

Unified County of Orange
and
Orange County
Operational Area



Emergency Operations Plan
February 2019

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I. Operational Area Executive Board and Emergency Management Council Letter of Approval

**Orange County Operational Area Executive Board
County of Orange Emergency Management Council**

Representatives of Law Enforcement Mutual Aid, Police Chiefs' and Sheriff's Association, Fire and Rescue Mutual Aid, Fire Chiefs' Association, Public Works Mutual Aid, City Engineers and Public Works Directors Association, Orange County Board of Supervisors, Health Care Mutual Aid, City Manager's Association, League of Cities, County Agencies, School Districts, and Special Districts.

February 13, 2019

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

Dear Orange County Emergency Response and Recovery Officials:


Herewith is presented the Unified County of Orange and Orange County Operational Area Emergency Operations Plan. This Plan is the foundation for the response and recovery operations from the Operational Area (OA) and County's perspective.

The County of Orange Emergency Management Council (EMC), which governs the County of Orange Emergency Organization, has approved and concurs with this Plan. The Orange County Operational Area Executive Board has approved and concurs with this Plan on behalf of the OA Members. This Plan continues to enhance the County of Orange and Orange County 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) and the duties and responsibilities of the County and its departments in preparedness, response, and recovery procedures. A copy of the Unified County of Orange and Orange County Operational Area Emergency Operations Plan may be obtained through the Orange County Sheriff's Department, Emergency Management Division.

This Plan is a compilation of multiple public agencies, special districts, private partners and nonprofit organizations, all with disaster response interests. The Unified County of Orange and Orange County Operational Area Emergency Operations Plan is linked to jurisdiction, discipline and mutual aid plans and standard operational procedures.


This Plan is designed as a reference and guidance document. Its successful implementation is, as always, dependent upon the skills and abilities of the County participants. Continued revision and testing of this plan will ensure its viability and appropriateness in future events. We look to you as members of the County of Orange and Orange County's Operational Area Emergency Response Organization to assist in the ongoing process of program and capability improvement. Use of this Plan when responding to the EOC and during exercises will continue to enhance our ability to respond.

Sincerely,



County of Orange
Emergency Management Council
Chair

Sincerely,



Orange County
Operational Area Executive Board
Chair

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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II. Record of Changes

Date of Revision	Revision Description	Section/Component	Revision Completed By
February 2019	Updated information and statistics	2.1 Population and Demographics	Emergency Management Division
February 2019	Updated information	2.1 Employment and Industry	Emergency Management Division
February 2019	Updated information	2.1 History of Disasters	Emergency Management Division
February 2019	Complete revision, methodology, ranking, hazard profile	2.2 Hazard Ranking	Emergency Management Division
February 2019	Reassignment of Alert & Warning Group to Operations Section	2.4.3 Logistics Section, Communications/Alert and Warning Unit Leader	Emergency Management Division
February 2019	Addition of the Food Unit to Logistics Section	2.4.3.3 Food Unit	Emergency Management Division
February 2019	Addition of Alert and Warning Group Supervisor from Logistics	2.4.5 Operations Section, 2.4.5.9 Alert and Warning Group Supervisor	Emergency Management Division
February 2019	Activation level definition	2.5.6 Levels of EOC Activation	Emergency Management Division

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Chapter 1 Introduction

1.1 Purpose

The Unified County of Orange (County) and Orange County Operational Area (OA) Emergency Operations Plan (EOP) provides guidance and procedures for the County and the County as the OA to prepare for and respond to 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 plan incorporates and complies with the principles and requirements found in state and federal laws, regulations and guidelines. It is intended to conform to the requirements California's Standardized Emergency Management System (SEMS) as defined in Government Code Section 8607 (a) and the National Incident Management System (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 plan describes the emergency organization and the process of preparing, responding to, and recovering from disasters. Use of the plan will differ according to the needs of the reader. All response personnel need to be familiar with the plan as a whole and those parts of the plan specific to their needs, roles and responsibilities. The plan 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

The Unified County of Orange and Orange County Operational Area Emergency Operations Plan is applicable to all agencies and individuals having responsibilities for emergency preparedness, 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 Emergency Operations Plan:

- 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 Emergency Operations Plan 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 plan. 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 Emergency Operations Plan defines responsibilities, establishes an emergency organization, defines lines of communications, and is designed in accordance with the statewide Standardized Emergency Management System and the National Incident Management Systems. Incorporating the FEMA Comprehensive Preparedness Guide (CPG) 101 version 2.0 and State of California Emergency Plan best practices, this Emergency Operations Plan is designed to be read, understood and exercised prior to an emergency.

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

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/OAC will normally operate from and be supported by County and Operational Area Emergency Operations Center.

The intended audience for this Emergency Operations Plan consists of County of Orange departments, elected officials, OA jurisdictions and private organizations representatives that are responsible for staffing positions within the County and OA Emergency Operations Center (EOC). This plan 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 plan 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, special districts, and school districts, etc.) in the geographic area of the County, which consists of the County, cities, special districts, and school districts. The OA is an intermediate level of the State emergency organization and provides coordination and communication between and with it's the political subdivisions and the State. The California Emergency Services Act also assigns the County responsibility as the OA lead agency.
- If a disaster occurs in the unincorporated areas of the county or use of county resources is 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 Operational Area Coordinator (OAC) will 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 assigned to the OA Lead as specified in the California Code of Regulations, Title 19, Section 2409 (or §2409).
- 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 uses the precepts of the Incident Command System (ICS) as adopted in the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) in emergency response operations.
- 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.
- 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 Unified County and OA 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.

1.4 Preparing and Responding with the Whole Community Strategy

The County of Orange strives to incorporate the Whole Community perspective in its emergency planning and encourages Operational Area jurisdictions to do the same. By planning for the Whole Community, complexities in the diversity in Orange County are assimilated into the County planning strategy.

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, supervision, 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 are transportation disadvantaged.

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 November 2018 and provided valuable feedback.

In order to meet the unique needs of children in disasters, the Operational Area formed the Kids in Disasters (KIDS) Working Group as a sub-committee of the Disabilities and Access and Functional Needs Working Group. The mission of the working group is to engage public and private community, government and healthcare organizations and individuals to promote coordinated efforts and partnerships to ensure that infants' and children's needs are met before, during, and after disasters. Integrating children (0-18) into disaster planning requires special emergency preparedness and planning. Disasters have proven evident that children are vulnerable and require additional support during emergency situations, especially when displaced from their parents or guardians. The physical and psychological damage sustained by children can far outweigh the same effects inflicted on grown members of society, including children with disabilities and access and/or functional needs. The KIDS Working Group will assist in identifying and supporting community programs that help meet the physical, mental, and emotional needs of children in disasters.

Furthermore, the County of Orange is committed to maximizing compliance with the Americans with Disabilities Act and providing the best service to Orange County residents and visitors. As such, the County of Orange adheres to and encourages Operational Area jurisdictions to follow the policy below:

- Disability will not prevent accessibility to services or facilities provided.
- Do not exclude or deny benefits of any sort based on a disability or access or functional need.
- Work to accommodate people with disabilities and 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.
- Shelter people with disabilities and access and functional needs with their families, friends and/or neighbors and in the most integrated setting possible.

Chapter 2 Concept of Operations

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:

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.

Population and Demographics

As of January 2017, the California Department of Finance estimates Orange County's population as 3,194,024. Of those, about 125,792 live in the unincorporated areas of the County.¹ Community diversity is shown in Table 1 below:

**Table 1 – Orange County Population by Race
July 1, 2018**

Percentage of Total Orange County Population	
White alone, Not Hispanic or Latino	40.5%
Hispanic or Latino	34.2%
Asian alone	21%
Black or African American alone	2.1%
American Indian and Alaskan Native alone	1%
Native Hawaiian and Other Pacific Islander alone	0.4%
Two or More Races	3.5%

Source: United States Census Bureau²

This diversity of origin emphasizes the need for effective communication in languages other than English during disasters. Roughly 45.7% of Orange County residents (over age 5) speak a language other than English at home, 20.1% speak English less than "very well" and 30% were born outside of the United States.³ In 2012, widely spoken languages other than English spoken in Orange County households included Spanish, Vietnamese, Korean, Chinese, Tagalog, Persian, Arabic and Japanese.⁴

The U.S. Census Bureau estimates that 8.5% of the non-institutionalized population in Orange County is living with a disability, which is defined as long-lasting physical, mental, or emotional conditions. Types of disabilities and population groups are shown in Table 2 below:

¹ E-1 Current Population Estimates - California Department of Finance. Retrieved February 14, 2018, from http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/documents/E-1_2017PressRelease.pdf

² U.S. Census Bureau. (2018-July-01). QuickFacts, Orange County, California. Retrieved from <https://www.census.gov/quickfacts/orangecountycalifornia>

³ 2016 American Community Survey – 1-Year Estimates – United States Census Bureau. Retrieved February 14, 2018, from <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml>

⁴ Languages Other Than English Spoken at Home (Orange County, 2012). Retrieved February 14, 2018, from <http://cpehn.org/chart/languages-other-english-spoken-home-orange-county-2012>

Table 2 – Orange County Disability Demographics

Population	0-4 years 189,509		5-17 years 530,692		18-64 years 1,987,981		65 + years 406,786	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Disability								
Hearing Difficulty	654	0.3%	2,469	0.5%	22,542	1.1%	52,818	13.0%
Vision Difficulty	511	0.3%	3,847	0.7%	24,510	1.2%	23,421	5.8%
Cognitive Difficulty	-	-	-	-	47,635	2.4%	35,914	8.8%
Ambulatory Difficulty	-	-	-	-	48,921	2.5%	79,967	19.7%
Self-Care Difficulty	-	-	-	-	20,677	1.0%	35,873	8.8%
Independent Living Difficulty	-	-	-	-	40,623	2.0%	62,194	15.3%

Source: U.S. Census Bureau, Disability Characteristics, 2016 American Community Survey 5-Year Estimates, Table S1810

Employment and Industry

As of December 2017, roughly 46% of the Orange County workforce was employed by service industries (including Information, Professional and Business Services, Educational and Health Services, Leisure and Hospitality, and Other Services). Approximately 9% of the workforce was employed by the manufacturing sector and 10% were employed in the retail trades. The top employers in Orange County were the Walt Disney Company, The University of California, the County of Orange, St. Joseph's Health, Kaiser Permanente, and Boeing.⁵ As of December 2017, the unemployment rate in Orange County was 2.8%.⁶ Orange County hosts 42 million visitors annually.⁷

79% of the workforce over the age of 16 commutes alone, 9.2% carpool and 2.1% use public transportation.⁸ The number of people commuting from surrounding areas to industrial and business centers creates a greater dependency on roads, communications, accessibility, and emergency plans.

History of Disasters

Since 1953, Orange County has received 29 disaster proclamations including 21 Presidential Disaster Declarations, three Presidential Emergency Proclamations, and five Fire Management Assistance declarations. Fire and flood are recurring threats with earthquake.

⁵ State of California Employment Development Department. Retrieved February 14, 2018, from <http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfil>

⁶ Labor Market Information. Retrieved February 14, 2018, from <http://www.labormarketinfo.edd.ca.gov/>

⁷ About OCVA. Retrieved February 14, 2018, from <http://www.visittheoc.com/maps-and-information/about-ovca/>

⁸ County of Orange, OC Community Indicators: 2017. Retrieved February 15, 2018, from <http://www.ocgov.com/civicax/filebank/blobdload.aspx?BlobID=64553>

Figure 1 – Orange County Federal Declared Disasters

Disaster Number	Year	Incident Type	Incident Title
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
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

2.2 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 2018 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 Federal Emergency Management Agency⁹ and the National Fire Protection Association¹⁰. 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 the County and OA EOP and the County of Orange Local Hazard Mitigation Plan to fully describe the risks posed by various hazards to Orange County and its political subdivisions. The County and OA jurisdictions will review and update the hazard analysis regularly in conjunction with the review of this Emergency Operations Plan (EOP).

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.

⁹ FEMA Local Hazard Mitigation Planning Handbook. Worksheet 5.1: Hazard Summary Worksheet.

¹⁰ NFPA 1600 – Disaster/Emergency Management and Business Continuity Programs (2016). 5.2 – Risk Assessment

- Low: Negligible. Little building damage and trivial impact to infrastructure and critical facilities.

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 	<ul style="list-style-type: none"> • Act of War • Flood/Levee/Reservoir Failure • Pandemic/High Consequence Disease • SONGS • Terrorism
	Moderate	<ul style="list-style-type: none"> • Aircraft Accident • Sea Level Rise • Wildland and Urban Fire • Excessive Temperature • Flood/Storm 	<ul style="list-style-type: none"> • Drought • Rail Accident • Oil Spill 	<ul style="list-style-type: none"> • Tsunami
	Low	<ul style="list-style-type: none"> • Disease Outbreak • Hazardous Materials Release • High Winds 	<ul style="list-style-type: none"> • Utility Failure • Landslide/Mudslide/Debris Flow • Vector-Borne Disease 	

2.2.1 Act of War

Impact: High

Probability: Unlikely

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

Definition

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.¹¹ 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.¹²

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. Potential incidents could include chemical, biological, radiological, nuclear, or explosive devices targeted at local critical infrastructure and key resources (CIKR).

In addition to local CIKR 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 employs 860 personnel, and covers about 5,000 acres and has 56 miles of railroad track for 130 rail cars and locomotives. The installation loads and unloads about 100 Navy ships each year. Joint Forces Training Base Los Alamitos is home to the CNG’s 40th Infantry Division and the United States Army Reserves 79th Sustainment Support Command headquarters. 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 Academy and STARBASE Academy. The facility operates the last two remaining military

¹¹ 18 U.S. Code §2331

¹² CGC §8558

runways in the greater Los Angeles and Orange County region. The base employs over 300 full and part-time personnel.¹³

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. Additional impacts to be considered depending upon the size, scope, and location of Acts of War within the geographic area of Orange County may include decontamination, mass evacuations, sheltering and fallout shelters. California has established a number of standing War Orders should an Act of War occur.¹⁴ While these consequences can be addressed through normal emergency response and recovery plans, Acts of War also have the unique potential to disrupt government operations and create uncertainty about government authority.

- Government priorities may change, and associated budget allocation changes may impact the ability of government agencies to perform their normal missions.
- Some actions taken by government in the past have been challenged in courts leading to ambiguity in their authority to undertake those actions.

Acts of War also 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).

¹³ Maintaining and Expanding California's National Security Mission, Report and Recommendations of the Governor's Military Council. Retrieved June 2015, from https://www.gov.ca.gov/wp-content/uploads/2017/09/GOV_MIL_REPORT_June.pdf

¹⁴ State of California, California Emergency Plan

2.2.2 Aircraft Accident

Impact: Moderate

Probability: Likely

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

See Aircraft 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.

Definition

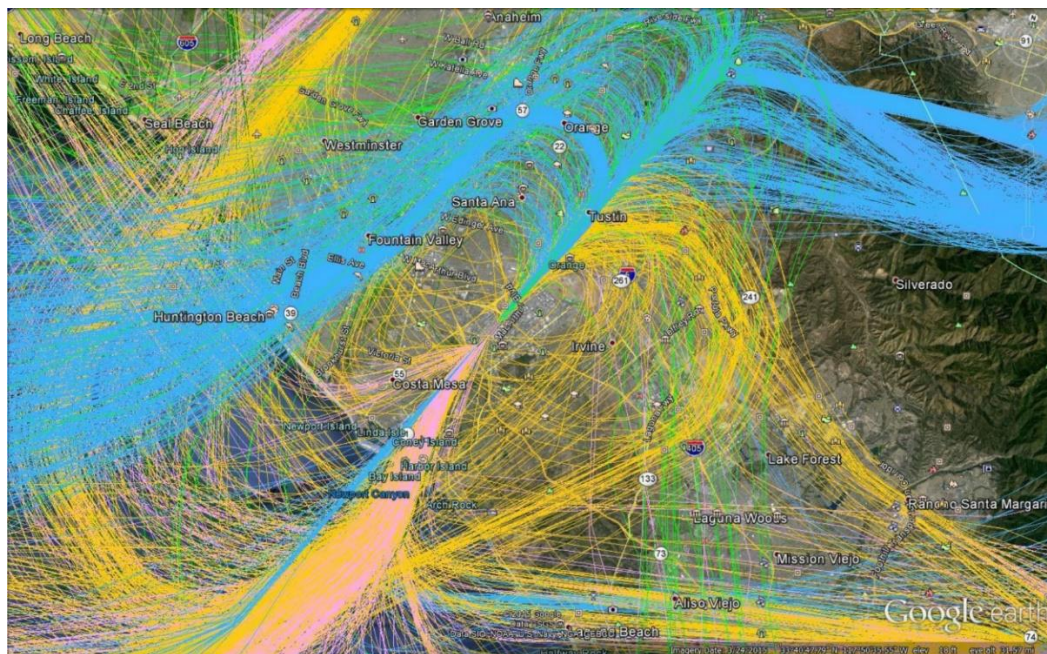
This hazard includes the following categories: On-airport accidents (including runway overruns or undershoots); Off-airport accidents (in residential, business, industrial areas, or over water); In-air collisions involving other aircraft; general, commercial, public agency, or military owners

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 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 and has an aircraft parking capacity of 600 small general aviation aircraft and serves as a base for OCFA, Anaheim, and CHP helicopters.
- **John Wayne International Airport (KSNA)** –KSNA serves an average of over 10 million commercial passengers with several hundred thousand total flight operations. JWA limits commercial flight operations to the hours of 0700 – 2200 hrs. to comply 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 hrs. to comply 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.



The image above displays a snapshot of daily air traffic associated with John Wayne Airport.

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. A major aircraft accident that occurs in a heavily populated area can result in considerable loss of life and property damage. The impact of a disabled aircraft creates the likely potential for multiple explosions resulting in intense fires. Regardless of where the crash occurs, the resulting explosions and fires have the potential to cause injuries, fatalities, and the destruction of property at and adjacent to the impact point. Damage assessment and disaster relief efforts associated with an aircraft accident will likely require support from local governments, private organizations, and state and federal agencies.

2.2.3 Civil Unrest

Impact: High

Probability: Likely

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

Definition

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, and Trump Rally in April 2016.

The 1992 Los Angeles riot began in South Los Angeles and spread into other areas of the metropolitan area over a 6-day period. Widespread looting, assault, arson, and murder occurred during the riots, and estimates of property damage topped \$1 billion. The rioting ended after soldiers from the California Army National Guard, along with U.S. Marines from Camp Pendleton were called in to stop the rioting after the local police could not handle the situation. In total, 53 people were killed during the riots and over 2,000 people were injured.¹⁵

¹⁵ Wilson, Stan. 2012. “Riot anniversary tour surveys progress and economic challenges in Los Angeles.” CNN. April 25. Retrieved from http://www.cnn.com/2012/04/25/us/california-postriot/index.html?hpt=us_t4

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.

- **The 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 Operational Area, 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, including delivery of services:** 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:** Private property often serves as a target 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.
- **Facilities:** Often in acts of civil unrest government facilities become the focal point of protests or targets for vandalism. 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.
- **Infrastructure:** Similar to government facilities, public and private infrastructure can become targets of civil unrest. Damage to transportation, communications, or utilities infrastructure could further exacerbate the situation.
- **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 Condition of the County:** Civil unrest could prove economically crippling to Orange County. Large-scale events are usually accompanied by widespread absenteeism and damage to private property.
- **Public Confidence in the Local Government:** 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.

2.2.4 Dam, Levee, Reservoir Failure

Impact: High

Probability: Unlikely

Related Hazard(s): Earthquake, Flood/Storm

See Dam and Reservoir Failure 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.

Definition

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 sitting, 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 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.

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.

2.2.5 Disease Outbreak (Large Scale)

Impact: Low

Probability: Likely

Related Hazard(s): Pandemic / High Consequence Diseases; Vector-Borne Diseases

See Disease Outbreak Response Annex (DORA) 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.

Definition

Certain communicable diseases are required to be reported to the local health department according to the California Code of Regulations. The Orange County Health Care Agency (OCHCA) Epidemiology and Assessment (E&A) division's medical directors, public health nurses, and epidemiologists investigate individual cases and outbreaks of reported communicable diseases.

See <http://ochealthinfo.com/phs/about/dcepi/epi/physprov/report> for the list of reportable diseases. Statistical data on communicable diseases in the County are available at <http://www.ochealthinfo.com/phs/healthinfo/cdis>.

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. Current disease outbreak threats include, but are not limited to:

- Foodborne illness, including norovirus
- Influenza, including seasonal, novel, and/or pandemic influenza strains
- Vaccine-preventable diseases, such as measles, pertussis and hepatitis
- Vector-borne diseases, such as West Nile virus, typhus, or Zika
- Emerging pathogens, including Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and viral hemorrhagic fevers such as Ebola
- Centers for Disease Control and Prevention (CDC) Bioterrorism Agents

Select examples of 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.

Probability

Small clusters and outbreaks of communicable diseases occur on a monthly basis in Orange County and are investigated by the Orange County Health Care Agency. Characteristics of a disease agent, which could cause a large disease outbreak, include:

- Mode of transmission
- Virulence/severity
- Immunity of population
- Geographic spread
- Presence or distribution of vector (if applicable) in area.

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 2017-2018, the Centers for Disease Control and Prevention (CDC) estimates there were 48.8 million people sick with influenza, 22.7 million medical visits, 959,000 hospitalizations and 79,400 deaths from influenza in the U.S. In Orange County, influenza activity was higher than reported in the previous five influenza seasons. There were more influenza-related deaths (24) in persons under 65 years in age than in any season since the 2009 H1N1 pandemic. 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.

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

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.

Measles

Measles is very contagious viral illness spread through the air through coughing and sneezing. Measles is characterized by fever (as high as 105°F) and malaise, cough, runny nose and conjunctivitis, followed by a rash. The rash spreads from head to trunk to lower extremities. Measles is usually a mild or moderately severe illness. However, measles can result in complications such as pneumonia, encephalitis, and death. Pneumonia occurs in about 1 out of every 20 children with measles. Approximately one case of encephalitis and one to two deaths may occur for every 1,000 children with measles.

The average incubation period for measles is 8–12 days, and the average interval between exposure and rash onset is 14 days, with a range of 7–21 days. Persons with measles are usually considered infectious from four days before until four days after onset of rash with the rash onset being considered as day zero.

One rare long-term consequence of measles virus infection is subacute sclerosing panencephalitis (SSPE), a fatal disease of the central nervous system that generally develops 7–10 years after infection. Among persons who contracted measles during the resurgence in the United States (U.S.) in 1989–1991, the risk of SSPE was estimated to be 4–11 cases/100,000 cases of measles.

Measles can be prevented with MMR (measles, mumps, and rubella) vaccine, which is part of the routine childhood vaccination schedule with the first dose at 12-15 months and the second dose at 4-6 years of age. Teenagers and adults should also be up to date on MMR vaccination.

Measles Cases & Outbreaks

In 2000, the United States declared that naturally occurring measles was eliminated in this country. However, cases and outbreaks still continue every year as travelers bring in measles from countries where it is still circulating regularly, including parts of Europe, Asia, the Pacific and Africa. Over the past 5 years, between 86 and 188 cases were reported each year with the exception of 2014, when the United States experienced a record number of measles cases, with 667 cases from 27 states reported; this is the greatest number of cases since the measles elimination was documented in the U.S. in 2000.

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.
- 2014: The U.S. experienced 23 measles outbreaks in 2014, including one large outbreak of 383 cases, occurring primarily among unvaccinated Amish communities in Ohio. Many of the cases in the U.S. in 2014 were associated with cases brought in from the Philippines, which experienced a large measles outbreak.

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.

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 cases, number exposed, and type of investigation/follow-up

measures needed. 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.

2.2.6 Drought

Impact: Moderate

Probability: Possible

Related Hazard(s): Climate Change

Definition

Unlike most other natural hazards, drought is not a sudden, catastrophic occurrence. It is often referred to as a "creeping phenomenon" and its impacts vary from region to region. Drought can therefore be difficult for people to understand. Because drought can occur over several years, it is almost impossible to determine when a drought begins and ends. Many government agencies, the National Oceanic and Atmospheric Administration (NOAA) and the California Department of Water Resources, as well as academic institutions, such as the University of Nebraska-Lincoln's National Drought Mitigation Center, generally agree that there is no clear definition of drought. Drought is highly variable depending on what part of a state or the country one is situated. In the most general sense, drought originates from a deficiency of precipitation over an extended period of time--usually a season or more--resulting in a water shortage for some activity, group, or environmental sector. Its impacts result from the interplay between the natural event (less precipitation than expected) and the demand people place on water supply, and human activities can exacerbate the impacts of drought.

Droughts may be measured by a number of indicators, including:

- Levels of precipitation
- Soil conditions (moisture)
- Temperature

There are four ways in which droughts can be viewed:

Meteorological – a measure of departure of precipitation from normal. Due to climatic differences, what may be considered a drought in one location of the country might not be a drought in another location.

Agricultural – refers to a situation where the amount of moisture in the soil no longer meets the needs of a particular crop.

Hydrological – occurs when surface and subsurface water supplies are below normal.

Annual Indicators – the California Department of Water Resources uses three indicators to evaluate water conditions in California. These are snowpack, precipitation, and reservoir storage as percentages of the annual average.

Probability

Historically, California has experienced severe drought conditions. A significant drought, reported by many of the ranchers in southern California, occurred in 1860. 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.

The approved 2013 State Hazard Mitigation Plan (SHMP) states that from 1972 to 2009, there have been eight drought-related State Emergency Proclamations in California. From 2014 through 2016, the State of California appropriated \$3.9 billion for drought response.

California experienced the latest drought event covering a 5-year period from 2012 through 2016. Water years 2012 and 2013 were dry statewide, and the 2013 record-low precipitation has worsened California's conditions for the 2014 water year (started October of 2013). Statewide reservoir storage was down significantly and impacts of several dry years in a row caused significant water delivery issues in California. In January 2014, a statewide Gubernatorial State of Emergency Proclamation was issued for the drought emergency. In April 2016, the Governor lifted the drought emergency declaration while retaining clauses that prohibits wasteful practices and advances measures to make conservation a way of life. For more information on drought conditions in California, visit:

<http://www.water.ca.gov/waterconditions/droughtinfo.cfm>.

Regulatory Environment

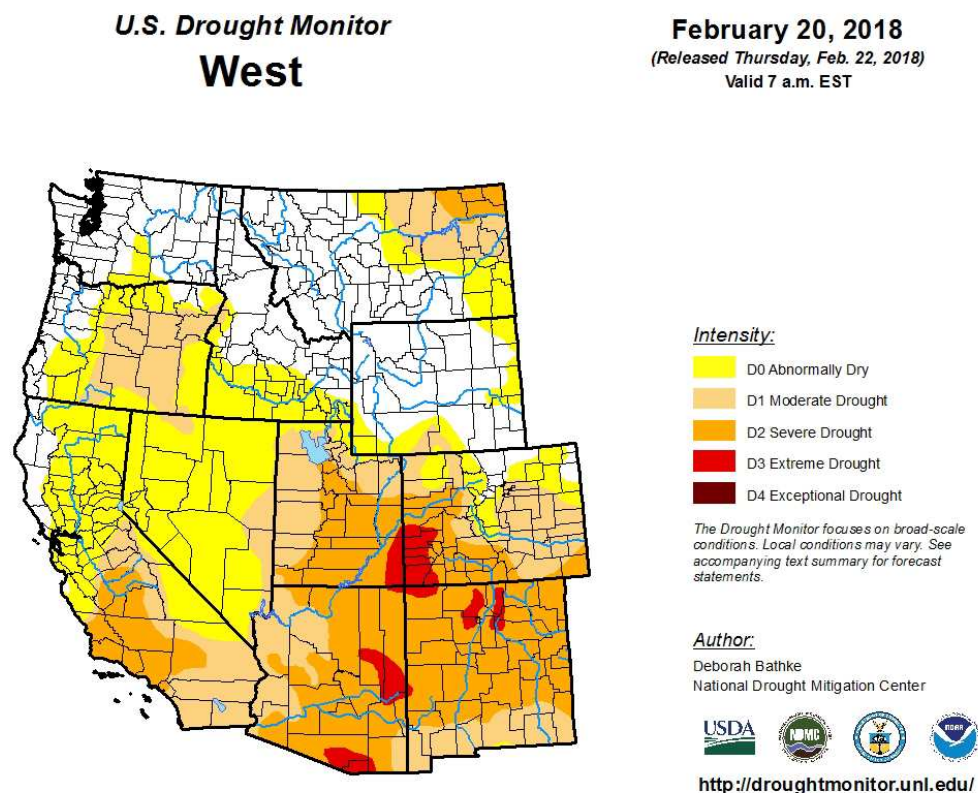
Several bills have been introduced into Congress in an effort to mitigate the effects of drought. In 1998, President Clinton signed into law the National Drought Policy Act, which called for the development of a national drought policy or framework that integrates actions and responsibilities among all levels of government. In addition, it established the National Drought Policy Commission to provide advice and recommendations on the creation of an integrated federal policy. The most recent bill introduced into Congress was the National Drought Preparedness Act of 2003, which established a comprehensive national drought policy and statutorily authorized a lead federal utility for drought assistance. Currently there exists only an ad-hoc response approach to drought unlike other disasters (e.g., hurricanes, floods, and tornadoes) which are under the purview of FEMA.

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 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.

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.

On a statewide basis, a number of regulatory requirements and documents address planning for drought in California, most notably the 2015 California Drought Contingency Plan.



Source: <http://droughtmonitor.unl.edu/>

Impact

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.

Drought is one of the few hazards that has the potential to directly or indirectly impact each and every person within Orange County, as well as adversely affect the local economy. The impacts would be water restrictions associated with domestic supplies, agricultural losses and economic impacts associated with those losses, economic impacts to tourism and recreation industries, hydroelectric power reductions, increased wildland firefighting costs, and increased costs for water. The magnitude of the drought's impact will be directly related to the severity and length of the drought. Secondary effects include increased susceptibility to wildfires and pine beetle infestations, which can weaken pine trees and make them more susceptible to drought conditions. Increased groundwater pumping during times of drought can contribute to land subsidence problems. However, the basins in Orange County are managed basins, restricting over-pumping and managing recharge operations.

Impacts are commonly referred to as direct or indirect. Reduced crop, rangeland, and forest productivity; increased fire hazard; reduced water levels; increased livestock and wildlife mortality rates; and damage to wildlife and fish habitat are a few examples of direct impacts. The consequences of these impacts illustrate indirect impacts. For example, a reduction in crop, rangeland, and forest productivity may result in reduced income for farmers and agribusiness, increased prices for food and timber, unemployment, reduced tax revenues because of reduced expenditures, increased crime, foreclosures on bank loans to farmers and businesses, migration, and disaster relief programs. Direct or primary impacts are usually biophysical. Conceptually speaking, the more removed the impact from the cause, the more complex the link to the cause. In fact, the web of impacts becomes so diffuse that it is very difficult to come up with financial estimates of damages. The impacts of drought can be categorized as economic, environmental, or social.

Many economic impacts occur in agriculture and related sectors, including forestry and fisheries, because of the reliance of these sectors on surface and subsurface water supplies. In addition to obvious losses in yields in both crop and livestock production, drought is associated with increases in insect infestations, plant disease, and wind erosion. 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.

Income loss is another indicator used in assessing the impacts of drought because so many sectors are affected. Reduced income for farmers has a ripple effect. Retailers and others who provide goods and services to farmers face reduced business. This leads to unemployment, increased credit risk for financial institutions, capital shortfalls, and loss of tax revenue for local, state, and federal government. Less discretionary income affects the recreation and tourism industries. Prices for food, energy, and other

products increase as supplies are reduced. In some cases, local shortages of certain goods result in the need to import these goods from outside the stricken region.

Environmental losses are the result of 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. 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. The degradation of landscape quality, including increased soil erosion, may lead to a more permanent loss of biological productivity of the landscape. Although environmental losses 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.

Social impacts mainly involve public safety, health, conflicts between water users, reduced quality of life, and inequities in the distribution of impacts and disaster relief. Many of the impacts specified as economic and environmental have social components as well. Population out-migration is a significant problem in California's Central Valley, as agricultural jobs are reduced. Migration is usually to urban areas within the stressed area or to regions outside the drought area. However, when the drought has abated, these persons seldom return home, depriving agricultural areas of valuable human resources necessary for economic development. For the urban area to which they have immigrated, they place ever-increasing pressure on the social infrastructure, possibly leading to greater poverty and social unrest.

In terms of calculations of the replacement value of the potential loss of structures due to drought, additional analysis could not be made due to data limitations. A mitigation action item was created to address this data limitation and it is hoped that funds will be available to correct for this in the next plan update. In the long-term, the County of Orange must continue to focus on mitigation actions to enhance local water storage, recycle water projects, increased water conservation programs, and looking at environmental erosion control projects without causing a significant economic disruption. Drought mitigation has a cascading effect and impact on other natural hazards including flooding and wildland fire.

Other economic losses occur for water utilities and small groundwater well owners. Income loss for water retail agencies can result in the need to increase water rates in order to cover fixed operational costs. As groundwater becomes unavailable, agencies or properties are required to drill deeper wells or identify alternate sources that are often more expensive and sometimes limited. Some water utilities are having 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.

2.2.7 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 Response Plan 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.

Definition

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 Society (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. While any of the multiple fault zones in Southern California can create hazards for Orange County. There are 5 documented fault zones that run through Orange 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 last significant earthquake on this fault was the Long Beach quake in 1933 that was a magnitude 6.3. This quake caused an estimated 40 million dollars in damage throughout the region and there were 115 -120 fatalities. While earthquakes remain unpredictable the US Geological survey has repeatedly stated (as recent as 2016) that the San Andreas Fault is "long overdue" for a major quake. A Southern California Earthquake Center (SCEC) report (SCEC, 1995) indicated that the probability of an earthquake of Magnitude 7 or larger in Southern California before the year 2024 is 80 to 90%.

Impact

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. Many families could be separated if the earthquake should occur during working hours. 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.

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

- Earthquakes can cause large and sometimes disastrous landslides and mudslides. Any steep slope is vulnerable to slope failure, often as a result of loss of cohesion in clay-rich soils.
- Earthquakes can also cause 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.

- Another secondary effect of earthquakes that is often observed in low-lying areas near water bodies is ground 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 away from water bodies in locations where the ground water is near the earth's surface.
- Tsunamis are formed as a result of earthquakes, volcanic eruptions, or landslides that occur under the ocean. When these events occur, huge amounts of energy are released as a result of quick, upward bottom movement. A wave is formed when huge volumes of ocean water are pushed upward. A large earthquake can lift large portions of the seafloor, which will cause the formation of huge waves.

Impact consideration resources include:

- USGS Fault Mapping: <https://earthquake.usgs.gov/hazards/qfaults/>
- Liquefaction Mapping: <https://geomaps.wr.usgs.gov/sfgeo/liquefaction/maps.html>
- Tsunami Mapping: https://nctr.pmel.noaa.gov/inundation_mapping.html

Scenario maps and impact modeling is available at:

- Shakemap: <https://earthquake.usgs.gov/data/shakemap/>

2.2.9 Excessive Temperature

Impact: Moderate

Probability: Likely

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

See Extreme Temperature 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.

Definition

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.

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 2015 and 2018, Orange County reached temperatures requiring implementation of the Excessive Temperature Annex three times for a heat event.

While cold weather is regarded as a rarity in Southern California, it does occur and poses a hazard to various populations. January 2007 was one of the coldest years ever in the state of California. 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. The NWS advised the temperatures would drop, reaching the high teens to low 20s in most areas at night, and continued daytime lows in the mid-40s. This prompted Governor Schwarzenegger to call upon Californians to take common sense steps to prepare for the cold and freezing temperatures, by preparing cold weather safety tips. But not all Californians have the ability to keep warm. Therefore, the state made 11 National Guard armories statewide available and began looking at other facilities to use during the extreme cold weather event. In 2018, Orange County implemented the Excessive Temperature Annex one time for a cold event reaching temperatures close to freezing.

Both excessive heat and cold events have impacted the Southern California region in recent history. The National Weather Service maintains records of fatalities caused by weather phenomenon. In 2015, there were 45 deaths nationally due to heat related illnesses. The ten-year average for heat deaths stands at 113 per year nationally. In 2018 two heat related death were reported by the Orange County Sheriff's Department, Coroner Division.

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.

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).

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).

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 danger²⁰.

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 itself²¹.

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

²⁰ Retrieved on December 6, 2018, from <https://www.webmd.com/first-aid/understanding-heat-related-illness-basics>;

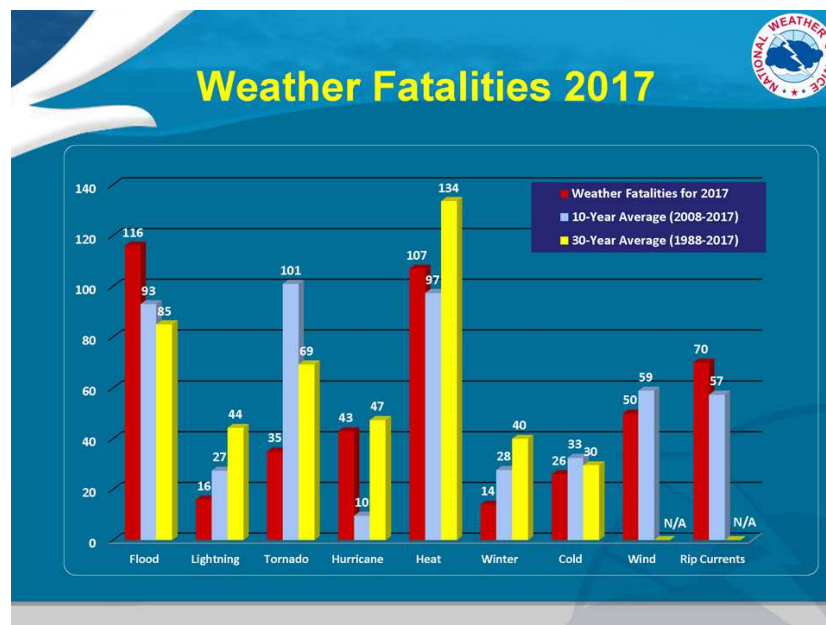
²¹ Retrieved on December 6, 2018, from <https://www.webmd.com/first-aid/understanding-heat-related-illness-basics>;

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 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 stroke²².

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.



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.

²² Retrieved on December 6, 2018, from <https://www.webmd.com/first-aid/understanding-heat-related-illness-basics>

2.2.10 Flood/Storm**Impact:** Moderate**Probability:** Likely**Related Hazard(s):** Climate Change, Dam/Levee/Reservoir Failure, Debris Flow,**Definition**

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.

Probability

Orange County's 948 square miles are comprised of mountain terrain and floodplain. 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. Although there is a countywide system of flood control facilities, the majority of these are inadequate for conveying runoff from major storms. 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, and 2017. The greatest flood in terms of water flow was in 1862 with an estimated flow rate of 317,000 cubic feet per second.

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, sighting 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

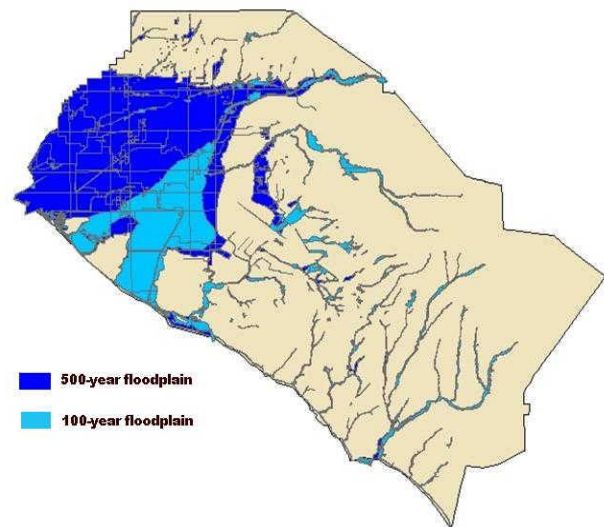
Federal Declarations for Flood/Storm Incidents in Orange County	
Date	Declaration Number
2017	DR-4305
2011	DR-1952
4/2005	DR-1585
2/2005	DR-1577
1998	DR-1203
3/1995	DR-1046
1/1995	DR-1044
1993	DR-1005
1993	DR-979
1992	DR-935
1988	DR-812
1983	DR-677
1980	DR-615
1978	DR-547
1978	DR-566
1969	DR-253

billion in damages. More than 110 acres would be flooded with 3 feet of water and 255,000 structures damaged.

San Juan Creek and Trabuco Creek Channels over the years have sustained numerous damages caused by heavy rainfall, with the most recent damage occurring in January 2005, December 2010, and January 2017.

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.



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.

2.2.11 Hazardous Materials Release

Impact: Low

Probability: Likely

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

Definition

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 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 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 of Orange'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.

Impact

A hazardous substance poses a threat due to its inherent characteristics. Its actual impact, however, depends on where the incident occurs and on 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 occurrence include: fatalities, injuries, system disruption, environmental damage, and property damage.

2.2.12 High Winds

Impact: Low

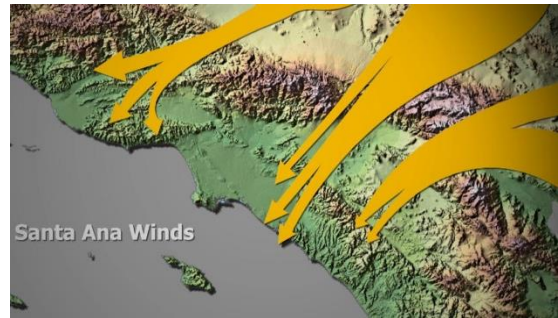
Probability: Likely

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

Definition

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.



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. During the period from 1996 through 2018, Orange County has had 104 High Wind events.

Impact

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

- The most common is fire fanned by the high winds. For example, on October 9, 2017, Southern California was in the midst of a “Red Flag Warning” with strong Santa Ana winds and low relative humidity for the entire area. Critical fire weather conditions were in existence. Santa Ana winds were a major contributing factor to the Canyon 2 Fire’s unpredictable behavior and rapid progression. Hot, dry winds continued to fan the fire throughout the week of October 9-10. Flame heights were reported as high as 100 feet. The Canyon 2 burned 9,200 acres and damaged or destroyed 79 structures.
- 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.

2.2.13 Large Special Events

Impact: High

Probability: Possible

Related Hazard(s): Civil Disturbance, Disease Outbreak, Terrorism

Definition

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

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, and rock concerts and festivals tend to produce spectator-generated incidents, while air shows and auto races tend to produce more participant-generated occurrences.

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 lone wolf 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 become overwhelmed.

Lastly, a natural disaster such as an earthquake, could have severe negative impacts with the ability to mass evacuate and offer sufficient sheltering. Some of the potential consequences are overcrowding, unaccompanied minors, and separated family members.

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.

2.2.14 Misinformation

Impact: High

Probability: Likely

Related Hazard(s): Cyber/Hacking, Terrorism

Definition

False or inaccurate information, especially that which is deliberately intended to deceive.

Probability

In the past, the public and organizations learned and shared information through traditional methods – notifications from law enforcement, news media, and manual call trees to seek information from and to share information with contacts in an impacted area. But in a modern, digital world, social media has become an efficient, real-time news source used by organizations around the globe; in many cases, even images on the evening news are being sourced from social media.²³

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. According to a 2016 Pew Research Center survey, 62 percent of adults go to social media outlets for their news.²⁴ Similarly, more than 75% of the United States adult population have access to social media applications.²⁵

The Director of National Intelligence, Daniel Coats, noted in 2018 that:

Domestic and foreign challenges to democracy and institutional capacity will test governance quality globally in 2018, especially as competitors manipulate social media to shape opinion... More governments are using propaganda and misinformation in social media to influence foreign and domestic audiences. In 2016, Freedom House identified 30 countries, including the Philippines, Turkey, and Venezuela, whose governments used social media to spread government views, to drive agendas, and to counter criticism of the government online.²⁶

²³Retrieved from http://go.everbridge.com/rs/everbridge/images/Rumors_and_Misinformation.pdf

²⁴ Retrieved from <http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/>

²⁵ Luna, S. and Pennock, M. "Social media in emergency management advances, challenges and future directions," 9th Annual IEEE International Systems Conference (SysCon) no. IEEE, Vancouver, Canada, pp. 792-797, 2015.

²⁶ Worldwide Threat Assessment of the US Intelligence Community. Retrieved from <https://www.dni.gov/files/documents/Newsroom/Testimonies/2018-ATA---Unclassified-SSCI.pdf>

Allegations of misinformation have become fairly commonplace, especially as they relate to politics. In October 2018, Facebook unveiled a “war room” at their California headquarters, where a team of employees are solely dedicated to weeding out false news ahead of the midterm elections.

Impact

Most emergencies are susceptible to communication errors. 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.

While many messaging errors might have little to no impact on people affected by a disaster, some rumors and misinformation can be very destructive.

- Misunderstandings can cause confusion. People may not know what to do if they do not feel they have enough information or are unable to interpret the information that is available to them.
- Mistrust may make rumors seem reasonable. The public could believe incorrect information if they feel its source is more credible than the responsible government agency.
- Simple mistakes may account for other emergency errors. Oversights—including typos and lack of fact checking—may lead people to misread messaging. Misleading communication might promote harmful behaviors that increase personal and public health risks.
- Inconsistent guidance can also undermine the credibility of a government organization.²⁷

²⁷ Retrieved from https://emergency.cdc.gov/cerc/cerccorner/article_072216.asp

2.2.15 Landslide**Impact:** Low**Probability:** Possible**Related Hazard(s):** Wildland Fire, Flood / Storm, Earthquake**Definition**

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.²⁸

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
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 or significantly impacted county residents:

1998 Laguna Niguel, Orange County Landslide

²⁸ Retrieved from https://www.usgs.gov/faqs/what-a-landslide-and-what-causes-one?qt-news_science_products=0#qt-news_science_products

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 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 as shown below.

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 almost certainly related to the extremely heavy winter rains that occurred from December through February.

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/. In 2007, the Burned Area Emergency Response (BAER) Report produced by United States Forest Service (USFS) identified specific areas as high risk for landslides and debris movement due to the burn areas of the Santiago Wildfires. A Debris Flow Response Annex was written for these areas and was activated several times in the following years in the unincorporated County areas. Several debris flows were documented in Laguna Beach and unincorporated County areas during a December 2010 winter storm. Following 2017 Canyon 2 Fire a Post Fire Debris Flow plan was implemented with areas of life safety concern based off USGS Hazard Assessment. Similarly, a Holy Fire Debris Flow Plan was developed following the 2018 Holy Fire in unincorporated Orange County.

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 Modjeska Canyon.

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. Impacts may include:

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

2.2.16 Oil Spill

Impact: Moderate

Probability: Possible

Related Hazard(s): Hazardous Materials Release

See Oil Spill Plan 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.

Definition

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.²⁹

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 U.S. Department of the Interior's Minerals Management Service (MMS). 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.

²⁹ Retrieved from <http://www.caloes.ca.gov/for-individuals-families/hazard-mitigation-planning/state-hazard-mitigation-plan>

Exxon Valdez

Although the 1989 Exxon Valdez oil spill in Prince William Sound, Alaska did not directly affect the California environment or economy, it is significant for several reasons. First, it highlights the interconnectivity of oil production and distribution systems. The Exxon Valdez was en route from the Alyeska Pipeline Terminal to Long Beach, California when it ran aground, rupturing 8 of the 11 cargo tanks holding crude oil. Secondly, although in size the spill is no longer listed in the top 50 international oil spills, it is still considered to be one of the largest in terms of environmental damage. Finally, because of the environmental impacts, the Exxon Valdez oil spill resulted in landmark environmental legislation and more rigorous oil industry regulations.

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>)

Guadalupe Dunes

The Guadalupe Dunes oil spill typifies another variety of oil spill that can occur in California. The Guadalupe-Nipomo Dunes, located along the southern coast of San Luis Obispo County, is one of the largest dune complexes along the California coast, measuring approximately 15,500 acres.

Oil exploration and production began in the area in the late 1940s. By 1953, Unocal Corporation was producing up to 2,000 barrels of oil per day from 34 wells. Oil field operations continued until March 1990 with gradual expansion to 215 wells producing approximately 4,500 barrels per day. Because of the highly viscous nature of the oil being extracted from the field, diluent (a diesel-like crude oil thinner) was introduced in the 1950s to assist in the production and transportation of the heavy crude. A 145-mile network of pipelines was built across the dunes to carry the diluent. Over the years, the pipelines rusted and became buried in the shifting sands, where they sprang leaks in 80 to 90 places, releasing as much as 12 million gallons of diluent into the dunes, beach, groundwater, and Pacific Ocean.

The spill came to the attention of state officials when an oily sheen was noticed by surfers and sea lions and seals began washing up dead on the shore. On March 23, 1994, a lawsuit was filed by the California State Attorney General, the California Department of Fish and Wildlife, the California Regional Water Quality Control Board Central Coast Region, the California Department of Toxic Substances Control, and the Coastal Conservancy against Union Oil Company of California. The state plaintiffs alleged in this action that on numerous occasions since Unocal began using diluent at the Guadalupe oil fields, it had leaked from the pipelines and storage tanks at numerous locations into the groundwater, surface water, and

marine water. An agreement was reached between the parties in July 1998, for \$43,800,000, of which \$9 million was allocated for dune restoration activities. Six state and federal agencies now oversee the cleanup activities. Unocal has dismantled and removed the pipelines, storage tanks, and other infrastructure related to the oil field operations.

Cosco Busan

This San Francisco oil spill occurred on November 7, 2007, as a result of a container ship, the M/V Cosco Busan, striking the fender surrounding a footing of the western span of the San Francisco Bay Bridge. The collision caused no substantial damage to the bridge and the ship hull ruptured, causing medium-grade fuel oil to leak from its tank. Unlike oil tankers, container and cargo ships are not required to have double hulls, a regulation that was adopted following the Exxon Valdez oil spill discussed earlier.

Numerous local jurisdictions border the bayfront coastline and were affected by the oil spill. Local proclamations were issued by the counties of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Solano, and Sonoma; the cities of Albany, Berkeley, and Oakland; and the East Bay Regional Park District. The Governor's proclamation covered the City and County of San Francisco and the counties of Alameda, Contra Costa, Marin, San Mateo, Solano, and Sonoma. The incident period for the event closed nearly one year following the oil spill on October 31, 2008.

Numerous state and federal agencies were involved in the oil spill response, cleanup, and subsequent investigations, including the United States Coast Guard, California Department of Fish and Wildlife (DFG) Office of Oil Spill Prevention and Response (OSPR), and California Environmental Protection Agency (CEPA) Office of Environmental Health Hazard Assessment (OEHHA). The 226 identified affected shoreline sites were ranked based on spill specifics such as the location of the release, nature of the release, volume of the release, and other established criteria.

Two new response and cleanup initiatives were developed as a result of this oil spill: DFG developed Shoreline Cleanup and Assessment Techniques (SCAT) teams to oversee beach and shoreline cleanup, and, OSPR has taken a lead role in expanding its convergent volunteer program to include opportunities outside of wildlife rehabilitation.

Gulf of Mexico

The Deepwater Horizon oil spill occurred in the Gulf of Mexico on April 20, 2010, as a result of an explosion that killed 11 platform workers and injured 17 others. It is the largest offshore marine oil spill in United States history. After releasing approximately 4.9 million barrels of crude oil, the leak was stopped by capping the wellhead. The spill caused extensive damage to marine and wildlife habitats as well as the Gulf's fishing and tourism industries.

While a six-month moratorium of off shore drilling was imposed after the explosion, it was lifted shortly thereafter by the United States District Court. Investigations into the causes of the explosion and spill are under way by the United States Coast Guard, Minerals Management Service, National Academy of

Engineering, National Commission on the BP Deepwater Oil Spill and Offshore Drilling, United States House Committee on Energy and Commerce, and others.

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)	TBD \$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

The 1969 oil spill off the coast of Santa Barbara was a pivotal event in the history of offshore oil safety. Since 1969, a number of preventive measures have been initiated, including stringent regulations covering OCS operational and environmental safety, a rigorous MMS inspection program in the Pacific OCS Region, continuous evaluation and improvement in OCS facilities' oil spill response, and the development of a highly organized oil spill response structure.

Following the Exxon Valdez oil spill in Alaska in 1989, both the United States and California government enacted laws to prevent oil spills. The International Safety Management Code, enforced since 1998, requires ships entering U.S. ports to meet certain standards, including procedures for reporting accidents and requiring qualified crew. In 1990, the U.S. enacted the Oil Pollution Act (OPA). OPA requires that oil tankers be double-hulled and that existing single-hull tankers be phased out. A double hull further protects a ship from damage to its cargo tank, reducing the risk of oil spilling during an accident. California enacted the Lempert-Keene Seastrand Oil Spill Prevention and Response Act in 1990, which established the Office of Spill Prevention and Response (OSPR) within the Department of Fish and Wildlife (DFW). The OSPR is authorized to direct spill response, cleanup, and natural resource damage assessment activities, as well as regulate all private vessels over 300 gross tons (672,000 pounds) that enter California ports. That Act also gave oversight of all marine oil terminals in the state to the State Lands Commission, with the mandate to protect the public health, safety, and the environment by preventing spills at these facilities.

Non-tanker vessels (like the container ship that spilled oil in San Francisco) have their own regulations, which are less stringent than those for tanker vessels. California requires a Non-Tank Vessel Contingency Plan and Certificate of Financial Responsibility, which means vessels must prove to OSPR that they have a plan in case of an oil spill and that they carry an insurance policy to cover the cost of a spill. Non-tank vessels over 300 gross tons must carry \$300 million of insurance, while the requirement for tanker vessels is \$1 billion.

Impact

Depending on the origin, size, and duration of the release, an oil spill can have serious impacts on air and water quality, public health, plant and animal habitat, and biological resources. Clean up and recovery is time and cost consuming, and dependent on weather conditions such as wind and rain. Tidal and current conditions may also make an oil spill more dynamic.

- **Environment:** The largest impacts may be to the environment, especially animals and plant life. 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>
- **The Public:** Individuals may be restricted from enjoying ocean-based activities.
- **Property:** Boats and marine-adjacent properties may be damaged.

-
- 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.
 - Economic Condition of the County: 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)

2.2.17 Pandemic/High Consequence Diseases

Impact: High

Probability: Unlikely

Related Hazard(s): Disease Outbreak, Vector-Borne Diseases

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

Definition

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
- Emerging pathogens, including Middle East Respiratory Syndrome Coronavirus (MERS-CoV) and viral hemorrhagic fevers such as Ebola
- Centers for Disease Control and Prevention (CDC) Bioterrorism Agents

Probability

Pandemic

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.

Influenza viruses change constantly, generally resulting in minor changes in the surface proteins (antigenic drift), which lead to influenza outbreaks and seasonal epidemics every year. Occasionally the influenza viruses can change more dramatically. An influenza pandemic can occur if a novel influenza A virus emerges (in animals) which is able to infect people easily and spread from person to person in an efficient and sustained way. 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 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.

Emerging Pathogens

Ebola Virus Disease (EVD)

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*);
- Tai Forest virus (*Tai 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 bushmeat), 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.

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.

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 cause 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/>.

Impact

An influenza pandemic is likely to affect everyone in Orange County at some point and can greatly impact “business as usual” in any sector of society or government. 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. 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.

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 be changing 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 of 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.

2.2.18 Product Contamination

Impact: High

Probability: Possible

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

Definition

Product contamination, also known as intentional adulteration, is the intentional or unintentional 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.³⁰

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 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.³¹ In September 2017, ISIS called for its supporters to target “unbelievers” (i.e., the West) by injecting poisons (such as cyanide) into fruits and vegetables or containers of ice cream found in supermarkets and grocery stores.

Incidents of product contamination occurring in the U.S. have included:

- 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)
- 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.³²

³⁰ Retrieved from <http://www.fao.org/tempref/docrep/fao/Meeting/008/j3110e.pdf>

³¹ Retrieved from <https://www.fda.gov/downloads/Training/ForStateLocalTribalRegulators/UCM218900.pdf>

³² Retrieved from <https://www.fda.gov/downloads/Training/ForStateLocalTribalRegulators/UCM170564.pdf>

- 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.³³

To reduce the likelihood of intentional adulteration, the Food and Drug administration 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.

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 Food and Drug Administration 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.³⁴
- The Tylenol tampering inspired hundreds of copycat incidents across the U.S. The Food and Drug Administration tallied more than 270 different incidents of product tampering in the month following the Tylenol deaths.³⁵ It also changed the way the consumers purchase and consume over-the-counter medications and new tamper-proof packaging protections soon became the industry standard for all medications.³⁶

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

³³ Retrieved from https://en.wikipedia.org/wiki/Chicago_Tylenol_murders

³⁴ Retrieved from http://articles.latimes.com/1994-12-31/news/mn-14948_1_california-grapes

³⁵ Retrieved from <http://content.time.com/time/nation/article/0,8599,1878063,00.html>

³⁶ Retrieved from <https://www.pbs.org/newshour/health/tylenol-murders-1982>

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.

2.2.19 Rail Accident

Impact: Moderate

Probability: Possible

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

See Rail 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.

Definition

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. 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.³⁷ 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 \$4,400,000.³⁸

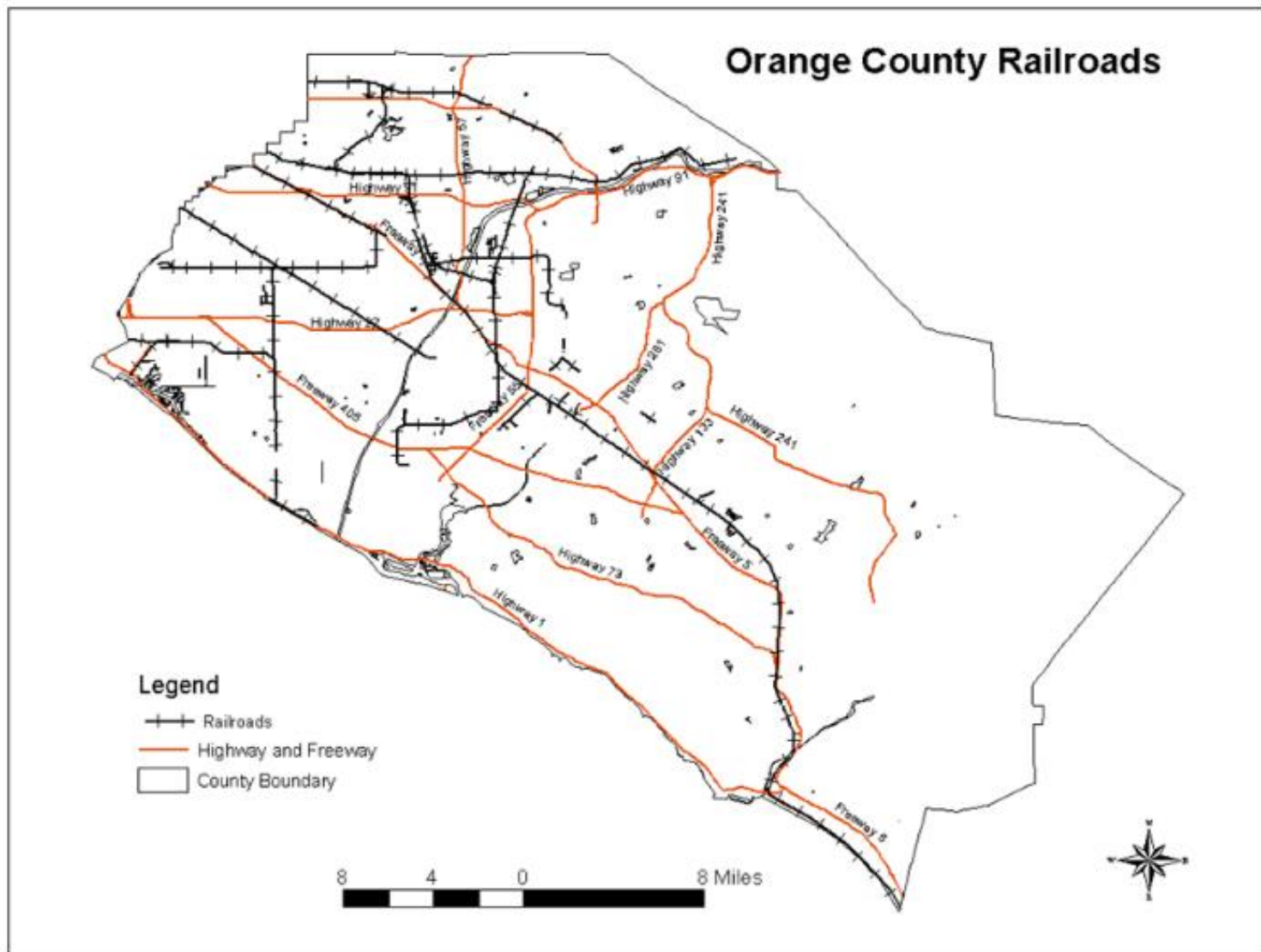
Impact

A major train derailment occurring in a heavily populated area can result in considerable loss of life and property. 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

³⁷ Retrieved from <https://www.nts.gov/investigations/AccidentReports/Pages/RAR0304.aspx>

³⁸ Retrieved from <https://www.nts.gov/investigations/AccidentReports/Pages/RAR9103.aspx>

damage to wither adjacent buildings or vehicles, and loss of life of those on the train or in either adjacent buildings, vehicles, and pedestrians.



2.2.20 Sea Level Rise

Impact: Moderate

Probability: Likely

Related Hazard(s): Flood, Tsunami

Definition

Sea-level rise is an increase in the mean (average) level of the ocean (USACE, 2013). During the 20th century, mean (average) sea level has risen by about 7 inches along most of California's coastline (A.L. Leurs, et al., 2006). Sea-level rise is a component of climate adaptation. Legislation pertaining to sea-level rise includes, but is not limited to, Governor Brown's Executive Order B-30-15 directing state agencies to factor climate change into their planning and investment decisions; SB 379 (Jackson) of 2015 requiring local governments to incorporate climate adaptation and resiliency strategies into their general plans; and SB 246 (Weickowski) of 2015, established the Integrated Climate Adaptation and Resiliency Program within the Governor's Office of Planning and Research.

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. Along the Pacific Coast, the highest values of sea level rise in Southern California have been reported at Newport Beach near the study region, where the observed increase is 2.22 mm per year. These rates are projected to accelerate over the 21st century.

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.

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. 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. Higher sea levels could worsen existing coastal flooding hazards by:

- Increasing the frequency of flooding.

2.2.21 San Onofre Nuclear Generating Station (SONGS)

Impact: High

Probability: Unlikely

Related Hazard(s): Nuclear Incidents

See County of Orange San Onofre Nuclear Generating Station Emergency Operations Plan. 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.

Definition

This hazard profile addresses nuclear incidents specific to reactors. There are two nuclear facilities in Orange County: San Onofre Nuclear Generating Station (SONGS) and the University of California Irvine. The UCI reactor is used for research purposes.

The San Onofre Nuclear Generating Station (SONGS) is currently in the decommissioning process; all fuel has been removed from the reactor core. SONGS stores uranium fuel on site using a combination of technologies: enclosed, steel-lined pools (spent fuel pools) and sealed stainless steel canisters that are housed in reinforced concrete structures (dry cask storage). Currently, about one-third of San Onofre's used nuclear fuel is in dry storage and the transfer of all remaining fuel to dry storage is planned by mid-2019.³⁹ There are 2,668 fuel assemblies in spent fuel pools and 1,187 fuel assemblies in 50 canisters (Areva NUHOMS 24PT1 and Areva NUHOMS 24PT4).⁴⁰

Probability

Southern California Edison (SCE) states that the risk of an incident at a permanently shut down and defueled reactor is much less than the risk from an operating power 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. The only incident that might lead to a significant radiological release at a decommissioning reactor is a zirconium fire. The zirconium fire scenario is a postulated, but highly unlikely, beyond design-basis accident scenario that involves loss of water inventory from the Spent Fuel Pool (SFP), resulting in a significant heat-up of the spent fuel, and culminating in substantial zirconium cladding oxidation and fuel damage. The probability of a zirconium fire scenario is related to the decay heat of the irradiated fuel stored in the SFP. Therefore, the risks from a zirconium fire scenario continue to decrease as a function of the time that SONGS has been permanently shut down. SCE provided a detailed analysis of hypothetical beyond-design-basis accidents that could result in a radiological release at SONGS

³⁹ Retrieved from <http://www.songscommunity.com/nuclear-fuel-storage.asp>

⁴⁰ Retrieved from <http://www.songscommunity.com/usedfuelstatusone.pdf>

in its March 31, 2014, submittal to the NRC (ADAMS Accession No. ML14092A332), as supplemented by letters dated September 9, October 2, October 7, October 27, November 3, and December 15, 2014 (ADAMS Accession Nos. ML14258A003, ML14280A265, ML14287A228, ML14303A257, ML14309A195, and ML14351A078, respectively). One of these beyond design-basis accidents involves a complete loss of SFP water inventory, where cooling of the spent fuel would be primarily accomplished by natural circulation of air through the uncovered spent fuel assemblies.⁴¹

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, dam failures, flash floods, transportation disruptions, accidents, overpass failures, building collapse, fuel shortages, 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.

⁴¹ 83 FR 2680. Retrieved from <https://www.federalregister.gov/documents/2018/01/18/2018-00715/southern-california-edison-company-san-onofre-nuclear-generating-station-units-1-2-and-3>

2.2.22 Terrorism

Impact: High

Probability: Unlikely

Related Hazard(s): Nuclear Incidents

See Weapons of Mass Destruction Annex for additional details. 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.

Definition

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.

Probability

The threat of domestic and international terrorist groups/organizations has increased since the September 11, 2001 terror attacks on U.S soil. The threat landscape has expanded considerably, though it is important to note that the more traditional threat posed by al-Qaeda and its affiliates is still present and active. The threat of domestic terrorism also remains persistent overall, with actors crossing the line from First Amendment protected rights to committing crimes to further their political agenda⁴². Orange County remains a possible target with its economic resources, tourism, and populations.

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 objectives⁴³. 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.

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

⁴² Retrieved on February 22, 2018, from <https://www.fbi.gov/investigate/terrorism>.

⁴³ Chris, C. (8-Apr-2014) Definition of Terrorism. Retrieved on February 22, 2018, from <http://www.secbrief.org/2014/04/definition-of-terrorism/>.

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 fear⁴⁴.

The impacts to Orange County are the populations and critical infrastructures, which are considered significant to the safety and well-being of the communities. The U.S. Department of Homeland Security defines critical infrastructures as systems whose “incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof.”⁴⁵

For Orange County, these services 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, critical infrastructure also includes 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.

⁴⁴ Retrieved on February 22, 2018, from <http://create.usc.edu/research/research-areas/economic-analysis>.

⁴⁵ Retrieved on February 22, 2018, from <https://www.dhs.gov/what-critical-infrastructure>.

2.2.23 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.

Definition

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 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 paleotsunami 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 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.

- 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

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. 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.

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.

Economic Impacts

During the summer, hundreds of thousands of people a day come into the community to stay in the beautiful hotels and shop at the unique boutiques. Local governments rely heavily on tourism and sales tax. A tsunami event would impact businesses by damaging property and by interrupting business and services.

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.

Roads blocked by objects during a tsunami may have severe consequences to people who are attempting to evacuate or who need emergency services. Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted. 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.

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

2.2.24 Utility Failure**Impact:** Low**Probability:** Possible**Related Hazard(s):** Earthquake, Fire, Flood/Storm, High Winds

See Power Outage 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.

DefinitionPower:

- Primary types of energy loss that face California consumers: disasters and power grid system deficiencies.
 - In a disaster, major power plants are expected to sustain some damage due to factors such as liquefaction and the intensity of an earthquake. A certain percentage of the system load may be interrupted following the initial shock.
 - 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), San Diego Gas and Electric (SDGE) to reduce electrical load immediately by a specific amount of megawatts. To reduce its load, SCE and SDGE initiates plans of controlled rotating outages throughout its service territory that has been ordered and approved by the California Public Utilities Commission (CPUC).
 - Public Safety Power Shutoff program: In July of 2018, SCE and SDGE implemented the Public Safety Power Shutoff program, known as PSPS. The program is a last resort public safety measure intended to mitigate wildfire risk. As part of this program, SCE 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, SCE will begin predictive modeling to assess potential impact and will communicate decisions with local governments. The PSPS program includes five phases of actions including planning, monitoring, power shutoff, and power restoration. The County of Orange has developed an Emergency Operations Center Action Plan outlining actions to be taken during the phases of the PSPS program including pre-incident, response and recovery.

Water

- Water supplies are most likely to be affected by earthquakes, power outages, and wildfires.

- 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 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.
- Water and waste water 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 wildfire fires.

Probability

Power

- The electrical grid within the State and surrounding areas has been constructed to minimize cascading outages or transmission emergencies; however, power shortages are possible. 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 evening.
- Under a CAISO Emergency, 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 of the short-term rotating outage. During these periods, critical, essential and key facilities may have to operate on emergency generators.
- A widespread power outage can occur in California at any time, just like the Southern California Power Outage in September 2011 when southern Orange County was impacted. Another example was the November 2011 winter wind event in the San Gabriel Valley, which left residents without power for days. These events usually short-term, may have consequences that should be taken into consideration.

Water

Water utilities have planned and built their infrastructure to minimize the affects 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 winds which impact power utilities' infrastructure, but they can also occur when power utilities experience unplanned power outages. The loss in power, whether from a wildfire or unplanned event, can impact a water utilities ability to continue pumping water to its customers and for fire fighting purposes. The loss in pressure can trigger public health notices.
 - SCE and SDGE'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.
 - Significant earthquakes, although not as common, will have the highest impact on water and wastewater utilities. The aging water infrastructure can experience significant disruptions due to fault ruptures and ground shaking. Secondary impacts, such as wildfire and power outages may intensify the disruption by lowering water pressure and taking out power supplies to critical infrastructure.
 - With continued increased in wildland fires the potential threat to water and wastewater infrastructure continues to increase. Water and wastewater utility providers participated in county-wide fire plans to identify key critical facilities with the county's high risk zones. Utilities continue to work with fire agencies to coordinate protection of key facilities during events and to enhance water operations as needed during large fires. Recognizing the potential impacts of Power Utility Public Safety Power Shutoff plans and the operational limitations of water systems there will continue to be a concern for fire suppression capabilities.

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. Individuals with disabilities, access, and/or functional needs may be particularly susceptible to secondary impacts of utility failures; for example, medical device power back-ups may fail. As detailed below, resource response and utility restoration must be prioritized during utility outages.

Critical Facility Service Restoration Priorities

Critical Facility Response Priority	Examples of the Types of Critical Facilities Which May Be Included
<p>Initial Response:</p> <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 • Water facilities: <ul style="list-style-type: none"> ○ Potable water
<p>Response in First 2 Hours:</p> <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
<p>Response in First 6 Hours:</p> <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"> ○ 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 wire line Central Offices or switch centers ○ Cell sites ○ Broadband data service providers

2.2.25 Vector-Borne Diseases

Impact: Low

Probability: Possible

Related Hazard(s): Disease Outbreak

Definition

Vector-borne diseases are human illnesses caused by parasites, viruses, and bacteria that are transmitted by mosquitoes, sandflies, triatomine bugs, blackflies, ticks, tsetse flies, mites, snails and lice. 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.

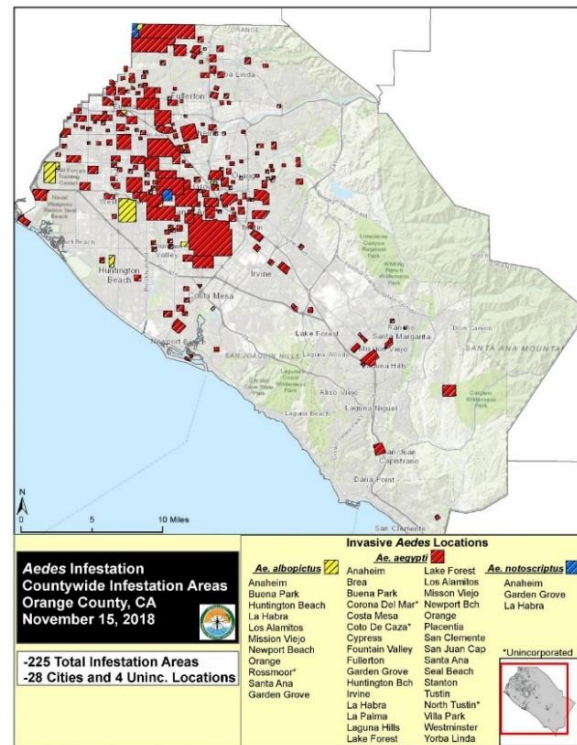
Probability

Information for this assessment was obtained from the Orange County Mosquito and Vector Control District and the California Department of Public Health, Vector-Borne Disease Section. The mission of the Orange County Mosquito and Vector Control District (District) is to protect Orange County citizens from vectors and the diseases they carry. The District routinely conducts field surveys to determine the presence of vectors and vector-borne diseases. The majority of the District's resources are devoted to the control of mosquitoes, rats, flies, and Red Imported Fire Ants (RIFA). The District uses an Integrated Vector Management (IVM) Program strategy to control populations of mosquitoes, filth flies and black flies, red imported fire ants (RIFA), and rats. The IVM Program consists of the following activities: 1) Surveillance for vectors, vector habitats, and associated pathogens/diseases, including field and laboratory analysis of vectors in order to evaluate populations and emerging disease threats; 2) Source reduction to limit breeding by vectors, including management of vegetation, land, and water with appropriate landowners to minimize vector production and harborage; 3) Education and outreach efforts targeted toward the public and private landowners in ways to facilitate source reduction and minimize disease-carrying vectors; 4) Distribution of mosquito fish (*Gambusia affinis*), a biological control measure used to reduce mosquito production in isolated aquatic features, such as neglected residential swimming pools; and 5) Application of pesticides to minimize vector populations and reduce the threat of potential vector-borne disease transmission to humans. When a vector-borne disease is detected by routine surveillance activities, and it is determined that risk to the public exists, the District will respond accordingly. The District maintains a Memorandum of Understanding (MOU) with the Orange County Health Care Agency (OCHCA) to respond to human cases of West Nile Virus (WNV) disease and a joint procedure for the provision of information to respond to human cases of other vector-borne diseases in Orange County. The District's response is determined by District management and is summarized in the OCMVCD Integrated Vector Management & Response Plan, the West Nile Virus Response Plan, and the Invasive *Aedes* Response Plan.

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 197 cities in 12 counties. 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 November 2018, invasive *Aedes* mosquitoes have been detected in 28 cities and 4 unincorporated areas in Orange County (see map below).

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.



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 globally.

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. As of February 2, 2018, California has reported 635 travel related Zika cases, with Orange County reporting 43 cases during the period of 2015 through 2017.

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" 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 Diseases

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 2001-2018, over 190 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.

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.

Impact: See Disease Outbreak

2.2.26 Wildland and Urban Fire**Impact:** Moderate**Probability:** Likely**Related Hazard(s):** Climate Change, Debris Flow, Drought, Earthquake, High Winds**Probability**

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, in 2017, the Canyon 2 Fire burned 9,217 acres and destroyed 79 structures, including homes and businesses. In 2007, the Santiago Fire burned for 31 days, charring over 28,000 acres and destroying 12 homes. In 2008, the Freeway Complex Fire burned over 30,000 acres, damaging or destroying over 300 residences and forcing 40,000 people from their homes. In 1993, the Laguna Beach Fire burned 14,337 acres and 441 homes. In all three 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.

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
1982	Gypsum Fire	20,142
1914	Unnamed (Near Irvine Lake)	18,755
1980	Owl Fire	18,332
Source: Cal Fire FRAP Fire Perimeters		

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

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 Landbase.

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.

In addition to threatening life and safety and destroying buildings and critical facilities, 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.



Source: http://frap.fire.ca.gov/webdata/maps/orange/fhszl_map.30.jpg

2.3 Concept of Operations (CONOPS)

The Unified County and OA 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:

- Prevention Phase
- Preparedness Phase
- Response Phase
- Recovery Phase
- Mitigation Phase

Prevention Phase

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.

Preparedness Phase

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.

Response Phase

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 Phase

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.

Mitigation Phase

Mitigation occurs before and after emergencies or disasters. Post-disaster mitigation is part of the recovery process. This includes eliminating or reducing the impact of hazards that exist within a jurisdiction. Pre-disaster mitigation improves community resiliency before a disaster causes loss of life, damage to property and adversely affects the environment.

2.3.1 Sequence of Events during Disasters and Emergencies

There are two sequences of events typically associated with disasters and emergencies. The first, involves the response sequence, and is generally described as the activities to save lives, protect property and preserve the environment. This sequence describes deployment of response teams, activation of emergency management organizations and coordination among the various levels of government. The second sequence involves emergency proclamations. This sequence outlines the steps to gain expanded emergency authorities needed to respond to the problem. It also provides the steps for requesting state and federal disaster assistance.

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)

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

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.

Local EOC Activation

Local jurisdictions activate their EOC based on the 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.

Operational Area EOC Activation

The OA EOC activates if one or more local EOCs are activated, or if the event requires resources from outside the affected jurisdictions. The OA EOC may also activate if an affected jurisdiction proclaims a local emergency. Once activated, the OA EOC coordinates 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 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 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.

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.

Transition to Recovery

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 and Operational Area Recovery Annex.

2.4 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.

Figure 27 – Operational Area EOC Assignment of Responsibilities Matrix

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

Unified County of Orange and
Orange County Operational Area

Emergency Operations Plan
Chapter 2

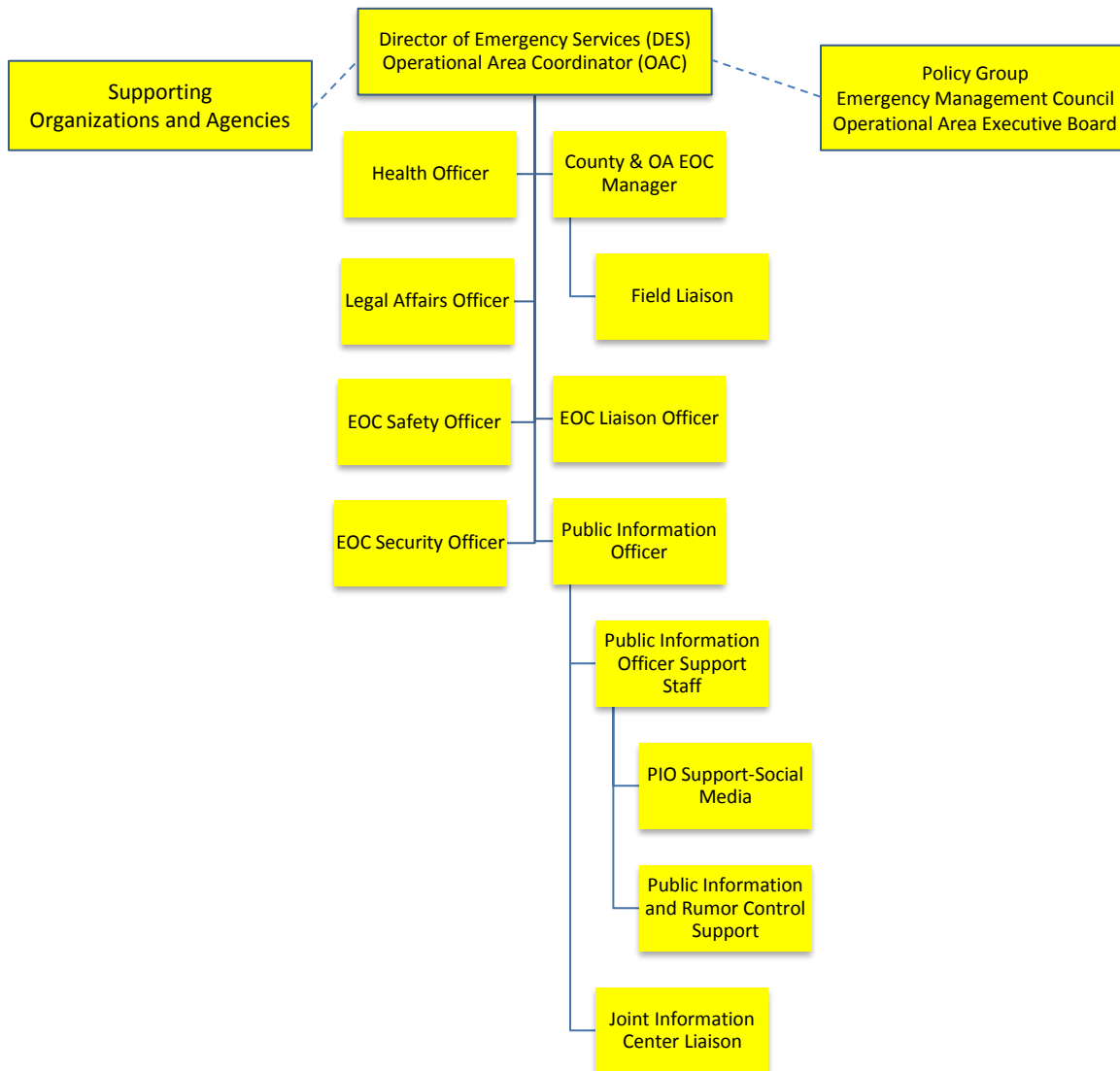
C=Contingent Upon the Hazard for DES, OAC and Section Chief Staffing P=Primary Responsibility S=Support Responsibility	Planning and Intelligence Section									Finance & Administration Section						
	Planning and Intelligence Chief	Situation Analysis Unit	Situation Analysis Support Staff (SASS)	SASS-GIS	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
Department of Education						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 Fire Authority	C	C				S		S	C	C					S	P
OC Public Works	C	C	S	S	S	S	S	P	C	C					S	P
OC Transportation Authority						S		S							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
Superior Court of California, Orange County			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
WEROC		S				S		S							S	S
COAD-OC		S				S		S							S	S

Unified County of Orange and
Orange County Operational Area

Emergency Operations Plan
Chapter 2

C=Contingent Upon the Hazard for DES and Section Chief Staffing S=Support Responsibility P=Primary Responsibility	Operations Section														
	Operations Chief	Fire and Rescue Branch	Urban Search and Rescue Group	Hazardous Materials Group	Law Enforcement and Traffic Control Branch	Alert & Warning	Movement Group	Light Search and Rescue Group	Transportation Assembly Point Group	Coroner Group	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															
Department of Education															
District Attorney															
Health Care Agency	C														
John Wayne Airport															
OC Community Resources														P	
OC Fire Authority	C	P	P	P											
OC Public Works	C										P	P	P	S	
OC Transportation Authority															
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															
WEROC															P
COAD-OC															

C=Contingent Upon the Hazard for DES and Section Chief Staffing S=Support Responsibility P=Primary Responsibility	Logistics Section									
	Logistics Chief	Resources and Support Unit	Procurement Unit	Transportation Unit	Transportation Group	Personnel Unit	EOC Registration	COAD-OC Liaison	Volunteer Coordination Group	Communications
Assessor										
Auditor-Controller										
Board of Supervisors										
CEO	P	P	P							S
Child Support Services										
Clerk of the Board										
Clerk/Recorder										
County Counsel										
Department of Education										
District Attorney										
Health Care Agency										
John Wayne Airport										
OC Community Resources										
OC Fire Authority										
OC Human Resources						P				
OC Public Works				P						
OC Transportation Authority					P					
OC Waste & Recycling										
Probation										
Public Defender										
Registrar of Voters										
Sheriff/Emergency Management Division						P		P		S
Sheriff-Coroner						S			P	P
Social Services Agency										
Superior Court of California, Orange County										
Treasurer/Tax-Collector										
American Red Cross								S		
WEROC										
COAD-OC							P	S		

2.4.1 Management Section

In the County/OA EOC, the Management Section consists of the Director of Emergency Services (DES) and/or an Operational Area Coordinator (OAC), the Policy Group, Legal Affairs Officer, Public Information Officer, Health Officer, County/OA EOC Manager and other supporting management staff positions. The Management element is provided through positions and agencies that are specifically

designated, report directly to the DES and/or OAC, and are assigned responsibility for key activities within the County and OA.

2.4.1.1 Director of Emergency Services (DES) and Operational Area Coordinator (OAC)

Table 3-DES and OAC Designation

Hazard	DES	OAC	Hazard	DES	OAC
Act of war	OC Sheriff	OC Sheriff	Flood	County Executive Officer	OC Public Works
Aviation incident	OC Fire Authority	OC Fire Authority	Hazardous materials	OC Fire Authority	OC Fire Authority
Civil disturbance	OC Sheriff	OC Sheriff	Mass casualty	OC Fire Authority	OC Fire Authority
Dam and reservoir failure	County Executive Officer	OC Public Works	Mass evacuation	OC Sheriff	OC Sheriff
Disaster recovery	County Executive Officer	County Executive Officer	Oil spill	County Executive Officer	OC Public Works
Debris flow/landslide	County Executive Officer	OC Public Works	Rail incident	OC Fire Authority	OC Fire Authority
Drought	County Executive Officer	OC Public Works	San Onofre Nuclear Generating Station (SONGS)	OC Sheriff	OC Sheriff
Earthquake	OC Sheriff	OC Sheriff	Severe weather (storms/high winds)	County Executive Officer	OC Public Works
Energy crisis and power outages	OC Sheriff	OC Sheriff	Terrorism	OC Sheriff	OC Sheriff
Epidemic or Disease outbreak	County Executive Officer	OC Health Care Agency	Tsunami	OC Sheriff	OC Sheriff
Excessive Heat	County Executive Officer	OC Health Care Agency			
Fire (urban and wildland)	OC Fire Authority	OC Fire Authority			

Director of Emergency Services (DES)

Per County of Orange Board of Supervisors resolution, the designated DES will direct the county's emergency organization during an emergency that impacts the unincorporated areas of the county.

Powers and duties of the DES:

- Direction and control: Serve as a key decision maker in the County's Emergency Organization providing direction and control.
- County representative: Represent the County 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.
- Briefs the County Board of Supervisors and elected officials or their representatives on the status of the emergency.

Operational Area Coordinator (OAC)

Per the Orange County Operational Area Agreement, when the emergency impacts Operational Area (OA) jurisdictions the designated OAC is responsible for ensuring direction, coordination and communication of policy decisions, resource needs and priorities between OA jurisdictions and the State throughout the emergency.

Powers and Duties of the OAC:

- 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.
- Emergency Public Information: Appoint a Public Information Officer to coordinate the dissemination of all emergency information, press releases, and public statements, and to manage conflicting information, misinformation, and the initiation of rumors, as appropriate to the type of emergency confronting the Operational Area.
- Emergency Proclamations: Each OA jurisdiction shall retain the powers and responsibilities granted by law to proclaim an emergency in its jurisdiction, according to procedures set forth by the jurisdiction. The County Board of Supervisors shall retain the powers and responsibilities granted by law to proclaim an emergency in the County geographic area, according to procedures set forth in County Ordinance No. 3915 Section 3-1-6 of the Codified Ordinances of the County of Orange and County Board of Supervisors Resolution.

DES and OAC as a Unified Command

When an emergency occurs in one or more OA jurisdictions and the unincorporated areas of the county, the designated DES and designated OAC, shall establish a unified command to collaborate and share responsibility in the coordination of resources and communication at the County/OA EOC.

Responsibilities of the Director of Emergency Services and Operational Area Coordinator

- Authorizes the activation of the County/OA EOC.
- 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 County Code of Ordinances and the OA Agreement and the responsibilities assigned to the OA Lead as specified in Title 19 California Code of Regulations Section 2409€.
- Requests that the County Board of Supervisors proclaim the existence or threatened existence of a Local Emergency in the County if necessary.
- Establishes the appropriate level of organization and staffing necessary to support operations and continuously monitor the effectiveness of that organization.
- Appoints a Public Information Officer (PIO) to coordinate the dissemination of all emergency information.
- Approves all news media releases.
- Designates Operation Section Chief and Planning and Intelligence Section Chief.
- 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, Section Chiefs, sets priorities for emergency response efforts and ensures all organizational actions are accomplished as established.
- Responsible for resources, services, and operations.
- Ensures collection of, evaluation, and dissemination of damage assessments and other essential information.
- Provides status and other reports to Cal OES.
- Represents the County and/or OA in all dealings with public or private agencies on matters pertaining to emergencies.
- With assistance provided by the EOC staff:
 - Uses communications and alert and warning systems including AlertOC, WEA, and EAS.
 - Provides information, instructions and guidance to the public.
 - Ensures whole community response planning is implemented.

Alternates to the DES and/or OAC

Each incumbent of a position designated to act as the DES and OAC shall annually designate, in writing by name and in order of succession, a minimum of three alternates. In the event that neither the designated DES and/or OAC nor either of the designated alternates is available to serve in the capacity

of DES and/or OAC, the following lines of succession shall be used to ensure continuity of County and/or Operational Area operations during times of emergency:

- DES and OAC: Sheriff-Coroner and a minimum of three designated alternates
- DES and OAC: Director, Orange County Fire Authority and a minimum of three designated alternates
- DES: County Executive Officer and a minimum of three alternates
- OAC: Public Works Mutual Aid Coordinator and a minimum of three designated alternates.
- OAC: Health and Medical Mutual Aid Coordinator and a minimum of three designated alternates.

The lines of succession for the DES are outlines in Board Resolution No. 12-036 and for the OAC in the Operational Area Agreement.

2.4.1.2 Policy Group

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

- A member of the Orange County Board of Supervisors
- A representative from the County Executive Office
- A representative from Orange County Health Care Agency
- A representative from John Wayne Airport
- A representative from Orange County Community Resources
- A representative from Orange County Public Works
- A representative from Orange County Waste and Recycling
- A representative from Orange County Fire Authority
- A representative from Orange County Transportation Authority
- A representative from Probation Department
- A representative from Sheriff-Coroner Department
- A representative from Social Services Agency
- Other representatives as determined by the DES and OAC depending upon the situation/event and the involvement of other organizations

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

Orange County Operational Area Executive Board

- A member of the Orange County Board of Supervisors
- A representative from the Orange County City Engineers' and Public Works Directors Association
- The Orange County Fire and Rescue Mutual Aid Coordinator
- A representative from the Orange County Fire Chiefs' Association
- The Orange County Sheriff-Coroner Law Enforcement Mutual Aid Coordinator
- A representative from Independent Special Districts of Orange County
- A representative from the Orange County Health Care Agency Health Care Mutual Aid Coordinator
- A representative from the Orange County Police Chiefs' and Sheriff Association
- A representative selected jointly from the Orange County City Manager's Association and the League of Cities
- A representative selected jointly from the Orange County Superintendent of Schools, Community Colleges and School Districts
- A representative from the Orange County Public Works Mutual Aid Coordinator

Responsibilities of the Policy Group

- Establishes basic policies, which govern the manner, and means in which the County and OA will respond to an actual and/or perceived disaster.
- Provides support to the DES and OAC.
- Acts as an advisor and furnishes the DES and OAC 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 and/or OAC in the development of rules, regulations, proclamations, and orders.
- Convenes multi/interagency coordination groups as appropriate.
- County Board of Supervisor representatives may assist by providing a political liaison for the County and OA, especially where issues of resource prioritization and usage are involved.

Position Alternates and Successors

Organizations with assigned positions on the Policy Group are responsible for developing protocols for position succession within their organizations.

2.4.1.3 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. Upon activation of the County and OA EOC, the County and OA Emergency Manager becomes the County and OA EOC Manager.

Responsibility of the County/OA EOC Manager

- 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.
- Acts as advisor to the DES and OAC, 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.
- Oversees and coordinates with County and OA Field Liaisons deployed amongst OA jurisdictions.
- Directs and coordinates EOC support staff and EOC personnel.
- Participates in the Cooperators Meeting.

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.

2.4.1.4 Legal Affairs Officer

Assignment of Primary Responsibilities

County of Orange, County Counsel

Responsibilities

- Advises the DES and OAC, 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 advice given by Legal Affairs Officer with respect to the incident.
- Commences legal proceedings as needed.

Position Alternates and Successors

County is responsible for developing protocols for EOC position succession, including the Legal Affairs Officer position.

2.4.1.5 Field Liaison

Assignment of Primary Responsibility

Orange County Sheriff's Department, Emergency Management Division

Responsibilities

- Provides and relays information between County departments, 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.

2.4.1.6 Public Information Officer

Assignment of Primary Responsibility

Since the DES and OAC is determined by the type of incident, the Public Information Officer will also be determined by the type of incident and designated by the DES.

Responsibilities

- Implements the Joint Information System (JIS).
See JIS Annex.
- 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.
- Leads the operation of the Joint Information System (JIS) and JIC, maintains contact in order to coordinate information gathering and dissemination.
- 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.
- Ensures all public information releases are distributed to 2-1-1 Orange County.
- Establishes with the DES and OAC if there are any limits on information release.
- Obtains approval for news media releases and public messaging from DES and OAC.
- 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 the news media and begins releasing lifesaving and health preservation instructions.
- Provides information on what is being done to respond to the emergency.
- In accordance with the JIS Annex, develops and distributes strategies and protocols for interviews, briefings and photo opportunities, including considerations for people with disabilities and those with access and/or functional needs.
- Monitors news media reporting for accuracy.
- Monitor and respond to approved social media sites and accounts.
- Responds to news media inquiries.
- Ensures all EOC staff is kept apprised of public information releases.
- Serves as the arbitrator on all public information related issued when conflicts or discrepancies arise.

- Analyzes other sources of emergency information.
- Coordinates 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 with the DES and OAC and Policy Group regarding dignitary protocols.
- 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 and OAC 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 and OAC-eligible departments (Orange County Sheriff's Department, Orange County Fire Authority, CEO, OC Public Works, or Health Care Agency).

2.4.1.7 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 Management 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 OAC, members of the Policy Group, and County/OA EOC staff are kept apprised of emergency public information issues concerning the emergency.
- Coordinates 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 JIS Annex, 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, internet 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 Management staff are tracking rumors and trends.
- Ensures Public Information Hotline/Rumor Management Supervisor tracks calls received and provide reports on a regular basis.

2.4.1.8 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:
 - Twitter: @OrangeCountyEOC.
 - Facebook: Orange County, California-Emergency Operations Center.
 - Other County websites and social media accounts, as directed.
- Maintains an incident blog, if applicable.
- 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.

2.4.1.9 Public Information Hotline and Rumor Management Supervisor

Assignment of Primary Responsibility

The Public Information Hotline/Rumor Management Supervisor will be an OCSO Emergency Communications Bureau Radio Dispatcher, if available. 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 management 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.

2.4.1.10 Public Information Hotline and Rumor Management Support Staff

Assignment of Primary Responsibility

The Public Information Hotline and Rumor Management Support 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 Public Information Hotline and Rumor Control will be provided by County departments and OA jurisdictions.

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.

2.4.1.11 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.

2.4.1.12 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.

2.4.1.13 EOC Safety Officer

Assignment of Primary Responsibility

CEO, Office of Risk Management

Responsibilities

- Ensures all EOC personnel follow and demonstrate 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 Incident Action Plan for safety implications and provides safety messages to the Planning and Intelligence Section for inclusion in the EOC Incident 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.

Position Alternates and Successors

The Office of Risk Management is responsible for developing protocols for EOC position succession, including the EOC Safety Officer position.

2.4.1.14 EOC Security Officer**Assignment of Primary Responsibilities**

Orange County Sheriff's Department

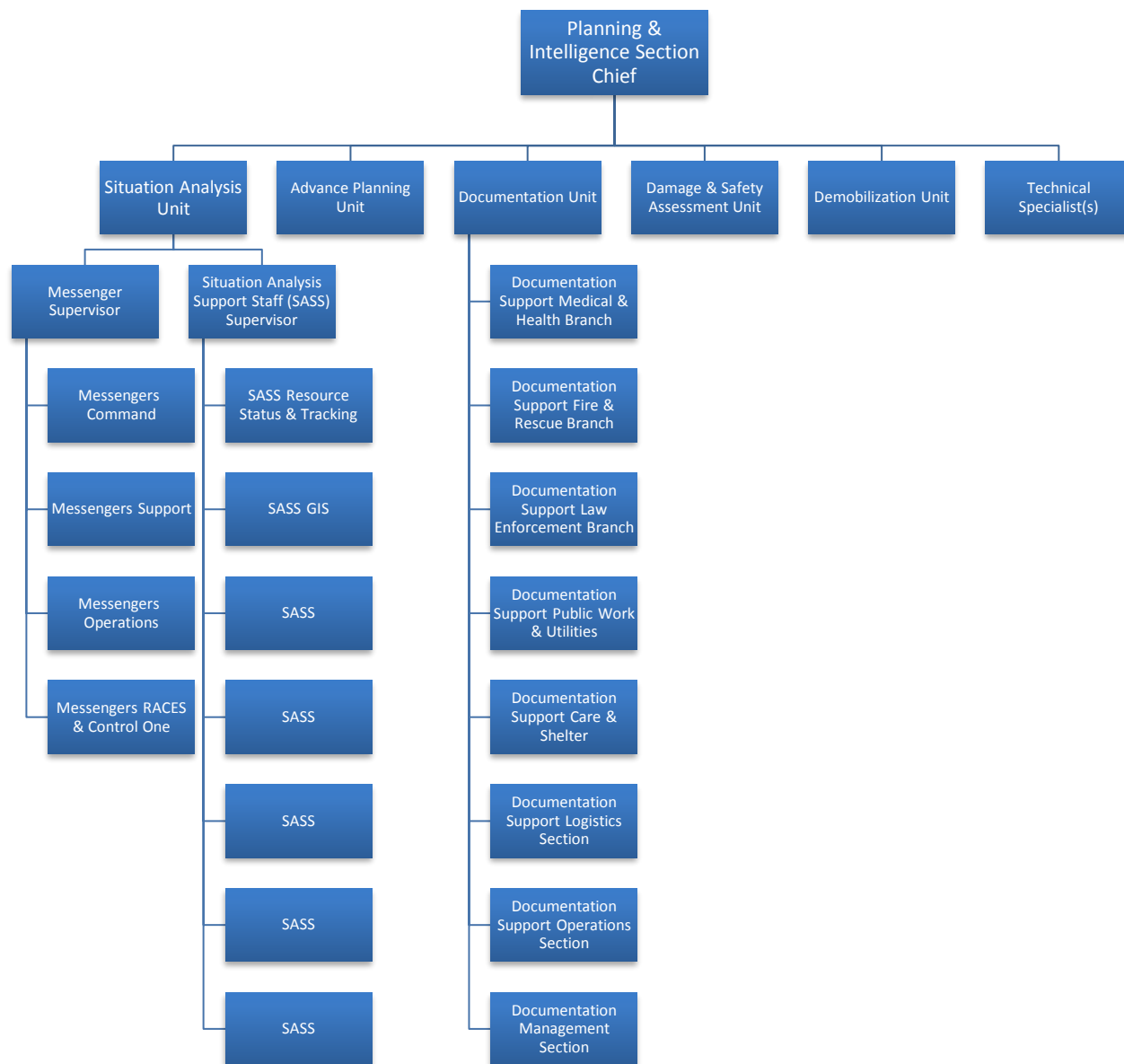
Responsibilities

- Provides 24-hour security for EOC facilities.
- Controls personnel access to facilities in accordance with policies established by the DES and OAC or County and Operational Area EOC Manager.
- Provides advice and guidance to the DES and OAC 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 position succession, including the EOC Security Officer position.

2.4.2 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 smaller 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. Technical Specialists in this section help ensure real time information is factored into strategy development and if necessary, pass warnings to County

departments and agencies, jurisdictions and organizations, within the OA. 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
 - Situation Analysis Support Staff-GIS
 - Messenger Supervisor
 - Messengers
- 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
- Advance Planning Unit Leader
- Damage and Safety Assessment Unit Leader
- Demobilization Unit Leader
- Technical Specialist(s)

2.4.2.1 Planning and Intelligence Section Chief

Assignment of Primary Responsibility

The EOC Planning and Intelligence Section Chief should be from the same discipline and agency as the DES or OAC. The Planning and Intelligence Section Chief will be determined by the type of incident.

Responsibilities

- 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.

- Establishes the appropriate level of organization within the Section, and continuously monitors the effectiveness of that organization.
- Coordinates with counterpart Planning and Intelligence Section Chief and active OA EOCs to ensure the OA priorities and strategies comply with County and OA needs.
- Reports to the DES and OAC on all matters pertaining to Section activities.
- Tracks the incident and provides information to the DES and OAC, Policy Group on the overall effectiveness of the policies established.
- Briefs the EOC and response agencies on the situation and status of the incident and resources.
- Collects and maintains event documents for all activities and a master log of events.
- Collects and reports damage assessment information.
- Coordinates directly with Section Chiefs in the EOC on the ICP to gather situational and operational status of the incident.
- 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 or OAC during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organization.

2.4.2.2 Situation Analysis Unit Leader

Assignment of Primary Responsibility

- The DES or OAC and Situation Analysis Unit leader should be from the same discipline agency. Since the DES and OAC is determined by the type of incident, the Situation Analysis Unit Leader will also be 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.
- 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 CalEOC.
- 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 personnel responsible for displaying information in the Command, Operations and Support Center within the County/OA EOC.
- Supervises the Messenger Supervisor.
- Maintains a master list of all resources committed to incident operations.
- Identifies resources needs from information received from others to meet short-term needs.
- Determines actions that may be necessary to access resources not immediately available.
- Identifies emerging trends and anticipates emerging needs.
- Ensures that OA jurisdictions report their status to the County/OA EOC.

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 and OAC during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for positions succession within their organization.

2.4.2.3 Situation Analysis Unit Assistant(s)

Assignment of Primary Responsibility

The DES or OAC and Situation Analysis Unit Assistant will be from the same discipline agency. Since the DES and OAC is determined by the type of incident, the Situation Analysis Unit Assistant will also be 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 and OAC, 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 CalEOC.
- Prepares situation summaries and meeting minutes from briefings.
- Prepares maps and gathers and disseminates information and intelligence for use in the EOC IAP.
- Maintains a master list of all resources committed to incident operations.
- Identifies resources needs from information received from others to meet short-term needs.
- Determines actions that may be necessary to access resources not immediately available.
- 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 and OAC during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for positions succession within their organization.

2.4.2.4 Situation Analysis Support Staff (SASS) Supervisor

Assignment of Primary Responsibility

The Situation Analysis Support Supervisor will be identified and appointed by the Situation Analysis Unit Leader at the time of the incident based on the availability of staff with applicable experience, expertise, and capability. 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.
- 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 and OAC, Policy Group, and other Section Chiefs.
 - Coordinates with County department, 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.
 - 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.

2.4.2.5 Situation Analysis Support Staff (SASS)

Assignment of Primary Responsibility

The SASS/Plotter support 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 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 departments 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.
- 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.
- Prepares maps, gathers and disseminates information and intelligence for use in the EOC EAP.
- 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.

2.4.2.6 Situational Analysis Support Staff-Resource Status and Tracking

Assignment of Primary Responsibility

The SASS-Resource Status and Tracking support 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 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:
 - 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.

2.4.2.7 Situational Analysis Support Staff-GIS

Assignment of Primary Responsibility

The SASS-GIS support staff will be identified and assigned at the time of the incident based on the availability of staff with applicable GIS experience, expertise, and capability. Staffing for the SASS-GIS support staff will be provided by the 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 and Management Sections
- Notifies the Situation Analysis Support Supervisor of important information, unusual events, and information discrepancies.
- Coordinates with OA jurisdictions, County departments 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.
- Assists in the developing projections and forecasts of future events related to the incident.

2.4.2.8 Messenger Supervisor**Assignment of Primary Responsibility**

The Messenger Supervisor will be identified and appointed by the Situation Analysis Unit Leader at the time of the incident based on the availability of staff with applicable experience, expertise and capability. 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, siren activation or responder safety messages.

2.4.2.9 Messenger**Assignment of Primary Responsibility**

The Messenger support 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 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 siren activation or responder safety messages to the appropriate personnel.

2.4.2.10 Documentation Unit Leader**Assignment of Primary Responsibility**

The Documentation Unit Leader will be identified at the time of the incident based on the availability of staff with applicable experience, expertise, and capability. Staffing for the Documentation Unit Leader will be provided by County departments or OA jurisdictions.

Responsibilities

- Coordinates with the Planning and Intelligence Section Chief and Situation Analysis Unit Leader to assist in the development of the EOC Action Plan (EAP), maintains the files, records that are developed as part of the overall EAP and planning function.
- Ensures Documentation Support Staff 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, including a complete record of the major steps taken to resolve the incident.
- Files, maintains, and stores incident files for legal, analytical, and historical purposes.
- Assists in financial recovery and maintains official records and reports related to recovery activities.

2.4.2.11 Documentation Support Staff**Assignment of Primary Responsibility**

The Documentation support staff will be identified at the time of the incident based on the availability of staff with applicable experience, expertise, and capability. Staffing for the Documentation support staff will be provided by County department or OA jurisdictions.

Responsibilities

- Maintains an accurate and complete activity log for the Section, Branch, Unit or Group assigned to. The activity log is a complete record of the major steps taken to resolve the incident.
- 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.
- Coordinates with Documentation Unit Leader with messages, and incident activities, to ensure complete documentation is maintained.

2.4.2.12 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 damages to County departments, county unincorporated areas and OA jurisdictions.
- 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 the Situation Analysis Unit to estimate property losses to be included in the Initial Damage Estimate.
- Coordinates with 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.

2.4.2.13 Advance Planning Unit Leader

Assignment of Primary Responsibility

The DES or OAC and Advance Planning Unit Leader will be from the same discipline agency. Since the DES and OAC is determined by the type of incident, the Advanced Planning Unit Assistant will also be 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 or OAC during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organizations.

2.4.2.14 Demobilization Unit Leader

Assignment of Primary Responsibility

The DES or OAC and Demobilization Unit Leader will be from the same discipline agency. Since the DES and OAC is determined by the type of incident, the Demobilization Unit Assistant will also be 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.

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 or OAC during the emergency situation underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organizations.

2.4.2.15 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 to 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.

- Personnel Unit Leader
 - EOC Registration Group
 - Volunteer Coordination Group
 - COAD-OC Liaison
- Transportation Unit Leader
 - Transportation Group
- EOC Facilities Unit Leader
 - Audio and Visual Group
 - Information Technology Group
 - Telecommunications Group
 - EOC Facility Support Group

2.4.3.1 Logistics 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 Administrative Manager II or Administrative Manager I.

Responsibilities

- Provides situational and resource status information to Section Chiefs and Management.
- Generates the Emergency Purchase Order that will be used on all contracts and purchases.
- Provides logistical support for EOC, field and shelter operations, such as:
 - Personnel, except for Law and Fire
 - 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.

Position Alternates and Successors

The County Executive Office is responsible for developing protocols for EOC position succession, including the Logistics Section Chief position.

2.4.3.2 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.

2.4.3.3 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

- Obtain briefing from Logistics Section Chief or Service Branch Director if activated.
- 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 other facilities.
- Set up Food Unit equipment.
- Verify menus to ensure incident personnel of well-balanced meals.
- 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.
- Provide Supply Unit Leader with food supply orders.
- Demobilize Food Unit in accordance with Incident Demobilization Plan.
- Maintain Unit Log (ICS Form-214).

2.4.3.4 Procurement Unit Leader

Assignment of Primary Responsibility

County Executive Office, 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.
- 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.

Position Alternates and Successors

The County Executive Office is responsible for developing protocols for EOC position succession, including the Procurement Unit Leader position.

2.4.3.5 Communications Unit Leader**Assignment of Primary Responsibility**

Orange County Sheriff's Department, Communications and Technology Division

Responsibilities

- Develops the Communications Plan 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.

Position Alternates and Successors

The Orange County Sheriff's Department, Communications and Technology Division, Emergency Communications Unit is responsible for developing protocols for EOC position succession, including the Communications Unit Leader position.

2.4.3.6 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 Group position is staffed.
- 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 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.
- Contacts the Public Information Officer to report and request disposition of any news media visitors or dignitaries.
- 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 Group 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 Group on requests for spontaneous volunteers and coordination with OneOC.
- Coordinates use of County personnel by 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.

Position Alternates and Successors

OC Human Resources Department is responsible for developing protocols for EOC position succession, including the Personnel Unit Leader position.

2.4.3.7 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 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.
- Contacts the PIO to report and request disposition of any news media visitors or dignitaries.
- Coordinates with Transportation Group Supervisor for transportation support for EOC responders, if offsite parking has been implemented.

2.4.3.8 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 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 with Personnel Unit Leader for use of County personnel by implementing the California's Disaster Service Worker authorities.
- Coordinates the Volunteer Coordination Group 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.

Position Alternates and Successors

The COAD-OC Leadership Council is responsible for developing protocols for EOC position succession, including the COAD-OC Liaison position.

2.4.3.9 Volunteer Coordination Unit

Assignment of Primary Responsibility

Orange County Sheriff's Department, Emergency Management Division

Responsibilities

- Implements the CMAP Mutual Aid Plan 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 is administered the Disaster Service Worker Oath under the Disaster Service Worker Volunteer Program authority.
 - Establish and maintain documentation of DSW paperwork, used.
 - Track and document volunteer services used.
- Ensures the general welfare and safety of all volunteers 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.

2.4.3.10 Transportation Unit Leader**Assignment of Primary Responsibility**

OC Public Works

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.

Position Alternates and Successors:

OC Public Works is responsible for developing protocols for EOC position succession, including the Transportation Unit Leader position.

2.4.3.11 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 EOC position succession, including the Transportation Group Supervisor position.

2.4.3.12 Facilities Unit Leader**Assignment of Primary Responsibility**

Orange County Sheriff's Department

Responsibilities

- Coordinates facility maintenance and security services at the County/OA EOC.
- 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.
- In coordination with Resources and Support Unit obtains additional facilities, including but not limited to:
 - Alternate EOC
 - Joint Information Center
 - Local Assistance Centers

Position Alternates and Successors

The Orange County Sheriff's Department is responsible for developing protocols for EOC position succession, including the EOC Facilities Unit Leader position.

2.4.3.13 Audio and Visual Unit**Assignment of Primary Responsibility**

Orange County Sheriff's Department, Communications and 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, Communications and Technology Division is responsible for developing protocols for EOC position succession, including the Audio and Visual Group position.

2.4.3.14 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.

2.4.3.15 Information Systems Unit**Assignment of Primary Responsibility**

Orange County Sheriff's Department, Support Services Division, Information Technology Bureau

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 to provide IT support for newly established support facilities.
- Coordinates with the EOC Facility Unit Leader with IT support operations, in the establishment of additional facilities.

Position Alternates and Successors

The Orange County Sheriff's Department, Support Services Division, Information Technology Bureau is responsible for developing protocols for EOC position succession, including the Information Technology Group position.

2.4.3.16 EOC Facility Support**Assignment of Primary Responsibility**

Orange County Sheriff's Department, Research and Development Division, Facilities Operations

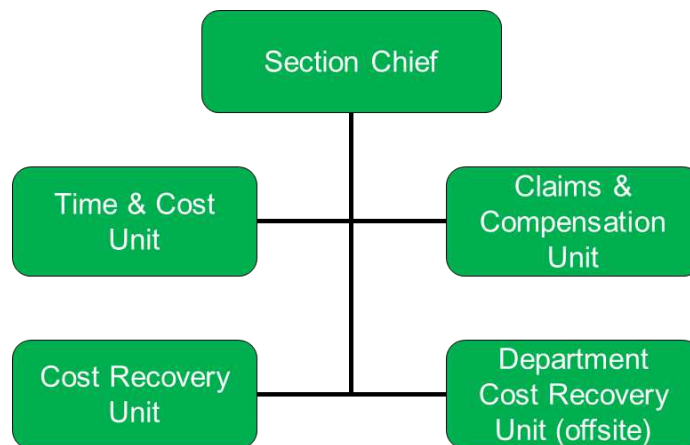
Responsibilities

- 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.

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 Group position.

2.4.4 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.

2.4.4.1 Finance and Administration Section Chief

Assignment of Primary Responsibility

County Executive Office, Finance Office, Administrative Manager III or Administrative Manager II

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 System.
- 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.
- Processes 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.

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.

2.4.4.2 Time and Cost Unit Leader**Assignment of Primary Responsibility**

Auditor-Controller, Administrative Manager

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.

2.4.4.3 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
 - 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.

2.4.4.4 Cost Recovery Unit Leader

Assignment of Primary Responsibility

Auditor-Controller, Administrative Manager

Responsibilities

- Coordinates the implementation of and maintains the County Disaster Accounting System.
- 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.

2.4.4.5 Department Cost Recovery Unit Leader (s)**Assignment of Primary Responsibility**

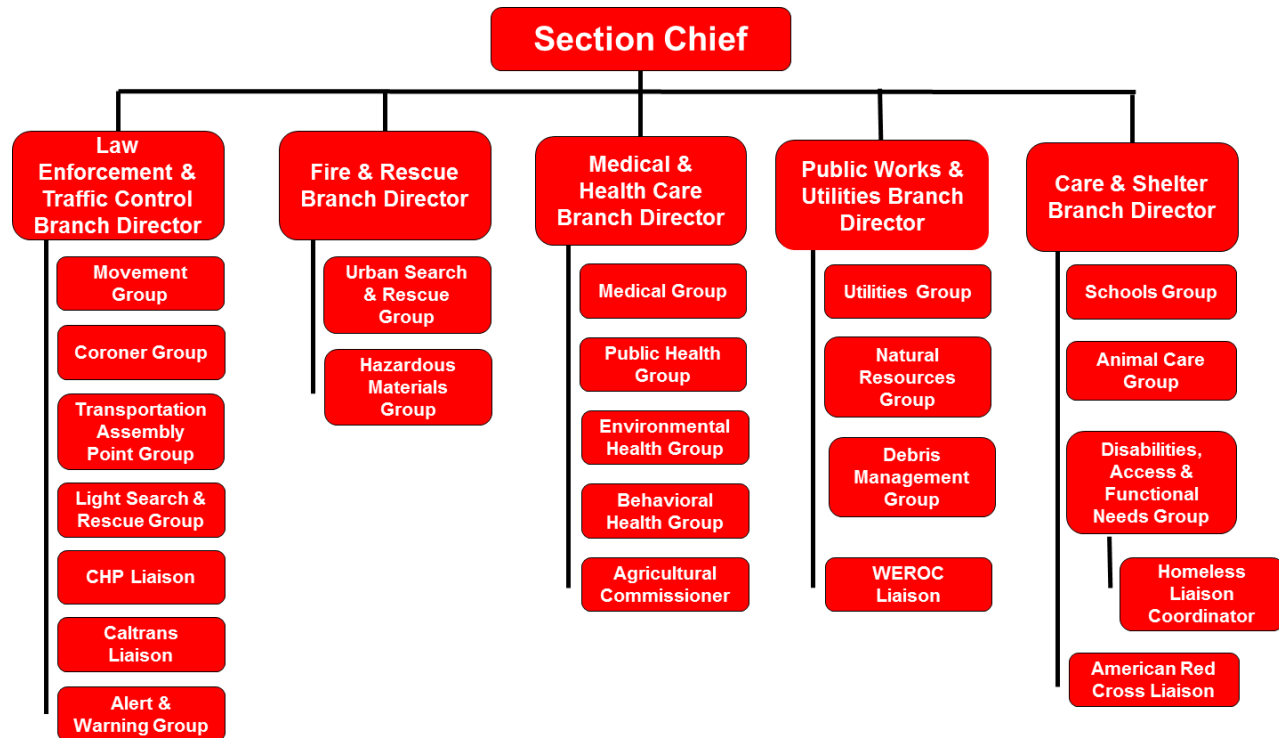
All County Departments and Agencies

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.

2.4.5 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.

2.4.5.1 Operations Section Chief

Assignment of Primary Responsibility

The EOC Operations Section Chief should be from the same discipline and agency as the DES or OAC. The Operations Section Chief will be 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, SASS-GIS, 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 or OAC during the emergency situation that is underway. Organizations assigned with this position are responsible for developing protocols for position succession within their organizations.

2.4.5.2 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.
- 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.

2.4.5.3 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 Transportation Group 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.

2.4.5.4 Movement Group

Assignment of Primary Responsibility

Orange County Sheriff's Department, Lieutenant or Sergeant

Responsibilities

- Implements the strategies and objectives from the County of Orange and Orange County Operational Area Evacuation Annex.
- Identifies the best strategy for sharing, acquiring and distributing evacuation resources and personnel in support of the incident.
- 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.

2.4.5.5 Light Search and Rescue Group**Assignment of Primary Responsibility**

Orange County Sheriff's Department, Lieutenant or Sergeant

Responsibilities

- Identifies the best strategy for sharing, acquiring and distributing search and rescue resources and personnel.
- 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.

2.4.5.6 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.

2.4.5.7 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.

2.4.5.8 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.

2.4.5.9 Alert and Warning Group Supervisor (AWGS)

Assignment of Primary Responsibility

Orange County Sheriff's Department

Responsibilities

- Under the direction of the DES and OAC, activates emergency alert and notification systems including but not limited to:
 - Integrated Public Alert and Warning System
 - Emergency Alert System (EAS)
 - Wireless Emergency Alert System
 - AlertOC (public emergency mass notification system)
 - Community sirens (where available)
 - Message boards
- Coordinates with the Public Information Officer and the Operations Section Chief to determine appropriate message content 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/OAC in correcting any conflicts.

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 Communications Division. Depending upon the severity of the incident, Control One may provide support staff to this position.

2.4.5.10 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.

2.4.5.11 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.

2.4.5.12 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.

2.4.5.13 Medical and Health 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.

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.

2.4.5.14 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 HCA DOC.
- Coordinates directly with appropriate Group Supervisors in the EOC, ICP and with representatives at the EMS-DOC or at the HCA 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.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Medical Group position.

2.4.5.15 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 DOC, 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.

2.4.5.16 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 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.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Environmental Health Group position.

2.4.5.17 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 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.

Position Alternates and Successors

The OC Health Care Agency is responsible for developing protocols for EOC position succession, including the Behavioral Health Group position.

2.4.5.18 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.

2.4.5.19 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.

2.4.5.20 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.

2.4.5.21 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.

2.4.5.22 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
- 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.

2.4.5.23 Water Emergency Response Organization of Orange County (WERO) Liaison

Assignment of Primary Responsibility

WERO, Emergency Services Manager, or designee

Responsibilities

- Coordinates water and waste water resources and personnel (e.g. emergency repairs, temporary construction, restoration of essential utilities, etc.).
- Coordinates with the water and waste water utilities for damage assessments and restoration of water supplies and systems.
- 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

WERO is responsible for developing protocols for EOC position succession, including the WERO Liaison position.

2.4.5.24 Care and Shelter Branch Director

Assignment of Primary Responsibility

Social Services Agency, Administrative Manager

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 for both impacted and non-impacted populations.
- Coordinates with the Public Information Officer on shelter status and operations.
- Coordinates with American Red Cross, Orange County Chapter and others as needed, in support of shelter operations.
- 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, jurisdictions and with representatives at the Social Services Agency DOC, if activated.
- 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.

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 position.

2.4.5.25 Schools Group**Assignment of Primary Responsibility**

Orange County Department of Education

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 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.

Position Alternates and Successors

The OC Department of Education is responsible for developing protocols for EOC position succession, including the Schools Group position.

2.4.5.26 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.

2.4.5.27 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 consult available population and facility databases to determine the extent to which critical care facilities are affected.
- 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 official and unofficial 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.
- Assists Logistics Section, as needed, with technical expertise on certain resources such as durable medical equipment (DME) and consumable medical supplies (CMS).
- Coordinates with:
 - Advanced Planning Unit (for people with disabilities and those with access and/or functional needs resource forecasting)
 - Public Works and Utilities Branch (to obtain manifest list of those who need electricity to use critical devices for use during power outages)
 - 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.

2.4.5.28 Homeless Liaison Coordinator

Assignment of Primary Responsibility

OC Community Resources, Administrative Manager I or above

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.
 - Continue to monitor their activities and needs.
- 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.
- 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

OC Community Resources is responsible for developing protocols for EOC position succession, including Homeless Liaison position.

2.4.5.29 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:
 - Shelters
 - Behavioral health
 - Public welfare
 - Schools
 - Social services
 - Child, elder and guardianship protective issues

- Emergency food and water distribution for the public and emergency responders

Position Alternates and Successors

The American Red Cross is responsible for developing protocols for EOC position succession, including the American Red Cross Liaison position.

2.5 Direction, Control, and Coordination

2.5.1 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 as a virtual County/OA EOC 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.

2.5.2 County of Orange Role and Responsibilities

The County of Orange, per County Board of Supervisors Resolution, is overseen by the County of Orange Emergency Management Council, the County's Disaster Council. 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.

2.5.3 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 Executive Board, which consists of members from the Board of Supervisors, Orange County Sheriff-Coroner Department, City Manager's Association & League of Cities, Health Care Agency, Department of Education, Independent Special Districts, OC Public Works, City Engineers' and Public Works Director's Association, Orange County Fire Authority, Fire Chief's Association, and Police Chiefs' and Sheriff Association. 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 Region I, which includes Orange, Los Angeles, Ventura, Santa Barbara, and San Luis Obispo Counties. The Region I REOC is located in Los Alamitos, CA. Mutual Aid Regions I and VI make up the Southern Cal OES Administrative Region, which is managed through the Los Alamitos REOC.

2.5.4 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 OAC, alternate or successor, will declare the County/OA EOC operational when adequate personnel have arrived to facilitate decisions.

2.5.5 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/or OAC 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.

2.5.6 Levels of EOC Activation

The extent to which the County/OA EOC is activated and when the designated DES and OAC assumes responsibility for the County/OA EOC depends on the type of emergency situation, its potential for escalation, its geographic extent, and other factors. The level of County/OA EOC activation is determined by the designated DES and OAC 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. In consultation with the designated DES and OAC, the County/OA EOC Manager determines an appropriate level of activation for the EOC. The activation levels and their associated staffing⁴⁶ 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

⁴⁶ Minimum staffing may vary with the actual situation.

2.5.7 Deactivation of the County/OA EOC

The DES and OAC have 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 pre-planned 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 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 and OAC, 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 and OAC 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 and OAC 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 and OAC may choose to dismiss elements of the Management Section. The DES and OAC typically receive a debriefing from the Section Chiefs as they cease operations. When the last Section Chief has provided a debrief and the DES and OAC 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:

- Ensure Logistics Section has coordinated the following:
 - 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 of County of Orange website, Twitter and other social media accounts.

2.5.7 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.

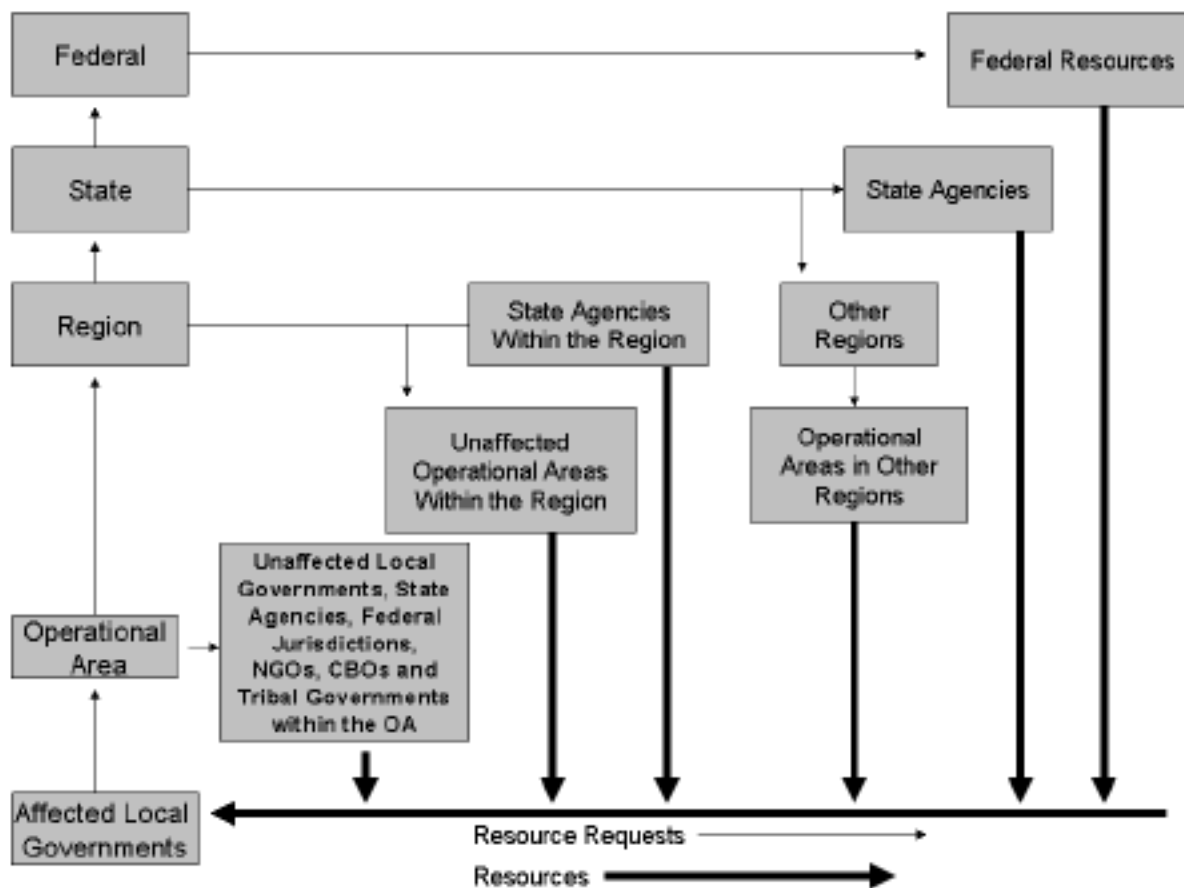
The five SEMS and NIMS organization levels, together with the private sector, are collectively referred to as the California Emergency Organization. This organization represents all resources available within the State, which may be applied in disaster response and recovery phases. The system operates 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 20 -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:

Field	Field Command
Local Government	Emergency Operations Center
Operational Area	Orange County OA EOC
Region	Cal OES Southern Region EOC (REOC)
State	Cal OES State Operations Center (SOC)

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.

If the County/OA EOC is activated, an Operational Area Coordinator (OAC) will be appointed depending on the type of hazard and will have the overall responsibility for coordinating resources on behalf of OA jurisdictions and supporting emergency operations within the county, as directed in the Orange County Operational Area Agreement.

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).



Figure 21 - Cal OES Administrative Regions

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.

2.5.8 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 Orange County Operational Area EOC organization:

Management	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	Responsible for coordinating and supporting operations of the emergency response at the field level.
Planning and Intelligence	Responsible for collecting, evaluating and documenting information, resources, developing the EOC Incident Action Plan, Situation Summary Reports, and After-Action Reports in coordination with other EOC functions.
Logistics	Responsible for obtaining and providing services, personnel, equipment, supplies, materials, facilities and volunteer coordination.
Finance and Administration	Responsible for all financial activities and other administrative aspects.

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 and OAC, 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.

2.5.9 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.

2.5.10 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.

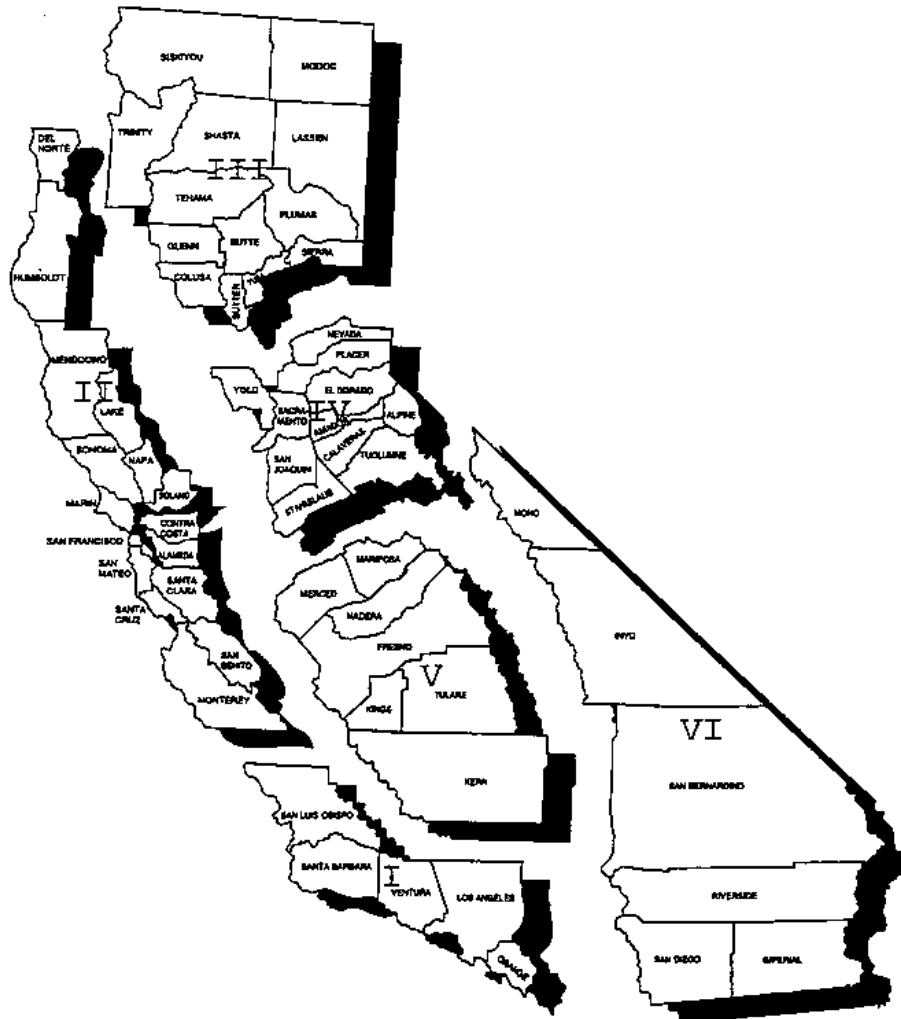
2.5.11 Mutual Aid Coordinators

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:

Figure 23 - Fire and Rescue Mutual Aid Regions



2.5.12 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 the County and those passed from the OA to the Southern REOC 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 (WERO).
- California Water/Wastewater Agency Response Network (Cal WARN).
- Robert T. Stafford Disaster Relief and Emergency Assistance Act.

2.5.13 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. 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.

- I. Operational Area Executive Board and Emergency Management Council Letter of Approval

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 deputies of the Department of Fish and Game 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.

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.

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

Emergency Management Assistance Compact (EMAC)

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>.

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.

Water and Wastewater

The Water Emergency Response Organization of Orange County (WEROC) is a mutual aid agreement between 35 water and wastewater utilities within Orange County; including city departments, special districts and one private entity. The purpose of WEROC is to share information and resources amongst the water utilities 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 Cal WARN 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 recognized by the Cal OES. Cal WARN consists of water and wastewater utilities as signatories throughout the State of California. Cal WARN is divided by the Cal OES mutual aid areas and is coordinated through the Water Sector Unit Leader at each Cal OES Regional EOC. 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.

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. 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.

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 Cal OES Secretary's Concurrence

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.

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). 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 a recommendation is made to the Governor through the Secretary 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.

Continuity of Government

A major disaster could result in the death or injury of key government officials, the partial or complete destruction of established seats of government, and loss of public and private records essential to the continued operations of both government and industry. To help preserve law and order and to continue and restore local services, it is essential that units of local governments continue to function during or following such situations. The California Government Code, the State Constitution and the California Emergency Services Act provide legal authority for the continuity and preservation of state and local

government if incumbents are unable to serve. Within the context of this document, the concept of Continuity of Government is comprised of three elements: 1) Standby Officers for the Governing Body; 2) Alternate Seat of Government; and 3) Preservation of Vital Records. Since Orange County and its Board of Supervisors are responsible for the establishment and performance of the Operational Area, this section describes continuity considerations for the County. The County Executive Office Information Technology Division (OCIT) coordinates with county departments for continuity of operations and business continuity plans.

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. The Sheriff's Department Communications Division is also located in the facility, which maintains communications systems throughout the County, and the Emergency Communications Bureau serves as the OC Sheriff's Department Dispatch Center. The alternate EOC location has multiple options, the use of another local government facility, such as a City EOC in Orange County, the use of a mobile command vehicle, or the use of pre-determined location within another local government agency. Refer to the Orange County and OA Alternate EOC Standard Operating Procedures.

Succession

Sections 8635 through 8644 of the California Government Code provide the following directives related to succession:

Orange County Line of Succession

In the event of vacancies during a Local Emergency, State of Emergency or a State of War Emergency, the Orange County Board of Supervisors will be reconstituted in accordance with the provisions of Government Code Sections 8635-8644. Orange County Code Section 3-1-4(a) e designates the lines of succession for the Emergency Management Council. The Chair shall be a member of the Board of Supervisors, appointed by the Board of Supervisors. The Board of Supervisors shall appoint one of its members as an alternate to the Chair of the Emergency Management Council, who shall preside over the Emergency Management Council in the absence of the Chair. In the absence of the Chair, the alternate Chair shall serve in the capacity as Chair. When both the Chair and alternate Chair are absent, the next Supervisor, in ascending order of district number (commencing with the First Supervisorial District), shall serve in the capacity of the Chair of the Board. In the event the entire Board of Supervisors is unable to serve in their designated capacity, the full line of succession through County Departments shall be in accordance with Board of Supervisors' Board Resolution No. 12-036, dated April 17, 2012.

2.6 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.

- Information sharing and dissemination within the EOC, 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.
- Information sharing and disseminated outside of the EOC occurs using various methods and tools such as:
 - Telephone
 - E-mail
 - Radio
 - Fax
 - WebEOC

2.7 Communications

2.7.1 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.

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 Wire, 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).
- 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.
- CLEMARS: The California Law Enforcement Mutual Aid Radio System provides common police radio frequencies for use statewide by state and local law enforcement agencies during emergencies where inter-agency coordination is required. It operates under appropriate FCC rules and regulations and is administered by the State through Cal OES. Participation in CLEMARS is open to all California law enforcement agencies, which are eligible to operate on radio frequencies authorized by the FCC for Police Radio Service. CLEMARS use is governed by a system of priorities:
 - Priority 1-Disaster and extreme emergency operations for mutual aid and interagency communications
 - Priority 2-Emergency or urgent operations involving imminent safety of life or protection of property
 - Priority3-Special event control activities, such as a planned event involving the participation of two or more agencies
 - Priority4-Drills, tests and exercises

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 Weather Service severe weather broadcasts are preceded with a 1,050 MHz tone that activates weather monitor receivers equipped with decoders. The Weather Service 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:

- 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.

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.

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, sirens, Sig-Alerts, news media releases, route alerting.

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.

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.com. 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
- 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

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.

Emergency Alert System (EAS)

The Emergency Alert System (EAS) is used by alerting authorities to send warnings via broadcast, cable, satellite, and wireline communications pathways. EAS participants, which consist of broadcast, cable, satellite, and wireless providers, are the stewards of this important public service in close partnership with alerting officials at all levels of government. The EAS is also 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 can be accessed at federal, state, and local levels to transmit essential information to the public. Message priorities under Part 73.922(a) of the FCC's rules are as follows:

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

Presidential messages, national programming, and news will be routed over established network facilities of the broadcast industry. State programming will originate from the state operations center and will be transmitted through the state using the state's California Law Enforcement Radio System (CLERS). Local programming will be transmitted by the Local Primary (LP-1) and (LP-2) stations.

Examples of emergencies identified by the County, which may warrant EAS activation by the broadcast industry, are earthquake, serious fires, heavy rains and flooding, 9-1-1 system outages, severe industrial accidents, and hazardous material accidents. The context of any emergency broadcast transmitted on EAS should be of concern to a significant segment of the population of Orange County. The message must be a voice message, it may be prerecorded, and it must not be longer than two (2) minutes in length.

EAS activation can be authorized by any one of the following parties for the County:

- Orange County Sheriff-Coroner Department, Department Commander
- Orange County Fire Authority Chief, Division Chief, Battalion Chief
- Orange County Health Care Agency
- OC Public Works
- County of Orange Director of Emergency Services

Orange County relies on KWVE-107.9 FM as its LP-1 EAS station. The LP-2 back up is located at the Control One Communications Center at the Loma Ridge facility.

Additional information can be found in the Orange County Emergency Alert System (EAS) Communications Operations Plan.

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 (90 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.

Presently, public alerting authority for WEA is governed by FEMA and CalOES with consultation of the local Operational Area. The cities of Aliso Viejo and Laguna Beach have independent access to launch messages across Orange County.

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.

2.7.2 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, where and how they can access resources and information, and conversely they should be informed of what their community expects of them and where and how they can access the resources they need to be self-reliant and advance their own recoveries.

Public information channels such as social media, hotlines, or in-person visits must be quickly established to receive incoming questions and referrals. Communication with employees, residents and businesses that may have been displaced outside the county will also need to be addressed.

The County and OA has a multitude of tools available to assist in the dissemination of public information. It is the responsibility of the 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 due to conflicting information.

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 and any other information delivery vehicles to ensure the greatest number of affected people is informed. Additionally, news media outlets should be encouraged to provide a television crawl and sign language interpreters during press conferences, or news media releases so people with disabilities and those with access and/or functional needs have every opportunity to receive the message being broadcasted.

Website Pages

The Orange County Sheriff's Department, Emergency Management Division EOC website (<http://www.ocgov.com/eoc>) 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-crafted news conference needs to identify important facts to share with the public, such as public resources (e.g., Local Assistance Center(s), 2-1-1, volunteer services, 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. Consequently, preplanning meetings prior to a press conference is of vital importance.

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, non-English translation services, and news media using in-frame captioning at all press conferences held by public officials.

The public looks to its 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.

Social Media

The County of Orange has approved the use of Facebook and 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.

The County of Orange Social Media Protocol for Twitter use can be found in Orange County Operational Area Joint Information System Annex, Appendix E of the Field Operating Guide.

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, Orange County 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 Joint Information System (JIS) Annex.

2.7.3 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, Sprint, Verizon and AT&T.

800 MHz Radios

The County/OA EOC has connectivity to the County's 800 MHz system, which provides communications capabilities to field personnel (e.g., fire, police, public works, public utilities, etc.) and potentially to mutual aid partners. During an emergency, County radios should be limited to emergency radio traffic only.

Orange County's EOC radio consoles have been programmed with each county and city law enforcement, fire service, lifeguard, marine safety, and public works agency for interoperable and mutual aid communications. Details on each can be found in the 800 MHz SOP, which is available through the Orange County Sheriff's Department, Control One.

EOC to EOC Radio

The County and OA have EOC-to-EOC radio systems through low-band UHF frequencies: OA1, OA2, and OC Access, for additional communications capability between the County/OA EOC, county departments

and OA Jurisdictions with these radio systems. The frequencies are 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 EOC-to-EOC radios. The Standard Operating Procedure for the OA Radio System includes a roll call procedure and briefing template for use during OA activations. The OA Radio System should be used to conduct at least one briefing each operational period. During an activation, any requests to patch the OA Radio System must be coordinated through Control One, Operations Section Alert & Warning Group Supervisor, and Logistics Communications.

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 consist of volunteer amateur radio (ham radio) operators who assist with emergency communications in times of disaster. This group provides auxiliary communications for all response agencies and other departments. The County maintains a cadre of RACES volunteers and radio base stations to ensure communications between the EOC and various locations. Individual operators may have their own base stations that 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. While operating in a RACES capacity, RACES stations and amateurs registered in the local RACES organization may not communicate with amateurs not operating in a RACES capacity.

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.

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, EOCLiaison@OCSD.Org.

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.

3.3.1 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 Orange County Sheriff's Department, Emergency Management Division provides training for EOC responders on an ongoing basis and provides training and consultation to County departments and OA jurisdictions upon request.

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.

Training classes and opportunities are ongoing to ensure all response personnel are trained in SEMS, NIMS and EOC functions. County and OA Emergency Operation Center functional training is scheduled and offered through the year, to accommodate personnel changes.

National Incident Management System (NIMS) Training

NIMS training, as identified in the National Incident Management System Training Program (September 2011) is available through FEMA's Independent Study program, visit FEMA's website, <http://training.fema.gov/IS/NIMS.aspx>, advanced courses are classroom based with class offering made available from a variety of sources. 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 President Directive-8, National Preparedness, establishes 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) responders⁵⁰: Each County department shall coordinate the following NIMS training at relevant levels for emergency personnel:

⁵⁰ NIMS Training Program, released September 2011

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-100: Introduction to ICS

Instruction method: interactive web based course via FEMA's Independent Study program. This course provides training, resources and a basic understanding of the Incident Command System. This course describes the history, features and principles and organizational structure of ICS and the relationship between ICS and NIMS.

IS-700: NIMS, An Introduction

Instruction method: interactive web based course via FEMA's Independent Study program. This course introduces and provides an overview of the National Incident System, including the intent of NIMS, key concepts, principles and the purpose of the NIMS components, including:

- Preparedness
- Communications and information management
- Resource management
- Command and management

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, Section Chiefs:

IS-701: NIMS Multi-Agency Coordination System (MACS)

Instruction method: interactive web based course via FEMA's Independent Study program. This course introduces MACS as described in NIMS and shows how MACS are used to improve incident response. MACS consist of a combination of elements: personnel, procedures, protocols, business practices and communications integrated into a common system. This course describes the components of the MAC system, including:

- Defining multiagency coordination at the local, State and Federal level of governments.
- Identify typical priorities established between elements of the MAC system.
- Describes the process of acquiring and allocating resources required by the incident management personnel.
- Identify potential coordination and policy issues arising from an incident relative to the MAC system.

IS-706: Intrastate Mutual Aid System

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: 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 the NRF.
- Explain the response doctrine established by the NRF.
- Roles and responsibilities of entities as specified in the NRF.
- Explain the actions that supports national response.

G191: ICS/EOC Interface

Instruction method: instructor led classroom 8 hours. This course reviews ICS and Emergency Operations Center (EOC) responsibilities and functions, identifying the roles of ICS and the EOC during emergency operations.

G775: EOC Management and Operations

Instruction method: instructor led classroom 12 hours. This course reviews the role, design and functions of EOC's and their relationships as components of a Multiagency Coordination System (MAC), including:

- How EOC operations relate to NIMS requirements.
- The relationship between the EOC and on-scene ICS structure.
- Identify staffing, information, systems and equipment needs of an EOC.

Mandatory for EOC and incident responders designated as Public Information Officers and Public Information Officer's Support Staff.

IS-702: NIMS Public Information Systems

Instruction method: interactive web based course via FEMA's Independent Study program. This course provides PIO's with basic information and tools needed to apply NIMS public information systems and protocols during incidents, including:

- Defining the NIMS Public Information System to include onsite operations, the Joint Information System (JIS) and the Joint Information Center (JIC) and how they relate to each other.
- JIS and JIC process of gathering, verifying, coordinating and disseminating information by PIO's.

- The role of each agency within the JIS to ensure the appropriate situational awareness information is communicated to the public.
- Identification of typical resources requirements for public information systems.

County and Operational Area Emergency Operations Center Training

Introduction to ICS, SEMS, NIMS & EOC Orientation

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.

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.

Operations Section: 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 supporting 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.

Planning and Intelligence Section: 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.

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.

Public Information Manager and PIO Support Staff Training

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, processes, protocols, the Joint Information System Annex, and a hands-on drill.

WebEOC Orientation

Course Overview: WebEOC Orientation 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.

EOC Support Pool (Messengers, Hotline, Documentation)

Course Overview: This course is designed for those who may be assigned as Messengers, Hotline, 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. 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 Manager. Training will be interactive and hands-on.

Situation Analysis Support Staff (SASS)

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.

3.3.2 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.

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.

Other 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

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- 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

Chapter 4 Authorities and References

The following Authorities and References related to this Plan are listed below:

4.1 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
- 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, v2.0, November 2010
- FEMA National Incident Management System Training Program September 2011
- Homeland Security Act of 2002, as amended
- Homeland Security Presidential Directive (HSPD) 5, Management of Domestic Incidents
- Homeland Security Presidential Directive and Presidential Policy Guidance 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 Americans with Disabilities Act Title II Technical Assistance Manual \(1993\) and Supplement \(1994\)](#)
- [The 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](#)
- [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 \(NRF\), May 2013](#)
- [USDHS, National Disaster Recovery Framework \(NDRF\), September 2011](#)
- [USDHS, National Mitigation Framework, Second Edition, June 2016](#)

4.2 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 Services Act, 2015](#)
- [California Fire Service and Rescue Emergency Mutual Aid System, December 2014](#)
- [California Government Code 8607 \(a\)](#)
- [California Law Enforcement Mutual Aid Plan, 2016](#)
- [California Medical and Health Operational Area Coordination Program Manual, December 2016](#)
- [California Medical Mutual Aid Plan. September 2007](#)
- [California Oil Spill Contingency Plan, April 2017](#)
- [California Public Health and Medical Emergency Operations Manual, July 2011](#)
- [California State Emergency Plan, 2017](#)
- [California State Hazard Mitigation Plan, 2013](#)
- [Emergency Management Assistance Compact \(EMAC\), 2015](#)
- [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](#)
- [State of California Hazardous Materials Business Program, 2016](#)

4.3 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. 12-036, adopting the amended membership of the Emergency Management Council and designation of the Director of Emergency Services, dated April 17, 2012
- 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, October 1995
- Orange County Operational Area Building Damage and Safety Assessment Mutual Aid Agreement, October 1997
- San Onofre Nuclear Generating Station Emergency Plan (SONGS), August 2018

4.4 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 Plan is not a standalone document. Its purpose is to support the emergency plans and procedures of the County of Orange and OA jurisdictions. This Plan is designed to be flexible enough that it can adapt to changing response environments and to the needs of supporting and requesting organizations. This Plan will frequently support/complement other County of Orange and Orange County Operational Area Plans and Annexes including:

- County of Orange and Operational Area Aircraft Accident Annex, August 2014
- County of Orange and Operational Area Disease Outbreak Response Annex (DORA), November 2017
- County of Orange and Operational Area Excessive Temperature Annex, May 2017

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- County of Orange and Operational Area Dam and Reservoir Failure Annex, November 2015
 - County of Orange Hazard Mitigation Plan, November 2015
 - County of Orange and Operational Area Joint Information System Annex, November 2018
 - County of Orange and Operational Area Mass Evacuation Annex, May 2018
 - County of Orange and Operational Area Medical Countermeasures (MCM) Annex, November 2015
 - County of Orange and Operational Area Power Outage Annex, November 2017
 - County of Orange and Operational Area Rail Emergency Response Annex, May 2014
 - County of Orange and Operational Area Recovery Annex, May 2015
 - County of Orange and Operational Area Mass Care and Shelter Annex, November 2018
 - County of Orange and Operational Area Tsunami Annex, May 2018
 - County of Orange and Operational Area Volunteer and Donations Management Annex, February 2018
 - County of Orange and Operational Area Weapons of Mass Destruction (WMD) Annex, November 2014
 - Operational Area Jurisdictions Emergency Plans and Procedures
 - Orange County Coroner's Mass Fatalities Incident Plan, October 2005
 - 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

4.4.1 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 Plan.

Supporting plans, operating procedures, and checklists developed in concert with this Plan will be reviewed periodically by the EMC Sub-Committee under the direction of the Emergency Management Council and OCEMO under the direction of the OA Executive Board.

Chapter 5 Appendices

5.1 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
AO	Administrative Order
ARC	American Red Cross
ATC	Applied Technology Council
BAER	Burned Area Emergency Response
BFE	Base Flood Elevation
BOS	Board of Supervisors
BSSC	Building Seismic Safety Council
CAD	Computer-Aided Dispatch
CA-EF	California Emergency Function
CAHAN	California Health Alert Network
CAISO	California Independent System Operator
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	County wide Coordinated Communications System (800MHz)
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
CLEMARS	California Law Enforcement Mutual Aid Radio System
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
EF	Emergency Function
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
EVC	Emergency Volunteer Center
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 Administration 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 Information Exchange System
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
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

OCIAC	Orange County Intelligence Assessment Center
OCPW	Orange County Public Works
OCSO	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 State
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
WMD	Weapons of Mass Destruction
WNV	West Nile Virus
WUI	Wildland Urban Interface

5.2 Glossary of Terms⁵¹

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 Executive or Administrator

Chief executive officer (or designee) of the agency or jurisdiction that has responsibility for the incident.

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.

⁵¹ SEMS Guidelines, Standardized Emergency Management System, November 2009, Part III Supporting Documents

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. Mutli-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 pocket-size 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**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 Multijurisdiction)

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**Recorders**

Individuals within ICS or EOC organizational units who are responsible for recording information. Recorders may be found in Planning, Logistics and Finance/Administration Units.

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, 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.

5.3 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.

5.4 Vital Record Retention

Vital records are required to support an organization's roles and responsibilities during and following an event that significantly disrupts normal operations, such as a disaster or national security emergency. The identification and protection of copies of vital records and the implementation of records disaster mitigation and recovery programs are an insurance policy against disruption of critical agency operations. To effect that insurance policy, the County of Orange acts to achieve continuing operations, resuming normal business operations, protecting legal and financial rights, and recovering damaged records. A review of statutory and regulatory responsibilities and current file plans of offices that perform essential functions or preserve rights and interests is critical to the identification of vital records. Vital records should comprise a relatively small fraction of the organization's total volume of records and be an integral part of the organization's overall Continuity of Operations Plan (COOP). The Orange County Sheriff's Department, Emergency Management Division, adheres to the County of Orange, County Records Management Policy No. 0300-9, 9/26/2017 and Board Resolution 14-113 Item 15, 12/16/2014.

Chapter 6 Position Checklists