of necessary support areas, including areas for food and water service, sleeping, sanitation, showering, etc. within the County/OA EOC.
- Ensures all voice and data communications, audio and visual equipment in the County/OA EOC is functional, and coordinates technical support, as required.
- Ensures the County/OA EOC remains functional by coordinating all facility support needs.
- Coordinate with vendors for facility needs.
- Coordinates for the technical support of the operating and delivery systems used by the County/OA EOC, including but limited to:
 - Water system
 - Heating and air conditioning systems
 - Trash collection
 - Septic system
 - Propane

- Facility generators
- Coordinates the installation, repair of and maintenance of facility operating and delivery systems used by the County/OA EOC.
- Coordinate necessary laundry services

Position Alternates and Successors

The Orange County Sheriff's Department, Research and Development Division, Facilities Operations is responsible for developing protocols for EOC position succession, including the EOC Facility Support Unit position.

3.2.3.15 Information Systems Unit

Assignment of Primary Responsibility

Orange County Sheriff's Department Technology Division

Responsibilities

- Provides technical support for the operation of information technology and delivery systems used by the County/OA EOC.
- Coordinates with the EOC Facility Unit Leader with IT support operations, in the establishment of new and existing facilities.

Position Alternates and Successors

The Orange County Sheriff's Department Technology Division is responsible for developing protocols for Information Systems Unit EOC position succession.

3.2.3.16 Telecommunications Unit

Assignment of Primary Responsibility

County Executive Office, Telephone Services Division

Responsibilities

- Provides technical support for the operation of telecommunications systems used by the County/OA EOC.
- Coordinates with the EOC Facility Unit Leader to provide IT support for newly established support facilities.
- Coordinates the installation, repair of and maintenance of telecommunication equipment used by the County/OA EOC.

Position Alternates and Successors

The County Executive Office Telephone Services Division is responsible for developing protocols for EOC position succession, including the Telecommunications Group position.

3.2.3.17 Audio and Visual Unit

Assignment of Primary Responsibility

Orange County Sheriff's Department Technology Division

Responsibilities

- Provides technical support for operation of audio and visual systems used by the County/OA EOC.
- Coordinates the repairs and maintenance of the audio and visual equipment used by the County/OA EOC.

Position Alternates and Successors

The Orange County Sheriff's Department Technology Division is responsible for developing protocols for Audio and Visual EOC position succession.

3.2.3.18 Transportation Unit Leader

Assignment of Primary Responsibility

OC Public Works Fleet Services

Responsibilities

- Identifies the best strategy for sharing, acquiring and distributing transportation equipment and related personnel.
- Coordinates with the Orange County Transportation Authority (OCTA), school districts and other agencies to ensure adequate vehicles are available, including para-transit vehicles for movement of impacted population.
- Establishes a pool of vehicles for use by County/OA EOC staff as needed.
- Coordinates with Medical and Health Care Branch to ensure vehicles are available to assist in the transportation of impacted population to and from medical facilities as needed.
- Ensure auxiliary transportation methods for supporting people with disabilities and those with access and/or functional needs.
- Coordinates with the Care and Shelter Branch for transportation support.
- Coordinates the maintenance and repairs of response vehicles and mobile ground support equipment.
- Records usage time for all ground equipment, including contract equipment.
- Coordinates fuel for all response vehicles.
- Assist in the development of the incident and EOC map to include traffic control and transportation information (ICS 201 map).
- Responsible for transportation planning.

Position Alternates and Successors:

OC Public Works is responsible for developing protocols for Transportation Unit Leader EOC position succession.

3.2.3.19 Transit Liaison

Assignment of Primary Responsibility

Orange County Transportation Authority (OCTA)

Responsibilities

- Ensures mass transit and para-transit vehicles are available to assist in the transportation of impacted population.
- Coordinates transportation support from outside agencies, including school districts and other mass transit agencies.
- Coordinates the implementation of transportation operations within OCTA.
- Coordinates and maintenance and repairs of agency vehicles used to support the incident.
- Coordinates transportation methods to support people with disabilities and those with access and/or functional needs.
- Coordinates with Transportation Unit Leader for fuel support of deployed vehicles.

Position Alternates and Successors

The OC Transportation Authority is responsible for developing protocols for the Transit Liaison EOC position succession.

3.2.4 Finance and Administration Section

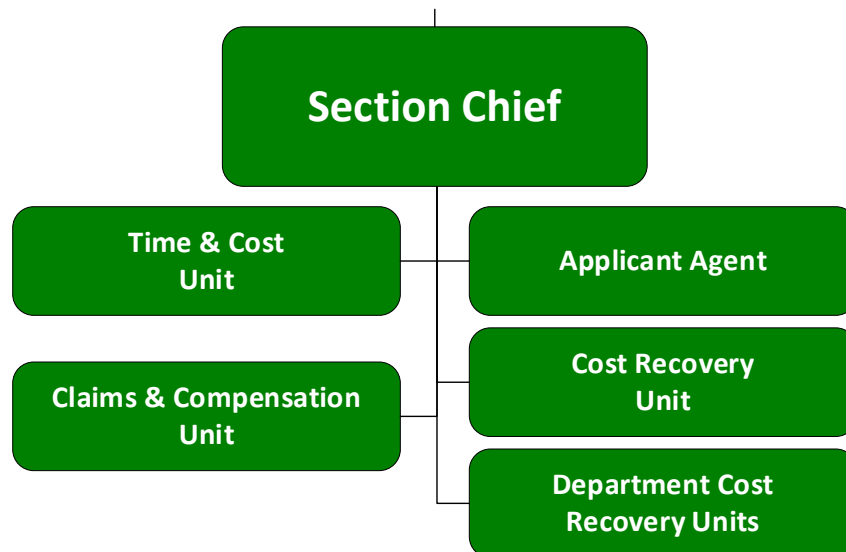


Figure 36: Org chart for the Finance and Administration Section

When there is a specific need for financial, (individual and agency or department), and/or administrative services to support the County/OA EOC management activities, a Finance and Administration Section is established. Not all agencies and incidents will require such assistance. In large, complex scenarios involving significant funding originating from multiple sources, the Finance and Administration Section is an essential part of the response organization. In addition to monitoring multiple sources of funds, the Finance and Administration Section must track and report on the financial “burn rate” as the incident progresses. This allows the County/OA EOC Management to forecast the need for additional funds before operations are negatively affected. This is particularly important if significant operational assets are under contract from the private sector. The Finance and Administration Section may also need to monitor cost expenditures to ensure applicable statutory rules are met. Close coordination with the Planning and Intelligence Section and Logistics Section is also essential so operational records can be reconciled with financial documents. Because of the flexible nature of SEMS, NIMS, and ICS, in some cases, only one or a few specific functions may be required.

The Finance and Administration Section will be activated as required for purposes of maintaining records on personnel and equipment time, providing payments to vendors for supplies and equipment usage, and determining the cost considerations or various alternatives strategies associated with incident planning. The Finance and Administration Section Chief will determine, given current and anticipated future requirements, the need for establishing specific subordinate units. The Finance and Administration staff positions and units pre-identified for the County/OA EOC are:

- Finance and Administration Section Chief
- Time and Cost Unit Leader

- Cost Recovery Unit Leader
- Claims and Compensation Unit Leader
- Applicant Agent
- Department Cost Recovery Unit Leader

3.2.4.1 Finance and Administration Section Chief

Assignment of Primary Responsibility

County Executive Office, Finance Office, Senior Management.

Responsibilities

- Manages all financial and cost analysis of the incident.
- Identifies the best strategy for sharing, acquiring and distributing response expenditures.
- Implements a County Disaster Accounting process. .
- Provides regular accounting of costs (personnel, equipment, services and supplies) reports associated with the incident.
- Assists with the quantification of damage to public property.
- Acts as a financial liaison between the County, Operational Area, and other agencies.
- Recommends financial policies to Management Section and carries out agreed upon policies.
- Authorize and reconcile purchase orders and contracts associated with the incident.
- Processes worker's compensation claims associated with the incident.
- Processes travel and expense claims associated with the incident.
- Processes insurance claims associated with the incident.
- Manages the financial claims process, working with the County's designated Applicant Agent, Cal OES and FEMA.
- Coordinates directly with Section Chiefs in the EOC, ICP and with representatives at the Department Operations Center, if activated.
- When EMMA is requested, coordinate with Logistics and County Counsel to develop and implement a claims standard format and submission process that meets Federal, State, and Local requirements.

Position Alternates and Successors

The County Executive Office, Finance Office is responsible for developing protocols for EOC position succession, including the Finance and Administration Section Chief position.

3.2.4.2 Time and Cost Unit Leader

Assignment of Primary Responsibility

Auditor-Controller, Senior Management.

Responsibilities

- Coordinates with the Logistics and Planning and Intelligence Sections to track incident resources and personnel expenditures.
- Maintains and processes complete and accurate time records of
- all personnel used in the incident and
- equipment costs
- Prepares regular reports for the Cost Recovery Unit that documents all personnel and equipment related costs of the operation at the County/OA EOC and field level.
- Ensures proper recording of personnel time in accordance with the policies of the County and the relevant departments and agencies.
- Documents excess hours worked and overtime of response personnel.
- Documents equipment usage time and expenses.
- Prepares personnel cost reports for Planning and Intelligence Section Chief.
- Provides all cost analysis activity associated with EOC and incident operations.
- Coordinates with counterparts in activated Emergency Operating Centers, to ensure that complete and accurate records are maintained.
- Coordinates directly with Unit Leaders and Group Supervisors in the EOC, ICP and with representatives at the Department Operations Center, if activated.

Position Alternates and Successors

The OC Auditor-Controller is responsible for developing protocols for EOC position succession, including the Time Cost Unit Leader position.

3.2.4.3 Claims and Compensation Unit Leader

Assignment of Primary Responsibility

County Executive Office, Office of Risk Management

Responsibilities

- Coordinates documentation of incident injury and property damage.
- Accepts claims resulting from the incident as the agent for the County.
- Initiates and coordinates the investigation and compensation of injury in the areas of: Worker's compensation, Property damage, and Liability
- Ensures preparation of forms and reports required by worker's compensation programs, providing support of claims, etc.
- Maintains a file of injuries and illnesses associated with response personnel.

Position Alternates and Successors

The Office of Risk Management is responsible for developing protocols for EOC position succession, including the Claims and Compensation Unit Leader position.

3.2.4.4 Cost Recovery Unit Leader

Assignment of Primary Responsibility

Auditor-Controller, Senior Management.

Responsibilities

- Coordinates the implementation of and maintains the County Disaster Accounting process.
- Coordinates documentation requirements with other EOC sections, County departments and agencies.
- Acts as liaison with disaster assistance agencies.
- Coordinates with the County's designated Applicant Agent in the preparation of reimbursement claims for costs associated with response and recovery operations.
- Collects and secures all required financial accounting data for expected audits.
- Assists the County's designated Applicant Agent with the filing of required Disaster Assistance Application(s) with state and federal agencies.
- Coordinates with the County's designated Applicant Agent during audits by Cal OES and FEMA.

Position Alternates and Successors

The OC Auditor-Controller is responsible for developing protocols for EOC position succession, including the Cost Recovery Unit Leader position.

3.2.4.5 Applicant Agent

Assignment of Primary Responsibility

OC Public Works, Management

Responsibilities

- A representative of the Applicant Agent will assist with the Preliminary Damage Assessment (PDA) site visits with Cal OES and FEMA
- The Applicant Agent is responsible for incident project identification on behalf of County departments and agencies.
- Development of the project worksheet for claims related to the incident on behalf of County departments and agencies.
- Preparation of appropriate document submission and conflict resolution of all State and FEMA financial matters for the County.
- The Applicant Agent will coordinate with County departments and agencies for project estimations, contractor selection and repair and reconstruction activities.

Position Alternates and Successors

The OC Public Works is responsible for developing protocols for EOC position succession, including the Applicant Agency position.

3.2.4.6 Department Cost Recovery Unit Leader (s)

Assignment of Primary Responsibility

All County Departments and Agencies

Responsibilities

- Coordinates and tracks department and agency resources and personnel used during the incident.
- Maintains and processes complete and accurate time records of all department and agency personnel and equipment costs used in support of the incident.
- Prepares regular reports for the Cost Recovery Unit that documents all department and agency personnel and equipment incident related costs.
- Ensures proper recording of department personnel time in accordance with the policies of the County.
- Ensures complete and accurate department and agency records are maintained.
- Prepares department and agency reimbursement claims for costs associated with response and recovery operations.
- Collects and secures all required financial accounting data for expected audits.

Position Alternates and Successors

The successors to the Department and Agency Unit Leader(s) will be designated by each County Department. Each County Department and Agency is responsible for developing protocols for position succession within their organization.

3.2.5 Operations Section

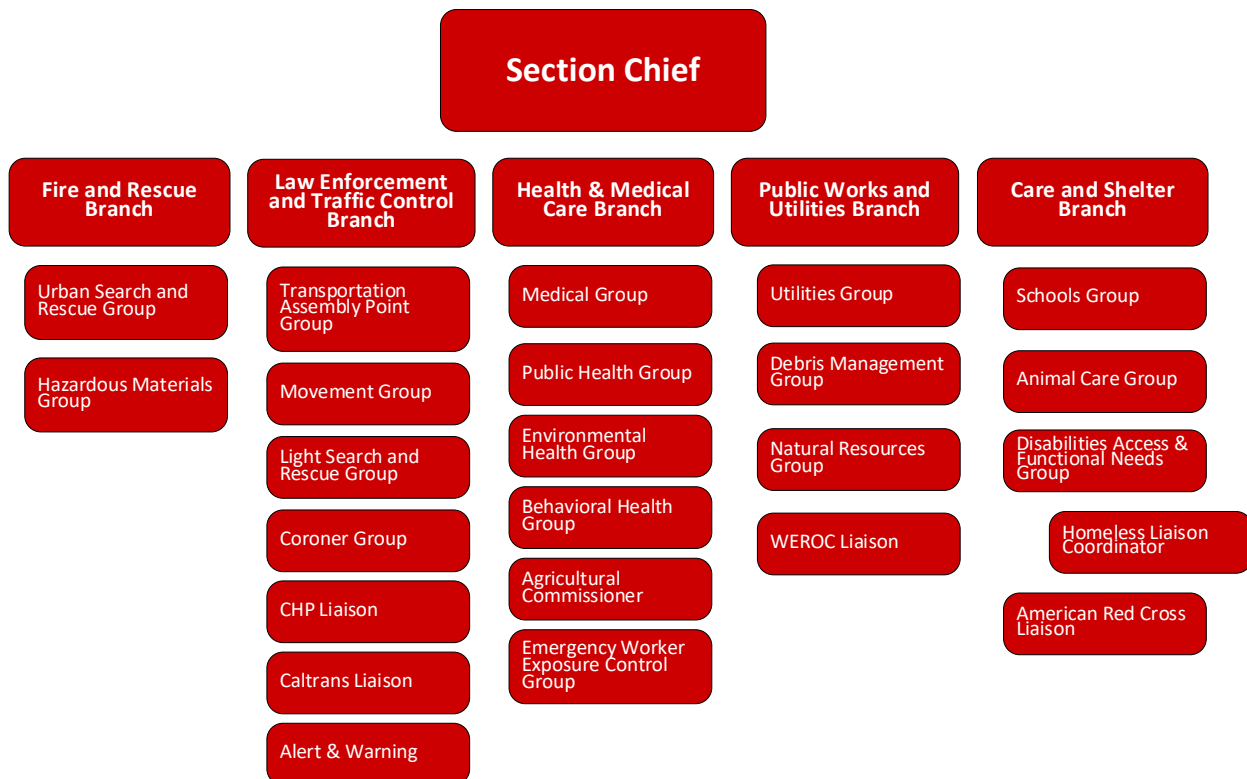


Figure 37: Org chart for the Operations Section

The Operations Section is responsible for coordinating incident and mutual aid support for the tactical operations of response agencies and impacted OA jurisdictions. The Operations Section Chief, each of the Branch Directors, and each of the Group Supervisors are responsible for coordinating with their counterparts, in the Incident Command Posts and active OA jurisdictions EOC to identify and seek out needed response resources and support on their behalf. In addition, there may be situations in which OA jurisdictions can better respond to a regional incident if their resources are pooled and coordinated under a single command. In these cases, County/OA EOC Operations Section personnel will coordinate with OA jurisdictions to direct the identification of, deployment and tactical operations of regional resources.

Incident operations within each OA jurisdiction can be organized and executed in many ways. The County/OA EOC will be organized in a way similar to that being used in OA jurisdiction EOCs. The specific method selected will depend on the type of incident, agencies involved, and objectives and strategies of the incident management effort. The Operations staff positions and units pre-identified for the County/OA EOC are:

- Operations Section Chief
- Law Enforcement and Traffic Control Branch Director
- Transportation Assembly Point Group

- Movement Group
- Light Search and Rescue Group
- Coroner Group
- CHP Liaison
- Caltrans Liaison
- Alert and Warning
- Fire and Rescue Branch Director
- Urban Search and Rescue Group
- Hazardous Materials Group
- Health and Medical Care Branch Director
- Medical Group
- Public Health Group
- Environmental Health Group
- Agricultural Commissioner
- Emergency Worker Exposure Control Group
- Public Works and Utilities Branch Director
- Utilities Group
- Debris Management Group
- Natural Resources Group
- WEROC Liaison
- Care and Shelter Branch Director
- Schools Group
- Animal Care Group
- Behavioral Health Group
- Disabilities Access and Functional Needs Group
- Homeless Liaison Coordinator
- American Red Cross Liaison

3.2.5.1 Operations Section Chief

Assignment of Primary Responsibility

The EOC Operations Section Chief should be from the same discipline and agency as the DES as determined by the type of incident.

Responsibilities

- Manages Section activities in direct support of field operations.
- Implements management decisions with respect to priorities and response plans.
- Supports Incident Command in identifying incident priorities, assessing resources and maintaining situational awareness.

- Identifies situations in which alert and warning notifications to the public are necessary and ensures coordination with the DES, PIO, GIS Specialist, and the Operations Section Alert & Warning Group occurs.
- Determines the need for resources, as required by the incident.
- Requests mutual aid and other necessary resources in support field operations.
- Coordinates directly with Section Chiefs in the EOC, ICP and with representatives at the Department Operations Center if activated.

Position Alternates and Successors

The successors to the Operations Section Chief will be designated by the department that has primary responsibility for serving as the DES during the emergency situation that is underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organizations.

3.2.5.2 Law Enforcement and Traffic Control Branch Director

Assignment of Primary Responsibility

Orange County Sheriff's Department, Captain

Responsibilities

- Monitors and supports field operation related to:
 - Enforcing laws, orders, and regulations.
 - Alerting and warning the public and responders.
 - Managing and directing vehicular traffic, access and perimeter control.
 - Managing evacuations.
 - Protects, houses and relocates prisoners as needed.
 - Provides security for County critical facilities and resources.
 - Assisting in light search and rescue operations.
 - Coordinating Law Enforcement Mutual Aid requests.
- Coordinating shelter-in-place orders as determined by field-based Incident Command.
- Supports the Security Officer in law enforcement activities within the County/OA EOC.
- Identifies resources required to assist with the mobilization and deployment for law enforcement, traffic control and perimeter control operations as necessary.
- Provides and/or coordinates for security for all County facilities, care and shelter sites, reception centers, and evacuated areas.
- Coordinates and supports Law Mutual Aid within the County and Operational Area.
- Supports damage assessment surveys of the County's unincorporated areas and County facilities.
- Coordinates directly with appropriate Sections, Units and Group Supervisors in the EOC, ICP and with representatives at Department Operations Center if activated.

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the Law Enforcement and Traffic Control Branch position.

3.2.5.3 Transportation Assembly Point (TAP) Group

Assignment of Primary Responsibility

Orange County Sheriff's Department, Lieutenant or Sergeant

Responsibilities

- Coordinates with the Movement Group Supervisor in establishing and staffing the Transportation Assembly Points for evacuees without transportation of their own.
- Coordinates with the Transit Liaison Supervisor in Logistics regarding the number and which type of vehicles are available for deployment to identified TAP locations.
- Ensures orderly operation at TAPs to facilitate a timely evacuation.
- Coordinates with the Movement Group Supervisor on resource needs and activities at TAPs.

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the Transportation Assembly Point Group Supervisor position.

3.2.5.4 Movement Group

Assignment of Primary Responsibility

Orange County Sheriff's Department, Sergeant or above

Responsibilities

- Implements the strategies and objectives from the County of Orange and Orange County Operational Area Evacuation Annex.
- Determines strategy for sharing, acquiring and distributing evacuation resources and personnel for the incident, including translators and sign language interpreters.
- Coordinates evacuation and movement of persons out of the impacted area.
- Coordinates resources and personnel to support traffic control for the movement of impacted populations.
- Coordinates with field personnel to ensure evacuated areas are reasonably secured and that access to the evacuated area is controlled.
- Assists the Medical and Health Care Branch in the relocation of medical facility personnel and patients located in the impacted area.
- Assists in the relocation of personnel incarcerated in county facilities.

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the Movement Group Supervisor position.

3.2.5.5 Light Search and Rescue Group

Assignment of Primary Responsibility

Orange County Sheriff's Department, Deputy II (Mutual Aid) or above

Responsibilities

- Identifies the best strategy for sharing, acquiring and distributing search and rescue resources and personnel, including the use of law enforcement Reserves.
- Coordinates resources and personnel in the support of the safe removal of endangered, trapped, injured or isolated persons.
- Coordinates with the Urban Search and Rescue Group in the Fire and Rescue Branch as necessary.
- Coordinates with the Coroner Group as necessary.

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the Light Search and Rescue Group Supervisor position.

3.2.5.6 Coroner Group

Assignment of Primary Responsibility

Orange County Sheriff's Department, Coroner Division, Supervising or Senior Deputy Coroner

Responsibilities

- Implements objectives and strategies from the Orange County Mass Fatality Plan.
- Coordinates emergency procedures to expand decedent operations, which may include the establishment of temporary morgues, personal property management and Family Assistance Center.
- Implements policy for the collection, identification and disposition of human remains.
- Coordinates with the Search and Rescue Groups as necessary to acquire resources for search and recovery operations.

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the Coroner Group Supervisor position.

3.2.5.7 California Highway Patrol (CHP) Liaison

Assignment of Primary Responsibility

California Highway Patrol Designee

Responsibilities

- Identifies the best strategy for sharing, acquiring and distributing CHP resources and personnel in support of the incident.
- Coordinates evacuation and movement of persons out of the impacted area with the Movement Group and Caltrans Liaison.

- Coordinates resources and personnel to support traffic control for the movement of impacted populations with the Movement Group and Caltrans Liaison.

Position Alternates and Successors

The California Highway Patrol (CHP) is responsible for developing protocols for EOC position succession, including the CHP Liaison position.

3.2.5.8 Caltrans Liaison

Assignment of Primary Responsibility

California Department of Transportation (Caltrans)

Responsibilities

- Identifies the best strategy for sharing, acquiring and distributing Caltrans resources and personnel in support of the incident.
- Coordinates evacuation and movement of persons out of the impacted area with the Movement Group and CHP Liaison.
- Coordinates resources and personnel to support traffic control for the movement of impacted populations with the Movement Group and CHP Liaison.
- Assists with the use of Changeable Message Signs (CMS) on Freeways and Toll Roads.
- Coordinates with Traffic Management Center for Sig-Alerts.

Position Alternates and Successors

The California Department of Transportation (Caltrans) is responsible for developing protocols for EOC position succession, including the Caltrans Liaison position.

3.2.5.9 Alert and Warning Group Supervisor (AWGS)

Assignment of Primary Responsibility

Orange County Sheriff's Department

Responsibilities

- Under the direction of the DES, activates emergency alert and notification systems including but not limited to:
 - Integrated Public Alert and Warning System (IPAWS)
 - Emergency Alert System (EAS)
 - Wireless Emergency Alert System (WEA)
 - AlertOC (public emergency mass notification system)
 - Message boards
- The use of community sirens may be used. However, the jurisdiction will retain ultimate control and will be the sole responsibility to launch a message. The County does not own or operate any community sirens.

- Coordinates with the Public Information Officer and the Operations Section Chief to determine appropriate message content, necessary language or cultural considerations, and ensure messages meet any technical limitations for alerting technologies
- Coordinates with the Operations Section Chief and Situation Analysis Support Staff-GIS to identify geographic area for alert notifications to target.
- Coordinates alert and warning message content and geography with other impacted jurisdictions.
- Communicates alert and warning message content and geography to other jurisdictions which may not be directly impacted by the incident but may experience cascading impacts (e.g., receiving evacuees).
- Communicates to the Situation Analysis Support Staff-GIS the geographic area of any alert and warning messages sent by other jurisdictions for mapping purposes.
- Identifies any overlapping alert and warning messages, especially any conflicting protective actions, and seeks guidance from the Operations Section Chief, Public Information Officer, and DES in correcting any conflicts.
- Updates WebEOC with Alert & Warning messages.

Position Alternates and Successors

The successors to the Alert and Warning Group Supervisor will be identified by the Orange County Sheriff's Department, Emergency Management Division in coordination with Control One and Technology Division. Depending upon the severity of the incident, Control One may provide support staff to this position.

3.2.5.10 Fire and Rescue Branch Director

Assignment of Primary Responsibility

Orange County Fire Authority, Division Chief or Battalion Chief

Responsibilities

- Monitors and supports field tactical operations related to:
- Urban search and rescue
- Heavy rescue
- Fire suppression and control
- Paramedic medical service
- Hazardous materials
- Mass casualty
- Coordinates resources to assist with the mobilization and deployment for fire operations as necessary.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the Fire Department Operations Center, if activated.

Position Alternates and Successors

The Orange County Fire Authority is responsible for developing protocols for EOC position succession, including the Fire and Rescue Branch position.

3.2.5.11 Urban Search and Rescue Group

Assignment of Primary Responsibility

Orange County Fire Authority, Battalion Chief or Captain

Responsibilities

- Coordinates resources and personnel for the care of and safe removal of endangered, trapped, injured or isolated persons.
- Coordinates with the Light Search and Rescue Group in the Law Enforcement and Traffic Control Branch as necessary.
- Coordinates with the Coroner Group as necessary.

Position Alternates and Successors

The Orange County Fire Authority is responsible for developing protocols for EOC position succession, including the Urban Search and Rescue Group position.

3.2.5.12 Hazardous Materials Group

Assignment of Primary Responsibility

Orange County Fire Authority, Battalion Chief or Captain

Responsibilities

- Provides operational expertise, policies, and procedures for response and recovery operations associated with hazardous material situations.
- Coordinates and supports hazardous materials situations during response and recovery operations.

Position Alternates and Successors

The Orange County Fire Authority is responsible for developing protocols for EOC position succession, including the Hazardous Materials Group position.

3.2.5.13 Health and Medical Care Branch Director

Assignment of Primary Responsibility

Orange County Health Care Agency

Responsibilities

- Monitors and coordinates with field tactical operations related to:
- People with disabilities and those with access and/or functional needs
- Emergency medical systems
- Environmental health concerns

- Injured transport
- Hospital functions
- Skilled Nursing and Assisted Living Facilities
- Disease control
- Medical mass care
- Behavioral health issues
- Coordinates resources to assist with the mobilization and deployment for health, medical, behavioral and environmental operations as necessary.
- Coordinates directly with Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the Health Care Agency DOC, if activated.
- Coordinates health, medical, environmental and behavioral health resource requests with the Medical and Health Operational Area Coordinator (MHOAC) for medical mutual aid requests through Cal OES Regional Operations Center (REOC) and Regional Disaster Medical Health Coordinator (RDMHC) and provides information as needed to the MHOAC for status reports.
- Coordinate with Care & Shelter Branch and Logistics Section, as needed, to facilitate provision of certain resources such as durable medical equipment (DME) and consumable medical supplies (CMS) as needed by clientele.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Medical and Health Care Branch Director position.

3.2.5.14 Medical Group

Assignment of Primary Responsibility

Orange County Health Care Agency

Responsibilities

- Coordinates medical response with hospitals and private ambulance companies as needed.
- Coordinates and supports Skilled Nursing and Assisted Living Facilities with relocation.
- Implements procedures for handling Medical Mass Care and medical surge.
- Coordinates emergency medical services for incident victims.
- Coordinates logistical requests for medical transportation and medical supplies with the Health Care Agency – Agency Operations Center (HCA AOC).
- Coordinates directly with appropriate Group Supervisors in the EOC, ICP and with representatives at the EMS-DOC or at the HCA AOC, if activated.
- Coordinates health, medical, environmental and behavioral health resource requests with the Medical and Health Operational Area Coordinator (MHOAC) for medical mutual aid requests through Cal OES Regional Operations Center (REOC)

and Regional Disaster Medical Health Coordinator (RDMHC) and provides information as needed to the MHOAC for status reports.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Medical Group position.

3.2.5.15 Public Health Group

Assignment of Primary Responsibility

Orange County Health Care Agency

Responsibilities

- Coordinates resources and personnel to support inspection and advisory services on public health issues, including handling of food in mass care facilities and resolving sanitation issues.
- Coordinates preventive public health services (e.g. health surveillance, epidemiology, health education, disease prevention, vaccination, occupational safety, etc.).
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the HCA AOC, if activated.
- Coordinates health, medical, environmental and behavioral health resource requests with the Medical and Health Operational Area Coordinator (MHOAC) for mutual aid requests through Cal OES Regional Operations Center (REOC) and Regional Disaster Medical Health Coordinator (RDMHC) and provides information as needed to the MHOAC for status reports.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Public Health Group position.

3.2.5.16 Environmental Health Group

Assignment of Primary Responsibility

Orange County Health Care Agency

Responsibilities

- Coordinates environmental health resources and personnel to manage monitoring, remediation, and testing of food and water, facility inspections, environmental remediation, hazardous waste, contamination, and sanitation.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the HCA AOC, if activated.
- Coordinates health, medical, environmental and behavioral health resource requests with the Medical and Health Operational Area Coordinator (MHOAC) for

medical mutual aid requests through Cal OES Regional Operations Center (REOC) and Regional Disaster Medical Health Coordinator (RDMHC) and provides information as needed to the MHOAC for status reports.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Environmental Health Group position.

3.2.5.17 Agricultural Commissioner Group Supervisor

Assignment of Primary Responsibility

OC Public Works, Agricultural Commissioner

Responsibilities

- Provide information and recommendations on agricultural issues due to the incident.
- Coordinate information on advisories, protective actions or embargoes impacting agriculture.
- Coordinate with the Public Information Officer for public messaging on agricultural advisories, protective actions and embargoes.
- Provide preliminary estimates for damage assessment to crops and livestock.
- Estimate cost of precautionary quarantine/interdiction or crop destruction.
- Obtain farm data, including location and crop type.
- Coordinate with Public Information Officer and the Operations Section Alert and Warning Group Supervisor to notify local ranchers, if necessary on:
- Place all grazing animals identified on stored feed and water.
- Cover all stored feed.
- Remove all lactating animals from pasture.
- Shelter livestock.
- Gather and maintain current information on farms, food crops, livestock and other agricultural data that are within the impacted area.
- Collaborates with the Public Works Branch regarding debris removal.

Position Alternates and Successors

OC Public Works is responsible for developing protocols for EOC position succession, including the Agricultural Commissioner Group position.

3.2.5.18 Emergency Worker Exposure Control Coordinator

Assignment of Primary Responsibility

Orange County Health Care Agency

Responsibilities

- Ensure dosimetry is issued to emergency workers.
- Track emergency workers exposures and provide the Radiological Protection Officer with this information.
- Maintain inventory of dosimetry devices and maintain records of all emergency worker exposures under county control.
- Manage dosimetry issued to agencies with predesigned emergency workers.
- Inform the Health Office when emergency workers exposure occurs.
- Ensure the Radiological Protection Officer is kept apprised of the dosimetry issuance.
- Ensure 24-hour capability for exposure control activities is maintained.
- Request additional equipment through State and Federal resources as necessary.
- Ensure exposure records are kept on file at the conclusion of the event.
- Ensure all emergency workers dosimetry equipment and records, such as the R-1 forms, are collected at the end of the event.

Positions Alternates and Successors

The Orange County Health Care Agency is responsible for developing protocols for EOC positions succession, including the Emergency Worker Exposure Control position.

3.2.5.19 Public Works and Utilities Branch Director

Assignment of Primary Responsibility

OC Public Works, Division Manager from either Flood, Construction, or Road Divisions.

Responsibilities

- Coordinates resources and personnel to assist with the mobilization and deployment for public works operations.
- Coordinates flood mitigation and abatement operations.
- Coordinates resources and personnel for heavy equipment support.
- Assists law and fire personnel in establishing or maintaining traffic control points, perimeter control, and hazardous material incident operations by providing changeable message signs, k-rails, barriers or other closure items.
- Coordinates with Planning and Intelligence Section on damage assessment inspections of public and private facilities.
- Coordinates emergency repair and restoration, debris clearance and route recovery operations.
- Coordinates debris removal and implements the County of Orange Debris Management Plan.
- Assists OA jurisdictions with their debris removal planning.
- Coordinates public works mutual aid requests.

- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the OC Public Works DOC, if activated.
- Identifies resource needs for safety damage assessments.

Position Alternates and Successors

OC Public Works is responsible for developing protocols for EOC position succession, including the Public Works and Utilities Branch Director position.

3.2.5.20 Utilities Group

Assignment of Primary Responsibility

OC Public Works, Manager

Responsibilities

- Coordinates utility resources and personnel (e.g. emergency repairs, temporary construction, restoration of essential utilities, etc.).
- Coordinates with the Water Emergency Response of Orange County (WEROC) for damage assessments and restoration of water and wastewater systems; including the coordination of water mutual aid.
- Coordinates with outside utility vendors, providers, and contractors as necessary (e.g., Southern California Edison, San Diego Gas and Electric, Southern California Gas Company, telecommunication providers) for damage assessments and restoration of services.
- Coordinates directly with appropriate Branches, Units and Groups in the EOC, ICP and with representatives at the OC Public Works Department Operations Center, if activated.

Position Alternates and Successors

OC Public Works is responsible for developing protocols for EOC position succession, including the Utilities Group position.

3.2.5.21 Debris Management Group

Assignment of Primary Responsibility

OC Public Works, Manager

Responsibilities

- Coordinates resources and personnel to assist with the mobilization and deployment for public works operations in support of debris management.
- Coordinates resources and personnel for heavy equipment support.
- Coordinates emergency repair and restoration, debris clearance and route recovery operations.

- Coordinates debris removal and executes the County of Orange Debris Management Plan at the direction of the branch director.
- Coordinates with OC Waste and Recycling for debris management planning.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the OC Public Works DOC, if activated.

Position Alternates and Successors

OC Public Works is responsible for developing protocols for EOC position succession, including the Public Works and Utilities Branch Director position.

3.2.5.22 Natural Resources Group

Assignment of Primary Responsibility

OC Community Resources, OC Parks, Manager

Responsibilities

- Provides technical expertise on wildlife, fisheries, environmental issues and habitat conservation for wildlife affected by the emergency.
- Coordinates with Logistics Section to provide available County parks, that can be used to support emergency response operations, including but not limited to:
 - Staging areas
 - Base camps
 - Incident Command Post site
- Work with the County Archeologist to check the California Historical Resources Information System (CHRIS).
- Coordinates resources and personnel with Law Enforcement and Traffic Control Branch for evacuation of County parks.
- Coordinates with OC Public Works emergency repair and restoration, debris clearance and route recovery operations.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the OC Public Works DOC, if activated.

Position Alternates and Successors

OC Community Resources, Parks is responsible for developing protocols for EOC position succession, including the Natural Resources Group position.

3.2.5.23 Water Emergency Response Organization of Orange County (WEROC) Liaison

Assignment of Primary Responsibility

WEROC, Director of Emergency Management

Responsibilities

- WEROC serves as the OA Water and Waste Water Mutual Aid Coordinator as described in the Operational Area Agreement. WEROC also serves as the representative on the Policy Group as the OA Water and Waste Water Mutual Aid Coordinator when the representation from the Orange County Operational Area Executive Board is required for decisions and Multi Agency Coordination (MAC) Group is required for direction and decisions.
- Coordinates water and waste water resources and personnel (e.g. emergency repairs, temporary construction, restoration of essential utilities, etc.).
- Coordinates with the Water Emergency Response of Orange County (WEROC) to obtain information and status updates regarding damage assessments and information on the restoration of water and wastewater systems; or information on the coordination of water mutual aid which WEROC is responsible for within Orange County and also serves as the CalWARN Region I Coordinator.
- Coordinates with the Orange County Drought Task Force as appropriate.
- Coordinates directly with Branches, Units and Groups in the EOC, ICP and with representatives at the OC Public Works Department Operations Center, if activated.

Position Alternates and Successors

WEROC is responsible for developing protocols for EOC position succession, including the WEROC Liaison position.

3.2.5.24 Care and Shelter Branch Director

Assignment of Primary Responsibility

Social Services Agency, Senior Management

Responsibilities

- Coordinates resources and personnel to assist with the mobilization and deployment for care and shelter operations as necessary.
- Coordinates with Schools Group and American Red Cross Liaison to ensure shelter sites meet ADA (American with Disabilities Act) requirements.
- Coordinates with the Disabilities and Access and Functional Needs Group on any related issues, resources and public information needs (including translators and sign language interpreters) for both impacted and non-impacted populations.
- Coordinates with the Public Information Officer on shelter status and operations.
- Coordinates with American Red Cross of Orange County and others as needed, in support of shelter operations and mass care messaging.

- Coordinates with OC Animal Care Group for the care of animals and determination of appropriate animal care sites.
- Coordinates directly with appropriate Sections, Branches, Unit Leaders and Group Supervisors in the EOC and ICP, partner jurisdictions and with representatives at the Social Services Agency DOC, if activated.
- Coordinates with Schools Group, Red Cross Liaison and other jurisdictional partners to determine site locations for County Unincorporated residents and the need to combine shelter efforts with city jurisdictions.
- Assists the OA with Local Assistance Center (LAC) operations or may be the primary point of contact for establishing County LACs as described in the County/OA Recovery Annex.
- Assist the OA with Family Assistance Center (FAC) operations or may be the primary point of contact for establishing the County FACs.
- Coordinates with the Office on Immigration and Regional Task Forces to assess and address needs of impacted immigrants.

Position Alternates and Successors

The OC Social Services Agency is responsible for developing protocols for EOC position succession, including the Care and Shelter Branch Director's position.

3.2.5.25 Schools Group

Assignment of Primary Responsibility

Orange County Department of Education

Depending upon the incident, schools may reside within Care and Shelter or be adapted to a separate Branch if the schools and their day to day duties/authorities are impacted. If the latter, the Department of Education will serve as the Branch Director.

Responsibilities

- Coordinates with school management to determine status of facilities, operations, resource and personnel needs.
- Coordinates with Logistics Section, Transportation Unit for status of available school buses that could be used for transportation of impacted population.
- Coordinates with the American Red Cross and the Disabilities and Access and Functional Needs (DAFN) Group in identifying appropriate school sites for care and shelter operations.
- Coordinates with the Public Information Officer on school(s) status.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and representatives at the OCDE Department Operations Center, if activated.
- Keeps the emergency organization apprised of issues relating to schools and children.

- Coordinates with private schools and child care facilities on reunification, lockdown, evacuation plans and unaccompanied minor situation status.
- Provides regular updates to Policy on the status of education/instruction, impacted technology, and meals programs.

Position Alternates and Successors

The OC Department of Education is responsible for developing protocols for EOC position succession, including the Schools Group position.

3.2.5.26 Animal Care Group

Assignment of Primary Responsibility

OC Community Resources, Animal Care Services, Manager

Responsibilities

- Monitors and supports field tactical operations related to animal evacuations.
- Coordinates with volunteer groups for large animal relocation.
- Coordinates and supports operations relating to:
 - Establishing animal shelters
 - Animal transportation
 - Search and rescue
 - Reunification with owners
 - Euthanizing
- Coordinates with the Public Information Officer and Public Information Officer Support Staff on animal related issues, status and operations.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the Department Operations Center, if activated.

Position Alternates and Successors

OC Community Resources, Animal Care Services is responsible for developing protocols for EOC position succession, including the Animal Care Group position.

3.2.5.27 Behavioral Health Group

Assignment of Primary Responsibility

Orange County Health Care Agency, Behavioral Health Services, Mental Health Specialist

Responsibilities

- Coordinates behavioral health resources and personnel in support of shelter operations.
- Monitors behavioral health teams in the impacted disaster areas, if deployed.
- Monitors and provides appropriate psychological support to the County/OA EOC staff.

- Coordinates with the hotline supervisor and provides a representative to work the hotline as needed.
- Coordinates directly with appropriate Sections, Branches, Units and Group Supervisors in the EOC, ICP and with representatives at the HCA AOC, if activated.
- Coordinates health, medical, environmental and behavioral health resource requests with the Medical and Health Operational Area Coordinator (MHOAC) for medical mutual aid requests through Cal OES Regional Operations Center (REOC) and Regional Disaster Medical Health Coordinator (RDMHC) and provides information as needed to the MHOAC for status reports.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Behavioral Health Group position.

3.2.5.28 Disabilities and Access and Functional Needs Group

Assignment of Primary Responsibility

Social Services Agency

Responsibilities

- Provides information to County/OA EOC Sections, Branches, Units and Groups on people with disabilities and those with access and/or functional needs-related issues, including available resources.
- Facilitates communication between the County and OA EOC and area organizations to monitor their response activities serving people with disabilities and those with access and/or functional needs.
- Ensures people with disabilities and those with access and/or functional needs are properly considered in all aspects of the incident response and recovery.
- Coordinates with the Operations Section Alert and Warning Group Supervisor to ensure all methods of emergency communications with the public are as accessible as possible, including AlertOC and the Emergency Alert System (EAS).
- Coordinates with Operations Section and Branches to identify access and functional needs-related issues and available resources.
- Works with Planning and Intelligence Section to provide information for inclusion in the EOC Action Plan.
- Provides information to the PIO, PIO Support Staff and Hotline Supervisor on how to effectively communicate with people with disabilities and those with access and/or functional needs.
- Coordinates with the PIO and PIO Support Staff to ensure organizations serving people with disabilities and those with access and/or functional needs are receiving all County and OA public notifications including, EOC news media releases.

- Coordinates with Medical and Health Care Branch to indicate the available facilities to determine the extent to which critical care facilities are impacted.
- Coordinates with Law Enforcement and Traffic Control Branch, Movement Group and Logistics Section, Transportation Unit to address any needs related to transportation accessibility and availability.
- Coordinates with American Red Cross Liaison and Care and Shelter Branch Director to address any accessibility issues in shelter locations.
- Coordinates with other shelter agencies on access and functional needs issues in shelters including the American Red Cross, Health Care Agency Behavioral Health, and Animal Care Services.
- Coordinate with Medical and Health Care Branch and Logistics Section, as needed, to facilitate provision of certain resources such as durable medical equipment (DME) and consumable medical supplies (CMS) as needed by clientele.
- Coordinates with:
- Advanced Planning Unit (for people with disabilities and those with access and/or functional needs resource forecasting)
- Situational Analysis Support Staff (to facilitate specific information related to people with disabilities and those with access and/or functional needs is collected)

Position Alternates and Successors

The OC Social Services Agency is responsible for developing protocols for EOC position succession, including Disabilities and Access and Functional Needs Group position.

3.2.5.29 Homeless Liaison Coordinator

Assignment of Primary Responsibility

CEO-Office of Care and Coordination, Management.

Responsibilities

- Provides information to County/OA EOC sections on homeless related issues and available resources.
- Facilitates and maintains communication between the County/OA EOC and area organizations serving homeless populations.
- Ongoing monitoring of the needs of impacted homeless population specific to the disaster.
- Ensures homeless populations are properly considered in all aspects of the incident response and recovery activities.
- Coordinates with the Law Enforcement and Traffic Control Branch Director, Public Works and Utilities Branch Director, Alert and Warning Group Supervisor, Public Information Officer and PIO Support staff to ensure methods of emergency communications are including homeless populations impacted by the event.

- Coordinates with Operations Section to identify homeless related issues and available resources.
- Works with Planning and Intelligence Section to provide information for inclusion in EOC Action Plan.
- Provides information to PIO, PIO Support Staff, 211 OC and Public Information Hotline and Rumor Control Supervisor on effectively communicating with homeless populations.
- Forwards any news media releases to the organizations who serve the homeless populations.
- Coordinates with Movement Group and Transportation Unit to address any needs related to transportation accessibility and availability. Related to transportation accessibly and relatability, especially for evacuations.
 - Identifies and coordinates accessible storage for homeless belongings along with homeless transportation with the Logistics Section
- Coordinates with American Red Cross Liaison and Care and Shelter Branch Director to address any homeless population accessibility issues in official shelter locations.
- Coordinates with other shelter agencies on homeless issues in shelters including the American Red Cross, Health Care Agency Behavioral Health, and Animal Care Services.
- Coordinate with non-profit/faith based organizations providing care and services to the homeless population.
- Create list of available resources or locations offered by such organizations and provide this information to the Logistics Section.
- Coordinates with:
 - Law Enforcement and Traffic Control Branch (evacuation and alert and warning notifications)
 - Public Works and Utilities Branch (obtain list or location of where personal artifacts were relocated from riverbed channels during storm events)
 - Planning and Intelligence Section, Situational Analysis Support Staff (to ensure specific information related to homeless populations is collected and documented)
 - Planning and Intelligence Section, Advance Planning Unit (for homeless needs resource forecasting)

Position Alternates and Successors

CEO-Office of Care and Coordination is responsible for developing protocols for EOC position succession, including Homeless Liaison position.

3.2.5.30 American Red Cross Liaison

Assignment of Primary Responsibility

American Red Cross

Responsibilities

- Supports the County and Operational Area in meeting the resource needs of the County and OA jurisdictions that relate to:
 - May assist in site selection of the Care and Reception Center
 - Overnight Congregate/Non-Congregate Shelter
 - Behavioral Health Support
 - Disaster Health Services
 - Mass casualty support
 - Public messaging support and coordination
 - Emergency food and water distribution
 - Recovery process support
 - Schools

Position Alternates and Successors

The American Red Cross is responsible for developing protocols for EOC position succession, including the American Red Cross Liaison position.

Chapter 4 DIRECTION, CONTROL, AND COORDINATION

4.1 EOC Purpose

The County/OA EOC is the information and resource coordination center for the County and OA emergency response organization, providing a central point for directing the coordination of operational, administrative, and support needs of the County and OA jurisdictions. It facilitates the coordination and communication between Mutual Aid Coordinators and Cal OES during county-wide and state-wide emergency response and recovery operations. The County/OA EOC may be used to gather and process information to and from the County, cities, schools and special districts, business and industry, volunteer organizations, individuals and state and federal government agencies. It has the capability to function virtually so that the County and OA jurisdictions may communicate between EOCs without co-location. The County/OA EOC is responsible for managing regional resources to meet incident priorities and benefit of the OA as a whole.

4.2 County of Orange Role and Responsibilities

By County Ordinance and Resolution, the County has established the Emergency Management Council (EMC) which serves as the County's disaster council under Government Code section 8610. The EMC is charged with:

- Directing the development and maintenance of this EOP
- Reviewing potential disaster situations and providing recommendations to the Director of Emergency Services and the Chair of the Board of Supervisors
- Reviewing and recommend for adoption by the Board of Supervisors, emergency and mutual aid plans, agreements, the Emergency Organization ordinance, resolutions, and any rules and regulations necessary to implement such plans and agreements
- Providing advice to County Officials regarding rebuilding and Cost recovery

During disasters, the County of Orange has the responsibility to direct and coordinate emergency operations at two levels, the field response and local government levels. At the field level, all response departments and agencies will use the Incident Command System (ICS) to manage the emergency response and report emergency related information to the County emergency management organization located in the EOC.

The County of Orange EOC manages, for the County's jurisdiction, the overall response to disasters and coordinates interdepartmental response and recovery efforts, implements local policies and determines the mission and priorities and provides direction and the authority to act. The County's EOC engages in long-range planning and coordination with outside agencies and organizations. The County is the source of information for dissemination to the public, and provides support for cost recovery efforts for the County by tracking and reporting the personnel, supplies, and equipment used by its various agencies and departments.

4.3 Operational Area Role and Responsibilities

The California Emergency Services Act requires the Operational Area (with the County designated as the lead agency) to support OA jurisdictions, or local governments, in identifying and coordinating resources and in communicating with regional and state authorities. During disasters, OA jurisdictions are required to coordinate emergency operations with the OA and, in some instances, other local governments.

The OA is overseen by the Orange County Operational Executive Area Board, which consists of members from the Chair of the Orange County Board of Supervisors, County Executive Officer, OA Law Enforcement Mutual Aid Coordinator-Orange County Sheriff-Coroner Department, OA Fire & Rescue Mutual Aid Coordinator as selected by the Orange County Fire Chiefs Association, OA Public Works Mutual Aid Coordinator-Orange County Public Works Director, OA Health Care Mutual Aid Coordinator-Orange County Health Care Agency Director, OA Water/Wastewater Mutual Aid Coordinator, Orange County Social Services Agency Director, a representative selected jointly from the OC City Managers Association, a representative from the OC Chiefs of Police and Sheriff's Association, a representative from the Orange County Fire Chiefs Association, a representative from the Orange County City Engineers and Public Works Directors Association, a representative from Independent Special Districts of Orange County, Orange County Superintendent of Schools-representing Orange County K-12 School Districts, a representative selected jointly from Orange County Community College Districts, the Orange County Transportation Authority Chief Executive Officer. The Orange County OA:

- Shares information amongst OA jurisdictions and with California Office of Emergency Services (Cal OES) Southern Regional Emergency Operations Center (REOC).
- Assists OA jurisdictions in obtaining resources and personnel to support their operations.
- Serves as the OA mutual aid coordination point for OA jurisdictions seeking resource support from within or outside the Orange County Operational Area.
- Serves as the OA jurisdictions' link to state government authorities and resources.
- Identifies and coordinates with resources outside the mutual aid system.
- Identifies strategies for sharing, acquiring, and/or distributing resources and personnel in the OA based on the needs of all involved OA jurisdictions.
- Identifies opportunities for the efficient use of response resources and personnel amongst OA jurisdictions.

Requests the OA is unable to meet are passed to the Cal OES Southern REOC or mutual aid regional coordinator. California is divided into 6 mutual aid regions. The Orange County OA is in Cal OES Region I, which includes Orange, Los Angeles, Ventura, Santa Barbara, and San Luis Obispo Counties. The Cal OES Region I REOC is located in Los Alamitos, California. Mutual Aid Regions I and VI make up the Southern Cal OES Administrative Region, which is managed through the Los Alamitos REOC.

4.4 EOC Activation

Activation of the County/OA EOC is required by SEMS, Title 19 California Code of Regulations Section 2409 (f), under the following conditions:

- On Request - A local government within the OA has activated its EOC and requested activation of the County/OA EOC to support its emergency operations. Jurisdiction(s) determine that additional response resources beyond that which would normally be covered by mutual aid are required and assistance from the OA may be necessary.
- Two City Local Emergency - Two or more cities within the OA have proclaimed a Local Emergency.
- County and City Local Emergency - The County and one or more cities have proclaimed a Local Emergency.
- Request for Governor's Proclamation - A city, city and County, or County has requested a Governor's proclamation of a State of Emergency, as defined in Government Code 8558(b).
- State of Emergency - A State of Emergency is proclaimed by the Governor of the State for the County or two or more cities within the OA.
- Request for Outside Resources - The OA is requesting resources from outside its boundaries, except those resources used in normal day-to-day operations which are obtained through existing agreements providing for the exchange or furnishing of certain types of facilities and services on a reimbursable, exchange, or other basis as provided for under the Master Mutual Aid Agreement.
- Request for OA Resources - The OA has received resource requests from outside its boundaries, except those resources used in normal day-to-day operations which are obtained through existing agreements providing for the exchange or furnishing of certain types of facilities and services on a reimbursable, exchange, or other basis as provided for under the Master Mutual Aid Agreement.

The DES and alternate or successor, will declare the County/OA EOC operational when adequate personnel have arrived to facilitate decisions.

4.5 Determining the Need to Activate

When an emergency occurs, the County and all OA jurisdictions will analyze the situation and can request activation of the County/OA EOC, if appropriate.

Designated emergency response in the field (Fire, Law Enforcement, Health Care, Public Works, etc.) will respond to emergencies, assess damage, and provide status reports to their jurisdiction according to internal operating procedures. The County and OA jurisdictions compile the information and provide it to the County/OA EOC. The County/OA EOC will compile that information and provide it to Cal OES.

The County/OA Emergency Manager monitors situation reports from the County, OA jurisdictions, National Weather Service and the State, as well as radio frequencies and news media reports.

Control One will notify the County/OA Emergency Manager of situation reports which may warrant a county or county-wide emergency coordination, including any natural or technological emergency or disaster occurring in Orange County, or from State information sources (major fire, flood, storm, earthquake, hazardous materials release, large scale civil disturbance, etc.) in which:

- Evacuation and/or sheltering of residents is required
- Coordination of several County departments and/or OA jurisdictions in response to the emergency
- Local resources are overwhelmed and a proclamation of Local Emergency may be warranted

The County/OA Emergency Manager contacts the designated DES and:

- Briefs them on the current situation and resource status in the County and OA;
- Determines if the current County and/or OA response is adequate; and
- Assesses the need to notify and mobilize additional personnel and/or activate the County/OA EOC.

4.6 Alternate Facilities

The primary County EOC is located at 2644 Santiago Canyon Road, Silverado, CA 92676-9719. It is 14.8 ground miles from the County Civic Center located in Santa Ana. The County/OA EOC facility meets the physical requirements and capabilities for managing a disaster response. For functional purposes, the facility also hosts the County's Systems Watch, which maintains communications systems throughout the County, and Sheriff's Dispatch (Emergency Communications Bureau). There may be disasters which impact the primary EOC, making it either inaccessible or ill-suited for the incident. The County maintains a plan to determine whether or not to use the facility and outlining options and responsibilities should an alternate EOC be needed: Orange County and OA Alternate EOC Standard Operating Procedures. As detailed in the Alternate EOC Standard Operating Procedure, there are multiple options identified including pre-determined locations, and mobile command vehicles. The County maintains a cache of alternate EOC communications technology equipment, and supplies at the John Wayne Airport that can be mobilized to any suitable deployment location.

4.7 Levels of EOC Activation

The extent to which the County/OA EOC is activated and when the designated DES assumes responsibility for the County/OA EOC depends on the type of emergency situation, its potential for escalation, its geographic extent, and other factors. These staffing levels can either be in person (located at the EOC) or virtual (assigned to the EOC but working remotely). The level of County/OA EOC activation is determined by the designated DES and County/OA Emergency Manager in

consultation with the affected jurisdiction(s). Once the County/OA EOC is activated, the County/OA Emergency Manager becomes the County/OA EOC Manager. The activation levels and their associated staffing⁵² are identified in the following table:

Activation Level	Conditions/Definition
LEVEL 1 (High)	<ul style="list-style-type: none"> • A major emergency where Operational Area or regional resources are overwhelmed and state resources and assistance are required • All County/OA EOC positions activated
LEVEL 2 (Medium)	<ul style="list-style-type: none"> • An incident/emergency for which resources and mutual aid are required on an Operational Area, regional or statewide basis • Selected County/OA EOC positions activated <ul style="list-style-type: none"> ○ Director of Emergency Services/Operational Area Coordinator ○ County/OA EOC Manager ○ Policy Group – as required ○ Section Chiefs ○ Public Information Officer ○ Branches and Units – as required ○ Support Pool Staffing (Hotline, SASS, Messengers, etc.) – as required ○ Specialists – as required ○ OCSD/Emergency Management Division Staff
LEVEL 3 (Low)	<ul style="list-style-type: none"> • Small to moderate incident or pre-planned event • Selected County/OA EOC positions activated <ul style="list-style-type: none"> ○ Director of Emergency Services/Operational Area Coordinator ○ County/OA EOC Manager ○ OCSD/Emergency Management Division Staff
NORMAL OPERATIONS	<ul style="list-style-type: none"> • Duty Officer status <ul style="list-style-type: none"> ○ Orange County Sheriff's Department, Emergency Management Division Director or Manager • Operational readiness • Maintaining situational awareness

Figure 38: Activation levels and possible conditions

4.8 Deactivation of the County/OA EOC

The DES has the authority to determine when to deactivate the EOC. The duration of an EOC activation is often dependent on the severity of the emergency situation. For preplanned events or smaller incidents with minimal recovery concerns, the activation might be limited to days or even hours. In major catastrophic events, the EOC may be activated for months or longer as operations transition from response to supporting long-term recovery. Following smaller incidents, deactivation of the EOC will typically take place after on-scene incident management activities have ceased, when it is determined that on-scene personnel have

⁵² Minimum staffing may vary with actual situation.

the incident fully contained and there is limited or no possibility of escalation, or when the incident has become small and specific enough that a single DOC can manage the incident alone. In either case, the DES in consultation with the Policy Group, will determine the time to deactivate the EOC. Once the decision has been made to deactivate the EOC, reducing EOC activities will occur in a phased process. Depending on the magnitude of the incident and the associated response, this phased process may be implemented over months, days, hours, or even minutes. The demobilization and deactivation of the EOC is determined by the DES in the following recommended order:

Operations Section

The Operations Section is typically the first to deactivate. The specifics of demobilization are determined by the Operations Section Chief and Branch Directors in accordance with the Demobilization Plan developed by the Planning and Intelligence Section, Demobilization Unit.

Logistics Section

The Logistics Section supports the Operations Section's deactivation. It will begin closing down facilities and reclaiming or disposing of resources that were used to support emergency workers (e.g., feeding locations, lodging, sanitation, etc.). It assists in accounting for resources, determining their status, returning or disposing of response resources, and reporting status, costs, and losses to the Finance and Administration Section.

Planning and Intelligence Section

The Planning and Intelligence Section, Demobilization Unit is responsible for developing the demobilization plan used by the Operations and Logistics Sections. The Planning and Intelligence Section remains active while the Operations and Logistics Sections deactivate, in case questions arise or revised strategies are needed. Following the deactivation of the Operations and Logistics Sections, the Planning and Intelligence Section will cease operations.

Finance and Administration Section

The Finance and Administration Section deactivates following the Planning and Intelligence Section. It is responsible for gathering all documentation related to the incident, identifying all associated costs (including demobilization costs), and leading cost recovery efforts. It may sometimes take considerable time to ensure all documentation is gathered from the other sections and to validate costs. Furthermore, complete accountability for the operation cannot be determined until all other sections have fully deactivated.

Management Section

The DES is accountable for all emergency management activities occurring in the EOC from start to finish. Therefore, the Management Section is the last to deactivate. At any time throughout the deactivation process, the DES may choose to dismiss elements of the Management Section. The DES typically receives a debriefing from the Section Chiefs as they cease operations. When the last Section Chief has provided a debriefing and the DES is confident that operations are terminated and all elements are accounted for, then official operational deactivation may result, and transition to the Recovery DES (CEO).

As personnel are released from the EOC, they will perform the following activities in accordance with the SEMS Generic Demobilization Phase Checklist:

- Close out logs when authorized by their Section Chief.
- Complete all required forms, reports, and other documentation. Submit all forms and logs to the Planning and Intelligence Section, Documentation Unit, prior to departure.
- Notify other appropriate organizations of the deactivation.
- Ensure any open actions not yet completed will be handled after deactivation.
- Be prepared to provide input to the after-action report.

Following an EOC activation and prior to deactivation, the Emergency Management Division will be responsible for restoring the County/OA EOC to a state of readiness. This may include:

- Cleaning services
- Servicing equipment and/or coordinating repairs
- Restocking EOC supplies.
- Reorganizing and rearranging furniture or other resources
- Producing fact sheets or public information for use by OC Sheriff's Department, Emergency Communications Bureau (Dispatch Center).
- Ensure PIO has updated County of Orange website, Twitter and other social media accounts.

4.9 Organization and Assignment of Responsibilities

The emergency response of government agencies in California is an extension of day-to-day operations. Emergency operations rely on the normal authority and responsibilities of government, plus police powers that may be invoked by executive authority under specified conditions. Governments at all levels must work together, along with the private sector, business and industry, community based organizations, and volunteers, to meet the challenges posed by a disaster. SEMS and NIMS are the systems required for managing response to multi-agency and multi-jurisdiction emergencies in California as described in the next section. SEMS and NIMS unifies all elements of California's emergency management organization into a single integrated system.

The five SEMS and NIMS organization levels, together with the private sector, are collectively referred to as the California Emergency Organization. This organization represents all resources available within the State, which may be applied in disaster response and recovery phases. The system operates from established EOCs at all levels of government, as well as in many businesses and industries. The goal is to support emergency activities to protect life, property, and the environment.

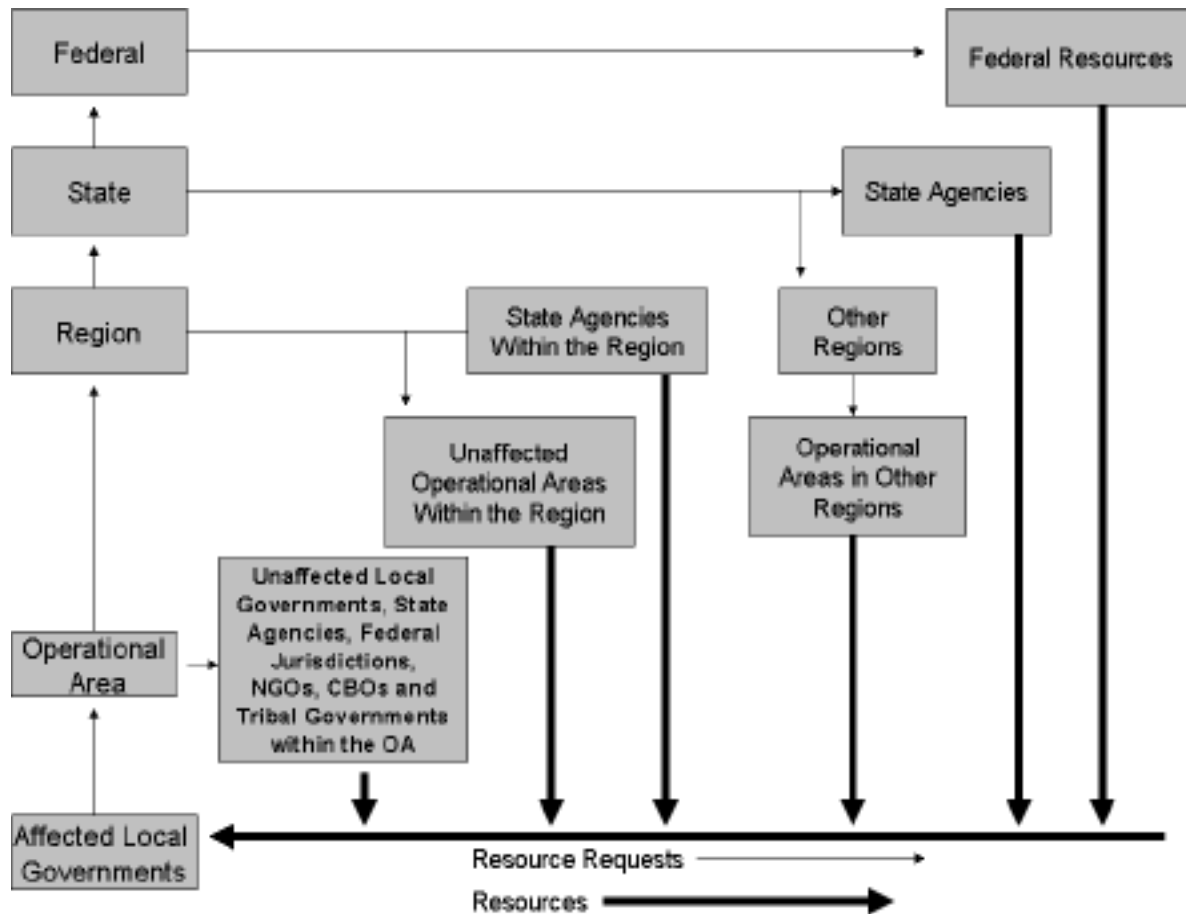
Emergency mutual aid response and recovery activities are generally conducted at the request and under the direction of the affected local government. Some emergency responses are led by

designated state agencies. In some cases, there may be a joint response requiring a Unified Command between state and local jurisdictions (e.g., hazardous material, nuclear power plant, and terrorism emergencies).

Resource requests for response and recovery originate at the lowest level of government and are progressively forwarded to the next level until filled. For example, if an OA is unable to provide the necessary requested assistance, it may contact the Cal OES Region at the REOC and forward the request. During complex emergencies involving multiple jurisdictions and agencies, coordination of resources can be achieved through the use of liaison officers, agency representatives, and unified command.

When support requirements cannot be met with state resources, the State may request assistance from those federal agencies having statutory authority to provide assistance in the absence of a Presidential Declaration. The State may also request a Presidential Declaration of an Emergency or Major Disaster Declaration under the provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93288 as amended.

Figure 39: Resource Request, and Supply Paths for the OA



Emergency Organizational Levels

When fully activated, the Standardized Emergency Management System (SEMS) consists of five levels: field response, local government, Operational Area, Cal OES Mutual Aid Regions, and state government. For the OA, those levels are assigned as follows:

Level	Facility
• Field	• Field Command
• Local	• Government Emergency Operations Center

Level	Facility
• Operational Area	• Orange County OA EOC
• Region	• Cal OES Southern Region EOC (REOC)
• State	• Cal OES State Operations Center (SOC)

Figure 40: Cal OES SEMS levels and the corresponding facilities

Field-Response Level

The field response level is where emergency response personnel and resources, under command, carry out tactical decisions and activities in direct response to an incident or threat. SEMS and NIMS regulations require the use of the ICS at the field response level. The ICS field functions used for incident management include Command, Operations, Planning and Intelligence, Logistics, and Finance and Administration.

Local Government Level

Local governments include counties, cities, school districts, and special districts. Local governments manage and coordinate the overall emergency response and recovery activities within their jurisdiction and amongst their field responders. Local governments are required to use SEMS and NIMS when their EOC is activated or a local emergency is proclaimed in order to be eligible for recovery funding of response related personnel costs. In SEMS and NIMS, the local government emergency management organization and its relationship to the field response level may vary depending upon factors related to geographical size, population, function, and complexity. Local jurisdictions are responsible for the overall direction of personnel and equipment provided for emergency operations through mutual aid (Government Code Section 8618). Local governmental levels shall provide the following functions: Management, Operations, Planning and Intelligence, Logistics, and Finance and Administration. Additional details relative to the organization and responsibilities of the SEMS and NIMS elements in the County EOC are provided in EOC Concept of Operations, as well as the position checklists.

Operational Area Level

Section 8605 of the California Emergency Services Act designates each county area as an Operational Area (OA). California is comprised of 58 OAs, one for each geographic county. The OA is the intermediate level of the state's emergency services organization, and consists of the county government, local (city) governments and special districts, located within the county area. During a State of Emergency, a State of War Emergency, or a Local Emergency, OA's are used to coordinate resources, develop priorities, disseminate information, and serve as a coordination and communication link to the State Mutual Aid System. As of December 1, 1996, per SB 1841, the utilization of the OA during emergencies is mandatory for local governments who wish to receive financial reimbursement for related response costs.

Signatories to the Orange County OA Agreement consist of cities, school districts, special districts and the County of Orange. The OA is responsible for:

- Coordinating information, resources and priorities amongst local governments within the OA.
- Coordinating information, resources and priorities between the regional level and the local government level.
- Using multi-agency and inter-agency coordination to facilitate decisions for overall OA level emergency response activities. SEMS regulations specify that the County Board of Supervisors is responsible for the establishment of an OA. The Orange County Sheriff-Coroner Department is the lead agency for the Orange County OA. All local governments cooperate in organizing an effective operational area, but the OA's authority and responsibility are not affected by the nonparticipation of any local government.



Figure 41: Cal OES Administrative Regions

Regional Level

The Regional Level manages and coordinates information and resources among OAs within the mutual aid region and also between the OA and the State Level. The Regional Level also coordinates overall state agency support for emergency response activities within the region. California is divided into three Cal OES Administrative Regions-Inland, Coastal and Southern, which are further divided into six mutual aid regions. Regional Level operations are executed from the Regional Emergency Operations Center (REOC).

State Level

The State Level prioritizes tasks and coordinates state resources in response to the requests from the Regional Level and coordinates between the Regional Level and State Level. The State Level also serves as the coordination and communication link between the state and the federal emergency response system. The State Level coordinates with the Federal Level when federal assistance is requested.

Federal Level

At the Federal Level, the National Response Framework identifies the methods and means for federal resources to provide support to the state and local government.

4.9.1 Emergency Organization Functions and Concepts

SEMS and NIMS require five functions: Management, Operations, Planning and Intelligence, Logistics, and Finance and Administration. The term command is used in the field and management is used in multiagency coordination centers (e.g., EOCs). These functions are the basis for structuring the County/OA EOC organization:

Section	Responsibility
Management	<ul style="list-style-type: none">Responsible for the overall emergency policy and coordination through the joint efforts of governmental agencies and private organizations. Dissemination of information and protective actions to the public.
Operations	<ul style="list-style-type: none">Responsible for coordinating and supporting operations of the emergency response at the field level.
Planning and Intelligence	<ul style="list-style-type: none">Responsible for collecting, evaluating and documenting information, resources, developing the EOC Action Plan, Situation Summary Reports, and After-Action Reports with other EOC functions.
Logistics	<ul style="list-style-type: none">Responsible for obtaining and providing services, personnel, equipment, supplies, materials, facilities and volunteer coordination.
Finance and Administration	<ul style="list-style-type: none">Responsible for all financial activities and other administrative aspects.

Figure 42: EOC Sections and the primary responsibilities for each

Organization Flexibility and Modular Organization

The five SEMS and NIMS functions are established as “sections” within the County/OA EOC. All other functions are organized as branches, groups, or units within sections. The activated functions and their relationship to one another depends upon the size and nature of the incident. Only those functional elements required to meet current objectives will be activated. Those functions that are needed but not staffed will be the responsibility of the next higher element in the organization structure.

Management of Personnel - Unity of Command and Span of Control

Each activated function has one person in charge of it (Unity of Command), but a supervisor may be in charge of more than one functional element. Every individual has one supervisor to eliminate potential conflicts or confusion among supervisors, and each supervisor is responsible for three to seven persons or functions, with the ideal span of control being five.

The County/OA EOC Section Chiefs for Operations, Planning and Intelligence, Logistics, and Finance and Administration constitute the EOC General Staff. The General Staff are responsible for:

- Overseeing the operations of their section.
- Interacting with each other, the DES, County/OA EOC Manager, and other entities within the County/OA EOC to ensure the effective functioning of the EOC organization.

Unified Command and Area Command Concepts

Unified Command (UC) is an ICS application used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC, often the senior person from agencies or disciplines participating in the UC, to establish a common set of objectives and strategies and a single Incident Action Plan (IAP) (e.g., EOC, Field, etc.). This is accomplished without losing or abdicating agency authority, autonomy, responsibility, or accountability. This occurs most frequently at the field level, in large-scale events, that involve more than one jurisdiction.

An Area Command is an organization established to oversee the management of multiple incidents that are each being handled by an ICS organization, or to oversee the management of large or multiple incidents to which several Incident Management Teams have been assigned. The Area Command has the responsibility to set overall strategy and priorities, allocate critical resources according to priorities, ensure incidents are properly managed, and ensure objectives are met and strategies followed. Area Command becomes Unified Area Command when the multiple incidents under the control of the Area Command are multi-jurisdictional. Area Commands are typically established at EOCs or some location other than an incident command post.

The County/OA EOC could become a Unified Command depending on the situation and the types of disciplines requiring involvement in the coordination of response activities. The EOC typically does not serve as an Area Command however, it is an option based on the flexible nature of ICS

and the given situation. County of Orange may also be integrated into a UC or Area Command established in another jurisdiction during an incident in which it is involved.

Multi-Agency and Organizational Level Coordination

An integral part of SEMS and NIMS is the use of multi and inter-agency coordination. Within the context of SEMS and NIMS, this involves prioritizing and assigning resources, managing competing demands, and maximizing resources amongst numerous response organizations, disciplines, and levels. By its composition, the County/OA EOC Policy Group serves as a MAC Group.

4.9.2 Mutual Aid

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure adequate resources, facilities, and other support are provided to jurisdictions whenever their own resources are insufficient to address an incident. The basis for the system is the California Disaster and Civil Defense Master Mutual Aid Agreement and is provided for in the California Emergency Services Act. The Master Mutual Aid Agreement creates a formal structure wherein each jurisdiction retains control of its own facilities, personnel and resources, but may also receive or render assistance to other jurisdictions within the state. State government is obligated to provide available resources to assist local jurisdictions in emergencies.

4.9.3 Federal Mutual Aid System

California is a member of the interstate Emergency Management Assistance Compact (EMAC), a congressionally ratified organization that provides, structure and procedures for rendering emergency assistance between states. After a state of emergency declaration, California can request and receive reimbursable assistance through the EMAC from other member states. The Secretary of Cal OES and the states EMAC Coordinator are responsible for facilitating request for assistance pursuant to EMAC. Additional information on EMAC can be accessed at <http://www.emacweb.org>.

4.9.4 California Mutual Aid System

A statewide mutual aid system, operating within the framework of the California Master Mutual Aid Agreement, allows for the progressive mobilization of resources to and from emergency response agencies, local governments, Operational Areas, regions, and the state with the intent to provide requesting agencies with adequate resources.

The statewide mutual aid system includes several discipline-specific mutual aid systems, such as fire and rescue, law, medical, emergency management, water and waste water and public works. These systems work through local government, operational areas, regional, and state levels consistent with the SEMS and NIMS. Mutual aid may also be obtained from other states. Interstate mutual aid may be obtained through direct state-to-state contacts pursuant to interstate agreements and compacts, or may be coordinated through federal agencies.

California mutual aid regions are established under the Emergency Services Act by the Governor.

4.9.5 Mutual Aid Coordinators

To facilitate mutual aid, discipline-specific mutual aid systems work through designated mutual aid coordinators at the local, Operational Area, regional, and state levels. The basic role of a mutual aid coordinator is to receive mutual aid requests, coordinate the provision of resources from within the coordinator's geographic area of responsibility, and pass on unfilled requests to the next level in the mutual aid system.

Mutual aid requests that do not fall into one of the discipline-specific mutual aid systems are handled through the emergency services mutual aid system at the local government, Operational Area, regional and state levels.

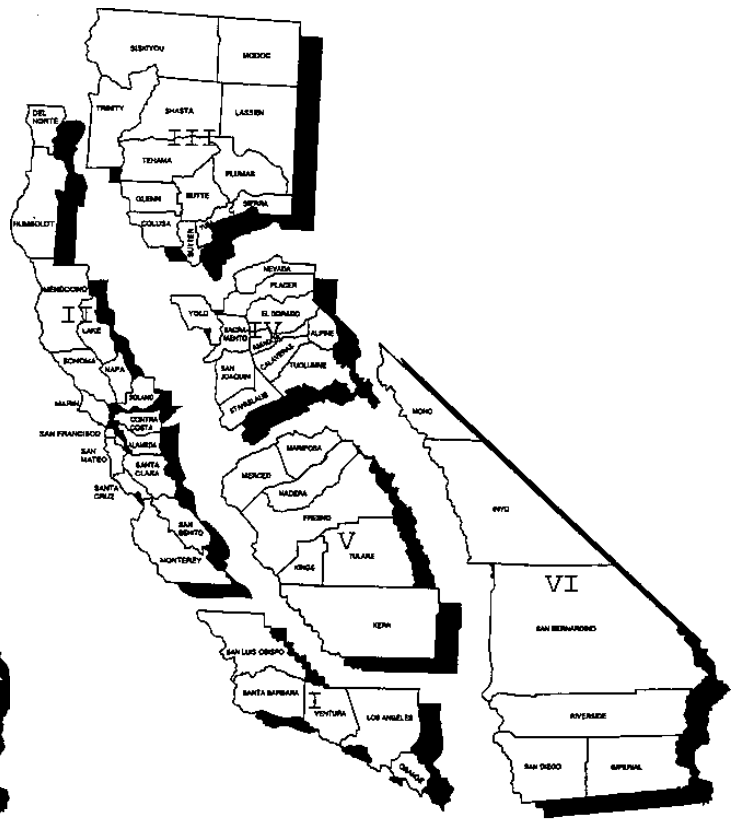
Mutual aid coordinators may function from an Emergency Operations Center (EOC), their normal departmental location or other locations depending on the circumstances. Some incidents require mutual aid but do not necessitate activation of the affected local government or County/OA EOC because of the incident's limited impacts. In such cases, mutual aid coordinators typically handle requests from their normal work location. When EOCs are activated, all activated, discipline-specific mutual aid systems should establish coordination and communications with the EOCs as follows:

- When the County/OA EOC is activated, the mutual aid system representatives will be at the County/OA EOC to facilitate coordination and information flow.
- When Cal OES or regional EOC (REOC) is activated, regional mutual aid coordinators should have representatives in the REOC unless it is mutually agreed that effective coordination can be accomplished remote means.
- State agencies may be requested to send representatives to the REOC to assist Cal OES regional staff in managing mutual aid requests for disciplines or functions that do not have designated mutual aid coordinators.
- When the State Operations Center (SOC) is activated, state agencies with mutual aid coordination responsibilities will be requested to send representatives to the SOC.

Figure 43: Law Enforcement and Coroner Mutual Aid Regions



Figure 44: Fire and Rescue Mutual Aid Regions



4.9.6 Orange County Mutual Aid Activation

When resources are insufficient within Orange County to respond to an emergency, the Mutual Aid Coordinators are responsible for coordinating the securing resources through the OA. Such coordination and acquisition of resources does not require an activation of the County/OA EOC. When resources are required from outside of the Orange County the Mutual Aid Coordinators will provide relevant information and submit requests for support to the Cal OES REOC. In larger scale incidents, Mutual Aid Coordinators will work from the County/OA EOC when mutual aid channels are active.

Resource requests submitted to the OA from jurisdictions and agencies within the County and those passed from the OA to the Southern REOC use the 213RR form (Attachment 8) should specify, at a minimum:

- Number and type of personnel needed.
- Type and amount of equipment needed.
- Reporting time and location.
- Authority to whom resources should report.
- Estimated duration of operations.

- Access routes.
- Risks and hazards.

Mutual aid assistance may be provided under one or more of the following authorities:

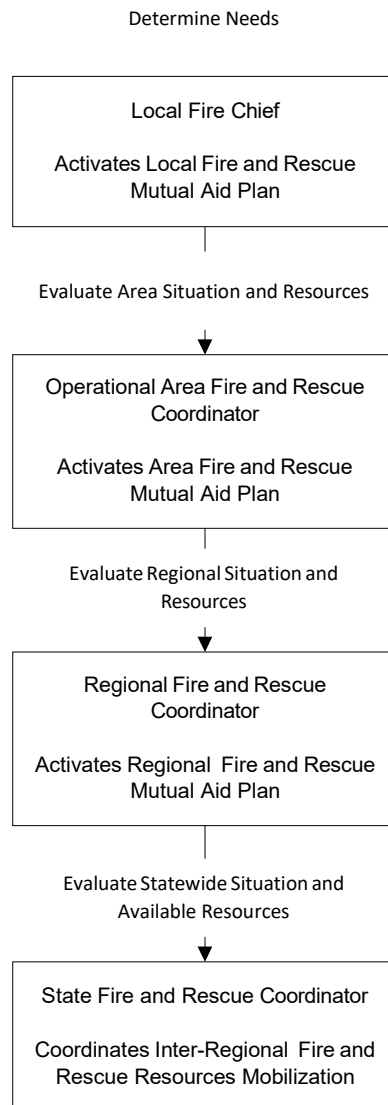
- California Master Mutual Aid Agreement
- California Emergency Management Mutual Aid Plan (EMMA)
- Emergency Management Assistance Compact (EMAC)
- Orange County Operational Area Agreement
- California Fire and Rescue Emergency Mutual Aid Plan
- California Law Enforcement Mutual Aid Plan
- California Coroners' Mutual Aid Plan
- California Medical Mutual Aid Plan
- Statewide Public Works Mutual Aid Agreement
- Transit Mutual Assistance Compact (TransMac)
- Water Emergency Response Organization of Orange County (WEROC)
- California Water/Wastewater Agency Response Network (CalWARN)
- Robert T. Stafford Disaster Relief and Emergency Assistance Act

4.9.7 Orange County Mutual Aid Structure

Fire and Rescue Mutual Aid

The Orange County Fire Authority (OCFA) coordinates the Fire and Rescue Mutual Aid System for the County and OA, see Figure 13. The Fire and Rescue Mutual Aid Coordinator is responsible for organizing and coordinating with other fire and rescue agencies within the OA for resources to support the County and OA. If the Fire and Rescue Mutual Aid Coordinator is unable to mobilize appropriate resources from within the Operational Area, then the Regional Fire and Rescue Coordinator and the Southern REOC will be contacted. Fire and Rescue Mutual Aid air support will be coordinated through normal fire mutual aid channels. Additional air support assets can be requested through the Law Enforcement Mutual Aid Coordinator.

Figure 45: Channels for Requesting Fire and Rescue Mutual Aid Resources



Law Enforcement and Coroner Mutual Aid

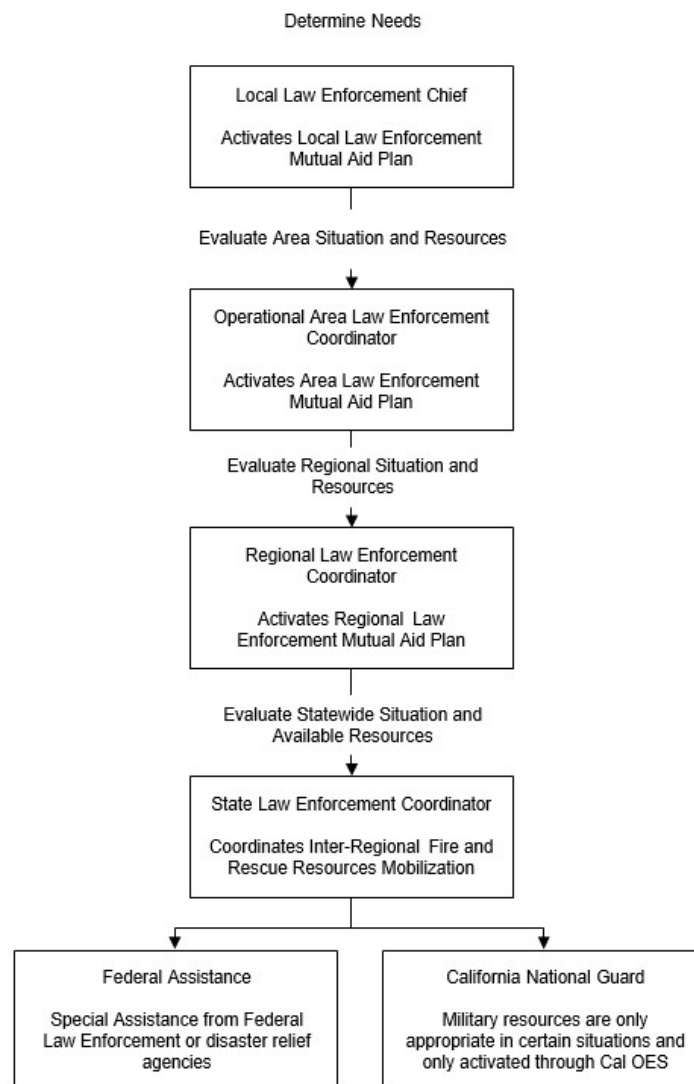
The Orange County Sheriff-Coroner Department coordinates the Law Enforcement and Coroner Mutual Aid System for the County and OA and serves as the Operational Area Coordinator, see Figure 14. The Law Enforcement and Coroner Mutual Aid Coordinator is responsible for organizing and coordinating with other law enforcement agencies within the OA for resources to support the OA. If the Law Enforcement and Coroners Mutual Aid Coordinator is unable to gather appropriate resources from within the OA, then the Regional Law Enforcement and Coroner Coordinator and the Southern REOC, will be contacted.

The Law Enforcement Mutual Aid system is enhanced by Section 830.1 of the Penal Code, which states that whenever a State of Emergency exists within a region or area, the following personnel

within the region or area, or who may be assigned to duty therein, have full peace officer powers and duties:

- All members of the California Highway Patrol.
- All wardens of the Department of Fish and Wildlife who have been appointed to enforce the provisions of the Fish and Game Code.
- The State Forester and the staff of the Department of Forestry who are designated by the State Forester as having the powers of peace officers.
- Peace officers who are state employees within the provisions of Section 830.5 of the Penal Code.

Figure 46: Channels for Requesting Law Enforcement and Coroner Mutual Aid Resources



Public Works Mutual Aid

OC Public Works coordinates the Public Works Mutual Aid System for the County and OA and serves as the Operational Area Coordinator. The Public Works Mutual Aid Coordinator is responsible for organizing and coordinating with other public works resources and agencies in the OA for resources to support the OA. If the Public Works Mutual Aid Coordinator is unable to mobilize appropriate resources from within the OA, then the Regional Public Works Coordinator at the Southern REOC will be contacted.

The Public Works Mutual Aid Coordinator also coordinates with the Water Emergency Response Organization of Orange County (WEROC). WEROC manages the OA regional water supply system during an emergency. WEROC was organized on the basis that each water agency is responsible for implementing its own preparedness plan to meet specific emergency needs within its service area. WEROC serves as a facilitator in expediting requests for and offers available personnel, equipment, and materials between water agencies. WEROC assists in maintaining contact with the OA and other key entities.

Social Human Services Agency Mutual Aid

The Orange County Social Services Agency is part of the Southern Association of County Human Service Agencies (SACHS). Each SACHS agency has an assigned Disaster Coordinator of which Orange County serves as the chair. In 2015, the Disaster Coordinators developed the SACHS Disaster Preparedness Mutual Aid Plan/Standard Operations Procedure (SOP). The purpose of this SOP is to provide guidance in supporting partner county human service agencies and their ability to maintain services in times of disaster or other emergency. The main objectives of the voluntary plan are to: (1) Provide emergency mutual aid from unaffected areas to support local jurisdictions during proclaimed emergencies; (2) Provide a system (organization, information, forms) necessary to coordinate the formal request, reception, assignment and tracking of assigned personnel from mutual aid counties; (3) Establish a structure to maintain this plan and its procedures; and (4) Promote the safety and wellbeing of the children in the county's care.

Water and Wastewater

The Water Emergency Response Organization of Orange County (WEROC) supports Orange County's 36 water and wastewater agencies respond to and prepare for natural disasters, infrastructure failures, and domestic threats. WEROC is the Operational Area Water/Wastewater Mutual Aid Coordinator and is written into and fully integrated within Orange County's Operational Area Emergency Operations Plan. Orange County relies on WEROC during disasters to activate its Emergency Operations Center serving as the point of contact between local water and wastewater agencies, regional water agencies, and the County of Orange along with state and federal partners. This includes developing and distributing accurate, timely, systemized messaging to keep the public up-to date on critical safety information.

WEROC maintains a mutual aid agreement between 36 water and wastewater utilities within Orange County; including city departments, special districts and one private entity. The purpose of WEROC is to ensure a coordinated response amongst systems that are operationally connected and use similar resources. The WEROC Mutual Aid Coordinator (OA WEROC Liaison) is responsible

for organizing and coordinating with the water utilities in the OA for resources to support the response. If the WEROC Mutual Aid Coordinator is unable to mobilize appropriate resources from within the Operational Area, then the CalWARN Region 1 Representative and the Southern REOC will be contacted.

The California Water and Wastewater Agency Response Network (CalWARN) is a state-wide mutual aid program. CalWARN consists of water and wastewater utilities as signatories throughout the State of California. CalWARN is divided by the Cal OES mutual aid areas and is coordinated through established points of contact. CalWARN has committed to coordinating information and resources for all water and wastewater utilities, regardless of a signed agreement, to ensure the coordination of resources essential to life safety and health. Information can be obtained at calwarn.org.

Medical Mutual Aid

The Orange County Health Care Agency coordinates the Medical Mutual Aid System for the County and OA and serves as the Medical and Health Operational Area Coordinator (MHOAC). The MHOAC is responsible for organizing and coordinating with other health and medical resources and agencies within the OA for resources to support the OA. If the MHOAC is unable to obtain appropriate resources from within the OA, then the Regional Medical and Health Coordinator at the Southern REOC is contacted.

California Emergency Management Mutual Aid (EMMA)

Emergency Management Mutual Aid (EMMA) provides emergency management personnel and technical specialists from unaffected areas to support local jurisdictions, OA and regional emergency operations impacted by a disaster.

Collaborating Organizations Active in Disasters-Orange County (COAD-OC)

COAD-OC focuses on coordinating between the private sector, nonprofit and community-based organizations, and government agencies to support response and recovery operations through use of volunteer and material resources, and to assist with long-term recovery by identifying emerging and unmet needs of the community.

CERT Mutual Aid Program (CMAP)

The Community Emergency Response Team (CERT) Mutual Aid Program (CMAP) is part of the local, state and national Citizen Corps effort to incorporate and use volunteers in the community. Citizen Corps is endorsed by the President, the Department of Homeland Security, the Operational Area and local jurisdictions. CMAP volunteers are trained in basic response techniques and mutual aid training to assist the Operational Area (OA) cities in a disaster or major emergency situation. CMAP is mechanism to coordinate and provide staffing resources during proclaimed local emergencies as defined by the California Emergency Services Act. CMAP volunteers have a wide range of skills and vary in their capabilities. Not all volunteers will have the physical abilities to do all tasks. Requesting agencies and CMAP jurisdictions should be aware of the volunteer assignments and

tasks of the activation. The CMAP Coordinator will ensure volunteers sent meet activation requirements.

4.10 Proclamations

Emergency proclamations expand the emergency powers and authorities of the state and its political subdivisions. They establish a mechanism for unaffected jurisdictions to provide resources and assistance to affected jurisdictions. Although emergency proclamations facilitate the flow of resources and support to the affected jurisdictions and local government, they do not preclude rendering mutual aid and assistance under existing agreements.

Definition of Local Emergency

A local emergency is defined as the proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, caused by such conditions as fire, flood, storm, epidemic, civil unrest, drought, severe energy shortage, plant or animal infestation or disease, earthquake or other conditions, other than conditions resulting from a labor controversy, which are or are likely to be beyond the control of services, personnel, equipment and facilities of that political subdivision and require the combined forces of other political subdivisions to combat (California Government Code, section 8558 (c)).

The California Emergency Services Act provides for three types of emergency proclamations in California:

- Local Emergency
- State of Emergency
- State of War Emergency

Local Emergency Proclamation

A local governing body or designee may proclaim a Local Emergency if there is extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city where the declaring entity is overwhelmed and unable to abate an existing or potential emergency and requires resources from other unaffected political subdivisions and jurisdictions. Proclamations may be issued by (Government Code section 8630 (a)):

- Governing body of a city, county or city and county or
- An official designated by ordinance adopted by that governing body.

Purpose (Government Code sections 8625 and 8634):

- Authorizes the promulgation of orders and regulations necessary to protect life and property (e.g., special purchasing or emergency contracting).
- Power to conduct and perform emergency response activities under emergency conditions with broadened immunities from legal liability for performance or failure of performance.

- Describes the circumstances that exist that may support the need for issuance of a State of Emergency Proclamation and/or Executive Order.
- Supports request for a Director's Concurrence, Governor's Proclamation of a State of Emergency, Executive Order, California Disaster Assistance Act (CDAA) funding, and/or a Presidential Declaration of Emergency or Major Disaster.

A sample proclamation is included as Attachment 9.

Deadlines

- Issuance: Within 10 days after the actual occurrence of a disaster if assistance will be requested through CDAA (Government Code section 8685.2).
- Ratification: If issued by official designated by ordinance, just be ratified by governing body within 7 days (Government Code section 8630 (b)).
- Renewal: Reviewed at least once every 60 days by the governing body until terminated (Government Code section 8630 (c)).
- Termination: At the earliest possible date that conditions warrant (Government Code 8630 (d)).

When a local government requests a Gubernatorial State of Emergency Proclamation, Directors Concurrence and/or CDAA funding, the local government will need to provide information describing local response efforts and identify the specific type and extent of state emergency assistance needed, including regulatory waivers necessary to facilitate the protection of life and property during response efforts.

Each political subdivision within the OA will retain the powers and responsibilities as granted by law to proclaim an emergency in its jurisdiction according to procedures set forth by the jurisdiction. The County Board of Supervisors will retain the powers and responsibilities as prescribed by County Ordinance No. 3915, Section 3-1-6, to proclaim an emergency for the County of Orange and for the County geographic area.

Notifications Process (consistent with Standardized Emergency Management System (Government Code section 8607))

- Local governments should notify the OA and provide a copy of the local emergency proclamation as soon as possible.
- OA shall notify Cal OES Region and provide a copy of the proclamation as soon as possible.
- Cal OES Region will ensure notification to the Cal OES Director and Deputy Directors and shall be the primary contact between the Cal OES Director, OA and local jurisdiction for updates on any requests for assistance.

- Cal OES Director will respond in writing to the local government concerning the status of any request for assistance included within the local proclamation or accompanying letter.

Request for the Governor to Proclaim a State of Emergency

When emergency conditions exceed, or have the potential to exceed, local resources and capabilities, local government may request state assistance under the California Emergency Services Act (ESA). Local governments can request cost reimbursement from the state for certain disaster-related expenditures under the California Disaster Assistance Act (CDAA) following the proclamation of a Local Emergency. Cal OES must receive the request from local government within 10 days after the actual occurrence of a disaster and include the Initial Damage Estimate (IDE) and a request from the City Mayor or Administrative Officer or County Board of Supervisors.

Initial Damage Estimate

The request for a Governor's Proclamation of Emergency should include a copy of the local proclamation document and an Initial Damage Estimate (IDE) that estimates the severity and extent of the damage caused by the emergency. An IDE may not be required for sudden emergencies with widespread impacts, emergencies of significant magnitude, or during fast moving emergencies where immediate response assistance is necessary.

Analysis of Request

The request and the IDE are reviewed by the Cal OES Region and forwarded to the Governor through the Director of Cal OES.

Proclamation of a State of Emergency

The Governor proclaims a State of Emergency based on the formal request from the local governing body and the recommendation of Cal OES. If conditions and time warrant, the Governor drafts and signs a formal State of Emergency Proclamation. The Governor has expanded emergency powers during a proclaimed State of Emergency. The Governor:

- Has the right to exercise police power, as deemed necessary, vested in the State Constitution and the laws of California within the designated area.
- Is vested with the power to use and commandeer public and private property and personnel, to ensure all resources within California are available and dedicated to the emergency when requested.
- Can direct all state agencies to use and employ personnel, equipment and facilities for the performance of any and all activities designed to prevent or alleviate actual and threatened damage due to the emergency and can direct them to provide supplemental services and equipment to political subdivisions to restore any services in order to provide for the health and safety of the residents of the affected area.

Governor's Proclamation without a Local Request

A request from the local governing body is not always necessary for the Governor to proclaim a State of Emergency. The Governor can proclaim a State of Emergency if the safety of persons and property in California are threatened by conditions of extreme peril or if the emergency conditions are beyond the emergency response capacity and capabilities of the local authorities.

Proclamation of a State of War Emergency

In addition to a State of Emergency, the Governor can proclaim a State of War Emergency whenever California or the nation is attacked by an enemy of the United States, or upon receipt by California of a warning from the federal government indicating that such an enemy attack is probable or imminent. The powers of the Governor granted under a State of War Emergency are commensurate with those granted under a State of Emergency.

State Request for a Presidential Declaration

When it is clear that State capabilities will be exceeded, the Governor can request Federal assistance, including assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). The Stafford Act authorizes the President to provide financial and other assistance to State and local governments, certain private nonprofit organizations, and individuals to support response, recovery, and mitigation efforts following Presidential emergency or major disaster declarations.

Preliminary Damage Assessment

Upon submission of the request, FEMA coordinates with the state to conduct a Preliminary Damage Assessment (PDA) and determine if the incident is of sufficient severity to require federal assistance under the Stafford Act. This process could take a few days to a week depending on the magnitude of the incident. FEMA uses the results of the PDA to determine if the situation is beyond the combined capabilities of the state and local resources and to verify the need for supplemental federal assistance. The PDA also identifies any unmet needs that may require immediate attention. Similar to the IDE, the PDA may not be required if immediate response assistance is necessary.

Federal Analysis of the State's Request

The FEMA Administrator assesses the situation and the request and makes a recommendation to the President through the Department of Homeland Security on a course of action. The decision to approve the request is based on such factors as the amount and type of damage, the potential needs of the affected jurisdiction and the state, availability of state and local government resources, the extent and type of insurance in effect, recent disaster history and the state's hazard mitigation history.

Federal Declarations without a Preliminary Damage Assessment

If the incident is so severe that the damage is overwhelming and immediately apparent, the President may declare a major disaster immediately without waiting for the PDA process described above.

Declaration of Emergency or Major Disaster

The President of the United States can declare an Emergency or Major Disaster under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 USC §5121 et seq.), thereby providing federal government resources to support the states' response and recovery activities. While Presidential Declarations under the Stafford Act release federal resources and funding to support response and recovery, federal agencies may also provide assistance under other authorities or agreements that do not require a Presidential Declaration.

4.10.1 Continuity of Government Plan

Please refer to the County of Orange Continuity of Government Plan for additional details.

4.11 Information Collection, Analysis, and Dissemination

The EOC provides the single point of contact for information sharing to County departments, OA jurisdictions and supporting agencies within the OA.

Prior to the County/OA EOC being activated the County and OA can directly receive alert and warning notifications from several sources such as, the State Warning Center, the National Weather Service and County departments and OA jurisdictions. The Orange County Sheriff's Department, Emergency Management Division has the responsibility to collect, analyze, and disseminate these notifications based upon current plans and procedures.

Upon activation of the County/OA EOC, the Planning and Intelligence Section is responsible for gathering timely, accurate, accessible and consistent information to create intelligence during an emergency. This intelligence is used to create a common operating picture and incorporated into the EOC Action Plans (EAP) to establish and share the operational goals, priorities and strategies for an incident. As detailed in Attachment 10, jurisdiction should share information via WebEOC or, if internet communications are down, using the paper-based JIMS forms and transmitted via facsimile, radio (audio or RACES winlink), or phone.

The Planning & Intelligence Section is also responsible for assembling and distributing incident information in a situation summary report on a periodic basis. The content and frequency of the report will be decided by the DES in consultation with the Section Chiefs. Depending upon the sensitivity or tactical level of information, distribution of these reports may be limited.

Within the EOC, information sharing and dissemination occurs using various methods and tools such as:

- The EOC provides the structure for face-to-face communication and coordination.
- The EOC Message form is used for written communications and documentation of key messages within the EOC organizational structure.
- WebEOC's situational status display boards are kept updated throughout the activation.

External facing information sharing and dissemination occurs using various methods and tools such as:

- Telephone
- E-mail
- Radio
- WebEOC
- Website

4.12 Communications

4.12.1 Alert and Warning

Alert and warning is the process by which government organizations and the public are notified of the threat of imminent, extraordinary danger. Dependent upon the nature of the threat and the population at risk, warning can originate at any level of government. Protection of life and property is dependent upon timely dissemination of warning and emergency information to the populations in threatened areas. The County of Orange is responsible for alerting and warning the unincorporated County areas and County departments. As the Operational Area, it assists the OA jurisdiction with alert and warning of their populations.

The Orange County OA warning point is the Orange County Sheriff's Department, Control One, co-located at the County/OA EOC. The 24-hour a day personnel at Control One are responsible for notifying County departments, jurisdiction warning points, and the County and OA emergency management staff.

There are various means and methods whereby an alert or warning may originate and be disseminated to the County.

4.12.2 Government Notifications and Alerts

The County and OA may be notified of emergency situations or conditions via the following methods:

California State Warning Center (CSWC)

The California State Warning Center is the official State level point of contact for emergency notifications. The CSWC maintains contact with Operational Area Warning Points, state agencies, federal agencies and the National Warning Center.

- Notifications received by CSWC: Local governments and OAs notify the CSWC of emergencies that affect their community in accordance with existing laws, protocols or when State assistance is requested or anticipated.
- Earthquake Notifications: the CSWC receives notifications of earthquakes from the California Integrated Seismic Network (CISN), National Earthquake Information Center (NEIC) and the United States Geological Survey (USGS).
- Tsunami Notifications: CSWC receives tsunami notifications from the National Tsunami Warning Center via the National Weather Service (NWS) and the National Warning Center.

- Weather Notifications: notification of severe weather is received from the NWS-San Diego Office.
- Energy Notifications: The California Independent Systems Operator (California ISO) monitors the state's power grids.
- Hazardous Materials, Oil Spill Release Notifications: in accordance with state law, CSWC will be notified of any release or threatened release of hazardous materials.

CSWC Dissemination of Alert and Warnings: the CSWC is responsible for informing, communicating, alerting and notifying local government, OAs, State officials and the Federal government of emergencies. CSWC is equipped with a number of telephone, data and radio systems, including CALWAS, CLETS, NWS Weather Radio (NWR), EDIS and Dialogic Automated Notification System. Most of these systems are used on a day-to-day basis; others are available for use in an emergency, as conditions require.

- CALWAS: The CSWC maintains the California Warning System (CALWAS) to communicate with Cal OES Regional Offices and County Warning Points during an emergency. CALWAS is part of the National Warning System (NAWAS). Control One monitors CALWAS 24 hours a day and functions as the point of contact for Orange County.
- CLETS: The California Law Enforcement Telecommunications System (CLETS) is a high-speed message switching system that provides law enforcement and criminal justice agencies with the capability of obtaining information directly from federal, state and local computerized information files. In addition, the system will provide fast and efficient point-to-point delivery of messages between agencies.
- Operational Area Satellite Information System (OASIS): Cal OES leases transponder space from a commercial satellite operator, and operates a satellite communications system known as OASIS. This system serves as one of the back-up and redundancy systems and allows public safety agencies to exchange disaster intelligence and resource requests when the public switched telephone network (PSTN) fails. In the event of PSTN failure, OASIS is the primary back up, providing voice and internet connectivity with the California State Warning Center, Cal OES Regional Emergency Operations Centers, key State agencies and each Operational Area. Control One monitors this system 24 hours a day and functions as the point of contact for Orange County.

National Weather Service (NWS)

The NWS provides warnings for weather, hydrologic and climate needs for the United States, its territories, adjacent waters and oceans. Orange County receives its notifications from the San Diego Forecast Office, which prepares any necessary warning for Orange County.

The National Weather Service transmits continuous weather information for the Orange County area on 162.450 MHz. The NWS severe weather broadcasts are preceded with a 1,050 MHz tone

that activates weather monitor receivers equipped with decoders. The NWS can also access NAWAS to announce severe weather information, which is disseminated to the county warning points using the CALWAS system.

The levels of notifications that the NWS issues include the following:

- Outlooks
- Statements
- Watches
- Advisories
- Warnings

National Oceanic and Atmospheric Administration's (NOAA) National Tsunami Warning Center:

Tsunami warnings for California are issued by NOAA's National Tsunami Warning Center (NTWC) located in Palmer, Alaska. The NTWC monitor a network of seismic and sea level stations, providing the basis for which tsunami warnings, advisories, watches and information statements to the State Warning Center and to local coastal communities.

Operational Area Partners

All Operational Area Partners work collaboratively with the County when using the alert and warning program. Alert and warning notifications that extend across multiple jurisdictions will be communicated and coordinated with the impacted and neighboring jurisdictions. These notifications from Operational Area Partners will make the County aware of events.

Public Media

The County's emergency management and response personnel have access to and monitor news media outlets on a daily basis. If the news media reports on incidents underway or threats of pending incidents, then the County will become aware of those events.

4.12.3 Public Notifications and Alerts

Emergency information warnings, advice and protective action instructions may be broadcast to the public by one or more methods including: AlertOC, Emergency Alert System (EAS), Wireless Emergency Alerts (WEA), outdoor alerting systems, Sig-Alerts, news media releases, and route alerting/door to door canvassing.

Methods of warning the public of specific emergency conditions are described below. These systems may also be primary ways that state and local governments become aware of emergency information. All public notifications and alerts issued by the County and OA are coordinated with other jurisdictions that are or may be impacted and in accordance with current plans and procedures.

More information on public notifications and alerts can be found in the County of Orange and Orange County Operational Area Alert and Warning Plan.

AlertOC

AlertOC is Orange County's regional public mass notification system to keep those who live or work in Orange County informed of important information during emergency events. AlertOC is available 24/7 and is pre-loaded with Orange County landline phone numbers (including unlisted) and countywide geographic maps. Additionally, citizens have the option to provide additional contact information via self- registration portal www.alertoc.org. The System is used to send a message, describing the situation and recommended action the public should take, to affected businesses and households via:

- Phone Calls
- TTY and TDD
- E-mail
- Text message

Use of the Mass Notification System for emergency activity contains two components:

- The need to disseminate critical, safety-related information to individuals regarding emergency events occurring now, follow up information regarding the event and termination of the emergency event.
- Communicating with safety-responder staff, volunteers and involved parties about the emergency event.

As a general rule, the System is to be used when the public is being asked to take some action (e.g. evacuate, prepare to evacuate, shelter in place, boil tap water before drinking, local assistance centers and other follow up information, re-entry to areas after evacuation orders have been lifted or termination of the emergency because the danger has passed).

Emergency Public Notifications are limited to:

- Imminent or perceived threat to life or property
- Disaster notifications
- Evacuation notices
- Public health emergencies
- Public safety emergencies
- Shelter-in place orders
- Any notification to provide emergency information to a defined community

Emergency Responder Notifications are limited to:

- Contacting first responders to advise of an emergency
- Contacting first responders to report for duty due to an emergency
- Contacting key staff regarding an emergency or crisis situation

- Contacting agency employees to report at a different time or location (or provide an update) due to an emergency
- Exercises

The AlertOC system also allows residents to “Opt-in” using only their phone number. This Opt-in feature provides those registrants with specific information and messaging related to local special events and impacts only. This option is of limited use with the approval of the OCSD Emergency Management Division Alert and Warning Coordinator.

Additional information can be found in the Orange County Operational Area Countywide Public Mass Notification System Standard Operating Procedures.

Integrated Public Alert and Warning System (IPAWS)

In Orange County, the components of IPAWS are accessed through the AlertOC portal and require special codes, available through the Emergency Management Division, in order to launch messages using its component technologies. IPAWS is an internet based alert and warning capability operated by FEMA.

Each OA partner who has their own IPAWS certificate can use their jurisdiction specific organization portion of AlertOC to send IPAWS messaging. The County Emergency Manager may revoke this privilege if the entity does not comply with AlertOC policies and procedures, or state and federal regulations.

Emergency Alert System (EAS)

The Emergency Alert System (EAS) is used by alerting authorities to send warnings via AM/FM radio, broadcast television, and cable and satellite television systems. EAS can be initiated at federal, state and local levels to transmit essential information to the public. The State has been divided into a number of EAS operational areas, with Orange County being its own EAS operational area. One primary EAS station in each operational area assumes the function of the Local Primary (LP) broadcast station. It is called the LP-1 station. If for any reason the LP-1 is unable to carry out this responsibility, a designated alternate station (LP-2) will assume the responsibility of transmitting EAS messages. For Orange County, the primary EAS station (LP-1) is not assigned. The secondary EAS station (LP-2) is Control One and has assumed all alerting capabilities. Using a County VHF radio channel, the LP station will transmit emergency information first, and the participating broadcast stations and cable systems will then re-transmit the same emergency message. Federal and Presidential messages are mandated to be carried. Transmitting State and local activations are not mandatory and messages are broadcast on a voluntary basis.

Presidential messages will be routed over established network facilities of the broadcast industry. State programming will originate from the State Operations Center. Local messages are transmitted by the LP-1 and LP-2 stations to all other participants for retransmission. Messages may also be originated using the Integrated Alert and Warning System (IPAWS).

The EAS message must be a voice message. It may be transmitted live or prerecorded for a duration not to exceed two (2) minutes in length. Activation of the Orange County EAS must meet the requirements identified in the Orange County EAS Plan and shall be used for emergency events and conditions of concern to a significant segment of the population of Orange County. It is not possible to “geo-target” a message location as can be done with AlertOC and Wireless Emergency Alert (WEA) messages. Examples of emergencies identified by the Plan which may warrant EAS activation are earthquake, major wildland fire, heavy rains and flooding, 9-1-1 system outages, and hazardous material warnings. A complete list is in the Orange County EAS Plan. The EAS may also be used when all other means of alerting the public are unavailable, providing an added layer of resiliency to the suite of available emergency communication tools.

EAS requests are provided to Control One. EAS activation can be authorized by any one of the following parties:

- Orange County Sheriff-Coroner Department: Sheriff-Coroner, Department Commander
- Orange County Fire Authority: Fire Chief, Division Chief, Battalion Chief
- Orange County Government: Health Care Agency Director, OC Public Works Director, County of Orange/Operational Area Director of Emergency Services
- City Law Enforcement: Police Chief, Watch Commander
- City Fire: Fire Chief, Battalion Chief
- City Government: City Manager
- State Government: Governor, California Highway Patrol when related to AMBER Alerts
- National Weather Service

Additional information can be found in the Orange County EAS Communications Operations Plan, which is incorporated as an Attachment to the Orange County Alert & Warning Plan. The OC-EAS Communications Operation Plan is maintained by the Local Emergency Communications Committee (LECC). The LECC includes local radio and television broadcasters, the OCSD-EMD, Control One, NWS and the San Onofre Nuclear Generating Station (SONGS).

Wireless Emergency Alerts (WEA)

With the implementation of IPAWS, the ability to launch Wireless Emergency Alerts (WEA) became available to the Operational Area. WEA messages allow brief alert messages (360 characters or less) to be sent to compatible cellular telephones in an impacted area. These messages alert the user to the type of hazard and give brief instructions. WEA messages can serve to alert those in an impacted area to take immediate action and seek out additional information. WEA messages are enabled by default on compatible wireless devices and do not require the user to subscribe or opt-in in order to receive messages. When a WEA alert message is sent via IPAWS, it is transmitted to cellphone carriers who then broadcast the alert from towers in the alert area.

Because these messages are broadcast from cellphone towers it is impossible to know exactly how many people will be alerted. Other considerations when assessing the efficacy of launching a WEA include:

- Geography of the area potentially impacting reception
- Populations within buildings that may have limited or no reception
- Potential that devices have been turned off or lost power
- Potential that smaller towers may not have power back-up during outages
- Whether a tower has a directional or omnidirectional antennae, which impacts its ability to broadcast a signal across a geography, as well as the signal strength of the tower
- Differences in cell service providers
- Differences in wireless devices (e.g. iPhone 6 vs. 10, etc.)

Presently, public alerting authority for WEA is governed by FEMA, the FCC and CalOES with consultation of the local Operational Area. The following cities have independent access to launch messages across Orange County, at the time this EOP is being revised:

Approved: Aliso Viejo, Anaheim, Costa Mesa, Huntington Beach, Irvine, Laguna Beach, Newport Beach, University of California, Irvine

Outdoor Alerting Systems

Some jurisdictions within Orange County have sirens or outdoor warning systems. Each jurisdiction is responsible for maintenance and activation of their own systems, and for educating the public who might hear them on actions to take when the system is activated. The County/OA EOC has no direct authority over these systems and should coordinate with the local jurisdiction for awareness of system activation.

Route Alerting and Door-to-Door Canvassing

Route alerting is a form of alert and notification used frequently in small-scale emergencies or during rapidly changing situations in a designated area. In route alerting, emergency officials drive or walk through an affected or potentially affected area alerting residents in that area of the emergency and actions they need to take. Route alerting can be conducted door to door or via a public address system on a police car, fire engine, etc. Although route alerting is effective when other systems are unavailable, it is dependent on resource availability and can be a slow process. Route alerting is traditionally used only in areas that are ordered to take action.

4.12.4 Communications with the Public

During all phases of an emergency, efforts will be made to keep residents, businesses, and government employees informed of what they can expect from the County and/or OA, and where and how they can access resources and information. Conversely residents, businesses, and government employees should be informed of what their community expects of them, any

protective actions that should be taken, and where and how they can access the resources they need to be self-reliant and advance their own recoveries

The County and OA has a multitude of tools available to assist in the dissemination of public information. It is the responsibility of the lead PIO to initiate the use of all applicable communication mediums in order to reach the intended audience during response and recovery. The tools listed below are intended to complement each other in distributing public information. The same message should be distributed across all channels to minimize any confusion that can arise from conflicting information.

Public information channels such as social media, hotlines, or in-person visits must be quickly established to receive incoming questions and referrals. Communication with community members and businesses that may have been displaced outside the county will also need to be addressed.

All forms of communication should incorporate, as well as possible, accessible multi-lingual formats.

Media Outlets

A list of news media outlets for Orange County and the surrounding region is maintained by the Orange County Sheriff's Department, Emergency Management Division. PIO members should attempt to contact as many news media outlets as possible when disseminating information, paying special attention to include non-English speaking outlets to ensure the greatest number of affected people are informed. Additionally, news media outlets should be encouraged to provide a television crawl and include sign language interpreters in broadcasts of press conferences so people with disabilities and those with access and/or functional needs have every opportunity to receive emergency messages.

Website Pages

The Orange County Sheriff's Department, Emergency Management Division EOC website ([Emergency Operations Center | Orange County, California - Sheriff's Department \(ocsheriff.gov\)](https://www.ocsheriff.gov/emergency-operations-center)) is an informational site for the public and County employees. During an activation of the EOC, this site serves as a place for news media releases and information to be publicly posted online.

Both FEMA and Cal OES maintain websites that provide information and resources available to assist businesses and individuals, their addresses are as follows:

- FEMA: <http://www.fema.gov> and <http://www.DisasterAssistance.gov>
- Cal OES: <http://www.caloes.ca.gov>

News Conferences, Public Forums and Community Meetings

News conferences are an integral part of the public information function before (when possible), during, and after an emergency. A well-constructed news conference needs to identify key messages and important facts to share with the public, such as public resources that may be

activated during an emergency (e.g., shelter, Local Assistance Center(s), 2-1-1, volunteer services, and donations).

There may be multiple spokespersons participating during a news conference, public forum, or community meeting. There may be times when one spokesperson for all aspects of the incident may be enough, but in most cases of a complex incident, a unified approach with multiple spokespersons is preferred. Preplanning meetings prior to a press conference is vital. The lead agency should make every effort to livestream press conferences on social media. Livestreams should, when possible, include closed captioning. Additionally, every effort should be made to provide translation services or a PIO able to speak fluently in a non-English language at the press conference and for individual media interviews after the press conference concludes.

For public meetings, consideration must be given to ensure all resources are available to accommodate the audience being addressed, such as sign-language interpreters, large-print handouts and displays, and translation services at all press conferences held by public officials.

The public looks to elected officials as sources of information and strength during an emergency and recovery. Officials need to advise the public on the status of the response and recovery efforts, the resources available to them, and what the public needs to do to assist in their recovery. The OA will work to give these officials the critical information needed to guide the public. OA PIOs can provide tools or guidance to help elected officials, including the following:

- Preparing talking points and key messages for elected officials to deliver during interviews.
- Anticipating questions elected officials may be asked and prepare appropriate answers (particularly for difficult questions).
- Highlighting public response efforts and recovery resources.

OCSD maintains equipment for press conferences including podiums, microphones, and multi-boxes. This equipment can be deployed to any location throughout the County by request through the EOC PIO if activated, or the County/OA Emergency Manager at other times.

Social Media

The County of Orange has approved the use of Facebook and X (formerly known as Twitter) for communications to the public during a disaster. Integrating information being received from verified accounts into the emergency organization can help to increase situational awareness and gain a better common operating picture. The County and OA will monitor these accounts for relevant information; however, the County Facebook page will be used strictly for providing information and not to receive any communications from the community. Many County departments maintain their own social media sites, and receiving communications from the public is at their discretion.

Social media can also be a powerful tool in information dissemination; however, messages released by the OA to social media sites must be approved by the DES. Social media outlets used

by the OA will only contain information present in approved news media releases, and only authorized OA representatives may post to the social media outlets.

County and Operational Area Public Information Hotline and Rumor Control

The County Public Information Hotline and Rumor Control, when activated, provides current, accurate and approved information to the community.

2-1-1 Orange County

2-1-1 Orange County (2-1-1) is a telephone-based service set aside by the Federal Communications Commission for the public's use in accessing community services 24 hours a day, 7 days a week. This need becomes even greater during and following a disaster. 2-1-1 works closely with the County and OA to provide essential information to Orange County residents during an emergency and maintains close working relationships with the County, the Red Cross, Orange County Social Services Agency, Orange County Health Care Agency and the COAD-OC. 2-1-1 is kept informed with the most up-to-date information from County authorities to ensure it can relay and support accurate information to any calls received. 2-1-1 also forwards calls to the County and OA if there are specific requests beyond the scope of services, such as people with disabilities and those with access and/or functional needs requests and volunteer and donation offers.

Non-Governmental, Non-Profit, Voluntary Organizations

Non-government, non-profit and voluntary organizations have a significant role in public information within the OA. Organizations will be looking for up to date information and citizens will be turning to their familiar community organizations as a source of information. Accurate, timely and approved information that is developed by the PIOs will need to be disseminated to local organizations as well as residents. PIOs will work with all information personnel, including organization liaisons, to ensure the communication of the most accurate and up-to-date information. The County of Orange works closely with COAD-OC, reference the COAD Emergency Management Plan.

Additional information can be found in the County of Orange and Orange County Operational Area Emergency Public Information Plan.

4.12.5 Communicating with County Departments and Operational Area Jurisdictions

A variety of voice, data and combined voice and data systems are available in the County/OA EOC to ensure uninterrupted communications amongst County Departments, OA jurisdictions and supporting organizations.

Telephones

The County/OA EOC has 140+ separate phone lines. These phone lines are on a first priority repair schedule in accordance with the County's Telecommunications Service Priority (TSP) program, if an interruption occurs. There are also conference call phones and numbers available for communications, both in the Command and Support Centers. Additional telecommunications services should be requested through the Logistics Section, EOC Facilities Unit.

Cellular Phones

The County/OA EOC has in building repeater systems to provide cellular service in the EOC by the three primary providers used by County departments, Verizon, T-Mobile, and AT&T.

800 MHz Countywide Coordinated Communication System

The County/OA EOC has connectivity to the County's 800 MHz Countywide Coordinated Communications System (CCCS), which provides the day-to-day and emergency communications capabilities to Orange County and its 34 cities (e.g., law enforcement, fire, emergency medical services, lifeguards, public works, public utilities, etc.) and other participating agencies. Orange County's EOC radio consoles are programmed with each county and city law enforcement, fire service, lifeguard, marine safety and public works agency for interoperable and mutual aid communications. Additional information about the radio system can be found in the 800 MHz CCCS SOP, which is available through the Orange County Sheriff's Department, Technology Division.

Operational Area Radio System

The OA Radio System consists of two VHF Low Band channels (OA1, OA2) and one VHF High Band channel (OC ACCESS V) for an additional communications capability between the County/OA EOC, County departments and OA Jurisdictions. OA1, OA2 and OC ACCESS V are always monitored by Control One if a department or jurisdiction cannot communicate by any other method; however, most County departments and OA jurisdictions do not monitor these systems continuously. Once the County/OA EOC has been activated, notifications are sent out advising all departments and OA Jurisdictions to monitor the OA Radio System. The OA Radio System will be used to conduct at least one briefing each operational period; and it may also be used to provide updates on the emergency, situation status and press release information as it becomes available. A monthly radio test is conducted and all OA Radio System participants are encouraged to participate. Since it is not used on a regular basis, the monthly test ensures the agency-owned radio is operational. Additional information can be found in the Orange County Operational Area Radio System SOP, which is available through the Orange County Sheriff's Department, Emergency Management Division. (Attachment 11)

Interoperable Radio Communication Systems

The Operational Area (OA) has a large number of interoperable radio systems and channels available for use during emergency and disaster situations. In addition to the 800 MHz CCCS, the following National and State interoperable radio channels are available for use in Orange County by any authorized agency, including those that do not have 800 MHz CCCS radios. Agencies that do not have 800 MHz CCCS radios may use these channels and optionally be electronically connected (patched) by Control One to any 800 MHz CCCS talkgroup.

- **California Emergency Services Radio System (CESRS):** CESRS serves as an emergency communications coordination system for Cal OES. The system assists in the dissemination of warning information and to support disaster and emergency operations. Control One monitors this channel 24 hours a day and functions as the point of contact for Orange

County. This is also an alternate way for the County/OA EOC and Control One to communicate with the Cal OES Regional Emergency Operations Center in Los Alamitos should normal methods of communication be disrupted.

- **California Law Enforcement Mutual Aid Radio System (CALAW):** CALAW was established to provide statewide police radio frequencies for use by state and local law enforcement agencies during periods of man-made or natural disasters or other emergencies where inter-agency coordination is required. It is administered by Cal OES who has provided a CALAW channel in each public safety frequency band (VHF Low, VHF High, UHF, 800MHz). Control One monitors these channels 24 hours a day and functions as the point of contact for Orange County.
- **California Law Enforcement Radio System (CLERS):** CLERS is a microwave interconnected radio system with statewide coverage. This system was designed for use by law enforcement agencies for point-to-point communications and to provide a backup warning system to all counties in the state. CLERS participation is voluntary, and many agencies no longer maintain the equipment. Cal OES provides and maintains the statewide repeater system and microwave network. Control One monitors this channel 24/7 and functions as the point of contact for Orange County.
- **Fire Mutual Aid Radio System (CAFIRE1):** CAFIRE1 was established to provide a common 800 MHz channel for use statewide by state and local fire agencies during periods of man-made or natural disasters or other emergencies where inter-agency coordination is required. It is administered by Cal OES. Control One monitors this channel 24/7 and functions as the point of contact for Orange County.
- **National Interoperability Channels:** Specific 700 MHz and 800 MHz nationwide channels are designed for interoperability between radios throughout the country. Use of these channels are coordinated through Control One.

Satellite Phone

Hardwired satellite phones are available within the County/OA EOC. These are used as back-up communication devices if telephones, cellular phones, radios, or other devices fail. It is not necessary to notify stakeholders that the satellite phone is being used because calls are rolled over from the satellite system to the commercial telephone automatically.

Radio Amateur Civil Emergency Service (RACES)

RACES consists of volunteer amateur radio (ham radio) operators who assist with emergency communications in times of emergency or disaster. This government auxiliary communications unit serves all City and County agencies in Orange County. The County maintains a cadre of RACES volunteers and amateur radio systems to ensure communications capability between the EOC and various locations. Individual operators have their own radio equipment and can also be dispatched at the discretion of the County/OA EOC. Emergency information can be communicated through RACES operators to any location where an operator is dispatched (e.g., local EOCs, Incident Command Posts, shelters, staging areas, etc.). Emergency information of any sort may be

communicated through a ham radio operator. At the discretion of the County/OA EOC, RACES operators are assigned to the EOC Radio Room to monitor and disseminate information over RACES channels and the Operational Area Radio System.

WebEOC

Orange County uses WebEOC® as its crisis information management system for real-time information sharing and primary form of communication during a disaster event. WebEOC® is a software program for electronically sharing disaster information within the County/OA EOC, County Departments, OA jurisdictions and supporting agencies. WebEOC® is accessed through the internet and is thereby accessible from any computer with internet access, as long as the user has an appropriate username and password. The system is used for, but not limited to:

- Maintaining individual activity logs by each position in the EOC.
- Monitoring and posting significant events taking place in the OA.
- Providing and sharing situational status information from County departments, OA jurisdictions and supporting agencies involved in the response, with display capabilities within the EOC.
- Monitoring who is supporting the response.
- Providing status information on operational shelters (e.g., location, capacity, accessibility, significant events, and other special considerations).
- Coordinating resources requesting using WebEOC® Resource Manager.

PrepareOC

PrepareOC is a SharePoint site operated and maintained by the Orange County Sheriff's Department Emergency Management Division. This site provides avenues for sharing of large documents such as the County of Orange and Orange County Operational Area Emergency Operations Plan and supporting Annexes.

E-Mail

E-mail is the redundant method of communication between the County/OA EOC and County departments, OA jurisdictions and supporting agencies due to the number of reporting jurisdictions and the quantity of documentation provided. Like cellular telephones, if other primary means of data or voice communications fail, then e-mail should be considered as a back-up. Before using e-mail, however, personnel should confirm that the intended recipient(s) has access to and is checking their e-mail. Confidential information should never be sent over e-mail unless confirmation exists that the intended recipient is receiving the messages.

The County has e-mail accounts for use specifically during County/OA EOC activations.

Fax Machines

Facsimile is used as a redundancy between the County/OA EOC and County departments and OA jurisdictions in addition to WebEOC® and e-mail. A variety of fax machines are available throughout the EOC.

Reddinet®

ReddiNet® is an emergency medical communications system that uses radios, telephone and internet to transmit messages between hospitals, dispatch centers, EOCs, and public health officials. It is a concurrent network in both Orange and Los Angeles Counties.

ReddiNet® provides capabilities for managing mass casualty incidents, assessing available healthcare system resources, participating in syndromic surveillance, communicating hospital diversion status and sending secure messages to multiple network facilities. It is used to produce Diversion History Reports, Assessment History Reports, MCI Reports, Bed Availability Reports, and Bed Census Reports in near real-time (depending on the frequency of census requests).

ReddiNet® service is available at the Orange County Sheriff's Department, Control One. The data component is viewable from any authorized computer in the County/OA EOC.

Chapter 5 PLAN DEVELOPMENT AND MAINTENANCE

5.1 Plan Development

The development of the EOP is a cooperative effort among all County and OA agencies and jurisdictions that have an emergency response and recovery role. The planning process is designed to: ensure a commitment to the tenets contained in the plan, consider the needs of the community, incorporate the various supporting agencies capabilities and limitations, and maximize resources. Each department and stakeholder is equally engaged in the development of this EOP. They are solicited for input, best practices, and lessons learned. Each comment or recommendation is carefully considered and, if appropriate, revised. The final draft of the EOP is then submitted to the Emergency Management Council⁵³ and Operational Area Executive Board⁵⁴ for approval.

5.2 Plan Maintenance

The OCSD-EMD maintains a revision schedule process (Attachment 12) and schedule (Attachment 13) for all plans, annexes, and supporting documents, including the Unified EOP.

The EOP will be reviewed every two years unless otherwise noted, or as necessary following an actual or training event to ensure that plan elements are valid and current. The OCSD-EMD will lead the responsible jurisdictions, agencies and departments in reviewing and updating their portions of the EOP as required based on deficiencies identified in drills, exercises or actual occurrences. The OCSD-EMD is responsible for making revisions to the EOP. The OCSD-EMD will prepare, coordinate, and publish any necessary changes to the EOP to all entities described in Record of Distribution section.

The OCSD-EMD, in collaboration with all County agencies and local jurisdictions, develops and implements a multi-year Integrated Preparedness Plan (Attachment 14). The IPP documents the cycle of planning, training, and exercises on all Plans, annexes, and supporting documents, including the Unified EOP.

5.3 Training and Exercise

A well-developed training and exercise program is vital to ensuring overall readiness and preparedness. Training ensures personnel are prepared for their roles and responsibilities. Exercises test the capabilities, resources, and working relationships of responding agencies. Each jurisdiction within the OC OA is responsible for its own planning, training and exercises, as well as involvement in Operational Area planning, training and exercises as required by the

⁵³ The Emergency Management Council is responsible for developing and recommending County emergency and mutual aid plans, agreements, ordinances, resolutions, rules and regulations for adoption by the Orange County Board of Supervisors.

⁵⁴ The Operational Area Executive Board is responsible for developing and recommending Operational Area emergency and mutual aid plans, agreements, resolutions for adoption in accordance with the Operational Area Agreement

Standardized Emergency Management System and the National Incident Management System and described in the EOP.

5.3.1 Training

The purpose of this section is to provide County departments and OA jurisdictions with the current training requirements for County employees and EOC responders and to provide guidance to the Operational Area jurisdictions for establishing their training requirements.

The OCSD-EMD provides training for EOC responders on an ongoing basis and provides training and consultation to County departments and OA jurisdictions upon request. Training classes and opportunities are ongoing to ensure all response personnel are trained in SEMS, NIMS and EOC functions.

All personnel who may respond to emergencies in the County and OA Emergency Operations Center (EOC), Department Operations Centers (DOCs) or at the field level must receive the appropriate SEMS, NIMS, EOC and other specialized training as required by SEMS regulations, NIMS policy and their specific position function, respectively. Individual departments and OA jurisdictions are responsible for identifying, coordinating, executing and documenting training for those personnel with response responsibilities. The County and OA jurisdictions are committed to adopting and implementing the NIMS Position Qualification System. Measurable standards, such as credentialing, are essential in validating the identity and attributes (e.g. affiliation, skills, or privileges) of emergency personnel.

5.3.1.1 National Incident Management System (NIMS) Training

NIMS training, as identified in the National Incident Management System Training Program (Summer 2020) is available through FEMA's Independent Study program website <http://training.fema.gov/IS/NIMS.aspx>. Training requirements for specialized areas of response (law, fire, EMS, etc.) are the responsibility of individual departments to identify, develop, execute and document.

NIMS represents a core set of doctrine, concepts, principles, terminology and organizational processes that enable effective, efficient and collaborative incident management across all emergency management and incident management response organizations and disciplines. Homeland Security Presidential Directive-5 (Management of Domestic Incidents) and Homeland Security Presidential Directive-8 (National Preparedness) establish NIMS, which include adoption and implementation of NIMS requirements by Federal, State, tribal and local agencies and is one of the conditions for receiving Federal preparedness assistance (through grants, contracts and other activities).

The following training requirements have been established for all County employees and County and OA Emergency Operations Center (EOC) responders. Each County department shall coordinate the following NIMS training at relevant levels for emergency personnel:

Mandatory Baseline training for all County Employees and Emergency Operations Center (EOC) Response Personnel:

TARGET AUDIENCE: All County employees and personnel designated to respond to the County and Operational Area EOC as Management, Policy Group, Section Chiefs, Branch Directors, Unit Leaders, Group Supervisors and Support Pool Staff.

ICS-100c: Introduction to the Incident Command System

Instruction method: interactive web based course via FEMA's Independent Study program. This course describes the history, features and principles, and organizational structure of the ICS. It provides the foundation for higher level ICS training and explains the relationship between ICS and NIMS.

IS-700.b: National Incident Management System, An Introduction

Instruction method: interactive web based course via FEMA's Independent Study program. This course introduces an overview of NIMS and describe and identify the key concepts, principles, scope, and applicability underlying NIMS.

G606: Introduction to Standardized Emergency Management System (SEMS)

Instruction method: interactive web based course via California Office of Emergency Services, California Specialized Training Institute (CSTI). This course provides a comprehensive overview of the components of SEMS and how SEMS is used when responding to disasters in the State of California.

Additional mandatory training – Specific training based upon EOC and/or Emergency Management role or expected role and jurisdiction risk and/or specific interest.

TARGET AUDIENCE: County employees designated as EOC Management, Policy Group, and Section Chiefs

IS-706: NIMS Intrastate Mutual Aid System, An Introduction

Instruction method: interactive web based course via FEMA's Independent Study program. This course provides an introduction to NIMS Intrastate Mutual Aid and Assistance, including:

- The purpose, benefits and uses of mutual aid and assistance.
- How mutual aid and assistance agreements related to NIMS.
- Identify what information should be included in a mutual aid and assistance agreement.
- Process for developing mutual aid and assistance agreements.
- Identify the elements of a mutual aid and assistance operational plan.

IS-800.d: National Response Framework (NRF), An Introduction

Instruction method: interactive web based course via FEMA's Independent Study program. This course provides an introduction to the NRF including:

- The purpose of NRF.
- The roles and responsibilities of response partners.

- The core capabilities for response and actions required to deliver those capabilities.
- The coordinating structures and operational planning used to support emergency response.
- How the stabilization of the seven Community Lifelines threats to public health and safety, or economic security.

IS -2200 Basic EOC Functions

Instruction method: interactive web based course via FEMA's Independent Study program. This course is designed to introduce the role, design, and function of the Emergency Operations Center (EOC) and the supportive relationship as a NIMS Command and Coordination component of the Multiagency Coordination System.

IS-29.a: Public Information Officer Awareness

Instruction method: interactive web based course via FEMA's Independent Study program. This course not only provides basic understanding of the PIO function for those new to the position, but familiarizes those in executive level roles the necessary knowledge of PIO roles and responsibilities during an emergency.

G191: Emergency Operations Center/Incident Command System Interface

Instruction method: instructor led classroom. The goal of this course is to enable the students to develop an effective interface between the Incident Command/Unified Command and the EOC by applying NIMS principles.

G775: EOC Management and Operations

Instruction method: instructor led classroom. This course reviews the role, design and functions of Emergency Operations Centers and their relationships as components of a Multiagency Coordination System (MAC) at the local, state and federal levels of government. Mandatory for EOC and incident responders designated as Public Information Officers and Public Information Officer's Support Staff.

G611 - EOC Section Overview: Management

This training module will focus on key Emergency Operations Center (EOC) positions within the Management Section based on the state OES EOC Section/Position credentialing document. Content will include:

- What does the Management Section do
- Position Roles and Responsibilities
- How each section interacts with each other
- Detailed position description
- Functions of the section/positions within the EOC
- Table-Top Exercise to apply section/position concepts

G611 - EOC Section Overview: Operations

This training module focuses on key Emergency Operations Center (EOC) positions within the Operations Section based on the state OES EOC Section/Position credentialing document.

Content will include:

- What does the Operations Section do
- Position Roles and Responsibilities
- How each section interacts with each other
- Detailed position description
- Functions of the section/positions within the EOC
- Table-Top Exercise to apply section/position concepts

G611 - EOC Section Overview: Planning and Intelligence

This training module focuses on key Emergency Operations Center (EOC) positions within the Planning and Intel Section based on the state OES EOC Section/Position credentialing document.

Content will include:

- What does the Planning and Intelligence Section do
- Position Roles and Responsibilities
- How each section interacts with each other
- Detailed position description
- Functions of the section/positions within the EOC
- Table-Top Exercise to apply section/position concepts

G611 - EOC Section Overview: Logistics

This training module focuses on key Emergency Operations Center (EOC) positions within the Logistics Section based on the state OES EOC Section/Position credentialing document.

Content will include:

- What does the Logistics Section do
- Position Roles and Responsibilities
- How each section interacts with each other
- Detailed position description
- Functions of the section/positions within the EOC
- Table-Top Exercise to apply section/position concepts

G611 - EOC Section Overview: Finance and Administration

This training module focuses on key Emergency Operations Center (EOC) positions within the Finance and Administration Section based on the state OES EOC Section/Position credentialing document.

Content will include:

- What does the Finance and Administration Section do
- Position Roles and Responsibilities
- How each section interacts with each other
- Detailed position description
- Functions of the section/positions within the EOC
- Table-Top Exercise to apply section/position concepts

5.3.2 County and Operational Area Emergency Operations Center Training

OC EOC Overview, Introduction to ICS, SEMS, and NIMS

This course is mandatory for all County/OA EOC response personnel. This introductory course is intended to give participants a basic overview of the Incident Command System, Standardized Emergency Management System, National Incident Management System, and an orientation to the basic functions of the County Emergency Operations Center.

OC EOC Management Training

Course Overview: This course provides an overview of the Management Section including the specific roles and responsibilities of the Management Section, Policy Group and the Public Information Officer. Instruction will include decision making responsibilities such as how we proclaim a local emergency, how resources are requested and mobilized to support emergency response activities, and how to communicate public information during an emergency.

OC EOC Operations Section Training: Evacuations, Sheltering, Law Enforcement, and Critical Infrastructure

Course Overview: This course is designed for departments and jurisdictions who may fill the Operation Section position within the EOC to support field operations. Training will include an overview of the Operations Section, consequence management, conflict resolution, and training on specific emergency plans and annexes maintained by the Emergency Management Division. Training will include hands-on practice and training on position specific roles and responsibilities.

OC EOC Planning and Intelligence Section Function and Exercise: Action Planning, Information Analysis, Situational Awareness

Course Overview: This course is designed for departments and jurisdictions who may fill a Planning and Intelligence Section position within the EOC to maintain information management and situational analysis. Training will include an overview of the Planning and Intelligence Section, consequence management, EOC Action Planning process, and training on specific emergency

plans and annexes maintained by the Emergency Management Division. Training will include hands-on practice and training on position specific roles and responsibilities.

OC EOC Logistics & Finance Section Training

Course Overview: This course is designed for departments and jurisdictions who may fill a Logistics and/or Finance Section position within the EOC. Training will include an overview of the Logistics and Finance Section process, protocols, position checklists and hands-on practice.

OC EOC Public Information Officer Update

Course Overview: This course is designed for those who may fill a Public Information Manager or Public Information Officer Support Staff position within the EOC. Training will include an overview of the County of Orange and Orange County Operational Area Emergency Public Information Plan, Countywide Emergency Public Information Coordination and the Joint Information System as well as tools and resources available for Lead PIOs and PIO Support Staff in the County EOC.

AlertOC (Mass Notification System) Training

Course Overview: This course covers the processes and procedures to send a notification using the Everbridge system. The course addresses the main features of emergency Mass Notification that may also apply to other types of notifications using the Everbridge suite.

WebEOC Training

Course Overview: The WebEOC Training is a two-hour class on the WebEOC Incident Management System used in County and OA Emergency Operations Centers. The class is a hands-on tutorial including login procedures, Activity Logs, and the Jurisdictional Information Management System.

OC EOC Messenger and Documentation Training

Course Overview: This course is designed for those who may be assigned as Messengers or Documentation staff in the EOC. Training will include the proper use of message forms, gathering of information from your assigned Section or Branch, and information flow in the EOC. Training will be interactive and hands-on.

OC EOC Hotline Training

Course Overview: The course provides an overview of the Hotline and Rumor Control position within the Orange County Operational Area Emergency Operations Center. There will be hands-on training in the form of an exercise and participants will practice on the hotline using WebEOC. Participants will learn how to appropriately answer calls, identify and manage trends and rumors and will use information from callers to report information to the Public Information Officer. It describes and explains the functions and responsibilities of Hotline and Rumor Control, the position and how it is used during an activation, introduces the tools and resources used as well as products produced by Hotline and Rumor Control.

OC EOC Situation Analysis Support Staff (SASS) Unit Orientation and Exercise

Prerequisite: Attendees must complete the WebEOC Orientation training

Course Overview: This course will focus on the Situation Analysis support within the EOC. Staff

members assigned to this role are responsible for gathering, analyzing and vetting important information impacting County departments, special districts, school districts, cities and all other affected organizations and use of WebEOC and the Smart Board projection system used to plot information in the EOC. This course will include hands-on training on WebEOC Incident Management System.

OC EOC Care and Shelter Branch Training

Course Overview: This course is designed for individuals who may staff a position within the Care and Shelter Branch during an exercise or activation of the County Emergency Operations Center. Training will include an overview of the positions within the Care and Shelter Branch and their responsibilities. The training will include hands-on practice on position's specific roles and responsibilities.

5.3.3 Exercises

The best method for putting training to the test and for allowing staff to demonstrate and practice their skills in a near real life situation is through exercises. At the OA level, exercises are conducted at least annually and additionally as needed. Individual County departments and OA jurisdictions may conduct exercises more frequently as they deem necessary. However, OA-level, multiagency, or regional exercises (which are the responsibility of the EMD) will be conducted at least annually to ensure OA staff is able to efficiently perform emergency functions, work together, and work with external organizations. An example of training coordination are the drills conducted in support and preparation for the SONGS facility. These exercises are both table top and field based in nature and are held in conjunction with activities on site with cooperation of the plant owners/operators.

Exercises are conducted to maintain the readiness of operational procedures. Exercises provide personnel with an opportunity to become familiar with procedures, facilities, and systems, which will actually be used in emergency situations. Forms of exercises include the following:

Seminars

Seminars are commonly employed to orient participants to or provide an overview of authorities, strategies, plans, policies, procedures, protocols, response resources, or concepts and ideas. Seminars provide a good starting point for jurisdictions that are developing or making major changes to their plans and procedures. They offer the following attributes:

- Low-stress environment employing a number of instruction techniques, such as lecture, multimedia presentations, panel discussions, case study discussions, expert testimony, and decision support tools
- Informal discussions led by a seminar leader
- Not constrained by real-time portrayal of events
- Effective with both small and large groups

Workshops

Workshops usually focus on having attendees develop a product. It is common to organize attendees into functional groupings aided by facilitators and to use breakout sessions. Final results are often presented and approved in a plenum session. In conjunction with exercise development, workshops are most useful in achieving specific aspects of exercise design, such as the following:

- Determining program or exercise objectives
- Developing exercise scenario and key events listings
- Determining evaluation elements and standards of performance

Tabletop Exercises (TTXs)

TTXs involve senior staff, elected or appointed officials, or other key staff in an informal setting to discuss simulated situations. This type of exercise is intended to stimulate discussion of various issues regarding a hypothetical situation. It can be used to assess plans, policies, and procedures, or to assess types of systems needed to guide the prevention, response to, and recovery from the defined event. TTXs can also be used to solve a specific problem. TTXs are typically aimed at facilitating the understanding of concepts, identifying strengths and shortfalls, and/or achieving a change in attitude. The effectiveness of TTXs is derived from the energetic involvement of participants and their assessment of recommended revisions to current policies, procedures, and plans. Attributes of a TTX may include the following:

- Practicing group problem solving
- Familiarizing senior officials
- Conducting a specific case study
- Examining personnel contingencies
- Testing group message interpretation
- Participating in information sharing
- Assessing interagency coordination
- Achieving limited or specific objectives

Drills

A drill is a coordinated, supervised activity usually employed to test a single specific operation or function in a single agency. Drills are commonly used to provide training on new equipment, develop or test new policies or procedures, or practice and maintain current skills. Typical attributes include:

- A narrow focus, measured against established standards
- Instant feedback
- Realistic environment
- Performance in isolation

Functional Exercises (FEs)

The FE is designed to test and evaluate individual capabilities, multiple functions or activities within a function, or interdependent groups of functions. It is generally focused on exercising the plans,

policies, procedures, and personnel of the direction and control nodes of incident command and unified command. Generally, events are projected through an exercise scenario with event updates that drive activity at the management level. The movement of personnel and equipment is simulated. The objective of the FE is to execute specific plans and procedures and apply established policies, plans, and procedures under crisis conditions, within or by a particular function team(s). The FE simulates the reality of operations in a functional area by presenting complex and realistic problems requiring rapid and effective responses by trained personnel in a highly stressful environment. Attributes of an FE include:

- Evaluating functions
- Evaluating EOCs, headquarters, and staff
- Reinforcing established policies and procedures
- Measuring the adequacy of resources
- Examining inter-jurisdictional relationships

Full-Scale Exercises (FSEs)

In an FSE, response elements are required to mobilize and deploy to a designated site or locale in response to a simulated incident, generally for an extended period. Actual mobilization and movement of personnel and resources are required to demonstrate coordination and response capability. EOCs and field command posts are activated. The FSE is the largest, costliest, and complex exercise type and may involve participation at the state, local, regional, and federal level. Although pre-scripted events may be used, the exercise is primarily driven by player actions and decisions. The FSE is used to evaluate the operational capabilities of systems, functional interfaces, and interactions during an extended period. It involves testing a major portion of operations plans and organizations under field conditions. Attributes of an FSE may include the following:

- Assessing organizational and individual performance
- Demonstrating inter-agency cooperation
- Allocating resources and personnel
- Assessing equipment capabilities
- Activating personnel and equipment locations
- Assessing inter-jurisdictional cooperation
- Exercising public information systems
- Testing communication systems and procedures
- Analyzing memoranda of understanding (MOUs), standard operating procedures (SOPs), plans, policies, and procedures

5.3.4 After Action Reports

Exercises train personnel and test systems, equipment and procedures. Lessons learned are documented in after action reports (AARs). While the exact length, format, and development timeframe of AARs depend on the exercise type and scope, the main focus of the document is an assessment of the core capabilities being exercised, and a structured improvement plan that operationalizes lessons learned.

Chapter 6 AUTHORITIES AND REFERENCES

The following Authorities and References related to this Plan are listed below:

6.1 Federal

- ADA Best Practices Tool Kit for State and Local Governments, Chapter 7, Emergency Management under Title II of the ADA (2007), Addenda 1-3, and the Introduction to Appendices 1 and 2 (Attached as Exhibit 1); Titles II, III, and V of the Americans with Disabilities Act of 1990, 42 U.S.C. §§ 12101-12103, 12131-12134, 12181-12188, and 12201-12213, as amended by the ADA Amendments Act of 2008
- American with Disabilities Act Title II Technical Assistance Manual
- Americans with Disabilities Act Title II Technical Assistance Manual (1993) and Supplement (1994)
- Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151-4157 Construction and Alteration of Public Buildings, 41 C.F.R. pt. 101-19
- Disaster Mitigation Act of 2000
- Disaster Recovery Reform Act of 2018
- Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Federal Emergency Management Agency, 44 C.F.R. pt. 16
- Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the Department of Justice, 28 C.F.R. pt. 39
- Federal Civil Defense Act of 1950 (Public Law 920), as amended
- Federal Disaster Relief Act of 1974 (Public Law 93-288) - Section 406 Minimum Standards for Public and Private Structures
- FEMA Comprehensive Preparedness Guide (CPG) 101, v3.0, September 2021
- FEMA National Incident Management System Training Program Summer 2020
- Homeland Security Act of 2002, as amended
- Homeland Security Presidential Directive (HSPD) 5, Management of Domestic Incidents
- Homeland Security Presidential Policy Directive/PPD- 8, National Preparedness
- Nondiscrimination Based on Handicap in Federally Assisted Programs and Activities of the Department of Housing and Urban Development, 24 C.F.R. pt. 8
- Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities, 28 C.F.R. pt. 36
- Nondiscrimination on the Basis of Disability in State and Local Government Services, 28 C.F.R. pt. 35
- Nondiscrimination on the Basis of Handicap in Programs or Activities Receiving Federal Financial Assistance, 45 C.F.R. pt. 84 (Department of Health and Human Services)

- Nondiscrimination on the Basis of Handicap in Programs or Activities Receiving Federal Financial Assistance, 34 C.F.R. pt. 104 (Department of Education)
- NRT-1, Hazardous Materials Emergency Planning Guide and NRT-1A Plan Review Guide (Environmental Protection Agency's National Response Team)
- Public Law 84-99, U.S. Army Corps of Engineers-Flood Fighting
- Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended)
- Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. §§ 794, as amended
- The Post-Katrina Emergency Management Reform Act of 2006, 6 U.S.C. 701 § as amended
- Title VIII of the Civil Rights Act of 1968 ("Fair Housing Act"), as amended, 42 U.S.C. §§ 3601- 3631. Discriminatory Conduct Under the Fair Housing Act, 24 C.F.R. pt. 100
- United States Department of Homeland Security (USDHS), NIMS, October 2017
- USDHS, National Response Framework (NRF), October 2019
- USDHS, National Disaster Recovery Framework (NDRF), June 2016
- USDHS, National Mitigation Framework, Second Edition, June 2016

6.2 State

- California Catastrophic Incident Base Plan, September 2008
- California Disaster and Civil Defense Master Mutual Aid Agreement, 1950
- California Disaster Assistance Act (Chapter 7.5 of Division 1 of Title 2 of the Government Code)
- California Emergency Management Mutual Aid (EMMA) Plan, November 2012
- California Emergency Management Mutual Aid Plan Annex A: EMMA Coordinator Checklists and Forms (March 2022)
- California Emergency Services Act, 2021
- California Fire Service and Rescue Emergency Mutual Aid System, Revised 2/1/2023
- California Government Code 8607 (a)
- California Law Enforcement Mutual Aid Plan, 2019
- California Medical and Health Operational Area Coordination Program Manual, December 2016
- California Medical Mutual Aid Plan. September 2007
- California State Oil Spill Contingency Plan, July 2019
- California Public Health and Medical Emergency Operations Manual, July 2011
- California State Emergency Plan, 2017
- California State Hazard Mitigation Plan, 2018

- Emergency Management Assistance Compact (EMAC), 2021
- Government Code, Title I, Division 4, Chapter 8, Sections 3100-3109
- Government Code, Title II, Division 1, Chapter 7. California Emergency Services Act, Article 12 State of War Emergency, Sections 8620-8624
- Government Code, Title II, Division 1, Chapter 7. California Emergency Services Act, Article 13. State of Emergency, Sections 8625-8629
- Standardized Emergency Management System (SEMS) Guidelines, November 2009
- Southern Association of County Human Service Agencies (SACHS) Disaster Preparedness Mutual Aid Plan/Standard Operating Procedures (SOP), May 2015
- State of California Hazardous Materials Business Program, 2016

6.3 County

- Orange County Public Works Mutual Aid Process Guide and Agreements, as amended, 2011
- Orange County Public Works Mutual Aid Agreement, Region I with LA County, October 1989
- County of Orange Resolution adopting the California Master Mutual Aid Agreement, November 28, 1950
- County of Orange Resolution No. 22-001, adopt resolution rescinding Resolution 12-036 and amending membership of the Emergency Management Council by updating titles, incorporating mandated, emergency plans, clarifying roles, and removing the Emergency Operation Center activation levels. Dated January 11, 2022.
- Orange County Board of Supervisors Ordinance 95-870 creating the Orange County OA
- Orange County Board of Supervisors Resolution No. 05-144, adopting the National Incident Management System, dated June 7, 2005
- Orange County Codified Ordinance, Title 3, Division 1 (Emergency Services)
- Orange County Fire Service Operational Area Mutual Aid Plan, December 1, 1997
- Orange County Chiefs' of Police and Sheriff's Association Law Enforcement Mutual Aid Operational and Procedural Protocol, January 2010
- Orange County Operational Area Agreement of the County of Orange and Political Subdivisions, January 2020
- Orange County Operational Area Building Damage and Safety Assessment Mutual Aid Agreement, October 1997

6.4 Relationship to Other Plans/References

This County and OA EOP is the primary document used by the County and OA to describe the conduct of emergency management activities from the County and OA perspective. The EOP provides a conceptual framework for all other emergency management planning of OA, but not necessarily of OA jurisdictions.

The EOP contributes to the emergency management programs of County departments and OA jurisdictions by describing how activities will be conducted within County of Orange and as the Operational Area, the limits and how support will be requested and coordinated—in the form of mutual aid and other resources—by County departments and OA jurisdictions and supporting agencies. When emergencies or disasters necessitate resource support from regional, state, federal, international, private, or non-profit sources outside the immediate control of County and/or OA, then this EOP will serve as the primary guide to coordinating those resources at the next SEMS level.

At the same time, this EOP is not a standalone document. Its purpose is to support the emergency plans and procedures of the County of Orange and OA jurisdictions. This EOP is designed to be flexible enough that it can adapt to changing response environments and to the needs of supporting and requesting organizations. This EOP will frequently support/complement other County of Orange and Orange County Operational Area Plans and Annexes including:

- County of Orange and Operational Area Legislated Aircraft Accident Annex, November 2022
- County of Orange and Operational Area Alert and Warning Plan, November 2022
- County of Orange Disaster Debris Management Plan, August 2019
- County of Orange and Operational Area Disease Outbreak Response Annex (DORA), February 2023
- County of Orange and Operational Area Excessive Temperature Annex, May 2021
- County of Orange and Operational Area Flood Annex, February 2023
- County of Orange & Orange County Fire Authority Local Hazard Mitigation Plan, December 2021
- County of Orange and Operational Area Emergency Public Information Plan, February 2023
- County of Orange and Operational Area Evacuation Annex, May 2023
- County of Orange and Operational Area Power Outage Annex, May 2022
- County of Orange and Operational Area Rail Emergency Response Annex, May 2022
- County of Orange and Operational Area Recovery Plan, May 2015
- County of Orange and Operational Area Mass Care and Shelter Annex, November 2022
- County of Orange and Operational Area Tsunami Annex, August 2022
- County of Orange and Operational Area Volunteer and Donations Management Annex, November 2021
- County of Orange and Operational Area Terrorism Annex, August 2023
- Operational Area Jurisdictions Emergency Plans and Procedures
- County of Orange and Operational Area Mass Fatality Annex, November 2022
- Orange County Fire Authority's Hazardous Materials Area Plans

- Orange County Fire Service Operational Area Mutual Aid Plan, December 1997
- Orange County Law Enforcement Mutual Aid, January 2010
- Orange County Tactical Interoperability Communications Plan (TICP), May 2010
- San Onofre Nuclear Generating Station Emergency Operations Plan (SONGS), May 2021
- Alternate Emergency Operations Center Standard Operating Procedure, February 2022

6.5 Standard Operating Procedures and Guidelines (SOPs or SOGs)

Departments, agencies, and organizations that have responsibilities in this plan should have prepared organizational and/or position-specific SOPs or SOGs detailing personnel assignments, policies, notification rosters, resource lists, and specific steps for accomplishing the functions assigned in this EOP.

Supporting plans, operating procedures, and checklists developed in concert with this EOP will be reviewed periodically by the EMC Sub-Committee under the direction of the Emergency Management Council and OCEDO under the direction of the OA Executive Board. Changes to SOPs or SOGs will be approved by their respective bodies.

Chapter 7 APPENDICES

The following Authorities and References related to this Plan are listed below:

7.1 Acronyms List

A&W	Alert and Warning
AAR	After Action Report
ACI	Approved Course of Instruction
ADA	Americans with Disabilities Act
ALERT	Automated Local Evaluation in Real Time
AlertOC	Orange County Mass Notification System
ARC	American Red Cross
BAER	Burned Area Emergency Response
BFE	Base Flood Elevation
BOS	Board of Supervisors
BSSC	Building Seismic Safety Council
CAD	Computer-Aided Dispatch
CA-ESF	California Emergency Support Function
CAHAN	California Health Alert Network
CAISO	California Independent System Operator
CALAW	California Law Enforcement Mutual Aid Radio System
Cal Fire	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
CALBO	California Building Officials
CalRecycle	California Department of Resources Recycling and Recovery
Caltech	California Institute of Technology
Caltrans	California Department of Transportation
CalWARN	California Water and Wastewater Agency Response Network
CalWAS	California Warning System
CAP	Corrective Action Planning
CBO	Community Based Organizations
CBRNE	Chemical, Biological, Radiological, Nuclear and Explosives
CCC	California Conservation Corps
CCCS	800 MHz Countywide Coordinated Communications System
CCP	Crisis Counseling Assistance and Training Program
CCR	California Code of Regulations
CDAA	California Disaster Assistance Act
CDPH	California Department of Public Health
CDSS	California Department of Social Services
CEO	Chief Executive Officer
CEQA	California Environmental Quality Act
CESRS	California Emergency Services Radio System
CERT	Community Emergency Response Team

CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CHHS	California Health and Human Services Agency
CHP	California Highway Patrol
CISN	California Integrated Seismic Network
CLERS	California Law Enforcement Radio System
CLETS	California Law Enforcement Telecommunications System
CMAP	CERT Mutual Aid Plan
COAD-OC	Collaborative Organizations Active in Disasters - Orange County
COG	Continuity of Government
COOP	Continuity of Operations
CPUC	California Public Utilities Commission
CRS	Community Rating System
CSWC	California State Warning Center
CUEA	California Utilities Emergency Association
DAFN	Disabilities, Access and Functional Needs
DES	Director of Emergency Services
DFO	Disaster Field Office
DHCS	California Department of Health Care Services
DHS	United States Department of Homeland Security
DMV	California Department of Motor Vehicles
DO	Duty Officer
DOC	Department Operations Center
DOJ	United States Department of Justice
DRC	Disaster Recovery Center
DSW	Disaster Service Worker
DWR	California Department of Water Resources
EAP	EOC Action Plan
EAS	Emergency Alert System
EDIS	Emergency Digital Information System
ESF	Emergency Support Function (Federal)
EMAC	Emergency Management Assistance Compact
EMC	County of Orange Emergency Management Council
EMD	Orange County Sheriff's Department Emergency Management Division
EMMA	Emergency Managers Mutual Aid
EMS	Emergency Medical Services
EMSA	Emergency Medical Services Authority
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EQ	Earthquake
ESA	California Emergency Services Act
ESC	Emergency Services Coordinator

ESF	Emergency Support Function
ESRI	Environmental System Research Institute (GIS tool)
EVC	Emergency Volunteer Center
EWEC	Emergency Worker Exposure Control
EWP	Emergency Watershed Protection
FAA	Federal Aviation Administration
FAC	Family Assistance Center
FAST	Functional Assessment Service Team
FCC	Federal Communications Commission
FCO	Federal Coordinating Officer
FEAT	Flood Emergency Action Team
FEMA	Federal Emergency Management Agency
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FIRESCOPE	Firefighting Resources of California Organized for Potential Emergencies
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Studies
FMAG	Fire Management Assistance Grant
FTE	Full Time Equivalent
GIS	Geographic Information System
HAZMAT	Hazardous Materials
HCA	Orange County Health Care Agency
HEAR	Hospital Emergency Administrative Radio
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
HSEEP	Homeland Security Exercise and Evaluation
HSPD	Homeland Security Presidential Directive
HUD	Housing and Urban Development
IA	Individual Assistance
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IDE	Initial Damage Estimate
IHP	Individual and Household Program
IMAT	Incident Management Assistance Team
IPAWS	Integrated Public Alert and Warning System
IT	Information Technology
JFO	Joint Field Office
JIC	Joint Information Center
JIMS	Jurisdiction Information Management System
JIS	Joint Information System
JRIC	Joint Regional Intelligence Center

LAC	Local Assistance Center
LAN	Local Area Network
LEMA	Law Enforcement Mutual Aid
LHMP	Local Hazard Mitigation Planning
MAC	Multi-Agency Coordination
MARAC	Mutual Aid Regional Advisory Council
MCM	Medical Counter Measures
MHOAC	Medical Health Operational Area Coordinator
MMAA	California Disaster and Civil Defense Master Mutual Aid Agreement
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPH	Miles Per Hour
MSL	Meters Above Sea Level
NAWAS	National Warning System
NDRF	National Disaster Recovery Framework
NEIC	National Earthquake Information Center
NEMA	National Emergency Management Agency
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NGO	Non-Government Organization
NIBS	National Institute of Building Officials
NIMS	National Incident Management System
NLETS	National Law Enforcement Telecommunications System
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NRF	National Response Framework
NTWC	National Tsunami Warning Center
NWS	National Weather Service
OA	Operational Area
OAC	Operational Area Coordinator
OA EX	Orange County Operational Area Executive Board
OASIS	Operational Area Satellite Information System
OCAC	Orange County Animal Care Services
OCCR	Orange County Community Resources
OCEMO	Orange County Emergency Management Organization
OCFA	Orange County Fire Authority
OCHCA	Orange County Health Care Agency
OCIAAC	Orange County Intelligence Assessment Center
OCPW	Orange County Public Works
OCSD	Orange County Sheriff's Department
OCTA	Orange County Transportation Authority
OCWR	Orange County Waste and Recycling
ODAC	Offsite Dose Assessment Center

OES	Office of Emergency Services
PA	Public Assistance
PDA	Preliminary Damage Assessment
PIO	Public Information Officer
PNP	Private Non-Profit
PO	Purchase Order
POST	Peace Officer Standards and Training
PSA	Public Service Announcement
PW	Project Worksheet
RACES	Radio Amateur Civil Emergency Service
RAP	Recovery Action Plan
RCC	Recovery Coordination Center
RDMHC	Regional Disaster Medical Health Coordinator
REOC	Regional Emergency Operations Center (Cal OES)
RIMS	Response Information Management System
RPO	Radiological Protection Officer
RSF	Recovery Support Function
SAP	State Safety Assessment Program
SAR	Search and Rescue
SARS	Severe Acute Respiratory Syndrome
SBA	Small Business Administration
SCAQMD	South Coast Air Quality Management District
SCEC	Southern California Earthquake Center
SCO	State Coordinating Officer
SEMS	Standardized Emergency Management System (California)
SEP	State of California Emergency Plan
SHMP	State of California Multi-Hazard Mitigation Plan
SOC	State Operations Center
SONGS	San Onofre Nuclear Generating Station
SOP	Standard Operating Procedures
SSA	Orange County Social Services Agency
TICP	Tactical Interoperable Communications Plan
UC	Unified Command
UHF	Ultra High Frequency
UPS	Uninterrupted Power Source
USACE	United States Army Corps of Engineers
USAR	Urban Search and Rescue
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United State Geological Survey
VHF	Very High Frequency
VOAD	Voluntary Organizations Active in Disasters
WAN	Wide Area Network

WEA	Wireless Emergency Alerts
WEROC	Water Emergency Response of Orange County
WERT	Watershed Emergency Response Team
WMD	Weapons of Mass Destruction
WNV	West Nile Virus
WUI	Wildland Urban Interface

7.2 Glossary of Terms

A

Action Plan

The plan prepared in the EOC containing the emergency response objectives of that SEMS level reflecting overall priorities and supporting activities for a designated period. The plan is shared with supporting agencies. See also Incident Action Plan.

Activate

At a minimum, a designated official of the emergency response agency that implements SEMS as appropriate to the scope of the emergency and the agency's role in response to the emergency.

After Action Report

A report covering response actions, application of SEMS, modifications to plans and procedures, training needs, and recovery activities. After action reports are required under SEMS after any emergency, which requires a declaration of an emergency. Reports are required within 90 days.

Agency

An agency is a division of government with a specific function, or a non-governmental organization (e.g., private contractor, business, etc.) that offers a particular kind of assistance. In ICS, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation), or assisting and/or cooperating (providing resources and/or assistance). (See Assisting Agency, Cooperating Agency and Multi-agency.)

Agency Dispatch

The agency or jurisdictional facility from which resources are allocated to incidents.

Agency Administrator or Executive

The official responsible for administering policy for an agency or jurisdiction.

Agency Representative

An individual assigned to an incident or to an EOC from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident or at the EOC. Agency Representatives report to the Liaison Officer at the incident, or the Liaison Coordinator at SEMS EOC levels.

Air Operations Branch Director

The person primarily responsible for preparing and implementing the air operations portion of the Incident Action Plan. Also responsible for providing logistical support to helicopters operating on the incident.

Allocated Resources

Resources dispatched to an incident.

Air Command

An organization established to: 1) oversee the management of multiple incidents that are each being handled by an Incident Command System organization; or 2) to oversee the management of a very large incident that has multiple Incident Management Teams assigned to it. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources based on priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed.

Assigned Resources

Resources checked in and assigned work tasks on an incident.

Assignments

Tasks given to resources to perform within a given operational period, based upon tactical objectives in the Incident or EOC Action Plan.

Assistant

Title for subordinates of the Command Staff positions at the Field SEMS level. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions. Assistants may also be used to supervise unit activities at camps.

Assisting Agency

An agency directly contributing tactical or service resources to another agency.

B

Base

The location at an incident at which primary logistical functions for an incident are coordinated and administered. There is only one Base per incident. (Incident name or other designator will be added to the term "Base.") The Incident Command Post may be collocated with the Base.

Branch

The organizational level at the SEMS Field Level having functional or geographic responsibility for major parts of incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section. Branches are identified by the use of Roman Numerals or by functional name (e.g., medical, security, etc.). Branches are also used in the same sequence at the SEMS EOC levels.

Branch Director

The ICS title for individuals responsible for supervision of a Branch at the Field Level. At SEMS EOC levels, the title Branch Coordinator is preferred.

C

Cache

A pre-determined complement of tools, equipment and/or supplies stored in a designated location, available for incident use.

Camp

A geographical site, within the general incident area, separate from the Incident Base, equipped and staffed to provide sleeping, food, water, and sanitary services to incident personnel.

Chain of Command

A series of management positions in order of authority.

Check-in

The process whereby resources first report to an incident or into an EOC. Check-in locations at the SEMS Field Level include: Incident Command Post (Resources Unit), Incident Base, Camps, Staging Areas, Helibases, Helispots, and Division Supervisors (for direct line assignments).

Clear Text

The use of plain English in radio communications transmissions. No Ten Codes or agency specific codes are used when utilizing Clear Text.

Command

The act of directing, and/or controlling resources at an incident by virtue of explicit legal, agency, or delegated authority. May also refer to the Incident Commander.

Command Post

(See Incident Command Post)

Command Staff

The Command Staff at the SEMS Field Level consists of the Information Officer, Safety Officer, and Liaison Officer. They report directly to the Incident Commander. They may have an assistant or assistants, as needed. These functions may also be found at the EOC levels in SEMS. At the EOC, they would report to the EOC Director but may be designated as Coordinators. At EOCs, the functions may also be established as Sections, or Branches to accommodate subsequent expansion.

Communications Unit

An organizational unit in the Logistics Section responsible for providing communication services at an incident or an EOC. A Communications Unit may also be a facility (e.g., a trailer or mobile van) used to provide the major part of an Incident Communications Center.

Community Based Organizations

A local organization (which may or may not be an affiliate of a national organization) with a primary mission to provide services to specific groups of people. This could include services to people who are developmentally disabled, homeless, low-income elderly, non-English speaking, or others. CBOs are usually nonprofit organizations. Most have a 501 (c) (3) tax-exempt status from the Internal Revenue Service. Some may have the nonprofit status from the Franchise Tax Board. In size, they range from all-volunteer organizations that get by on virtually no budget, to multi-million dollar operations. Examples include Food Banks, Centers for Independent Living, Immigration Assistance Programs, Easter Seals, Neighborhood Clinics, and Family Centers.

Compensation Unit/Claims Unit

Functional unit within the Finance/Administration Section responsible for financial concerns resulting from property damage, injuries or fatalities at the incident or within an EOC.

Complex

Two or more individual incidents located in the same general area, which are assigned to a single Incident Commander or to a Unified Command.

Cooperating Agency

An agency supplying assistance other than direct tactical or support functions or resources to the incident control effort (e.g., American Red Cross, telephone company, etc.)

Coordination

The process of systematically analyzing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra-or inter-agency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc. Multi-agency or Inter-agency coordination is found at all SEMS levels.

Coordination Center

Term used to describe any facility that is used for the coordination of agency or jurisdictional resources in support of one or more incidents.

Cost Sharing Agreements

Agreements between agencies or jurisdictions to share designated costs related to incidents. Cost sharing agreements are normally written but may also be verbal between authorized agency or jurisdictional representatives at the incident.

Cost Unit

Functional unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.

D

Delegation of Authority

A statement provided to the Incident Commander by the Agency Executive delegating authority and assigning responsibility. The Delegation of Authority can include objectives, priorities, expectations, constraints and other considerations or guidelines as needed. Many agencies require written Delegation of Authority to be given to Incident Commanders prior to their assuming command on large incidents.

Demobilization Unit

Functional unit within the Planning Section responsible for assuring orderly, safe and efficient demobilization of incident or EOC assigned resources.

Department Operations Center

A facility used by a distinct discipline, such as flood operations, fire, medical, hazardous material, or a unit, such as Department of Public Works, or Department of Health. Department Operations Centers may be used at all SEMS levels above the field response level depending upon the needs of the emergency.

Deputy Incident Commander (Section Chief or Branch Director)

A fully qualified individual who, in the absence of a superior, could be delegated the authority to manage a functional operation or perform a specific task. In some cases, a Deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies may also be found as necessary at all SEMS EOC levels.

Disaster

A sudden calamitous emergency event bringing great damage loss or destruction.

Dispatch

The implementation of a command decision to move a resource or resources from one place to another.

Dispatch Center

A facility from which resources are assigned to an incident.

Division

Divisions are used to divide an incident into geographical areas of operation. Divisions are identified by alphabetic characters for horizontal applications and, often, by numbers when used in buildings.

Divisions are also used at SEMS EOC levels and are found organizationally between Branches and Units.

Division or Group Supervisor

The position title for individuals responsible for command of a Division or Group at an Incident. At the EOC level, the title is Division Coordinator.

Documentation Unit

Functional unit within the Planning Section responsible for collecting, recording and safeguarding all documents relevant to an incident or within an EOC.

E

Emergency

A condition of disaster or of extreme peril to the safety of persons and property caused by such conditions as air pollution, fire, flood, hazardous material incident, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestations or disease, the Governor's warning of an earthquake or volcanic prediction, or an earthquake or other conditions, other than conditions resulting from a labor controversy.

Emergency Management 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.

Emergency Management Director (Emergency Services Director)

The individual within each political subdivision that has overall responsibility for jurisdiction emergency management. For cities and counties, this responsibility is commonly assigned by local ordinance.

Emergency Medical Technician (EMT)

A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.

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.

Emergency Operations Plan

The plan that each jurisdiction has 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 operations center.

Emergency Response Personnel

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

EOC Action Plan (EAP)

The plan developed at SEMS EOC levels, which contains objectives, actions to be taken, assignments and supporting information for the next operational period.

Event

A planned, non-emergency activity. ICS can be used as the management system for a wide range of events, e.g., parades, concerts or sporting events.

F

Facilities Unit

Functional unit within the Support Branch of the Logistics Section at the SEMS Field Response Level that provides fixed facilities for the incident. These facilities may include the Incident Base, feeding areas, sleeping areas, sanitary facilities, etc.

Field Operations Guide

A pocketsize manual of instructions on the application of the Incident Command System.

Finance/Administration Section

One of the five primary functions found at all SEMS levels, which is responsible for all costs and financial considerations. At the incident and Section can include the Time Unit, Procurement Unit, Compensation/Claims Unit and Cost Unit.

Food Unit

Functional unit within the Service Branch of the Logistics Section responsible for providing meals for incident and/or EOC personnel.

Function

In ICS, function refers to the five major activities in the ICS, i.e., Command, Operations, Planning/Intelligence, Logistics and Finance/Administration. The same five functions are also found at all SEMS EOC levels. At the EOC, the term Management replaces Command. The term function is also used when describing the activity involved, e.g., "the planning function."

Functional Element

Refers to a part of the incident, EOC or DOC organization such as section, branch, group or unit.

G

General Staff

The group of management personnel reporting to the Incident Commander or the EOC Director. They may each have a deputy, as needed. At the Field SEMS level, the General Staff consists of: Operations Section Chief, Planning/Intelligence Section Chief, Logistics Chief, Finance/Administration Chief. At some SEMS EOC levels, the position titles are Section Coordinators.

Generic ICS

Refers to the description of ICS that is generally applicable to any kind of incident or event.

Ground Support Unit

Functional unit within the Support Branch of the Logistics Section at the SEMS Field Response level that is responsible for the fueling, maintaining and repairing of vehicles, and the transportation of personnel and supplies.

Group

Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division) Groups are located between Branches (when activated) and Resources in the Operations Section.

H

Hazard

A hazard is any event that poses an uncommon threat to lives, property or the environment.

Helibase

The main location for parking, fueling, maintenance, and loading of helicopters operating in support of an incident. It is usually located at or near the incident base.

Helispot

Any designated location where a helicopter can safely take off and land. Some helispots may be used for loading of supplies, equipment, or personnel.

Hierarchy of Command (See Chain of Command)

I

Incident

An occurrence or event, either human-caused or by natural phenomena, that requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Action Plan

The plan developed at the field response level, which contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The plan may be oral or written.

Incident Base

Location at the incident where the primary logistics functions are coordinated and administered. (Incident name or other designator will be added to the term "Base.") The Incident Command Post may be collocated with the Base. There is only one Base per incident.

Incident Commander

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 or other incident facilities.

Incident Command System (ICS)

The nationally use standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

Incident Communications Center

The location of the Communications Unit and the Message Center.

Incident Management Team

The Incident Commander and appropriate General and Command Staff personnel assigned to an incident.

Incident Objectives

Statements of guidance and direction necessary for the selection of appropriate strategy(s), and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed.

Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.

Information Officer

A member of the Command Staff responsible for interfacing with the public and the media or with other agencies requiring information directly from the incident. There is only one Information Officer per incident. The Information Officer may have assistants. This position is also referred to as Public Affairs or Public Information Officer in some disciplines. At SEMS EOC levels, the information function may be established as a Coordinator or as a section or branch reporting directly to the EOC Director.

Initial Action

The actions taken by resources, which are the first to arrive at an incident.

Initial Response

Resources initially committed to an incident.

J

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.). (See Multi-jurisdiction)

Jurisdictional Agency

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

L

Landing Zone

See Helispot

Leader

The ICS title for an individual responsible for a functional unit, task forces, or teams.

Liaison Officer

A member of the Command Staff at the Field SEMS level responsible for coordinating with representatives from cooperating and assisting agencies. At SEMS EOC levels, the function may be done by a Coordinator and/or within a Section or Branch reporting directly to the EOC Director.

Life-Safety

Refers to the joint consideration of both the life and physical well-being of individuals.

Local Government

Means local agencies per Article 3 of the SEMS regulations. The Government Code 8680.2 defines local agencies as any city, city and county, county, school district or special district.

Local Government Advisory Committee (LGAC)

Committees established by the Director of OES to provide a forum for the exchange of information among the cities and counties of a Mutual Aid Region. The LGAC may develop a consensus of action and policy among local emergency managers on issues, policies, and programs of concern to local governments, and if necessary bring such concerns to the attention of the OES Executive Management. This Committee has become inactive with the advent of the Mutual Aid Regional Advisory Committees.

Logistics Section

One of the five primary functions found at all SEMS levels. The Section responsible for providing facilities, services and materials for the incident or at an EOC.

M

Management by Objectives

In SEMS field and EOC levels, this is a top-down management activity, which involves a three-step process to achieve the desired goal. The steps are: establishing the objectives, selection of appropriate strategy(s) to achieve the objectives, and the direction or assignments associated with the selected strategy.

Master Mutual Aid Agreement

An agreement entered into by and between the State of California, its various departments and agencies, and the various political subdivision, municipal corporations, and public agencies of the State of California to assist each other by providing resources during an emergency Mutual Aid occurs when two or more parties agree to furnish resources and facilities and to render services to each other to prevent and combat any type of disaster or emergency.

Marshaling Area

An area used for the completed mobilization and assemblage of personnel and resources prior to their being sent directly to the disaster affected area. Marshaling Areas are utilized particularly for disasters outside of the continental United States.

Medical Unit

Functional unit within the Service Branch of the Logistics Section at SEMS Field levels responsible for the development of the Medical Emergency Plan, and from providing emergency medical treatment of incident personnel.

Message Center

The Message Center is part of the Incident or EOC Communications Center and is collocated or placed adjacent to it. It receives, records, and routes information to appropriate locations at an incident or within an EOC.

Mobilization

The process and procedures used by all organizations federal, state and local for activating, assembling, and transporting all resources that have been requested to respond to or support an incident.

Mobilization Center

An off-incident location at which emergency service personnel and equipment are temporarily located pending assignment to incidents, release, or reassignment.

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, including the sharing of critical resources and the prioritization of incidents.

Multi-Agency Coordination System (MACS)

The combination of personnel, facilities, equipment, procedures and communications integrated into a common system. When activated, MACS has the responsibility for coordination of assisting agency resources and support in a multi-agency or multijurisdictional environment. A MAC Group functions within the MACS. MACS organizations are used within the California Fires Services.

Multi-Agency Incident

An incident where one or more agencies assist a jurisdictional agency or agencies. The incident may be managed under single or unified command.

Multijurisdictional Incident

An incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In ICS these incidents will be managed under Unified Command.

Mutual Aid Agreement

Written agreement between agencies and/or jurisdictions in which they agree to assist one another upon request, by furnishing personnel and equipment.

Mutual Aid Coordinator

An individual at local government, operational area, region or state level that is responsible to coordinate the process of requesting, obtaining, processing and using mutual aid resources. Mutual Aid Coordinator duties will vary depending upon the mutual aid system.

Mutual Aid Region

A mutual aid region is a subdivision of state OES established to assist in the coordination of mutual aid and other emergency operations within a geographical area of the state, consisting of two or more county (operational) areas.

O

Office of Emergency Services

The Governor's Office of Emergency Services.

Operational Area

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

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. The Section responsible for all tactical operations at the incident, or for the coordination of operational activities at an EOC. The Operations Section at the SEMS Field Response Level can include Branches, Divisions and/or Groups, Task Forces, Teams, Single Resources and Staging Areas. At the EOC levels, the Operations Section would contain Branches or Divisions as necessary because of span-of-control considerations.

Out-of-Service Resources

Resources assigned to an incident but unable to respond for mechanical, rest, or personnel reasons.

P

Planning Meeting

A meeting held as needed throughout the duration of an incident to select specific strategies and tactics for incident control operations and for service and support planning. On larger incidents, the planning meeting is a major element in the development of the Incident Action Plan. Planning meetings are also an essential activity at all SEMS EOC levels.

Planning Section

(Also referred to as Planning/Intelligence) One of the five primary functions found at all SEMS levels. Responsible for the collection, evaluation, and dissemination of information related to the incident or an emergency, and for the preparation and documentation of Incident or EOC Action Plans. The section also maintains information on the current and forecasted situation, and on the status of resources assigned to the incident. At the SEMS Field Response Level, the Section will include the Situation, Resource, Documentation, and Demobilization Units, as well as Technical Specialists. Other units may be added at the EOC level.

Procurement Unit

Functional unit within the Finance/Administration Section responsible for financial matters involving vendor contracts.

Public Information Officer

The individual at field or EOC level that has been delegated the authority to prepare public information releases and to interact with the media. Duties will vary depending upon the agency and SEMS level.

R

Region Emergency Operations Center (REOC)

Facilities found at State OES Administrative Regions. REOCs are used to coordinate information and resources among operational areas and between the operational areas and the state level.

Reporting Locations

Specific locations or facilities where incoming resources can check-in at the incident. (See Check-in).

Resources

Personnel and equipment available, or potentially available, for assignment to incidents or to EOCs. Resources are described by kind and type, and may be used in tactical support or supervisory capacities at an incident or at EOCs.

Resources Unit

Functional unit within the Planning Section at the SEMS Field Response level responsible for recording the status of resources committed to the incident. The Unit also evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.

S

Safety Officer

A member of the Command Staff at the incident or within an EOC responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety. The Safety Officer may have assistants.

Section

The organization level with responsibility for a major functional area of the incident or at an EOC, e.g., Operations, Planning/Intelligence, Logistics, Administration/Finance.

Section Chief

The ICS title for individuals responsible for command of functional sections: Operations, Planning/Intelligence, Logistics, and Administration/Finance. At the EOC level, the position will be Section Coordinator.

Service Branch

A Branch within the Logistics Section responsible for service activities at the incident. Includes the Communications, Medical and Food Units.

Single Resource

An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

Situation Unit

Functional unit within the Planning Section responsible for the collection, organization and analysis of incident status information, and for analysis of the situation as it progresses. Reports to the Planning Section Chief.

Span-of-control

The supervisory ratio maintained within an ICS or EOC organization. A span-of-control of five-positions reporting to one supervisor is considered optimum.

Special District

A unit of local government (other than a city, county, or city and county) with authority or responsibility to own operate or maintain a project (as defined in California Code of Regulations Section 2900(s) for purposes of natural disaster assistance. This may include a joint powers authority established under Section 6500 et.seq.of the Code.

Staging Area

Staging Areas are locations set up at an incident where resources can be placed while awaiting a tactical assignment. Staging Areas are managed by the Operations Section.

Staging Area Managers

Individuals within ICS organizational units that are assigned specific managerial responsibilities at Staging Areas (Also Camp Manager).

Standardized Emergency Management System (SEMS)

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

State Operations Center (SOC)

An EOC facility operated by the Governor's Office of Emergency Services at the state level in SEMS.

Strategy

The general plan or direction selected to accomplish incident or EOC objectives.

Supply Unit

Functional unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.

Support Branch

A Branch within the Logistics Section responsible for providing personnel, equipment and supplies to support incident operations. Includes the Supply, Facilities and Ground Support Units.

Support Resources

Non-tactical resources under the supervision of the Logistics, Planning/Intelligence, Finance/Administration Sections or the Command Staff.

Supporting Materials

Refers to the several attachments that may be included with an Incident Action Plan, e.g., communications plan, map, safety plan, traffic plan, and medical plan.

T

Tactical Direction

Direction given by the Operations Section Chief at the SEMS Field level which includes the tactics appropriate for the selected strategy, the selection and assignment of resources, tactics implementation, and performance monitoring for each operational area.

Task Force

A combination of single resources assembled for a particular tactical need, with common communications and a leader.

Team

(See Single Resource)

Technical Specialists

Personnel with special skills that can be used anywhere within the ICS or EOC organization.

Time Unit

Functional unit within the Finance/Administration Section responsible for recording time for incident or EOC personnel and hired equipment.

Type

Refers to resource capability. A Type 1 resource provides a greater overall capability due to power, size, capacity, etc., than would be found in a Type 2 resource. Resource typing provides managers with additional information in selecting the best resource for the task.

U

Unified Area Command

A Unified Area Command is established when incidents under an Area Command are multijurisdictional. (See Area Command and Unified Command)

Unified Command

In ICS, Unified Command is a unified team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by establishing a common

set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility or accountability.

Unit

An organizational element having functional responsibility. Units are commonly used in incident Planning/Intelligence, Logistics, or Finance/Administration sections and can be used in operations for some applications. Units are also found in EOC organizations.

Unity of Command

The concept by which each person within an organization reports to one and only one designated person.

7.3 Contact List

A list of agencies and personnel not internal to the organization, but critical to emergency operations will be provided upon request and with the written approval of the Emergency Management Manager.

Chapter 8 ATTACHMENTS

Attachment 1: Risk, Threat, and Hazard Identification Process

Attachment 2: Risk, Threat, and Hazard Analysis Process

Attachment 3: Business Process Meeting

Attachment 4: Cal Card Procedure

Attachment 5: Battle Rhythm

Attachment 6: Documentation Collection Plan

Attachment 7: Disaster Purchasing Website

Attachment 8: Resource Request Form (213RR)

Attachment 9: Sample Proclamation

Attachment 10: WebEOC Manual

Attachment 11: Operational Area Radio Standard Operating Procedure

Attachment 12: Plan Revision Process

Attachment 13: Plan Revision Schedule

Attachment 14: Integrated Preparedness Plan

Attachment 15: EOC Position Checklists