

Unified
County of Orange
and
Orange County
Operational Area



Emergency Operations Plan
August 2016

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I. Emergency Management Council and Operational Area Executive Board 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.

August 10, 2016

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 revised Unified County of Orange and Orange County Operational Area Emergency Operations Plan (EOP). This EOP is the foundation for the response operations from the County's and Operational Area (OA) 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 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 and response 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 County of Orange and Orange County Operational Area EOP is complemented by other plans, procedures and hazard-specific annexes developed to meet specific emergencies.

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 Emergency Operations Center and 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
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II. County of Orange Board of Supervisors Resolution

III. California Office of Emergency Services Letter of Acceptance

IV. Record of Changes

Date of Revision	Revision Description	Section or Component	Reviewed by	Revision Completed By
2014	Emergency Operations Plan revision to new template	County of Orange Emergency Operations Plan	EMC Sub-Committee and DAFN Working Group	Emergency Management Division
2014	Updated hazard assessment	Chapter 2, section 2.2 Hazard Assessment	EMC Sub-Committee and DAFN Working Group	Emergency Management Division
2014	Update reference to Disabilities and Access and Functional Needs laws and regulations	Throughout the Emergency Operations Plan	EMC Sub-Committee and DAFN Working Group	Emergency Management Division
2014	Updated hazard information and descriptions	Section 2.2.1 Aviation Accident and 2.2.19 Vector Control	Emergency Management Council	Emergency Management Division
3/2016	Emergency Operations Plan 2 year Revision	Complete County of Orange Emergency Operations Plan	EMC Sub-Committee	Emergency Management Division
4/2016	Combining the 2 EOP's, County and Operational Area EOP into 1 plan	Unifying and updating the new County of Orange and Orange County Operational Area EOP	EMC Sub-Committee, OCEMO and DAFN Working Group	Emergency Management Division
4/2016	Updating hazard descriptions (from Hazard Mitigation Plan)	Chapter 2 County of Orange Community Profile and Hazard Assessment	EMC Sub-Committee, OCEMO and DAFN Working Group	Emergency Management Division

V. Plan Distribution

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

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

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Chapter One: Introduction

1.1 EOP 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 significant or catastrophic natural, technological or conflict-related incidents that produce situations requiring a coordinated response. It further provides guidance regarding 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.

1.2 Intended Audience

The intended audience of this EOP 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 government, and other interested members of the public. It is intended as an overview of emergency management in the County and the OA, and is not a detailed tactical document.

1.3 How to use the Unified County and OA Emergency Operations Plan

The plan provides readers with a description of 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, although only a few will need all chapters. Most will focus their attention on the parts of the plan specific to their needs, roles and responsibilities. The plan provides the basis for developing jurisdiction and/or department-specific, detailed checklists and standard operating procedures.

By using this EOP appropriately, the County, OA jurisdictions and external representatives supporting the County and 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 effective response and recovery operations across organizations and jurisdictions.

1.4 Preparing, Responding and Recovering with the Whole Community Strategy

The County of Orange strives to incorporate the Whole Community perspective in its emergency planning. By planning for the Whole Community, complexities in the diversity in Orange County are assimilated into the County of Orange planning strategy.

Orange County's definition of disabilities and those with access and/or 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 OA formed the Orange County Disabilities and Access and Functional Needs (DAFN) Working Group in 2011 to strengthen partnerships with the disability community and those with access and/or functional needs. This team includes representatives from county agencies, local jurisdictions and nonprofit organizations serving people with disabilities and those with access and/or functional needs in Orange County. This group's instrumental efforts have turned the OA towards more inclusive emergency planning for the Whole Community. This group reviewed the County and Operational Area Emergency Operations Plan in July 21, 2016 and provided valuable feedback.

In order to meet the unique needs of children in disasters, the OA formed the Kids in Disasters (KIDs) Working Group as a sub-committee of the DAFN Working Group. The mission of the KIDS 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 those with access and/or

functional needs. The KIDs Working Group will assist in identifying and supporting community programs that help meet the physical, medical, and mental health needs of children in disasters.

Furthermore, the County and OA are 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 and Operational Area adheres to the guidelines outlined below:

- Disability will not prevent accessibility to services or facilities provided by the County.
- The County will not exclude or deny benefits of any sort based on a disability, access or functional need.
- The County will work to accommodate people with disabilities and those with access and/or functional needs in the most integrated setting possible.
- During all phases of disaster response, the County will make reasonable modifications to policies, practices and procedures, if necessary, to ensure programmatic and architectural access to all.
- The County will shelter people with disabilities and those with access and/or functional needs with their families, friends and/or neighbors as feasible in the most integrated setting possible.

1.5 Planning Assumptions

This plan has been developed on the basis of the following general assumptions:

- California Emergency Services Act requires the County Board of Supervisors to establish an OA to include all political subdivisions 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 the political subdivisions and the State. The California Emergency Services Act also assigns the County responsibility for OA lead agency.
- If a disaster occurs in the unincorporated areas of the county or use of county resources are required or impacted, the Director of Emergency Services will direct and coordinate the County's response efforts, in conformance with its Emergency Services Ordinance.
- If a disaster occurs in more than one jurisdiction, the Operational Area Coordinator (OAC) will serve as the key decision-maker in the County and 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 Title 19 California Code of Regulations Section 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 and 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.

1.6 Disclosure Exemptions

Portions of this document contain sensitive information pertaining to the deployment, mobilization, and tactical operations of the County, OA and OA jurisdictions in response to emergencies. Although the majority of this plan is available for public review, certain sensitive portions that include personal privacy information or information with significant implications on city, regional, state, or national security have been placed in attachments that are exempt from public disclosure under the provisions of the California Public Records Act §6254.

1.7 Promulgation and Approval

The Orange County Emergency Management Organization (OCOMO) and Emergency Management Council (EMC) Sub-Committee under direction of the Operational Area (OA) Executive Board¹, and the County of Orange Emergency Management Council, respectively, are

¹ The Operational Area Executive Board consists of the following individuals or representatives from the following organizations: Chair of the County Board of Supervisors; City Engineers/Public Works Association Director; Fire and Rescue Mutual Aid Coordinator; Fire

responsible for the development of the Unified County and OA Emergency Operations Plan (EOP), training and exercises.

The OA Executive Board and Emergency Management Council are responsible for the approval of the Unified County and OA EOP and includes representatives from organizations and County departments with emergency responsibilities and policy direction for the County and OA.

The OA Executive Board includes all jurisdictions who are signatories to the OA Agreement. It has authority over major policy issues, as determined by the Executive Board, including the adoption of and amendments to the OA Agreement and adoption of any OA fees.

The County of Orange Emergency Management Council has authority for the direction of the County's emergency organization; the coordination of the emergency functions of this County with all other public agencies, corporations, organizations, and affected private persons; and the preparation and implementation of plans for the protection of persons and property within this County in the event of an emergency. Any expenditures made in connection with such emergency activities, including mutual aid activities, shall be deemed conclusively to be for the direct protection and benefit of the inhabitants and property of the County of Orange.

The Unified County and OA EOP will be reviewed by all OCEMO members, EMC Sub-Committee members, the Orange County Disabilities Access and Functional Needs Working Group, and organizations assigned a primary function in the County and OA emergency operations organization as defined in this EOP. OCEMO, EMC Sub-Committee and other working groups will provide feedback on the content of the Unified County and OA EOP. Each department and organization is responsible for ensuring its willingness and preparedness to perform the functions assigned to it in this plan.

Upon completion of preliminary review and Operational Area Executive Board and Emergency Management Council approval, the EOP will be submitted to the California Office of Emergency Services (Cal OES) for review. Upon approval from Cal OES, the plan will be officially adopted and promulgated by the County Board of Supervisors.

Chief's Association; Law Enforcement Mutual Aid Coordinator; Independent Special Districts of Orange County; Health Care Mutual Aid Coordinator; Police Chief's and Sheriff's Association; City Manager's Association/League of Cities; Superintendents of Schools, Community Colleges, and School Districts; Environmental Management/Public Works Mutual Aid Coordinator.

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Chapter Two: Operational Area Profile and Hazard Assessment

2.1 Orange County Profile

The County of Orange was officially formed on August 1, 1889 and covers an area of 948 square miles, with surface water accounting for 159 square miles of the area and 789 square miles of it is land.

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 also famous as a tourist destination. The County is home to such attractions as Disneyland Resort and Knott's Berry Farm, sports teams like the Los Angeles Angels of Anaheim and the Anaheim Ducks, as well as sandy beaches for swimming and surfing, yacht 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 being the primary business hub. There is also one military base, the Los Alamitos Joint Forces Training Base, located in in Orange County in the City of Los Alamitos.

2.1.1 Population and Demographics

As of January 2016, the California Department of Finance estimates Orange County's population as 3,147,655. Of those, about 124,014 live in the unincorporated areas of the County.² The latest data depicts a diverse community, as shown in Table 1 below.

Table 1 – Orange County Population by Race

Percentage of Total Orange County Population	
White alone, Not Hispanic or Latino	42%
Hispanic or Latino	35%
Asian, Not Hispanic or Latino	19%
Other	4%

Source: California Department of Finance

This diversity of the Orange County community emphasizes the need for effective communication during disasters for non-English speaking people. Roughly 45% of Orange County residents (over age 5) speak a language other than English at home, 20% speak English less than “very well” and 29.7% 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

In 2014, the U.S. Census Bureau estimated that 8.6% of the non-institutionalized population in Orange County was living with a disability. This percentage increases among the older population, with nearly 31% of the population 65 and older having some type of disability.

Table 2 – Orange County Disability Demographics

Population	0-4 years 191,517		5-17 years 529,348		18-64 years 2,000,063		65 + years 407,850	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Disability								
Hearing Difficulty	1,130	0.7%	2,625	0.5%	23,185	1.2%	50,483	12.4%
Vision Difficulty	723	0.4%	4,480	0.8%	24,639	1.2%	22,366	5.5%
Cognitive Difficulty	-	-	12,506	2.4%	49,374	2.5%	33,807	8.3%
Ambulatory Difficulty	-	-	2,336	0.4%	50,081	2.5%	78,443	19.2%
Self-Care Difficulty	-	-	4,504	0.9%	21,304	1.1%	33,886	8.3%
Independent Living Difficulty	-	-	-	-	62,606	2.2%	62,606	15.4%

Source: U.S. Census Bureau, Disability Characteristics, 2014 American Community Survey 1-Year Estimates

² E-1 Current Population Estimates - California Department of Finance. Retrieved October 15, 2015, from <http://www.dof.ca.gov/research/demographic/reports/estimates/e-1/view.php>

³ American Community Survey - SDC - Demographic Research - California Department of Finance. Retrieved August 15, 2015, from

http://www.dof.ca.gov/research/demographic/state_census_data_center/american_community_survey/

⁴ Languages Other Than English Spoken at Home (Orange County, 2012). Retrieved October 15, 2015, from <http://cpehn.org/chart/languages-other-english-spoken-home-orange-county-2012>

2.1.2 Employment and Industry

As of February 2015, roughly 50% 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 10% 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 July 2015, the unemployment rate in Orange County was 4.7%.⁶

Orange County hosts 42 million visitors annually.⁷

82% of the workforce commutes alone, 10% carpool and 3% use public transportation.⁸ The high mobility of employees commuting from surrounding areas to industrial and business centers creates a greater dependency on roads, communications, accessibility and emergency plans.

2.1.3 History of Disasters

Since 1953 Orange County has received 29 disaster proclamations including 21 Presidential Disaster Declarations, 3 Presidential Emergency Proclamations, and 5 Fire Management Assistance declarations. While the greatest recurring threat is flood and fire, the earthquake risk is an ever-present threat.

⁵ County of Orange Comprehensive Annual Financial Report - Principal Employers (2014). Retrieved October 15, 2015, from <http://ac.ocgov.com/civicax/filebank/blobdload.aspx?BlobID=41026>

⁶ Labor Market Information. Retrieved August 15, 2015, from <http://www.labormarketinfo.edd.ca.gov/>

⁷ About OCVA. Retrieved September 15, 2015, from <http://www.visitheoc.com/maps-and-information/about-ovca/>

⁸ County of Orange. (2015). OC Community Indicators: 2015. Retrieved October 15, 2015, from <http://ocgov.com/civicax/filebank/blobdload.aspx?BlobID=45210>

Figure 1 – Orange County Federal Declared Disasters

Disaster Number	Year	Incident Type	Incident Title
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

In addition, in March 2014 the County proclaimed a local state of emergency following the 5.1 magnitude La Habra earthquake. Despite more than 10.5 million dollars in damage and costs related to this earthquake, no State Emergency Proclamation was received. On January 17, 2014 the Governor of California proclaimed a State of Emergency related to the State's

extended drought. While the proclamation did not direct specific actions for counties, it was an important step in working towards reducing the overall impact of the drought across the state.

Figure 2 – Orange County Base Map



2.2 Hazard Assessment

A hazard analysis has indicated that the County and Operational Area is at risk for numerous hazards associated with natural disasters and technological incidents. Many of the hazards which exist in or adjacent to Orange County have the potential for causing disasters exceeding

any one jurisdiction's capabilities to successfully respond making centralized management and coordination by the County and its departments essential. The County and OA jurisdictions will review and update the hazard analysis annually in conjunction with the review of this Emergency Operations Plan (EOP).

The following criteria was used to establish each potential hazard rating, based upon historical and recent events to validate frequency and impacts:

- What are the hazard threats facing the community?
 - Natural disaster
 - Human caused disasters
- What is the probability of occurrence?
 - Likely
 - Possible
 - Unlikely
- What are the effects to lives and property?
 - High
 - Average
 - Low
- What is the hazard rating – multiply probability of occurrence by effect?

