

APPENDIX A – 2018 STATE HAZARD MITIGATION TEAM ROSTER OF AGENCIES AND STAKEHOLDER ORGANIZATIONS

AECOM National Governments
Alameda County Office of Emergency Services
Alpine County Operational Area Inland Region IV
Air Resources Control Board (ARB)
Amador County Operational Area Inland Region IV
American Planning Association California Chapter
American Red Cross (Sacramento Chapter)
Association of Bay Area Governments
Association of Contingency Planners
Association of Environmental Professionals
Burbank Fire Corps
Business and Industry Council for Emergency Planning & Preparedness (BICEPP)
Business, Consumer Services, and Housing Agency
Business Executives for National Security (BENS)
Business Recovery Managers Association
Butte County Operational Area Inland Region III
California Adaptation Forum
California Association of Councils of Governments
Cahuilla Band of Indians
California Board of Forestry and Fire Protection
Calaveras Council of Governments
California Coastal Commission
California Conservation Corps
California Community Colleges
California Department of Community Services and Development
California Department of Conservation
California Department of Corrections and Rehabilitation
California Department of Education
California Department of Food and Agriculture
California Department of Forestry and Fire Protection (CALFIRE)
California Department of General Services
California Department of Housing and Community Development
California Department of Insurance
California Department of Public Health
California Department of Public Health, Environmental Health Tracking
California Department of Social Services
California Department of Technology Services
California Department of Transportation
California Department of Water Resources
California Earthquake Authority
California Emergency Services Association (CESA) – Sutter County
California Emergency Commission
California Energy Commission
California Environmental Protection Agency (CalEPA)
California Fire Safe Council
California Geological Survey
California Highway Patrol
California Military Department
California Natural Resources Agency

CalRecycle
 California Ocean Protection Council/Coastal and Ocean (CAT)
 California Ocean Science Trust
 California Governor’s Office of Emergency Services
 California Public Utilities Commission
 California Resiliency Alliance
 California Polytechnic State University, San Luis Obispo
 California Seismic Safety Commission
 California Secretary of State- California State Archives
 California State Archives
 California State Association of Counties (CSAC)
 California State Coastal Conservancy
 California State Lands Commission
 California State Parks
 California State University System (CSU)
 California State University, Office of the Chancellor
 California Utilities Emergency Association (CUEA)
 California Volunteers
 Cambria Community Services District Fire Department
 Cathedral City Fire Department
 Central Valley Flood Protection Board (CVFPB) - Office of the Chief
 Central Valley Regional Water Quality Control Board
 Chemehuevi Indian Tribe
 Chino Valley Fire District
 Chula Vista Elementary School District
 City of Aliso Viejo
 City of Anaheim
 City of Angels Camp
 City of Bellflower
 City of Big Bear Lake
 City of Buena Park
 City of Cerritos
 City of Chino, Police Department
 City of Chula Vista
 City of Cloverdale
 City of Corona, Fire Department
 City of Costa Mesa Police Department
 City of Cudahy
 City of Culver City, Public Works Department
 City of Diamond Bar
 City of Downey
 City of El Segundo, Fire Department
 City of Glendale Fire Department
 City of Grand Terrace
 City of Hermosa Beach, Office of Emergency Services
 City of Hesperia
 City of Highland
 City of Huntington Beach, Fire Department
 City of Indio
 City of Inglewood
 City of Irvine
 City of Laguna Beach, Police Department
 City of Laguna Niguel

City of Lakewood
City of La Canada Flintridge
City of La Puente, Development Services Department
City of La Quinta
City of San Leandro
City of Lincoln
City of Loma Linda
City of Long Beach, Disaster Preparedness Bureau
City of Los Angeles
City of Manhattan Beach, Fire Department
City of Montclair
City of Montebello
City of Moreno Valley – Office of Emergency Management and Volunteer Service
City of Newark
City of Norwalk, Office of Emergency Management
City of Ontario
City of Orange
City of Pacifica
City of Pittsburg
City of Pomona
City of Rancho Cucamonga
City of Rancho Mirage
City of Rancho Santa Margarita
City of Roseville
City of Sacramento
City of San Clemente
City of San Gabriel
City of San Jose
City of San Mateo
City of San Rafael
City of Santa Ana
City of Santa Cruz
City of Santa Maria Fire Department
City of Santa Rosa
City of Seal Beach
City of Signal Hill
City of South Gate
City of Suisun
City of Suisun, Fire Department
City of Susanville
City of Torrance
City of Twentynine Palms
City of Union City
City of Vacaville
City of Vallejo
City of West Hollywood
Coachella Valley Association of Governments
Colusa County OA Inland Region III
Contra Costa Transportation Authority
Community Outreach Promoting Emergency (COPE) Preparedness
Council of Fresno County of Governments
Council of San Benito County Governments
County of Inyo

County of San Bernardino
 County of San Bernardino Fire Protection District
 County of Riverside
 Crestline Village Water District
 Delta Council
 Delta Dental
 Delta Protection Commission
 Delta Stewardship Council
 Del Norte County Office of Emergency Services
 Department of General Services (DGS) - Emergency Management
 Department of Insurance
 Department of Pesticide Regulation (DPR)
 Department of State Hospitals
 Dewberry
 Division of Real Estate Services
 Division of the State Architect
 East Bay Municipal Utility District
 East Bay Regional Park District
 Earthquake Engineering Research Institute (EERI)
 El Dorado County OA Inland Region IV
 Emergency Management, Resilience, and Recovery, Beverly Hills
 Emergency Medical Services Authority (EMSA)
 Energize Fresno
 Environmental Justice Coalition for Water
 Environmental Systems Research Institute (Esri), Public Safety
 Federal Emergency Management Agency
 Federated Indians Graton Rancheria
 FEMA Regional Support Center
 FEMA Region IX
 FEMA Region IX Mitigation- Arizona
 FEMA Region IX Risk Analysis Branch
 Floodplain Management Association
 Four Twenty-Seven Climate Solutions (427)
 Fountain Valley Fire Department
 Fresno County OA Inland Region III
 Fresno County OA inland Region V
 Glenn County OA Inland Region III
 Glenn County Planning and Public Works Agency
 Governor’s Office of Planning and Research
 Hemet Unified School District
 Hi-Desert Water District
 Humboldt County Association of Governments
 Insurance Institute for Building and Home Safety (IIBHS)
 Integrated Waste Management Board
 Kern County OA Inland Region V
 Kings County Association of Governments
 Laguna Beach Unified School District
 Lake County Metropolitan Transportation Authority
 Lake County Office of Emergency Services
 Lake Valley Fire Protection District
 Lanterman Regional Center
 Lassen County
 Lassen County OA Inland Region III

League of California Cities
 Livermore - Pleasanton Fire Department
 Local Government Commission
 Los Angeles County Metropolitan Transportation Authority
 Los Angeles County Probation
 Los Angeles Department of Water and Power
 Los Angeles Superior Court
 Los Angeles Unified School District
 Los Angeles World Airports
 Marin County Sheriff's Office
 Marin County Office of Emergency Services
 Mariposa County Operational Area Inland Region V
 Mendocino County Office of Emergency Services
 Mendocino Council of Governments
 Merced County Association of Governments
 Michael Baker Corporation
 MMI Engineering
 Modoc County Operational Area Inland Region III
 Mono County
 Monterey County Office of Emergency Services
 Morongo Band of Mission Indians
 National Fire Protection Association
 National Oceanic Atmospheric Administration - Office for Coastal Management
 Native American Heritage Commission
 Natural Resources Conservation Services
 Natural Resources Defense Council
 Nature Conservancy
 Nevada County Operational Area Inland Region IV
 Nevada Department of Public Safety - Division of Emergency Management/ Homeland Security
 Newberry Springs (Volunteer Fire Department)
 Ocean Science Trust
 Office of Correctional Safety
 Office of Environmental Health Hazards Assessment
 Office of Historic Preservation
 Office of Statewide Health Planning and Development
 Ocean Protection Council/Coastal and Ocean Climate Action Team
 Orange County Child Support Services
 Orange County Operational Area Inland Region III
 Orange County Public Works
 Orange County Sheriff's Department, Emergency Management Division
 Oregon Health Authority
 Orchard Dale Water District
 Placer County OA Inland Region IV
 Placer Group Sierra Club
 Planning and Conservation League
 Plumas County Operational Area Inland Region III
 Public Agency Risk Managers Associates
 Reclamation Board
 Resilient Bay Area
 Resources Legacy Fund
 Riverside County
 Rooted in Resilience
 Rural County Representatives of California (RCRC)

Sacramento Area Council Governments
 Sacramento County Department of Water Resources
 Sacramento County Operational Area Inland Region IV
 Sacramento Fire
 Sacramento Metropolitan Air Quality Management District
 Sacramento Municipal Utility District (SMUD)
 Reclamation District 108 (Sacramento River West Side Levee District)
 Santa Barbara County Office of Emergency Management
 San Bernardino Valley Municipal Water District
 San Bernardino Police Department
 San Diego Regional Climate Collaborative
 San Diego County Office of Emergency Services
 San Fernando Police Department
 San Francisco Bay Area Rapid Transit District
 San Francisco Bay Area Conservation and Development Commission (BCDC)
 San Francisco County Office of Emergency Services
 San Joaquin County Operational Area Inland Region IV
 San Joaquin County Office of Emergency Services
 San Mateo County Office of Emergency Services
 Santa Clara County Office of Emergency Services
 Santa Clara Valley Water District
 Santa Cruz County Office of Emergency Services
 Sierra Club
 Sierra County Operational Area Inland Region III
 Sierra Nevada Conservancy
 Siskiyou County Operational Area Inland Region IV
 Shasta County
 Shasta County Operational Area Inland Region III
 Solano County Office of Emergency Services
 Sonoma County
 Spotlight 29 Casino
 State Water Resources Control Board
 Superior Court of California, County of Orange
 Susanville Fire Department
 Sutter County Operational Area Inland Region IV
 Stanislaus County Office of Emergency Services
 Stanislaus County Operational Area Inland Region IV
 State Humane Association of California
 State of Hawaii Emergency Management Agency
 State of Nevada
 State Water Resources Control Board (SWRCB) Division of Drinking Water Programs
 Strategic Growth Council
 Tehama County
 Tehama County OA Inland Region III
 The Center on Race, Poverty, and the Environment
 The Ramona Band of Cahuilla, Tribal Office
 The Reclamation Board- Environmental Services
 Town of Apple Valley
 Town of San Anselmo
 Town of Yucca Valley
 Trinity County
 Tulare County Operational Area Inland Region V
 Tuolumne County Operational Area Inland Region IV

Twentynine Palms Water District
Union of Concerned Scientists
United States Army Corps of Engineers
United States Bureau of Indian Affairs
United States Bureau of Land Management
United States Bureau of Reclamation- Pacific Region Office
United States Department of Homeland Security (DHS)
United States Forest Service
United States Fish and Wildlife Service
United States Geological Survey
University of California, Davis
University of California, Irvine Police Department
University of California, Office of the Secretary of the Regents
University of Nevada, Reno
University of Southern California (USC)
Vallejo Sanitation and Floor Control District
Viejas Tribal Government
Ventura County Sheriff's Office of Emergency Services
Volunteer Centers of California
West Cities Police Communications Center
Wildlife Conservation Board
Yolo County Operational Area Inland Region IV
Yuba County Operational Area Inland Region III
Zone 7 Water Agency (Livermore)

**Note: The SHMT roster listed above is current as of May 2018 and many not reflect team members added after that time.*

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APPENDIX B– STATE AGENCY FUNCTIONS: AGENCY RESPONSIBILITY MATRIX

Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Business, Transportation & Housing Agency (BTHA) www.bth.ca.gov	Umbrella agency that oversees statewide transportation system, promotes job growth and economic development, increases affordable housing, and regulates building codes and sales.		
California Highway Patrol (CHP) www.chp.ca.gov	Serves and protects the public and prevents the loss of life, injuries, and property damage.	Responsible for protection of state employees and property	GC §14685
Department of Housing and Community Development (HCD) www.hcd.ca.gov	Provides policy and program leadership to expand and preserve safe and affordable housing opportunities and promotes strong communities for all Californians.	Requires mobile home earthquake bracing devices: test devices and issue certifications	SB 360 (1981)
		Manufactured Housing Program: mobile home inspection	Mobile Homes-Manufactured Housing Act of 1980, HSC, Div. 13, Pt. 2, §18000, et seq.; 25 CCR, Div. 1, Ch. 3, subchapter 2, §4000, et seq.
		Factory-Built Housing Program	HSC, Div. 13, Pt. 6, §19960, et seq.; 25 CCR, Div. 1, Ch. 3, subchapter 1, §3000, et seq.
		Office of Migrant Services: contracts with local governments to procure or construct housing and provide services for migrant agricultural workers	HSC, Div. 31, Pt. 2, Ch. 8.5, §§50710-50715
		Special Housing Programs for the Developmentally Disabled, Mentally Disordered, and Physically Disabled	HSC, Div. 31., Pt. 2, Ch. 7, §§50680-50689.5
		Residential Hotel Rehabilitation	HSC, Div. 13, Pt. 2, Ch. 3.3, §§50519-50522
		Multifamily Housing Program	HSC, Div. 13, Pt. 2, Ch. 6.7, §§50675-50675.14
		Assures protection of health, safety, welfare of all mobile home and special occupancy park residents and user	Mobile Home Park Act (HSC Div. 13, Part 2.1) & Special Occupancy Park Act (HSC Div. 13, Part 2.3)
		Uniformity in building standards	HSC, Div. 13, Pt. 1.5, Ch. 4, §17958, et seq.
		Accessibility requirements	24 CCR, Pt. 2 (CA Building Code)

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Proposes the adoption, amendment, or repeal of building standards to CA Building Standards Commission	HSC, Div. 13, Pt. 2.5, Ch. 4, §18935, et seq.
		State Housing Law authority	State Housing Law: Part 2.5, Chapter 4, commencing with §18935
Department of Transportation (DOT) www.dot.ca.gov	Oversees the planning, design, construction, maintenance of the State Highway System and related highway facilities.	Administers bond addressing emissions reduction, air quality improvement, transit system security, port security and disaster response	SB 1266 (2006)
		Prepares inventory of state-owned bridges that require strengthening to meet seismic safety standards	SB 2104 (1990)
		Seismic hazards consideration in design of highway infrastructure	
California Earthquake Authority (CEA) www.earthquakeauthority.com	Provides residential earthquake insurance.	Provides catastrophe residential property earthquake insurance	SB 1993; AB 3232; AB 2086 (1996); AB 331 (1997); SB 1716 (1997); AB 964 (1999); AB 1048 (2003); SB 430 (2008) and AB 886 (2009)
California Governor’s Office of Emergency Services (Cal OES) www.caloes.ca.gov	Protects the public and the state from natural and man-made disasters through coordination and support for emergency managers, hazard mitigation, disaster assistance, and other programs.	Nonstructural Earthquake Hazards in CA Schools	SB 1122; GC §8587.7
		Flood Mitigation Assistance	44 CFR 78.5
		Hazard Mitigation Grant Program	44 CFR 206 and 13
		Local Hazard Mitigation Planning Program	DMA 2000, Section 322; Interim Final Rule of 2002; 44 CFR 201, as amended
		Pre-Disaster Mitigation Program	DMA 2000
		State Hazard Mitigation Plan	44 CFR 201

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Provides reimbursements for disaster-related costs including emergency response, emergency protective measures, and restoration of public infrastructure.	California Disaster Assistance Act; 19 CCR Div. 2, Ch. 6
		Emergency Services Act created Office of Emergency Services (originally established in 1950)	Emergency Services Act (1970); GC §8550, et seq.
		California State Warning Center	
		California Accidental Release Prevention (CalARP) Program: Prevents accidental release of regulated toxic and flammable substances	Risk Management Program; HSC §§25531-25543.3
		Establishes Steering Committee (for Tsunamis) and establishes Statewide Tsunami Hazard Mitigation Program	Tsunami Hazard Mitigation and Preparedness (AB 319)*
	Gathers and disseminates information critical to the protection of the state; creates state's comprehensive security strategy; and designs and implements critical state, regional and local programs.	Establishes CA Governor's Office of Homeland Security	The Homeland Security Act of 2002, Executive Order (2003)
		Critical Infrastructure Protection: Identifies and assures protection of critical infrastructure; provides timely warning of specific, imminent threat	Homeland Security Presidential Directive Number 7 (2003)
		Protected Critical Infrastructure Information (PCII): Encourages private industry to voluntarily share sensitive and proprietary business information with federal government	Homeland Security Presidential Directive Number 7 (2003)

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Buffer Zone Protection Plan (BZPP) Program: Facilitates reduction of vulnerabilities at critical infrastructure/key resources (CI/KR) sites by protecting area around site	Homeland Security Presidential Directive Number 7 (2003)
		California Homeland Security Exercise and Evaluation Program (CA-HSEEP): Provides financial and direct support to state and local agencies with development and implementation of an exercise and evaluation program to enhance and assess domestic preparedness	
		State Terrorism Threat Assessment Centers (STTACs): Provides statewide analysis products, information tracking, pattern analysis and other statewide intelligence products	
		Regional Terrorism Threat Assessment Centers (RTTACs): Maintains regional threat assessment, facilitates coordination with FBI field offices, facilitates inter-agency information sharing	
		Terrorism Liaison Officers: Local agency point of contact for all terrorism-related alerts, requests for information, warnings and other notifications from regional, state or federal homeland security agencies	
California Environmental Protection Agency (CalEPA) www.calepa.ca.gov	Umbrella agency that protects California's environment and public health.	Establishes minimum standard protocols for responding to pesticide drift emergencies	SB 391 (2004); HSC §25501
		Climate Action Team	Global Warming Solutions Act of 2006 (AB 32), Executive Order S-3-05

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Air Resources Board (ARB) www.arb.ca.gov	Promotes and protects public health, welfare, and ecological resources through the effective and efficient reduction of air pollutants.	Toxic Air Contaminants Identification Program	Toxic Air Contaminants Identification & Control Act (AB 1807 [1983]; HSC §39600, et seq.)
		Air Toxic Hot Spots Program	Air Toxics "Hot Spots" Information & Assessment Act (AB 2588 [1987]; HSC §44300, et seq.)
		Manages generated waste, promotes waste reduction, and regulates the handling, processing, and disposal of solid waste.	Integrated Waste Management Act (AB 939, 1989); 14 CCR, Chs. 3 through 5
PRC, Div. 30 - Waste Management; 14 CCR - California Waste Management Board (Chs. 3 through 5)			
AB 2920 (1992); PRC §43035			
Department of Pesticide Regulation (DPR) www.cdpr.ca.gov	Regulates pesticide sales and use; fosters reduced-risk pest management.	California Schools Integrated Pest Management Program	Healthy Schools Act of 2000 (AB 2260)
		Regulates the proper, safe, and efficient use of pesticides essential for production of food and fiber and for protection of public health and safety	Food and Agricultural Code §11501
		Fosters reduced-risk pest management	Food and Agricultural Code §11501
		Assures agricultural and pest control workers of safe working conditions where pesticides present	Food and Agricultural Code §11501
		Encourages development and implementation of pest management systems	Food and Agricultural Code §11501

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Department of Toxic Substances Control (DTSC) www.dtsc.ca.gov	Oversees statewide regulation of the generation, transport, treatment, storage, and disposal of hazardous waste; oversees the cleanup of sites contaminated with hazardous wastes and hazardous substances.	Hazardous substance release prevention, containment and mitigation; hazardous waste transportation; hazardous waste transfer, treatment and disposal facilities	Resource Conservation and Recovery Act (1976)
		Hazardous waste source reduction compliance	Hazardous Waste Source Reduction and Management Review Act of 1989 (SB 14)
		Brownfields cleanup and reuse program	California Land and Environmental Restoration and Reuse Act (SB 32 [2000])
		Biomonitoring Program: monitors toxic chemicals in bodies of Californians to target chemicals of concern	SB 1379 [2000]; HSC §105440, et seq.
		Green Chemistry: promotes design of chemical products and processes that reduce or eliminate use and generation of hazardous substances	California Safer Chemical Substitutes Act of 2005 (AB 990)
Office of Environmental Health Hazard Assessment (OEHHA) www.oehha.ca.gov	Develops and provides risk managers in state and local government agencies with toxicological and medical information relevant to decisions involving public health. †	Environmental Protection Indicators for California (EPIC)	
		California Accidental Release Prevention (CalARP) Program: Prevents accidental release of regulated toxic and flammable substances	Risk Management Program; HSC §§25531-25543.3
		Assessing Exposures and Health Risks at Existing and Proposed School Sites	HSC §901
		OEHHA Ecotoxicology Program	HSC §901
		PBDE Health Risks	HSC §108920, et seq.
		Toxic Air Contaminants Identification Program	Toxic Air Contaminants Identification & Control Act (AB 1807 [1983]; HSC §39600, et seq.)
		Air Toxic Hot Spots Program	Air Toxics "Hot Spots" Information & Assessment Act (AB 2588 [1987], HSC §44300, et seq.)
		Safe Drinking Water and Toxic Enforcement Act of 1986, Prop 65	Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop 65)

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Green Chemistry and Inherently Safer Technologies	California Safer Chemical Substitutes Act of 2005 (AB 990)
<p>State Water Resources Control Board (SWRCB)</p> <p>www.waterboards.ca.gov</p>	<p>Preserves, enhances and restores the quality of California's water resources, and ensure proper allocation and efficient use.</p> <p>Regulates Public Water Systems to assure that they serve safe, clean, wholesome potable water reliably and adequately; for Emergency Management and Mitigation Responsibilities - Issues/requires the issuance of unsafe water alerts as necessary to protect public health from off-specification water, Assists Public Water Systems in response and recovery - inspections, guidance, funding; for Legislation.</p>	<p>Underground Storage Tank Cleanup</p> <p>Santa Monica Bay Restoration Commission</p> <p>Prohibits discharge of substances from oceangoing ships under NPDES</p>	<p>Barry-Keene Underground Storage Tank Cleanup Fund Act of 1989</p> <p>through National Estuary Program (Clean Water Act §320)</p> <p>Clean Water Act of 2005 (SB 771)</p> <p>California Safe Drinking Water Act (Health and Safety Code - Division 104 – Environmental Health PART 12 – Drinking Water CHAPTER 4 - California Safe Drinking Water Act Federal Safe Drinking Water Act (Title XIV of The Public Health Service Act: Safety of Public Water Systems)</p>
<p>California Health & Human Services Agency (CHHS)</p> <p>www.chhs.ca.gov</p>	<p>Umbrella agency that administers state and federal programs for health care, social services, public assistance and rehabilitation.</p>	<p>CHHS directly serves millions of Californians in health and human service programs, while touching the lives of all Californians through statewide efforts such as public health protection and emergency preparedness and response</p>	<p>California Government Code § 8560 & Exec Order W-9-91</p>
<p>California Department of Public Health (CDPH)</p> <p>www.cdph.ca.gov</p>	<p>CDPH is committed to responding to public and environmental health emergencies in a rapid, efficient, and coordinated manner to save lives, protect health and safety, and preserve the environment.</p>	<p>(The Director of CDPH may) Declare a health emergency in any jurisdiction affected by a public health threat.</p> <p>Provide oversight for clinical and public health laboratory operations. Maintain laboratory programs to perform microbiological, physical, and chemical analyses.</p>	<p>HSC § 101080</p> <p>HSC § 100250 - 100255, HSC § 116390</p>

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Develop and maintain a nuclear power plant emergency response program.	HSC § 114650 - 114655, HSC § 114662
		Provide for programs to effectively regulate, establish procedures, and permit maximum utilization of sources of ionizing radiation.	HSC § 114650 - 114655, HSC § 114662
		Establish standards for permitting at medical waste facilities.	CCR, Title 22, § 65600 - 65628
		Detail the administration, guarantees, packaging, labeling, and advertising of food products.	Sherman Food, Drug and Cosmetic Laws, HSC § 109875-111915
		Establish uniform sanitation standards for shellfish and shell stock intended for human consumption.	HSC § 112150-112285
		Investigate and control communicable disease within the state. Establish a list of reportable diseases and conditions.	HSC §120125, HSC 120140, HSC § 120130
		Set general acute care hospital requirements in accordance with the Centers for Disease Control guidelines.	HSC § 1288.7, CFR, Title 42, § 483.70
		Require every CDPH-licensed facility develop and implement a disaster and mass fatality plan.	CCR, Title 22, § 102417 (g) (9), 101174 (a)
		Pandemic Flu Plan	HSC §§120125-120140
		Conduct special investigations of the sources of morbidity and mortality and the effects of localities, employments, conditions and circumstances on the public health and perform other duties as may be required in procuring information for state and federal agencies regarding the effects of these conditions on the public health.	HSC § 100325
	Promotes equitable healthcare accessibility for California. †	Develops and regulates seismic performance standards for hospitals	Alquist Hospital Seismic Safety Act of 1983 (SB 1953), HSC §§130000-130070

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Office of Statewide Health Planning and Development (OSHPD) www.oshpd.ca.gov		Institutes plan review and field inspection of hospital buildings under construction	SB 961 (1982)
		Hospital Building Safety Board	SB 519
California Public Utilities Commission (CPUC) www.cpuc.ca.gov	Regulates privately owned electric, telecommunications, natural gas, water and transportation companies.	Encourages solar energy infrastructure in existing homes and businesses (joint program with CEC)	California Solar Initiative; SB 1 (2006)
		Addresses seismic design of Liquid Natural Gas (LNG) facilities	SB 1081 (1977)
California State Archives (CSA) www.sos.ca.gov/archives	Collects, catalogs, preserves, and provides access to the historic records of state government and some local governments. †	Preservation of state historical records	
California State Military Reserve (CSMR) http://www.calguard.ca.gov/CSMR http://www.calguard.ca.gov/casmr/	Assists in training the California National Guard; provides rapid response in the preparation, prevention, defense, and mitigation of natural and man-made threats to California.	Responds to natural disasters in California, such as earthquake damage assessment	
California State University System (CSU) www.calstate.edu	Provides high-quality, accessible, student-focused higher education at 23 campuses throughout state. †	Adopt retrofit guidelines for state buildings owned by CSU	AB 3313 (1990)

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
<p>CaliforniaVolunteers</p> <p>http://californiavolunteers.org/</p>	<p>Administers the AmeriCorps, Citizen Corps, Cesar Chavez Day of Service and Learning programs, maintain the California Volunteer Marching Network. Guides policy development for the volunteer and service fields. Coordination of volunteer activities related to disaster response and recover. Increasing individual, family, and community preparedness.</p>	<p>Increase the number and impact of Californians engaged in service and volunteerism</p>	<p>Executive Order W-77-94; Executive Order S-04-06</p>
<p>Department of Corrections & Rehabilitation (CDCR)</p> <p>www.cdcr.ca.gov</p>	<p>Maintains efficient and cohesive correctional policy. †</p>	<p>Provides labor for vegetation management</p>	
<p>Department of Education (CDE)</p> <p>www.cde.ca.gov</p>	<p>Provides leadership, assistance, oversight, and resources for education of students at primary and secondary levels.</p>	<p>California Schools Integrated Pest Management Program</p>	<p>Healthy Schools Act of 2000 (AB 2260)</p>
		<p>Nonstructural Earthquake Hazards in CA Schools</p>	<p>SB 1122; GC §8587.7</p>
		<p>Guides schools in planning for earthquakes and other emergencies</p>	<p>Katz Act; Education Code §§35295-35297</p>
		<p>Guides school districts in preparation to respond to emergencies using Standardized Emergency Management System</p>	<p>Petris Bill; GC § 8607</p>
<p>Department of Food and Agriculture (CDFA)</p> <p>www.cdca.ca.gov</p>	<p>Administers food safety oversight and inspection, responses to invasive animal and plant disease, and ensures an equitable and orderly marketplace for agricultural products.</p>	<p>Animal Health and Food Safety Services: Mitigate risks to CA's livestock and poultry industries. Animal Health Branch, Meat and Poultry Inspection Program, Milk and Dairy Food Safety Branch</p>	<p>3 CCR, Div. 2, et seq.</p>
		<p>California Animal Health and Food Safety Laboratory System</p>	<p>3 CCR, Div. 1, Ch. 3, §520, et seq.</p>
		<p>Meat and Poultry Inspection Services</p>	<p>3 CCR, Div. 9, Ch. 4, §18650, et seq.</p>

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Makes state-owned fairgrounds available for emergency management preparedness, response, recovery and mitigation activities	
		Inspection Services: Mitigate the introduction of toxins and contaminants to the food chain	3 CCR, Div. 4, et seq.; 3 CCR, Div. 5, et seq.
		Integrated Pest Control	
		Plant Health and Pest Prevention Services and Disease Control Program: Administers statewide exterior exclusion program, interior exclusion quarantine programs, weed eradication and biological control programs	
Department of Insurance (CDI) www.insurance.ca.gov	Enforces many of the insurance-related laws of the state; regulates insurance industry's practices. †	Enforces statutory mandatory compliance with "mini" residential earthquake insurance policy	3 CCR, Div. 4, Ch. 9, Art. 8, §6045, et seq. AB 1366; California Insurance Code §10089
Department of Social Services (DSS) (Disaster Services Bureau) www.dss.cahwnet.gov	Provide coordination, collaboration, and resource identification for mass care and shelter, to support the State of California's capabilities to minimize the humanitarian impact of disasters and other emergencies through all four phases of emergency management	Lead state department for EF-6	California Government Code § 8560 & Admin. Order by Cal OES, Executive Order W-9-91
		Establish Joint Field Offices (JFO) and Local Assistance Centers (LAC) in response to a disaster	California Government Code § 8560 & Admin. Order by Cal OES, Executive Order W-9-91
		Mass Care & Shelter: The lead state department to administer and maintain the federal National Shelter System (NSS)	Admin. Order by Cal OES, Executive Order W-9-91
		Volunteer Emergency Services Team (VEST): Recruiting and training state employee volunteers to increase disaster response capacity to assist in mass care and shelter operations	Admin. Order by Cal OES, Executive Order W-9-91

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Administer the Functional Assessment Service Team (FAST) Program. Local government employees and partnering community based organization (CBO) personnel are trained to assist in identifying and meeting essential functional needs so that people with disabilities and others with access and functional needs can maintain their health, safety, and independence in general population shelters during disasters.	Executive Order W-9-91
		Administer California’s State Supplemental Grant Program (SSGP) to assist people who have suffered damage in a disaster area declared by the President when the federal assistance to Individuals and Household Program (IHP) is implemented	Welfare and Institutions Code Section 13600-13601 & Admin. Order by Cal OES, Executive Order W-9-91
		Lead state department in the Repatriation Program (provides repatriation assistance)	Social Security Act, Section 1113; 45 CFR 212.
Emergency Medical Services Authority (EMSA) www.emsa.ca.gov	Provides leadership in developing and implementing EMS systems throughout the state.	Provides medical resources to local governments in support of their disaster response; promotes disaster medical preparedness	HSC §§1797.150-151
Governor's Office of Planning & Research (OPR) www.opr.ca.gov	Provides legislative and policy research support for Governor's office; also assists in issues pertaining to land-use planning. †	Provides technical advisory to cities and counties on developing general plan, including Safety Element	AB 890; GC §65300, et seq.
		Provides technical advisory series that includes publication "Fire Hazard Mitigation and the General Plan"	GC §65300, et seq.

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Office of Historic Preservation (OHP) www.ohp.parks.ca.gov	Administers federal and state mandated historic preservation programs in California.	Provide information and technical assistance to local, state, and national/federal agencies and organizations to protect, stabilize, and rehabilitate historic structures impacted by disaster. Review and comment on publicly funded projects and programs that impact historic resources.	Public Resources Code Section 5024.6 The National Historic Preservation Act (NHPA; Public Law 89-665; 54 U.S.C. 300101 et seq.)
Resources Agency (CRA) www.resources.ca.gov	Umbrella agency for departments, boards and commissions and conservancies with shared goals to protect and conserve natural and human public state resources.		
California Conservation Corps (CCC) www.ccc.ca.gov	Improves the ecology of California's lands and rivers and contributes to the state's public safety while providing workforce development for young men and women. †	Provides critical front-line and logistical support for natural and manmade hazards	Public Resources Code §§14000-14406, Division 12.
California Coastal Commission (CCC) www.coastal.ca.gov	Administered the California Coastal Act through planning and permitting within the Coastal Zone to ensure conservation of coastal resources for current and future generations.	Works with local governments and project applicants to ensure development is safe from coastal hazards such as flooding and erosion over its anticipated lifetime	California Coastal Act of 1976 (Public Resources Code 30000 et seq.)
San Francisco Bay Conservation and Development Commission (BCDC) http://www.bcdc.ca.gov/			
California State Coastal Conservancy			

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
California Energy Commission (CEC) www.energy.ca.gov		Energy Emergency Response Plan - plan for possible electrical energy or fuel supply shortage	Public Resource Code §§25216.5(b) and 25700
		Green Building Initiative - reduce energy use in state-owned buildings by 20%, encourage private sector to reduce energy use	Executive Order S-20-04
	Administers statewide energy policy and planning	Reduce wasteful peak load energy consumption in residential and nonresidential buildings	AB 549
		California Solar Initiative - encourage solar energy infrastructure in new homes (joint program with CPUC)	SB 1 (2006)
		Reduce wildlife impacts from wind energy development (joint program with DFG)	PRC §§25210, 25213, 25218(e)
California State Lands Commission (CSLC) www.slc.ca.gov	Manages and protects important natural and cultural resources on public lands, through policies of environmental justice and public trust	Promotes public health, safety, and environment protection by regulating marine oil terminals and gas and thermal facilities, with focus on “prevention” including mitigation. Endeavors to take system safety approach to reduce human error, structural and mechanical failures. The Commission has authority to include mitigation measures in the leasing policies for land use.	Lempert- Keen -Sea-strand Oil spill Prevention and Response Act. Public Resources Code §8750 et seq.
		An independent program addresses removal of hazards from the surf zone within state jurisdiction.	Public Resources Code §6301 et seq.
		Regulates introduction of non-indigenous aquatic species into California Waters through oceangoing ships.	Public Resources Code §72001 et seq

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Delta Protection Commission (DPC) www.delta.ca.gov	Implements the Land Use and Resource Management Plan for the Primary Zone of the Delta.	Mandates designation of Primary and Secondary Zones within Delta region; creation of DPC; completion of Land Use and Resource Management Plan for Primary Zone	Delta Protection Act (SB 1866, 1992, as amended); PRC §297000, et seq.
		Makes policy recommendations for subsidence control	Delta Protection Act
		Makes policy recommendations for monitoring, maintenance, rehabilitation, and upgrading of levee system	Delta Protection Act
Department of Boating and Waterways (DBW) www.dbw.ca.gov	Develops convenient public access to the waterways and promotes on-the-water safety. †	Control of water hyacinth and Egeria densa in Sacramento-San Joaquin Delta	Harbors and Navigation Code § 64
Department of Conservation www.consrv.ca.gov	Provides services and information that promote environmental health, economic vitality, informed land use decisions and sound management of our state's natural resources.†	State Mining & Geological Board: Represents state interest in development of seismological and geological information pertaining to earthquake and other geological hazards	PRC §§660-678 (specifically §672)
California Geological Survey (CGS) www.consrv.ca.gov/cgs	Provides data, information, expert technical services and advice on seismic hazards, earthquake engineering, geology, mineral hazards and mineral resources	Strong Motion Instrumentation Program (SMIP): installation of monitoring devices to measure earthquake shaking	SB 1374 (1972)
		Alquist-Priolo Earthquake Fault Zoning Act: Prevents construction of buildings used for human occupancy on surface trace of active faults	Alquist-Priolo Earthquake Fault Zoning Act, Alquist-Priolo Special Studies Zone Act (SB 520, 1972); PRC §§2621-2630

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Seismic Hazard Zonation Program (SHZP): Establishes regulatory zones and issues appropriate seismic maps for non-surface fault rupture earthquake hazards; addresses liquefaction and seismically induced landslides; tsunami hazards will be addressed in 2018	Seismic Hazards Mapping Act (SB 3897, 1990); PRC §2690, et seq.
Department of Fish & Wildlife (CDFW) www.dfg.ca.gov	Maintains native fish, wildlife, plant species, and natural communities for their intrinsic and ecological value and their benefits to people.	Habitat protection, Natural Communities Conservation Planning	Natural Communities Conservation Planning Act; Fish and Game Code §200, et seq.
		Establish networks of marine protected areas in California waters	Marine Life Protection Act
		wildlife disease control	
		pollution control	
		fire control	
		flood control	
		vector control	
		conservation and mitigation banking, flood control	Sacramento-San Joaquin Wetlands Mitigation Bank Act of 1993; Fish & Game Code §1775, et seq.
		Comprehensive Environmental Response, Cleanup, and Liability Act (CERCLA) support	Comprehensive Environmental Response, Cleanup, and Liability Act (CERCLA, 1980)
		Natural Resource Damage Assessment and Restoration	CERCLA, Clean Water Act (1972/1977), Oil Pollution Act (1990)
Office of Spill Prevention & Response (OSPR) www.dfg.ca.gov/ospr	Protects California's natural resources by preventing, preparing for, and responding to spills of oil and other deleterious materials.	Marine Invasive Species Monitoring Program	Lempert-Keene-Seastrand Oil Spill Prevention & Response Act; GC §§8574 and 8670, et seq.; PRC §8750, et seq.
		Oil spill prevention and response responsibilities	
		Military Base Realignment and Closure/Installation Restoration Services (BRAC/IR)	Ballast Water Management Act of 1999 (Marine Invasive Species Monitoring Program)
"Keep Me Wild" campaign			
Pike Eradication Proposal			

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Department of Forestry & Fire Protection (CAL FIRE) www.fire.ca.gov	Protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values. †	Sudden Oak Death Syndrome Task Force	Plant Quarantine Manual (State Miscellaneous Ruling 3700), AB 2251
		Southern California Bark Beetle Infestation	Governor's Declaration of State Emergency (March 7th, 2003)
		Pitch Canker Task Force	SB 1712 (Sept. 21, 1998)
		Local Community Wildland Protection Plan Programs	Healthy Forests Restoration Act (HFRA)
		Fire Hazard Severity Zone (FHSZ) mapping	PRC §§4201-4204; 14 CCR, §1280
		Vegetation Management Plan (VMP)	SB 1704
		California Forest Improvement Program (CFIP)	California Forest Improvement Act of 1978; PRC §§4790-4799.05 or 14 CAC, Div. 1.5, Ch. 9.5, Articles 1-8
		Prop 40 Fuels Reduction Programs	Proposition 40, California Clean Water, Clean Air, Safe Neighborhood Parks and Coastal Protection Act of 2002; PRC §5096.659(g)
		Reforestation	SB 251
		Designate Hazardous Fire Areas	SB 1972 (1979); PRC §§4254, 4255, 4258, 4259, 4260, 4296.5
		Firework regulation in State Responsibility Area (SRA) fire hazard Zones	AB 799; PRC §§4258-4260
		Forest Stewardship Program	Cooperative Forestry Assistance Act of 1978, as amended; first enacted with 1990 Farm Bill
		Urban forestry health	California Urban Forestry Act of 1978; PRC §§4799.06-4799.12
		Firefighter training and standards	AB 669
		Defensible Space (100' reduction zone)	PRC §4291, et seq.
		Natural Hazard Disclosure for wildfire in SRA	AB 1812 (1989); PRC §4291, et seq.
		Minimum fire safety regulation in SRA	SB 1075 (1991); PRC §4290
		Very High Fire Hazard Severity Zones; Fire Hazard Zoning in Local Responsibility Area (LRA)	AB 337 (1992); GC §§ 51178-51188; HSC §13108.5

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Class A roof and Model Ordinance for defensibility of space and structures	AB 3819 (1995); GC §§51178.5, 51189; HSC §§13108.5, 13132.7; PRC §42205
		Class A, B, C roof and shingle testing timeline	HSC §13132.7
		LE-38 Program	
		WUI Building Standards	24 CCR, Part 2, California Building Code (Phase I, Phase II); 24 CCR, Part 9, California Fire Code; 24 CCR, Part 2, California Reference Standards Codes
		FireWise	Cooperative Forestry Assistance Act of 1978, as amended
		Natural Hazard Disclosure for wildfire in LRA and Very High Fire Hazard Severity Zones	AB 6X and 1195 (1998); Civil Code §1103, et seq.
		California Fire Alliance	National Fire Plan (2000)
Office of the State Fire Marshal (CAL FIRE/OSFM) www.osfm.fire.ca.gov	Protects life and property through development and application of fire prevention engineering, education, and enforcement. †	Expand fire safety building standards in areas with high fire risk to various components (not listed)	AB 1216 (2002); PRC §4291, GC §51189 SB 1241
		Proposes fire protection building standards for roofs, exterior walls, structure projections and structure openings	HSC §13108.5
		Lists wood roofing materials that have passed at least five years of the ten-year weather test; insurance companies honor replacement cost coverage for increased cost of fire retardant roofing materials	AB 423 (1999); HSC §13132.7
		Ensures fire safety of hospital buildings under construction	SB 961 (1982)
		Arson Task Force	AB 2336, as amended

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Department of Parks & Recreation (CA State Parks) www.parks.ca.gov	Protects natural and coastal resources, the state's biodiversity; provides quality recreational experiences	Charged with stewardship and protection of the lands, facilities and the public within the State Park System, to include all-hazard preparedness and mitigation	Public Resources Code 5003, 5008
Department of Water Resources (DWR) www.water.ca.gov	Operates and maintains the State Water Project; provides dam safety and flood control services, assists local water districts in water management and conservation activities, promotes recreational opportunities, and plans for future statewide water needs.	Disaster Preparedness and Flood Prevention - rebuilds and repairs California's most vulnerable flood control structures	Disaster Preparedness and Flood Prevention Bond Act of 2006 (Proposition 1E)
		Flood Protection Corridor Program: Funds nonstructural flood management protects	Safe Drinking Water, Watershed Protection and Flood Protection Act (Proposition 13)
		Stormwater Flood Control Grants	Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Prop 84)
		National Dam Safety Program: Provides training, technical assistance, research and support to states through incentive grant awards that encourage states to improve their programs	Dam Safety Act (1928), most recent reauthorization is Dam Safety and Security Act of 2002
		FloodSAFE California Initiative	
		Delta Risk Management Strategy: Evaluates potential impacts on water supplies from Delta based on projections for impacts from natural and man-made hazards	AB 1200; Water Code §139.2, et seq.
		Delta Vision Process	Proposition 84
		Drought Action Team	Admin. Order by OES, Executive Order W-9-91
		Governor's Proclamation of State of Emergency	Emergency Services Act (Government Code §8550, et seq.)
		State Water Plan; Water Quality Monitoring	
Southern District (Division of Planning and Local Assistance) - Water Quality Evaluations	Water Code §229		

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
		Authorize public and private water purveyors to declare water shortage emergency	Water Code §§350-358
		Provides financial assistance to local agencies for the development, control and conservation of water resources	Davis-Grunsky Act of 1960
		Urban Water Management Planning: Assesses water supply availability	Urban Water Management Planning Act (SB 610/SB 221, 2001, as amended); Water Code §§10610-10656
		California Bay-Delta Program (CALFED): Provides ecosystem protection for the Bay-Delta Estuary, improves quality and reliability of water supplies	California Bay-Delta Act of 2003
		Urban Streams Restoration Program	Proposition 84
		Floodplain Management Task Force	AB 1147 (2000)
		Flood Emergency Action Team formation	Executive Order (1997)
		San Joaquin Valley Drainage Implementation Program: Drainage management plan in SJ Valley	Memorandum of Understanding (1991)
<p>Business, Consumer Services and Housing Agency (SCSA)</p> <p>www.bcsch.ca.gov</p>	<p>Umbrella agency responsible for civil rights enforcement, consumer protection, and professional licensure.</p> <p>Educates consumers and makes government more efficient, effective, and accountable for all California taxpayers. Dedicated to protecting consumers and delivering efficient, cost-effective, and responsive services to internal and external State Clients. †</p>	<p>Identity Theft Prevention, mortgage prevention workshops</p>	<p>Privacy Legislation: AB 22 (Torres) – Computer Hacking Penalties, AB 32 (Lieu) – Public Officials Online Personal Information, AB 130 (Jeffries) – Marriage Records, AB 524 (Bass) – Paparazzi, Publishers and Privacy, AB 1094 (Conway) – Disposal of Personal Information/Abandoned Records, SB 226 (Alquist) – Identity Theft Jurisdiction</p>

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
Building Standards Commission (BSC) www.bsc.ca.gov	Administers the processes related to adoption, approval, and implementation of state’s building codes. †	Reviews and approves building standards proposed and adopted by state agencies	California Building Standards Law (1953); 24 CCR: "California Building Standards Code"
		Develop and adopt building retrofit guidelines for state buildings	AB 3313 (1990)
Seismic Safety Commission (SSC) www.seismic.ca.gov	Provides decision- makers and the general public with cost effective recommendations to reduce earthquake losses and speed recovery.	Commission established to advise Governor, Legislature, state and local governments on reduction of earthquake risk	Seismic Safety Commission Act (1975)
		Nonstructural Earthquake Hazards in CA Schools	SB 1122; GC §8587.7
		Prepare and administer Earthquake Loss Reduction Plan	California Earthquake Hazards Reduction Act; GC §8871, et seq.
		Compile update on status of local governments' compliance with Unreinforced Masonry Building Law	Unreinforced Masonry Building Law (1986); GC §8875
		Develop and adopt building retrofit guidelines for state buildings	AB 3313 (1990)
Department of General Services (DGS) www.dgs.ca.gov	Oversees services supporting state government normal operation, including the management of state properties and telecommunications. †	Field Act implementation	Field Act (1933), Education Code §17281
		ASCE 41-06: Seismic Rehabilitation of Existing Buildings	
Division of Real Estate Services	Maintains Statewide Property Inventory (SPI), a detailed inventory of the State's real property assets including land, structures/improvements, leased space, and State-owned space leased to others.	The Emergency Function 7 (EF7) Facilities Workgroup has determined that the SPI would be the proper database to be utilized by Cal OES and others during a disaster or catastrophic event. The DGS Real Estate Services Division, keeper of the SPI, has begun to update and enhance the inventory for this purpose.	GC §§11011.15-18
Division of the State Architect (DSA)	Provides policy, design and construction oversight, for K-12 schools and community colleges.	Field Act implementation	Field Act (1933), Education Code §17281
		Nonstructural Earthquake Hazards in CA Schools	SB 1122; GC §8587.7

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
www.dsa.dgs.ca.gov	Provides policy leadership and design and construction oversight, for K-12 schools and community colleges.	Ensures essential buildings are designed and constructed to minimize fire, seismic and wind hazards	Essential Services Building Act of 1986; HSC §16000, et seq.
		Ensures essential buildings comply with State Building Standards Code	SB 122 (1990)
		Develop and adopt building retrofit guidelines for state buildings	AB 3313 (1990)
Office of Public School Construction (OPSC) www.opsc.dgs.ca.gov	Administers the School Facility Program and other programs of the State Allocation Board.	Good Repair Standards: Interim Evaluation Instrument and Facilities Inspection System	SB 550 & AB 607
Department of Technology Services (DTS) www.dts.ca.gov	Provides IT services to state, county, federal and local government entities; technology center for the state.	Operational Recovery: Recover critical applications within 72 hours in event of disaster	State Administrative Manual §§4842.21 & 4843
The Reclamation Board (RB)	Controls flooding along the Sacramento and San Joaquin Rivers and their tributaries; maintains flood control infrastructure. †	Authority to designate floodways in Central Valley	23 CCR, Art. 5, §107
University of California (UC) www.universityofcalifornia.edu	Conduct research, teaching, and public service activities at ten campuses throughout the state. Provide healthcare and conduct teaching and research at five associated medical centers.	Adopt retrofit guidelines for state buildings owned by UC	AB 3313 (1990)
		California Animal Health and Food Safety Laboratory System	3 CCR, Div. 1, Ch. 3, §520, et seq.
		University of California Center for Pest Research	3 CCR, Div. 1, Ch. 3, §576, et seq.
		Establishes center for earthquake engineering and research (PEER)	SB 1864 (1996)
		Seismic retrofit or replacement of hospital facilities	Alquist Act (1983) SB 1953

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
<p>California Department of Community Services and Development</p> <p>www.csd.ca.gov/</p>	<p>Administers federal programs to help low-income families achieve and maintain self-sufficiency, meet their home energy needs, and reside in housing free from the dangers of lead hazards.</p>	<p>Modernize our nation's infrastructure, enhance energy independence, expand educational opportunities, preserve and improve affordable health care, provide tax relief, and protect those in greatest need</p>	<p>The American Recovery and Reinvestment Act of 2009 (Recovery Act)</p>
<p>California Department of Education</p> <p>http://www.cde.ca.gov/index.asp</p>	<p>Oversees the state's diverse and dynamic public school system. Responsible for enforcing education law and regulations, and for continuing to reform and improve public elementary school programs, secondary school programs, adult education, some preschool programs, and child care programs.</p>	<p>Provides training, resources, and technical assistance in preparedness for, immediate response to, and mitigation of the aftermath of school safety crises. To assist school districts with the ongoing concerns of the mental health aspects of crisis planning and crisis response, and helping students to cope with tragic events. To emphasize health education, physical education, nutrition, and a healthier school environment.</p>	<p>Assembly Bill 537 - California Safety and Violence Prevention Act of 2000, Senate Bill 1234 – defined "gender" for purposes of identifying hate crimes and eliminating unlawful discrimination in public schools.</p>

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
<p>California State Parks http://www.parks.ca.gov/</p>	<p>To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.</p>	<p>Programs have evolved to include the use of warning signs, public information, education and interpretation (materials and programs), a broad spectrum of employee training, including boat patrol and enforcement and formal lifeguard services preventing and performing swimmer rescues. Park management, interpretation, maintenance, and law enforcement training. The Department employs over 700 peace officers to safeguard both visitors and the resources themselves. Rangers and lifeguards provide not only public safety law enforcement and aquatic rescue services; they also provide public education through interpretation.</p>	<p>The American Recovery Act, H. R. 2336, AB 32 (Global Warming Solutions Act of 2006), AB 811, SB 375, AB 2160, California's EO S-20-04</p>

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Agency	Agency Function	Emergency Management and Mitigation Responsibilities	Legislation
<p>Native American Heritage Commission</p> <p>http://www.nahc.ca.gov/</p>	<p>Provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and places of worship on public property, and maintains an inventory of sacred places.</p>	<p>Tribal governments, Indian organizations, and most likely descendants will become knowledgeable of effective mitigation measures, treatment, and disposition of Native American human remains and associated grave goods, protection of sacred places, and state and federal laws. Californians will come together to protect and preserve this valuable State heritage. Daily workload of the office includes review of environmental impact reports for projects on federal land and under state jurisdiction, negative declarations, mitigated negative declarations, and timber harvest plans. The cultural resource section of each report is reviewed for adequate mitigation and verification if appropriate local tribal groups have been contacted regarding the project. Reports are also checked against sacred lands file.</p>	<p>Government Code 65351: Native American Involvement in General Plan Proposals, 65352: Referral of Action on General Plan Changes to Native Americans, 65352.3- 65352.4: Consultation with Native Americans on General Plan Proposals, 12600-12612: Attorney General- Environmental Action, 65560, 65562.5: Consultation with Native Americans on Open Space, 25373, 37361: City/County Protection of Historic Resources Public Resources Code: 5097.95: State and local agency cooperation with the NAHC, 5020.5: State Historical Resources Commission, 5020.7: Public promotion of historical resource protection, 5024: State-owned historical resources, 5079.40-5079.44: Grants for historical resource preservation, 21083.2: California Environmental Quality Act- Archeological Resources, 21084.1: California Environmental Quality Act- Historic Resources, 65352.3- 65352.4: Consultation with Native Americans on General Plan Proposals, California Environmental Quality Act</p>

[†] Description of agency function derived from agency website in lieu of survey response

Note: State agencies listed in bold in Appendix B are umbrella agencies. The state departments, boards, and offices listed in regular font below are affiliates under that umbrella agency.

* Pending legislation

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APPENDIX C – MULTI-AGENCY MITIGATION ACTION MATRIX

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
CREATING A STRATEGIC FRAMEWORK FOR MITIGATION			
<p>Support Legislative Efforts that Formalize California’s Comprehensive Mitigation Program</p> <p><i>See Progress Summary 3.A</i> <i>See Progress Summary 3.B</i> <i>See Progress Summary 3.D</i> <i>See Progress Summary 3.E</i> <i>See Progress Summary 6.C</i> <i>See Progress Summary 7.C</i> <i>See Progress Summary 7.D</i> <i>See Progress Summary 8.A</i> <i>See Progress Summary 9.D</i> <i>See Appendix F-1</i></p>	<p>Mitigation Legislation and Implementation</p>	<p><u>New:</u> The Department of Water Resources funded a regional effort to support local flood management plans consistent with the Central Valley Flood Protection Plan. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> In support of the Delta Reform Act, the Delta Stewardship Council launched the Delta Investment Strategy. <i>Responsible Agency: Delta Stewardship Council</i></p> <p><u>New:</u> The CAL FIRE / Office of the State Fire Marshal’s Land Use Planning Program was established in June 2013 to implement the provisions in Senate Bill 1241 which require jurisdictions within designated Very High Fire Hazard Severity Zones (VHFHSZ) and Counties containing State Responsibility Area (SRA) review and update their general plan safety elements to address the risk of fire. <i>Responsible Agency: CAL FIRE, OSFM</i></p> <p><u>New:</u> SB 32, signed in September 2016, accelerated the State greenhouse gas emission reduction goal, and directed the development of enhanced rules and regulations for implementation. <i>Responsible Agency: California Air Resources Board.</i></p> <p><u>New:</u> The Sustainable Groundwater Management Act of 2014 commits California to local management of groundwater supplies with the goal of achieving sustainable management of groundwater basins through development and implementation of groundwater sustainability plans (GSPs) by local agencies within 20 years. <i>Responsible Agency: DWR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Strengthen Inter-agency Coordination Actions Including State, Regional, and Local Linkages</p> <p><i>See Progress Summary 3.C</i> <i>See Progress Summary 3.D</i></p>	<p>Establish Inter-agency Advisory Groups, Task Forces, and Work Groups to ensure vertical and horizontal integration and coordination of mitigation planning and implementation</p>	<p><u>Ongoing:</u> SHMT Strategic Work Groups with multi-agency participation continue to inform the SHMP Updates. <i>Responsible Agency: Cal OES</i></p> <p><u>New:</u> The Fire Service Task Force on Climate Impacts was established in 2015 in response to Executive Order B-3-15. It builds on work done by the Blue Ribbon Fire Commission established following the 2013 wildfires. Membership includes local, state, and federal agencies and professional organizations. <i>Responsible Agency: Cal OES</i></p> <p><u>New:</u> In response to Executive Order B-30-15, the Technical Advisory Group (TAG) and Sub-TAGs were convened by the Office of Planning and Research (OPR). The group, representing multiple state, regional and local agencies as well as non-governmental organizations and the private sector, met from April 2016 through January 2017. The TAG produced guidance for state agencies. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> Established in 2016, the Coastal and Ocean Resources Working Group for the Climate Action Team (CO-CAT) is charged with implementation of the Safeguarding California Plan and the California Climate Action Strategy. <i>Responsible Agency: California Ocean Protection Council</i></p> <p><u>New:</u> The Integrated Climate Adaptation and Resiliency Program (ICARP) was convened in 2016 through SB 246. ICARP produces a variety of tools and guidance to promote integration of climate change adaptation. <i>Responsible Agency: OPR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Broaden Public and Private Sector Mitigation Linkages</p> <p><i>See Progress Summary 3.B</i> <i>See Progress Summary 6.L</i> <i>See Best Practices Highlight 9.B</i> <i>See Progress Summary 9.E</i></p>		<p><u>New:</u> The Delta Investment Strategy is a collaborative effort between state agencies, local reclamation districts, delta landowners, businesses, and other stakeholders. <i>Responsible Agency: The Delta Stewardship Council.</i></p> <p><u>Ongoing:</u> The Great California ShakeOut is an annual event involving public and private sector organizations, as well as local, regional, state, and federal agencies. Over 10 million individuals participated in the earthquake awareness and preparedness drill in 2017. <i>Responsible Agency: Cal OES</i></p> <p><u>Ongoing:</u> FireSafe Councils are community-based organizations that collaborate with the California Fire Alliance (CFA) and CAL FIRE to identify local fire prevention projects. Funding for implementation is accomplished through federal agency grants. <i>Responsible Agency: CFA, CAL FIRE</i></p> <p><u>New:</u> The State Water Efficiency and Enhancement Program (SWEEP) was initiated in response to the 2012-2016 statewide drought and the Executive Order accelerating the state’s goal to reduce greenhouse gas emissions. SWEEP provides matching grant funds to agricultural operations. It provides a unique opportunity for government and the private enterprise to jointly reduce agricultural water and energy usage. <i>Responsible Agency: California Department of Food and Agriculture (CDFA), DWR, SWRCB</i></p> <p><u>Ongoing:</u> The California Solar Initiative is a partnership between the California Public Utilities Commission (CPUC), private utilities, and the general public. Its goal is to provide financial incentives to residential property owners, including low income, to install solar systems to reduce greenhouse gas emissions. <i>Responsible Agency: CPUC</i></p> <p><u>New:</u> The California Cybersecurity Task Force is a statewide partnership comprised of key stakeholders, subject matter experts, and cybersecurity professionals from California’s public sector, private industry, academia, and law enforcement. Its primary mission is to reduce the likelihood and severity of cyber incidents that could cause damage to the state’s economy, infrastructure, and computer networks. <i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Assist Local Governments in Implementing Land Use Guidance and Best Practices for Reducing Vulnerability within High Hazard Zones.</p> <p><i>See Progress Summary 3.E</i> <i>See Progress Summary 3.F</i> <i>See Best Practices Highlight 3.A</i> <i>See Progress Summary 7.H</i> <i>See Progress Summary 8.A</i></p>		<p><u>Ongoing:</u> Numerous cities and counties in California have integrated their LHMP's with their general plan safety elements as outlined in SB 2140. <i>Responsible Agency: Cal OES</i></p> <p><u>New:</u> The Land Use Planning Program was established within the Office of the State Fire Marshall (OSFM) in 2013. OSFM collaborates with the Board of Forestry and Fire Protection (BOF&FP) to assist local jurisdictions in addressing fire hazards in their general plans in accordance with SB 1241. OSFM produces guidance, reviews safety elements, and provides assistance with damage inspection and recovery following devastation from wildfires and floods. <i>Responsible Agency: OSFM, BOF&FP</i></p> <p><u>New:</u> SB 379 passed in 2015 requires local jurisdictions to include climate change in updates to their general plan. The Office of Planning and Research provided implementation guidance in the 2017 General Plan Guidelines. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> The California Coastal Commission (CCC) published a guide in 2015 to help local jurisdictions address sea-level rise in local coastal programs and other plans. <i>Responsible Agency: CCC</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Incorporate Climate Change into Local, Regional, and Statewide Hazard Profiles, Risk Assessments, and Mitigation Plans.</p> <p><i>See Progress Summary 4.B</i> <i>See Progress Summary 6.B</i> <i>See SHMP Hazard Assessments, Chapters 6-9</i></p>		<p><u>New:</u> SB 379 passed in 2015 requires local safety elements to include a climate change vulnerability assessment, measures to address vulnerabilities, and a comprehensive hazard mitigation and emergency response strategy. <i>Responsible Agency: OPR, Local jurisdictions</i></p> <p><u>New:</u> SB 246 passed in 2015 directed OPR to coordinate and maintain the State Adaptation Clearinghouse. The web-based clearinghouse provides state, regional, and local planners access to the most current planning and technical assistance resources. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> The 2018 Update of the SHMP includes hazard specific discussions of potential climate change impacts within each of the affected natural hazards. <i>Responsible Agency: Cal OES, SHMT</i></p> <p><u>New:</u> The Safeguarding California Plan, updated in 2018, includes climate adaptation strategies for 5 natural and managed resource sectors. <i>Responsible Agency: Cal OES</i></p> <p><u>New:</u> Since 2015, portions of the Cal VIVA project assessment model have been used as the basis for a new project from the Fourth Climate Change Assessment called “Assessing Vulnerability and Improving Resilience of Critical Emergency Management Infrastructure in a Changing Climate” also known as “Project 6A”. <i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>
<p>Enhance Collaboration on the Development and Sharing of Data Systems and Geographic Information Systems (GIS) Modeling</p> <p><i>See Progress Summary 3.C</i> <i>See Progress Summary 3.G</i> <i>See Progress Summary 6.D.</i> <i>See Progress Summary 7.G</i></p>		<p><u>Ongoing:</u> MyPlan Internet Mapping Tool continues to provide GIS web-based mapping to support local planning. The California Department of Technology (CDT) will support updates to the MyPlan Tool. <i>Responsible Agency: Cal OES, CDT</i></p> <p><u>Ongoing:</u> GIS data for all state-owned facilities has been mapped in relation to estimated exposure to primary hazards. <i>Responsible Agency: Cal OES</i></p> <p><u>New:</u> The General Plan Guidelines Online Mapping Tool helps communities identify existing resources, including environmental, structures, infrastructure and demographics, and allows the upload of local data. <i>Responsible Agency: OPR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Enhance Collaboration on the Development and Sharing of Data Systems and Geographic Information Systems (GIS) Modeling (continued)</p>		<p><u>New:</u> The California Air Resources Board (CARB) developed the Climate Action Portal Map (CAP-Map), an interactive web resource that is intended to share climate change actions and policies being implemented within California. <i>Responsible Agency: CARB</i></p> <p><u>New:</u> SB 246 passed in 2015 directed OPR to coordinate and maintain the State Adaptation Clearinghouse. The web-based clearinghouse provides state, regional, and local planners access to the most current climate change planning and technical assistance resources. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> CalEnviroScreen was developed by the Office of Environmental Health Hazard Assessment (OEHHA) to identify disadvantaged communities as required by SB 525, passed in 2017. <i>Responsible Agency: OEHHA</i></p> <p><u>New:</u> The California Department of Public Health has developed an interactive data and mapping tool providing a snapshot of social determinants across the state that can be used to prioritize areas with social and economic disadvantage. <i>Responsible Agency: CDPH</i></p> <p><u>New:</u> The California Geologic Survey (CGS) developed a web-based tool to allow easy public access to Seismic Hazard Zone Maps. <i>Responsible Agency: CGS</i></p> <p><u>New:</u> The Department of Water Resources provides an interactive tool to identify all flood hazard areas in California not mapped under the FEMA National Flood Insurance Program. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> The State Lands Commission (SLC) Sea-level Rise Viewer displays potential future sea-levels, compare scenarios, and includes the ability to overlay infrastructure, environmental and social economic data. It also includes a database of local coastal community plans. <i>Responsible Agency: SLC</i></p> <p><u>New:</u> CAL FIRE’s Tree Mortality Map Viewer contains spatial information related to tree mortality, including location, removal projects, infrastructure, recreational facilities, and fire threat. <i>Responsible Agency: CAL FIRE</i></p>	

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Support and Coordinate Monitoring of Progress on State Goals and Objectives</p> <p><i>See Progress Summary 9.F</i></p>	<p>Set systematic near- and long-term mitigation targets and priorities</p>	<p><u>Ongoing:</u> he California Energy Commission tracks progress California is making in meeting its clean energy goals. Examples of indicators tracked include: energy efficiency, statewide energy demand, zero-emission vehicles, and reliance on coal, renewable energy, and once-through cooling.</p> <p><i>Responsible Agency: CEC</i></p> <p><u>Ongoing:</u> Mitigation Best Practices Highlights are included throughout the 2018 SHMP. <u>Ongoing:</u> Progress Summaries are highlighted throughout the 2018 SHMP. <u>Completed:</u> Cal VIVA III tested and refined the Cal VIVA II prototypical department plan and produced a template that can be used by departments and agencies within state government to systematically address critical building vulnerability and potential retrofits on a long-term basis.</p> <p><i>Responsible Agency: State Departments & Agencies</i></p> <p><u>New:</u> Mitigation targets were established within state legislation: SB 32 passed in 2016 establishes a target for greenhouse gas emission reductions; and the Sustainable Groundwater Management Act of 2014 establishes a target date for completion of required local plans.</p> <p><i>Responsible Agency: CARB, DWR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>
<p>Expand Mitigation Project Loss Avoidance Tracking through the State Mitigation Assessment Review Team (SMART) System</p> <p><i>See Progress Summary 3.H</i> <i>See Progress Summary 10.A</i></p>	<p>Conduct post-disaster onsite review and documentation of loss avoidance of mitigation projects using SMART</p>	<p><u>New:</u> SMART field assessments were conducted following the 2014 Napa Earthquake. In addition to Level I and II assessments, 2 structures were selected for a Level III assessment, which concluded that previous seismic mitigation projects were cost-effective.</p> <p><i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
CLIMATE CHANGE			
California Global Warming Solutions Act (SB 32)	Reduce greenhouse gas (GHG) emissions to 40% below 1990 levels by 2030.	<p><u>New:</u> SB 32, passed in 2016 updates the previous GHG emission standards established in 2008 under AB 32. In addition to accelerating GHG reductions, it requires the California Air Resources Board (CARB) to adopt rules and regulations in an open public process to achieve the most technically feasible and cost effective GHG reductions.</p> <p><i>Responsible Agency: CARB</i></p> <p><u>New:</u> In 2017, CARB released an update to the 2008 Scoping Plan, building on key programs to reduce GHG emissions in the energy producing, transportation, agriculture and forestry sectors</p> <p><i>Responsible Agency: CARB</i></p>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
Interagency Coordination	<p>Coordinate the activities of state agencies to improve air and water quality; protect natural resources and agricultural lands; increase the availability of affordable housing; improve infrastructure systems; promote public health; and, assist state and local entities in the planning of sustainable communities and meeting AB 32 goals.</p> <p>Provide technical support and feedback on climate change issues to be addressed in the 2009 CA Water Plan Update.</p> <p>Review and develop policy and operational recommendations associated with the effects of climate change on fire preparedness and response planning.</p>	<p><u>Ongoing:</u> SB 732 was signed in September 2008, creating the cabinet-level Strategic Growth Council (STC). The Council has authority to distribute Proposition 84 funds. Projects funded by Proposition 84 funds must reduce greenhouse gases emissions on a permanent basis</p> <p><i>Responsible Agency: Strategic Growth Council</i></p> <p><u>Ongoing:</u> The Climate Change Technical Advisory Group (CCTAG) was formed in 2009 to advise the Department of Water Resources (DWR) on the scientific aspects of climate change and the development of adaptation approaches for California’s water sector.</p> <p><i>Responsible Agency: DWR</i></p> <p><u>New:</u> The Fire Service Task Force on Climate Impacts was established in 2015 in response to Executive Order B-3-15. It builds on work done by the Blue Ribbon Fire Commission established following the 2013 wildfires. Membership includes local, state, and federal agencies and professional organizations.</p> <p><i>Responsible Agency: Cal OES</i></p> <p><u>New:</u> In response to Executive Order B-30-15, the Technical Advisory Group (TAG) and Sub-TAGs were convened by the Office of Planning and Research (OPR). The group, representing multiple state, regional and local agencies as well as non-governmental organizations and the private sector, met from April 2016 through January 2017. The TAG produced guidance for state agencies.</p> <p><i>Responsible Agency: OPR</i></p> <p><u>New:</u> Established in 2016, the Coastal and Ocean Resources Working Group for the Climate Action Team (CO-CAT) is charged with</p>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Interagency Coordination <i>(continued)</i></p>	<p>Provide guidance for agencies to incorporate and integrate climate change into all planning and investment decisions. Ensure the state’s ability to adapt to climate change impacts on ocean and coastal resources</p> <p>Facilitate coordination among state, regional and local agency efforts to adapt to the impacts of climate change</p> <p>Provide a venue for cross-sector collaboration and information sharing on development of the Safeguarding California plan.</p>	<p>implementation of the Safeguarding California Plan and the California Climate Action Strategy. <i>Responsible Agency: California Ocean Protection Council</i> <u>New:</u> The Integrated Climate Adaptation and Resiliency Program (ICARP) was convened in 2016 through SB 246. ICARP produces a variety of tools and guidance to promote integration of climate change adaptation. <i>Responsible Agency: OPR</i> <u>New:</u> The Safeguarding California Climate Action Team (SafeCAT) was established in 2017. It meets quarterly to provide updates on various adaptation-related efforts.</p>	
<p>California Adaptation Strategy <i>See Progress Summary 4.A</i> <i>See Progress Summary 4.B</i> <i>See Table 4.1</i></p>	<p>Communicate current and needed actions state government should take to build climate change resiliency.</p>	<p><u>New:</u> The 2009 California Climate Adaptation Strategy (CAS) was updated as the 2014 Safeguarding California Plan to include energy and emergency management chapters. It was again updated as the Safeguarding California Plan: 2018 Update – California’s Climate Adaptation Strategy. <u>New:</u> A set of four complementary Adaptation Planning Guides (APG), providing guidance to communities in addressing consequences of the (CAS) were finalized in 2012. The APG is being updated based on the 2018 CAS and an update is expected to be released in early 2019. <i>Responsible Agency: CNR, Cal OES</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, Objectives 1, 2, 3, 4, 5, 7, 8</p>

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California Building Resilience Against Climate Change Effects Project (CalBRACE)	Enhance the California Department of Public Health’s (CDPH) capability to plan for and reduce health risks associated with climate change.	<p><u>New:</u> The CalBRACE project provides resources and technical assistance for state and local public health departments to build climate adaptation capacity and enhance resilience at the local and regional levels. CalBRACE is funded by the Center for Disease Control (CDC). <i>Responsible Agency: CDPH</i></p> <p><u>New:</u> The Climate Change and Health Equity Program (CCHEP) works with local, state, and national partners to assure climate change mitigation and adaptation activities do not exacerbate health inequalities. <i>Responsible Agency: CDPH, Cal OES</i></p>	Goal 1, Objectives 1, 2, 5 Goal 4, Objectives 1, 3, 4, 5, 6, 7
Climate Change Assessment	Produce periodic scientific assessments on the potential impacts of climate change in California	<p><u>Ongoing:</u> The First Climate Change Assessment was released in 2006, focusing on potential impacts on key state resources. The Second Assessment, released in 2009, focused on economic impacts. The Third Assessment, released in 2012, made significant progress in projecting climate change impacts. The Fourth Assessment, scheduled for release in 2018, will be the first inter-agency effort to implement the Climate Change Research Plan which was published in 2015. <i>Responsible Agency: CNR</i></p> <p><u>New:</u> Climate Change and Emergency Management in California is part of the Fourth Assessment. It includes a Critical Facilities Vulnerability Assessment (CFVA, and a component addressing transportation adaptation. <i>Responsible Agency: Cal OES</i></p>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, Objectives 1, 2, 3, 4, 5, 6, 7
Local Planning for Climate Change <i>See Progress Summary 4.B</i> <i>See Table 4.1</i> <i>See Best Practices Highlight 4.A</i>	Incorporate climate change adaptation and greenhouse gas emission reductions into local planning processes.	<p><u>New:</u> The 2017 General Plan Guidelines published by OPR requires the inclusion of content on climate change and environmental justice within the General Plan, either as stand- alone elements or integrated into other elements. It also summarizes how a general plan or climate action plan can be consistent with CEQA Guidelines <i>Responsible Agency: OPR</i></p>	Goal 1, Objectives 2, 4, 5 Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives

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Web Based Climate Change Tools	Provide a centralize source of climate change information and resources	<p>New: SB 246 passed in 2015 directed OPR to coordinate and maintain the State Adaptation Clearinghouse. The web-based clearinghouse provides state, regional, and local planners access to the most current planning and technical assistance resources.</p> <p><i>Responsible Agency: OPR</i></p> <p>New: The California Air Resources Board (CARB) developed the Climate Action Portal Map (CAP-Map), an interactive web resource that is intended to share climate change actions and policies being implemented within California.</p> <p><i>Responsible Agency: CARB</i></p>	Goal 1, Objective 1 Goal 4, Objectives 2, 7

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
EARTHQUAKE AND GEOLOGIC HAZARD MITIGATION			
California Earthquake Loss Reduction Plan	Update the California Earthquake Loss Reduction Plan as required by the California Earthquake Hazards Reduction Act of 1986.	<p>Ongoing: The most recent update, California Earthquake Loss Reduction Plan 2007-2011 was published in 2007 by the California Seismic Safety Commission (CSSC).</p> <p><i>Responsible Agency: California Seismic Safety Commission (CSSC)</i></p> <p>New: In June 2016 the CSSC, in partnership with the Pacific Earthquake Engineering Center (PEER), issued a report discussing findings and priority recommendations organized by focus areas of the California Earthquake Loss Reduction Plan.</p> <p><i>Responsible Agency: California Seismic Safety Commission (CSSC)</i></p>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, Objective 5 Goal 4, All Objectives
Earthquake Zones of Required Investigation (Formerly Seismic Hazard Mapping) <i>See Progress Summary 6.C</i> <i>See Best Practices Highlight 6.C</i>	Ensure efficient, accurate, and reliable completion of the statewide Seismic Hazard Mapping Program	<p>Ongoing: 10 years to complete.</p> <p>Since 2013, 10 additional quadrangle maps have been issued, bringing the total number of maps issued to 124, affecting 170 cities and 10 counties. Additionally, 21 new and revised Alquist-Priolo Earthquake Fault Zone Maps have been issued.</p> <p><i>Responsible Agency: California Geological Survey (CGS)</i></p> <p>New: Special Publication 42 addressing surface fault rupture was significantly revised in 2017.</p> <p><i>Responsible Agency: California Geological Survey (CGS)</i></p>	Goal 1, All Objectives Goal 2, Objectives 1, 2, 3, 4 Goal 3, Objective 5 Goal 4, Objectives 5, 7

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EQ Zapp: California Earthquake Hazards Zone Application <i>See Progress Summary 6.D</i>	Create an easily accessible online mapping tool that includes mapped earthquake fault zones, seismic hazard zones, and areas susceptible to ground failure.	<u>New:</u> The California Geologic Survey has launched the California Earthquake Hazards Zone Application (EQ Zapp), to allow anyone with a computer, tablet, or smartphone to conveniently check whether a property is in an earthquake hazard zone. <i>Responsible Agency: CGS</i> <u>New:</u> Prior to launching EQ Zapp CGS completely updated all the regulatory hazard zones, including A-P fault zones and Seismic Hazard Zones in 2017. <i>Responsible Agency: CGS</i>	Goal 1, Objectives 1, 3 Goal 2, Objective 1, 3 Goal 3, Objectives 4, 5 Goal 4, Objective 7
Uniform California Earthquake Rupture Forecast (UCERF)	Revise California earthquake probabilities; Prepare updated shaking hazard map of California.	<u>Completed:</u> UCERF III was completed in 2014. <i>Responsible Agency: CGS</i>	Goal 1, Objectives 1, , 4, 5 Goal 2, Objectives 1, 2, 3, 4, Goal 4, Objective 7
HAZUS Earthquake Loss Estimates <i>See Progress Summary 6.A</i>	Update statewide annualized losses	<u>New:</u> Using the latest HAZUS default data and the 2014 update of the USGS National Seismic Model, the California Geological Survey (CGS) updated statewide annualized losses for California in 2016. <i>Responsible Agency: CGS</i>	Goal 1, Objective 1 Goal 4, Objective 7
California Earthquake Early Warning System (CEEWS) See Napa Earthquake Case Study	Rapidly detect the occurrence of an earthquake, estimate the level of ground shaking, and issue a warning before significant ground shaking begins.	<u>New:</u> In September 2013, SB 135 required Cal OES to develop a comprehensive statewide EEWS through public-private partnerships. The 2016-17 state budget provides \$10 million in funding to support the installation of new seismic sensors and 4 permanent research positions. <i>Responsible Agency: Cal OES</i>	Goal 1, Objectives 1, 3, Goal 2, Objective 5, Goal 3, Objective 5 Goal 4, Objective 1, 6, 7
Delta Liquefaction Hazard	Map liquefaction hazard of native geologic materials in the Sacramento-San Joaquin Delta region	<u>In progress:</u> NEHRP funded project <i>Responsible Agency: CGS</i>	Goal 1, Objectives 1, 2 Goal 2, Objectives 1, 2, 3
LIDAR Fault Mapping	Examine the utility of high-resolution LIDAR topographic data for mapping active faults	<u>In progress:</u> NEHRP funded project <i>Responsible Agency: CGS</i>	Goal 1, Objectives 1, 2 Goal 2, Objectives 1, 2, 3

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Remote Sensing Fault Mapping	Examine the utility of airborne hyper-spectral remote-sensing imagery for mapping active faults	<u>In progress:</u> NASA funded project <i>Responsible Agency: CGS</i>	Goal 1, Objectives 1, 2 Goal 2, Objectives 1, 2, 3
California Vital Infrastructure Vulnerability Assessment <i>See Progress Summary 6.B</i>	Develop and test a methodology for assessing the vulnerability of state-owned building stock to seismic and other hazards and determine minimum retrofit measures to protect occupants from harm and facilitate recovery	<u>Completed:</u> All three increments of Cal VIVA have been completed, with final reports issued in 2013. <i>Responsible Agency: Cal OES</i> <u>New:</u> Portions of the Cal VIVA model were used for the Fourth Climate Change Assessment. <i>Responsible Agency: Cal OES</i>	Goal 1, All Objectives Goal 2, Objectives 2, 3, 4, 5, 6
State Building Retrofits <i>See Map 6.J</i>	Identify and retrofit seismically deficient state-owned buildings.	<u>New:</u> In 2017 a Seismic Risk Rating Study of California Superior Court Buildings was completed. One hundred forty-five structures identified as being at risk of collapse or causing a major risk to life were ranked and prioritized for seismic mitigation. <i>Responsible Agency: Judicial Council Program</i>	Goal 1, All Objectives Goal 2, Objectives 2, 3, 4, 6
CSU Retrofits	Reduce unacceptable seismic risk of existing buildings and manage current construction programs to limit future seismic risk.	<u>Ongoing:</u> The California State University System continues its vigorous program to reduce seismic risk to acceptable levels. As of budget year 2014-15, CSU has funded and implemented nearly \$525 million in system-wide seismic retrofit projects. <i>Responsible Agency: California State University System(CSU)</i>	Goal 1, Objectives 4, 5 Goal 2, Objectives 2, 3, 5, 6
UC Retrofits <i>See Progress Summary 6.E</i> <i>See Best Practices Highlight6.A</i>	Conduct seismic review to identify and set priorities for hazard mitigation.	<u>Ongoing:</u> Between 1979 and 2016, the University of California System-Wide Seismic Safety Program has included seismic retrofit work in 329 structural improvement projects. <i>Responsible Agency: University of California (UC) Board of Regents</i>	Goal 1, Objectives 4, 5 Goal 2, Objectives 2, 3, 5, 6

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<p>Seismic Evaluation of Single Family Dwellings</p> <p><i>See Progress Summary 6.G</i> <i>See Progress Summary 6.H</i> <i>See Best Practices Highlight 6.F</i></p>	<p>Develop comprehensive guidelines for evaluating and seismically retrofitting single-family dwellings</p> <p>Build a cadre of professionals qualified to perform seismic retrofit inspections and recommended retrofits</p>	<p><u>Ongoing:</u> The first edition of the California Building Code (CBC) to establish standards for the retrofit of single-family dwellings with cripple walls less than 4 feet was adopted in 2010 and can be found in the 2016 CBC. Research is underway to establish standards for additional types of residential construction which may trigger revisions to further CBC updates.</p> <p><i>Responsible Agency: CEA, BSC</i></p> <p><u>Ongoing:</u> In 2012, FEMA produced P-50, Simplified Seismic Assessment of Detached Single-Family Wood Frame Dwellings, and P-50-1 Seismic Retrofit Guidelines. Since 2015, over 250 seismic inspection professionals have completed the training. In 2016, CEA developed a web-based application based on P-50.</p> <p><i>Responsible Agency: CEA</i></p>	<p>Goal 1, Objectives 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 4, Objective 5, 6, 7, 8</p>
<p>California Earthquake Authority (CEA) Grants</p> <p><i>See Progress Summary 6.G</i></p>	<p>Provide financial support to homeowners to retrofit single family residences</p>	<p><u>New:</u> The Earthquake Brace + Bolt (EBB) Program was initiated in 2013. The EBB provides up to \$3000 per residential unit for seismic residential upgrading. Since 2013 the program has issued grants to 3,622 homeowners. Funding has been collectively provided through the CEA Loss Mitigation Fund, the State of California and through FEMA HMGP grants.</p> <p><i>Responsible Agency: CEA</i></p>	<p>Goal 1, Objectives 4,5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 4, Objectives 5, 6, 7, 8</p>
<p>Non-Ductile Concrete Buildings</p> <p><i>See Progress Summary 6.F</i></p>	<p>Implement retrofit programs for non-ductile concrete buildings subject to severe damage or collapse in an earthquake</p> <p>Voluntary program to canvass cities and counties throughout the state to determine how many pre-1976 non-ductile concrete buildings may exist within each jurisdiction.</p>	<p><u>New:</u> In 2016 the City of Los Angeles passed a mandatory ordinance requiring the retrofit of all pre-1977 non-ductile concrete buildings. As of 2018, buildings are being identified and notices to comply are being sent to building owners, including a schedule for compliance.</p> <p><i>Responsible Agency: Los Angeles Department of Building and Safety</i></p> <p><u>Ongoing:</u> In 2012/13 a new phase of the Concrete Coalition Project, supported by an HMGP grant, is focusing on developing tools that help decision-makers and engineers advance this field of endeavor.</p> <p><i>Responsible Agency: EERI</i></p>	<p>Goal 1, Objectives 2, 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 4, Objective 7, 8</p>

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<p>Unreinforced Masonry Buildings</p> <p><i>See Best Practices Highlight 6.C</i></p>	<p>Reduce the risk of life loss, injury, and collapse of unreinforced masonry buildings at the local level.</p>	<p><u>New:</u> The state adopted seismic retrofit standards for URM buildings in the 2016 Building Standards Code. These standards have been adopted by 169 cities and counties.</p> <p><i>Responsible Agency: Building Standards Commission</i></p> <p><u>Ongoing:</u> In response to the URM building law of 1986, the City of San Luis Obispo adopted a seismic building retrofit ordinance in 1997. The city identified 126 hazardous URMs. By 2015, all but 8 of the 126 buildings had been retrofit, with 2 partially retrofit and 6 under construction.</p> <p><i>Responsible Agency: City of San Luis Obispo</i></p>	<p>Goal 1, Objectives 2, 3, 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 4, Objective 1, 5, 6, 7, 8</p>
<p>Mobile Homes</p> <p><i>See Progress Summary 6.I</i></p>	<p>Adopt regulations to improve the structural and lateral stability of manufactured housing.</p>	<p><u>Ongoing:</u> regulations became effective in April 2013 that apply the current California Residential Code structural standards to any alteration of a manufactured home built after 1958.</p> <p><i>Responsible Agency: Department of Housing and Community Development (HCD)</i></p> <p><u>New:</u> An information flyer was developed jointly by Cal OES, FEMA, and EERI in 2015 and translated into Spanish in 2016.</p> <p><i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, Objectives 2, 3, 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 4, Objectives 1, 5, 6, 7, 8</p>
<p>Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS)</p> <p><i>See Progress Summary 6.J</i></p>	<p>construction, inspection, maintenance, and repair of marine oil terminals piers, wharves and other waterfront facilities</p>	<p><u>New:</u> MOTEMS was updated in 2016. The MOTEMS Audit Manual was developed to assist marine oil terminal operators to comply with the revised standards.</p> <p><i>Responsible Agency: California State Lands Commission (CSLC)</i></p>	<p>Goal 1, Objectives 1, 3, 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 3, Objectives 1, 2, 3, 5 Goal 4, Objectives 1, 2, 3, 7, 8</p>
<p>Highway Bridge Retrofits</p> <p><i>See Progress Summary 6.K</i></p>	<p>Evaluate and seismically retrofit state highway bridges and overpasses to prevent collapse in major earthquakes.</p>	<p><u>In progress:</u> By 2016, all but one of the 2,194 state bridges previously determined to need seismic retrofitting had been retrofitted. Anticipated completion is 2020 or 2021</p> <p><i>Responsible Agency: Caltrans</i></p>	<p>Goal 1, Objectives 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 3, Objectives 1, 5 Goal 4, Objective 1</p>
<p>The Great California ShakeOut Earthquake Drill and Public Readiness Initiative</p> <p><i>See Progress Summary 6.L</i></p>	<p>Conduct statewide emergency preparedness. Mitigation and response activities to include multiple levels of government, the private sector, and the public.</p>	<p><u>Ongoing:</u> The Great California ShakeOut is an annual event. Initiated in Southern California in 2008 with 5.5 million participants, the event was broadened to statewide in 2009. Nearly 10.6 million participated in the 2017 event.</p> <p><i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, Objectives 1, 2, Goal 2, Objective 5 Goal 4, Objectives 1, 5, 6,</p>

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Landslide Inventory Maps <i>See Map 6.V & 6.X Progress Summary 6.M</i>	Continue to map earthquake induced landslides through the Seismic Hazards Mapping Program	<u>Ongoing:</u> CGS continues to release maps of seismically induced landslides under the Seismic Hazards Mapping Act. CGS also makes available landslide inventory maps covering much of coastal California. These maps which have been being produced since the 1970's show locations of existing landslides and are now available on the CGS Landslide Inventory Viewer. <i>Responsible Agency: CGS</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, Objective 1 Goal 4, Objective 4, 7
Post-Fire Runoff & Debris Flows	Develop regional modeling to assess potential effects of post-fire runoff. Develop an early warning system for post-fire flash floods and debris flows.	<u>New:</u> In 2014, the Department of Water Resources issued a report entitled the Assessment of Post-Fire Runoff Hazards for Pre-Fire Mitigation Planning – Southern California. Regional modeling of burn areas around the state is being conducted by state and federal agencies. <i>Responsible Agency: California Department of Conservation</i> <u>New:</u> USGS and NOAA have developed a demonstration early warning system for recently burned areas in Southern California. <i>Responsible Agency: USGS, NOAA, Cal OES</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, Objectives 1, 2, 4 Goal 4, Objective 1, 6, 7
Volcano Hazard Vulnerability Assessment		<u>New:</u> Preparation of assessment to provide broad perspective on the State's exposure and vulnerability to volcanic hazards by integrating existing volcanic hazard zones with geospatial data on at-risk populations, infrastructure, and resources. <i>Responsible Agency: USGS, CGS, Cal OES</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, Objective 1 Goal 4, Objective 4, 7

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
FLOOD HAZARD MITIGATION RIVERINE, STREAM, AND ALLUVIAL FAN HAZARDS			
Flood Control System Deficiencies in Central Valley <i>See Progress Summary 5.O</i>	Produce a Descriptive Document to inventory the facilities and operations associated with State and Federal flood control works, and a Flood Control System Status Report to assess the status of that inventory.	<u>In Progress:</u> Underway. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 1, 2, 4, 5 Goal 2, Objectives 2, 3, 5 Goal 3, Objectives 2, 4 Goal 4, Objective 5

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Flood Risk Mapping	Adopt a schedule for mapping flood risk areas in the Central Valley and prepare/approve levee flood protection zone maps. Provide yearly notices to owners of property in a levee flood protection zone.	<u>Ongoing:</u> Legislation requires DWR to make the maps available to the public by June 2013. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 1, 2, 5, 6 Goal 2, Objective 5 Goal 4, Objective 7
Land Use Planning and Management <i>See Progress Summary 7.A</i> <i>See Progress Summary 7.G</i>	Control future development in floodplains and flood-prone areas, in conformance with the CVFPP.	<u>Ongoing:</u> Implementation of SB 5 requiring cities and counties within Sacramento-San Joaquin Valleys to address new flood protection standards when considering new development. <i>Responsible Agency: DWR</i> <u>Completed:</u> As required by SB 1278, DWR developed and released 200-year informational floodplain maps for 10 urban communities in the Sacramento-San Joaquin Valley. SB 1278 also extended the deadlines for local adoption of general plans and zoning ordinances consistent with the CVFPP. <i>Responsible Agency: DWR</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
Flood Legislation Planning Assistance <i>See Progress Summary 7.A</i>	Provide planning assistance to local governments in implementing the five flood legislation bills passed in 2007.	<u>Completed:</u> Two documents were prepared in 2007 to assist local governments in complying with legislated requirements: California Flood Legislation Summary and California Flood Legislation Companion Reference. The third document, Local Land Use Planning: Handbook for Communities Implementing Flood Legislation – October 2010 describes legislation requirements affecting city and county local planning responsibilities. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 2, 6 Goal 2, Objectives 1-6 Goal 3, Objectives 1, 3, 4 Goal 4, Objectives 1, 2, 4, 5, 6

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Flood Management</p> <p><i>See Progress Summary 5.Q</i></p>	<p>FloodSAFE California, launched in 2006 is a multi-faceted program to improve public safety through integrated flood management.</p>	<p><u>Ongoing:</u> The FloodSAFE Strategic Plan: Public Draft was released in May 2008. It contains twelve Foundational Objectives with target dates for completion extending to 2025. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> The Flood Risk Notification Program is part of the FloodSAFE California Initiative. In September 2010, DWR provided the first annual written notice of flood risks to each landowner whose property is protected by certain levees. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> In 2013 DWR and the US Army Corps of Engineers published the report “California’s Flood Future” to look at statewide flood risk. <i>Responsible Agency: DWR</i></p>	<p>Goal 1, Objectives 1, 2, 6 Goal 2, Objectives 1, 2, 3, 5 Goal 3, Objectives 3, 4 Goal 4, Objectives 1, 5, 7</p>
<p>California’s Flood Future</p> <p><i>See Progress Summary 7.E</i> <i>See Figure 7.C</i> <i>See Map 7.E</i> <i>See Map 7.F</i></p>	<p>Assess statewide exposure to flood risk, identify, and address the barriers to improved flood management.</p>	<p><u>New:</u> California’s Flood Future: Recommendations for Managing the State’s Flood Risk was developed by DWR in partnership with the .S. Army Corps of Engineers as a companion plan to the 2013 California Water Plan Update. The document concludes with 7 recommendations for state and federal assistance to reduce the risk and consequences of flooding. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> DWR is developing a companion report Investing in California’s Flood Future: An Outcome-Driven Approach to Flood Management, to guide future capital flood management and risk reduction projects. <i>Responsible Agency: DWR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>
<p>Flood Management System Planning and Programs</p> <p><i>See Progress Summary 7.B</i> <i>See Progress Summary 7.D</i> <i>See Progress Summary 7.E</i> <i>See Figure 7.B</i></p>	<p>Improve flood management across the state.</p>	<p><u>Ongoing:</u> California’s Flood Management System includes 5 integrated program areas: Flood Management Planning; Floodplain Risk Management; Flood Risk Reduction Projects; Flood System Operations and Maintenance; and, Flood Emergency Response. <i>Responsible Agency: DWR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Central Valley Flood Protection Plan (CVFPP)</p> <p><i>See Progress Summary 7.C</i> <i>See Progress Summary 7.D</i></p>	<p>Update and implement recommendations and planning requirements outlined in the CVFPP.</p>	<p><u>New:</u> The CVFPP is California’s strategic blueprint to improve flood risk management in the Central Valley. The first plan was adopted in 2012. The 2017 Update was officially adopted in August 2017 by the Central Valley Flood Protection Board and serves as a long-range plan that guides the State’s participation in managing flood risk in the Central Valley. It will guide investments in multi-benefit flood projects over the next 30 years.</p> <p><i>Responsible Agency: DWR</i></p> <p><u>New:</u> Following adoption of the 2012 Plan, DWR completed six Regional Flood Management Plans (RFMP) for regions in the Central Valley in 2015, and recommendations were incorporated into the 2017 CVFPP Update.</p> <p><i>Responsible Agency: DWR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>
<p>California Water Plans</p> <p><i>See Progress Summary 7.E</i></p>	<p>Ensure reliable water supplies and foundational actions for sustainable water use in California.</p>	<p><u>New:</u> The 2018 update of the California Water Plan will identify specific outcomes and metrics to track performance, prioritize near-term State actions and investments, recommend financing methods having more stable revenues, and inform water deliberations and decisions as they unfold. The final plan is scheduled for adoption by the end of 2018.</p> <p><i>Responsible Agency: DWR</i></p> <p><u>New:</u> The California Water Plan Update 2018 Envisioning Sustainable Water Resources brochure presents the Water Plan’s vision of sustainability.</p> <p><i>Responsible Agency: DWR</i></p> <p><u>New:</u> The California Water Action Plan, first developed in response to the drought in 2014, was updated in 2016. The plan describes actions for increasing flood protection and the need for integrated regional flood management projects.</p> <p><i>Responsible Agency: DWR</i></p> <p><u>New:</u> The Delta Reform Act of 2009 created the Delta Stewardship Council, an independent state agency, to provide a more reliable water supply for California and enhancing the Delta’s ecosystem.</p> <p><i>Responsible Agency: DWR</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
NFIP Compliance	Work with local floodplain managers to promote participation in and ensure compliance with the NFIP to update community's FIRM	<p><u>New:</u> The 2015 International Building Code and International Residential Building Code, both of which have been adopted in California, now incorporate standards for the design and construction of buildings in flood hazard zones. All provisions are meet or exceed NFIP minimum requirements.</p> <p><i>Responsible Agency: CBSC, local building departments</i></p> <p><u>Ongoing:</u> As of 2017, 97% of California communities (527 throughout the state) participate in the NFIP. Ongoing: FEMA implemented the new CRS Coordinator's Manual beginning April 2013. Each participating CRS community will need to meet the new criteria.</p> <p><i>Responsible Agency: DWR</i></p>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
FLOOD HAZARD MITIGATION SEA LEVEL RISE, COASTAL FLOODING AND EROSION HAZARDS			
Sea-level Rise Guidance <i>See Progress Summary 7.H</i>	Provide guidance on factors to consider in projecting sea-level rise, potential impacts, and adaptation strategies.	<p><u>New:</u> In April 2018, the Ocean Protection Council (OPC) released new update of the State's Sea-Level Rise Guidance.</p> <p><i>Responsible Agency: OPC</i></p> <p><u>New:</u> In April 2017, the Ocean Protection Council (OPC) released a new guidance document entitled Rising Seas in California: An Update on Sea-Level Science. The document synthesizes the state of sea-level rise in California and provides the basis for the current update of the State's Sea-Level Rise Guidance which was approved in April 2018.</p> <p><i>Responsible Agency: OPC, CNRA, OPR, CEC</i></p> <p><u>Ongoing:</u> In 2015, the California Coastal Commission (CCC) published the California Coastal Commission Sea-level Rise Policy Guidance. The guide outlines six steps to address sea-level rise for local coastal planning.</p> <p><i>Responsible Agency: CCC</i></p> <p><u>New:</u> The California Coastal Commission's draft 2017 Residential Adaptation Policy Guidance document focuses on climate adaptation and residential communities.</p> <p><i>Responsible Agency: CCC</i></p>	Goal 1, Objectives 1, 2, 4 Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
State Agency Adaptation Planning <i>See Best Practices Highlight 7.A</i> <i>See Figure 7.H</i> <i>See Figure 7.I</i>	Assess vulnerability of state assets to sea-level rise and develop adaptation strategies to address potential impacts.	<p><u>New:</u> Caltrans is preparing initial vulnerability assessment and adaptation studies for each of its districts. The first was prepared for District 1 in 2014. The District 4 assessment was released in early 2018 and focuses on climate change threats along the state highway system in the San Francisco Bay Area.</p> <p><i>Responsible Agency: Caltrans</i></p>	Goal 1, Objectives 1, 4, 5 Goal 2, Objectives 1, 3, 4, 5, 6 Goal 3, Objective 3 Goal 4, Objectives 2, 3

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>San Francisco Bay Conservation and Development District (BCDC) Climate Change Planning Program</p> <p><i>See Progress Summary 7.J</i></p>	<p>Provide scientific information and planning resources to Bay Area local jurisdictions.</p>	<p><u>Ongoing:</u> BCDC launched ART Portfolio, a place to find planning guidance, tools, and information that have been developed, tested, and refined by the Adapting to Rising Tides Program to address the specific challenges of climate change. BCDC continues to partner with local, state, and federal agencies to develop and disseminate sea-level rise information and planning tools.</p> <p><i>Responsible Agency: (BCDC)</i></p>	<p>Goal 1, Objectives 1, 2, 4, 5 Goal 2, Objectives 2, 3, 5 Goal 3, Objectives 2, 3, 4, 5 Goal 4, Objectives 1, 2, 3, 4, 5, 6, 7</p>
<p>Local Climate Adaptation Planning</p> <p><i>See Progress Summary 7.I</i> <i>See Best Practices Highlight 7.B</i> <i>See Best Practices Highlight 7.C</i> <i>See Best Practices Highlight 7.D</i> <i>See Figure 7.J</i></p>	<p>Support sea-level rise adaptation planning by local jurisdictions.</p>	<p><u>New:</u> In October 2016, the Department of Water Resources (DWR) published a document entitled National Flood Insurance Program in California Quick Guide Coastal Appendix: Planning for Sea-level Rise. The document supports floodplain managers in addressing potential sea-level rise impacts for their communities</p> <p><i>Responsible Agency: DWR</i></p> <p><u>New:</u> The Local Coastal Program/Local Assistance Grant Program provides funds to support local governments in completing or updating their Local Coastal Programs (LCPs). The program has awarded 45 grants since its inception in FY 2013/14.</p> <p><i>Responsible Agency: CCC</i></p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>
FLOOD HAZARD MITIGATION TSUNAMI AND SEICHE HAZARDS			
<p>Reducing Tsunami Hazards and Risks</p> <p><i>See Progress Summary 6.D</i></p>	<p>Support and provide matching funds for development of improved technologies and methodology to assess tsunami risk</p>	<p><u>New:</u> Post-event survey teams and questionnaires were used to gather information about the impacts and response to two significant teletsunamis which occurred in 2010 and 2011. New products and planning tools will be developed to improve tsunami preparedness as a result of these analyses.</p> <p><u>Ongoing:</u> CGS received funding from NOAA for continued refinement of the inundation maps and to investigate the feasibility of tsunami hazard maps for purposes of land-use planning</p> <p><i>Responsible Agency: CGS</i></p>	<p>Goal 1, Objectives 1, 2 Goal 2, Objectives 1, 2, 3, 4, 5 Goal 4, Objectives 1, 2, 3, 7</p>

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Understanding Tsunami Probability</p> <p><i>See Progress Summary 7.K</i> <i>See Progress Summary 7.L</i> <i>See Map 7.R</i></p>	<p>Improve the understanding of tsunami hazards in California through coordinated research.</p>	<p>New: In 2014 a statewide assessment of geological evidence was conducted to locate evidence of past tsunamis. Evidence was found in several locations for events occurring in 1700, 1946, and 1964.</p> <p>New: The State Tsunami Program is working to complete a new set of tsunami inundation maps based on probabilistic analyses, with some maps to be completed in 2018 through the Probabilistic Tsunami Hazard Program (PTHA).</p> <p>New: in 2016, 33 Maritime Tsunami Response Playbooks were developed to provide harbor officials with hazard risk information.</p> <p>Responsible Agency: CGS</p>	<p>Goal 1, Objective 1 Goal 4, Objectives 6, 7</p>
<p>Tsunami Mitigation and Preparedness Planning</p> <p><i>See Progress Summary 7.K</i> <i>See Progress Summary 7.L</i></p>	<p>Develop loss estimation models to compute potential impacts from tsunamis.</p> <p>Provide site-specific harbor and pier improvements, engineering recommendations, and cost-benefit assessments.</p> <p>Develop planning and technical assistance resources to support tsunami evacuation planning.</p>	<p>New: FEMA has developed a new tsunami loss estimation model for HAZUS that can be used by state and local agencies to assess potential impacts to their community and establish mitigation and preparedness priorities.</p> <p>Responsible Agency: FEMA, state and local jurisdictions</p> <p>New: The State Tsunami Program is working with the State Lands Commission to complete Pier and Harbor Improvement Reports for all at risk harbors and piers.</p> <p>Responsible Agency: CGS, SLC</p> <p>New: Maritime Response Playbooks provide local jurisdictions and harbor officials with maps and guidance about which areas to evacuate or avoid during a tsunami.</p> <p>Responsible Agency: CGS</p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, Objectives 1, 3, 5 Goal 4, Objectives 1, 4, 5, 6, 7</p>
<p>Tsunami Building Codes</p> <p><i>See Progress Summary 7.L</i> <i>See Progress Summary 7.M</i></p>	<p>Address tsunami loads and develop design standards for critical and essential facilities</p>	<p>New: The PTHA maps produced by CGS will form the basis of a new section in the California Building Code (CBC). If adopted by the Building Standards Commission in the current building code cycle, they will be included in the 2019 version of the CBC.</p> <p>Responsible Agency: CGS, CBSC</p>	<p>Goal 1, Objectives 3, 5 Goal 4, Objective 8</p>

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
FLOOD HAZARD MITIGATION LEVEE FAILURE HAZARDS			
Levee Evaluation and Repair <i>See Progress Summary 7.O</i>	Evaluate and upgrade aging and deteriorating levees along the Sacramento and San Joaquin River Valleys and Delta. Funding is provided through Propositions 84 and 1E.	<u>Ongoing:</u> To date, nearly 250 levee repair sites have been identified with repairs to more than 100 critical sites completed. <i>Responsible Agency: DWR</i> <u>Ongoing:</u> DWRs Levee Evaluation Program includes the Urban Levee Geotechnical Evaluations (ULE) Project and the Non-Urban Levee Evaluations (NULE) Project. Two Geotechnical Reports were produced from these evaluations, by April 2015. <i>Responsible Agency: DWR</i> <u>New:</u> The Urban/Non-Urban Levee Evaluations Cost Analysis Tool helps flood managers develop accurate estimates for levee repair. <i>Responsible Agency: DWR</i>	Goal 1, All Objectives Goal 2, Objectives 2, 3, 4, 6 Goal 3, All Objectives Goal 4, Objectives 1, 2, 3, 5, 7
Delta Levees Program <i>See Progress Summary 7.P</i> <i>See Progress Summary 7.Q</i> <i>See Best Practices Highlight 7.F</i>	Provide funding to local agencies in the Sacramento-San Joaquin for levee maintenance and improvement and for habitat mitigation and enhancement.	<u>Ongoing:</u> The Delta Levees Program addresses approximately 1100 miles of levees and supports the efforts with local agencies in the Delta. In 2016 significant levee projects were completed on New Hope Tract, Bouldin Island, Bacon Island, and elsewhere. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 2, 3, 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 3, All Objectives Goal 4, Objectives 1, 5, 8
Local Levee Assistance <i>See Best Practices Highlight 7.E</i>	Provide funding to local agencies outside the Sacramento-San Joaquin Delta	<u>New:</u> DWR established this program to assist local agencies with flood risks throughout the state. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 2, 3, 4, 5 Goal 2, Objectives 2, 3, 4, 5, 6 Goal 3, All Objectives Goal 4, Objectives 1, 5, 8
Cascading Hazards Evaluation <i>See Progress Summary 7.N</i>	Review and evaluate earthquakes and high water as hazards to Delta levees.	<u>New:</u> In July 2016 the Delta Independent Science Board convened a workshop. The potential for liquefaction due to earthquakes and potentially higher water levels due to climate change were identified as primary issues. <i>Responsible Agency: Delta Independent Science Board</i>	Goal 1, Objectives 1, 5 Goal 2, Objective 5 Goal 4, Objectives 2, 3, 5, 6
FLOOD HAZARD MITIGATION DAM FAILURE HAZARDS			
Inspection and Remediation	Inspect dams on an annual basis to identify high hazard dams and need for remediation.	<u>Ongoing:</u> DWR's Division of Dam Safety (DSOD) inspections as of August 2017, indicates there are 474 dams ranked as High Hazard, and 196 as Extremely High Hazard. As of September 2017, 97 dams have been identified as needing remediation. <i>Responsible Agency: DSOD</i>	Goal 1, All Objectives Goal 2, Objectives 2, 3, 5, 6 Goal 3, Objective 2, 3, 4 Goal 4, Objectives 5, 6, 7

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Emergency Action Plans (EAPs)	Create EAPs based on updated inundation maps for dams having high or extremely high hazard ratings.	<u>New:</u> Senate Bill 92, signed into law in 2017, requires, Cal OES to review and approve EAPs upon DSOD approval of dam inundation maps prepared by dam owners. <i>Responsible Agency: Cal OES</i>	Goal 1, Objective 1 Goal 2, Objective 5 Goal 4, Objectives 1, 4, 6, 7

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
WILDFIRE HAZARD MITIGATION			
Legislation for Local Wildfire Hazard Planning <i>See Progress Summary 8.A</i>	Incorporate wildfire hazards into development and land use planning.	<u>Ongoing:</u> SB 1241, passed in 2012 requires wildfire updates to general plans, mandatory findings for subdivision approvals in SRA's and VHFHSZs, and CEQA checklist updates for wildfire safety. <i>Responsible Agency: CAL FIRE, OPR</i>	Goal 1, Objectives 2, 3, 4, 6 Goal 2, Objectives 1, 2, , 4, 5 Goal 3, Objectives 1, 3 Goal 4, Objectives 2, 4, 5, 7, 8
Fire Hazard Severity Zones <i>See Progress Summary 8.C</i> <i>See Best Practices Highlight 8.A</i>	Map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors to define the application of various mitigation strategies to reduce risk.	<u>Ongoing:</u> CAL FIRE updated SRA and LRA Very High Fire Hazard Severity Zones (VHFHSZ) Maps for the state in draft form in 2014, officially released in 2017. An on-line viewer reflects annual updates to SRA and LRA VHFHSZs. <i>Responsible Agency: CAL FIRE</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
Strategic Fire Plan <i>See Progress Summary 8.D</i>	The Strategic Fire Plan forms the basis for assessing California's complex and dynamic natural and man-made environment and identifies a variety of actions to minimize the negative effects of wildland fire.	<u>Completed:</u> The 2010 Strategic Fire Plan was approved in June 2010. It contains seven goals that may be implemented within any timeframe based on available funding. <i>Responsible Agency: CAL FIRE, State Board of Forestry</i> <u>New:</u> A Work Group has been formed to prepare the 2018 update of the Strategic Fire Plan. <i>Responsible Agency: CAL FIRE, State Board of Forestry</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Forest and Range Assessment	Identify and evaluate wildland fire hazards and the associated values and assets at risk. Facilitate the sharing of all analyses and data collections across all ownerships for consistency in type and kind	<u>Ongoing:</u> FRAP and USFS Region 5 are now preparing for the 2015 assessment, which is scheduled for completion in July 2018. The updated 2015 Assessment will revisit the topics from the 2010 Assessment as well as revive the inclusion of Montreal Process Criteria and Indicators to assess our progress toward or away from sustainable forestry. <i>Responsible Agency: CAL FIRE</i>	Goal 1, Objectives 1, 2, Goal 3, Objectives 1, 3, 5 Goal 4, Objectives 1, 2, 5, 7
FireSafe Councils	Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space, fire prevention and fire safe building standards	<u>Ongoing:</u> As of 2017, there are 92 nationally recognized FireSafe communities in California. <u>Ongoing:</u> In 2012 CAL FIRE, Firewise, and California Fire Safe Council signed an MOU to allow CFSC to act as the State Liaison for Firewise Communities in California. <i>Responsible Agency: CAL FIRE, CFSC</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
Post-Fire Assessment	Address post-fire responsibilities for natural resource recovery including watershed protection, reforestation, and ecosystem restoration	<u>Ongoing:</u> Implementation of Governor’s Executive Order S-07-08 which requires the Governor’s Office of Emergency Services, California Resources Agency, and the California Environmental Protection Agency to provide post-fire assessment services to citizens living near burned areas on State, local, tribal, or private lands. The State Emergency Assessment Teams (SEAT), coordinates with the U.S. Forest Service Burn Area Emergency Response (BAER) Teams. <i>Responsible Agency: Cal OES, CNRA, Cal EPA</i>	Goal 1, Objectives 1, 2, 4, Goal 2, Objectives 2, 3, 5, Goal 3, Objectives 3, 4 Goal 4, Objectives 1, 5, 6, 7
Community Wildfire Protection Plans (CWPP)	Identify hazardous fuel reduction treatment priorities, recommend measures to reduce structural ignitability and address issues such as wildfire response, hazard mitigation, community preparedness and structure protection	<u>Ongoing:</u> CWPPs are produced in collaboration with public fire agencies and affected non-governmental interests (especially local community residents). <i>Responsible Agency: CAL FIRE</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
AGRICULTURAL AND SILVICULTURAL PESTS AND DISEASES HAZARD MITIGATION			
Initiatives and Technology <i>See Progress Summary 9.A</i>	Mitigating the spread of invasive pests	<u>Ongoing:</u> The California Firewood Task Force has focused on promoting the Buy It Where You Burn It campaign since 2011 to increase public awareness about invasive tree pests being transported via long distance firewood movement. <u>Ongoing:</u> CDFA’s “Report a Pest” app allows the public to access the CDFA database and invasive species experts to identify the presence of invasive species. <i>Responsible Agency: CDFA</i>	Goal 1, Objectives 1, 2, 3 Goal 2, Objectives 5 Goal 3, All Objectives Goal 4, Objectives 2, 5, 6, 7
AIR POLLUTION HAZARD MITIGATION			
Air Quality/Pollution Monitoring <i>See Progress Summary 9.B</i>	CalEnviroScreen Reduce pollutant exposures to improve community health	<u>New:</u> The Office of Environmental Health Hazards Assessment (OEHHA) developed and maintains the <u>CalEnviroScreen</u> mapping tool to help identify California communities disproportionately impacted by sources of pollution. <i>Responsible Agency: OEHHA</i> <u>New:</u> The California Environmental Health Tracking Program, along with academic partners, initiated a community-based effort to place air monitoring equipment to identify pollution “hot spots” <i>Responsible Agency: CDPH</i>	Goal 1, Objective 1, 2, Goal 3, Objective 5 Goal 4, Objective 5, 7
Air Pollution Planning	Incorporate Environmental Justice into General Plans	<u>New:</u> Senate Bill 1000 passed in 2016 requires cities and counties with disadvantaged communities to identify objectives and policies to reduce pollution exposure in their General Plan Updates. <i>Responsible Agency: OPR, cities, counties</i>	Goal 1, Objective 2, 3, 5 Goal 2, Objective 1,2, 3 Goal 3, Objective 5 Goal 4, Objective 1, 4, 5
AQUATIC INVASIVE SPECIES HAZARD MITIGATION			
Marine Invasive Species Act <i>See Progress Summary 9.C</i>	Reduce the introduction of invasive species transported through vessel ballast water	<u>Ongoing:</u> Vessels arriving in California ports are required to submit a Ballast Water Management Report. Between 2014 and 2016, the rate of compliance was over 96%. Additionally, regulations to manage biofouling were implemented in 2017. <i>Responsible Agency: State Lands Commission</i>	Goal 1, Objectives 1, 2, 3 Goal 2, Objectives 5 Goal 3, All Objectives Goal 4, Objectives 2, 5
DROUGHTS AND WATER SHORTAGES HAZARD MITIGATION			

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
State Water Efficiency and Enhancement Program (SWEET) <i>See Best Practices Highlight 9.B</i>	Reduce agricultural water usage through installation of more efficient irrigation practices.	<u>New:</u> SWEET, a competitive grant program, was initiated in 2014. To date it has resulted in an estimated water savings of 58,000 acre feet. <i>Responsible Agency: CDFA, DWR, SWRCB</i>	Goal 1, Objectives 2, 4 Goal 2, Objective 3 Goal 3, Objectives 2, 3, 4, 5 Goal 4, All Objectives
Water Supply <i>See Best Practices Highlight 9.A</i>	Improve potable water supply to areas dependent on well water	<u>New:</u> In response to the 2012-2016 drought, East Porterville, a socially vulnerable community, was connected to a permanent source of potable water, eliminating its reliance on groundwater supplies in future droughts. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 1, 2, 4 Goal 2, Objectives 1, 2, 3, 5 Goal 3, Objective 4 Goal 4, Objectives 1, 3, 5, 6, 8
Groundwater Management Plan <i>See Progress Summary 9.D</i>	Strengthen local control and management of groundwater basins.	<u>New:</u> The Sustainable Groundwater Management Act was passed into law in September 2014. It requires local jurisdictions with medium and high priority basins to develop Groundwater Sustainability Plans within 20 years. <i>Responsible Agency: DWR</i>	Goal 1, All Objectives Goal 2, Objectives 1, 2, 3, 5 Goal 3, Objectives 1, 2, 3, 4 Goal 4, Objectives 1, 2, 3, 4, 5, 6, 7
Local Storm Water Management <i>See Best Practices Highlight 9.C</i>	Capture storm water and redirect it for ground water recharge which will offset increased groundwater use during drought years.	<u>New:</u> Los Angeles County is in the process of updating the county's stormwater infrastructure in order to capture an additional 33 billion gallons of storm water flowing out to the ocean and redirect it for groundwater recharge. The program's goal is to improve and optimize the county's existing flood protection and water conservation systems through a capital improvement program for new infrastructure. <i>Responsible Agency: Los Angeles County</i>	Goal 3, Objectives 2, 3, 4 Goal 4, Objectives 1, 2, 3
California Drought Contingency Plan	Minimize drought impacts by improving agency coordination and enhancing monitoring and early warning capabilities.	<u>Ongoing:</u> The Drought Contingency Plan was updated in 2016. It builds on strategies and actions contained in the 2010 Plan and directs water operations in response to the 2012-2016 drought. <i>Responsible Agency: DWR</i>	Goal 1, Objectives 1, 2, 6 Goal 2, Objectives 3, 5 Goal 3, Objectives 2, 3, 4, 5 Goal 4, Objectives 1, 2, 3, 5, 6, 7, 8
California Water Plan	Develop a comprehensive approach to addressing drought hazard mitigation over the long-term to serve as the state's blueprint for integrated water management and sustainability.	<u>Ongoing:</u> The California Water Plan was updated in 2013, and supports the Governor's Water Action Plan <i>Responsible Agency: DWR</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Safe Drinking Water Plan for California	Assess the overall quality of the state’s drinking water, identify problems, and recommend improvements.	<u>New:</u> The State Water Resources Control Board (SWRCB) submitted an update of the Safe Drinking Water Plan for California to the Legislature in June 2015. The plan focuses on the 2% of the state’s water system consumers without safe drinking water. <i>Responsible Agency: SWRCB</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives
ENERGY SHORTAGE HAZARD MITIGATION			
Existing Buildings Energy Efficiency Action Plan	Double the energy efficiency savings of existing buildings by 2030	<u>New:</u> The California Energy Commission (CEC) adopted the first version of the Existing Buildings Energy Efficiency Plan in 2015, and the first update in 2016, in response to SB 350. <i>Responsible Agency: CEC</i>	Goal 1, Objectives 1, 4 Goal 2, Objectives 2, 3, 5, 6 Goal 3, Objectives 2, 3, 5 Goal 4, All Objectives
Regional Energy-Savings Efforts <i>See Progress Summary 9.H</i>	Implement effective energy saving programs on a regional basis.	<u>New:</u> The Bay Area Regional Energy Network (BAYREN), covers nine counties in the San Francisco Bay Area representing 20% of the state population. BayREN provides planning, technical, and financial assistance funded through the Public Utilities Commission. <i>Responsible Agency: PUC, ABAG</i>	Goal 1, Objectives 1, 4 Goal 2, Objective 2, 3, 5 Goal 3, Objectives 2, 3, 5 Goal 4, All Objectives
Solar and Energy Storage for Resiliency <i>See Best Practices Highlight 9.C</i>	Integrate solar and energy storage into response planning	<u>New:</u> San Francisco’s Solar Resilient initiative goal is to create a roadmap for using solar energy as a viable tool for energy security in the event of an emergency. The objective is to integrate solar energy and energy storage into the City’s Emergency Response Plans. <i>Responsible Agency: City and County of San Francisco</i>	Goal 1, Objective 1, 4 Goal 2, Objective 5 Goal 3, Objectives 2, 3, 5 Goal 4, Objectives 1, 2, 3, 4, 5, 6
California Solar Initiative <i>See Progress Summary 9.E</i>	Reduce the cost of solar generating equipment to reduce use of fossil fuels for power generation.	<u>Ongoing:</u> The CSI program has several funding programs to stimulate the installation of solar systems on residential structures. By the end of 2015, 3,886 megawatts of solar capacity had been installed at over 488,541 sites. <i>Responsible Agency: CPUC</i>	Goal 1, Objective 2, 4, 5 Goal 2, Objective 2, 3 Goal 3, Objectives 2, 3, 5, Goal 4, Objectives 1, 8
Clean Energy <i>See Progress Summary 9.F</i>	Progress Tracking	<u>Ongoing:</u> The California Energy Commission tracks progress California is making in meeting its clean energy goals. Examples of indicators tracked include: energy efficiency, statewide energy demand, zero-emission vehicles, reliance on coal, renewable energy, and once-through cooling. <i>Responsible Agency: CEC</i>	Goal 3, All Objectives
CALEAP	California Local Energy Assurance Planning	<u>Completed:</u> Energy assurance planning has been incorporated into other California Energy Commission initiatives, such as EPIC. <i>Responsible Agency: CEC</i>	Goal 2, Objective 6 Goal 3, Objectives 2, 3, 5, 7 Goal 4, Objectives 1, 3, 5, 7, 8

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Clean Energy Jobs Act <i>See Progress Summary 9.G</i>	Improve energy efficiency in K-12 schools	<u>Ongoing:</u> Proposition 39 was approved by California voters in November 2012. From December 2013 through December 2016, a total of 869 projects using \$282 million in Proposition 39 funds had been completed or were under construction. <i>Responsible Agency: California Department of Education, California Energy Commission, California Public Utilities Commission</i>	Goal 1, Objective 4 Goal 2, Objectives 2, 3, 5 Goal 3, Objectives 2, 3, 4, 5 Goal 4, Objectives 3, 5, 8
EPIDEMIC/PANDEMIC/VECTOR BORNE DISEASES HAZARD MITIGATION			
Mosquito Borne Diseases <i>See Progress Summary 9.I</i>	Surveillance and control of mosquito borne diseases	<u>New:</u> Published the 2017 annual update of the California Mosquito-Borne Virus Surveillance and Response Plan to enhance the state’s capability to track and control a number of mosquito-borne diseases. <i>Responsible Agency: CDPH</i>	Goal 1, Objectives 1, 2 Goal 3, Objectives 2, 4 Goal 4, Objectives 2, 5, 6
EXTREME HEAT HAZARD MITIGATION			
Extreme Heat Vulnerability <i>See Map 9.Q</i>	Identify areas of the state most vulnerable to climate impacts	<u>New:</u> Developed a climate vulnerability index and combined 19 indicators into an overall climate vulnerability score, as part of the Third California Climate Change Assessment. <i>Responsible Agency: CNR</i>	Goal 1, Objectives 1, 2 Goal 4, Objectives 1, 2, 3
Extreme Heat Vulnerability	Identify vulnerable populations	<u>New:</u> The CalBRACE extreme heat indicator describes certain populations that may have greater difficulty preparing for extreme heat. <i>Responsible Agency: CDPH</i>	Goal 1, Objectives 1, 2 Goal 4, Objective 5
Planning for Extreme Heat Emergencies <i>See Best Practices Highlight 9.D</i> <i>See Progress Summary 9.J</i>	Prepare at the local and state level to respond to extreme heat emergencies.	<u>New:</u> In June 2014, Cal OES issued a revised version of the Contingency Plan for Excessive Heat Emergencies. <i>Responsible Agency: Cal OES</i> <u>New:</u> SB 296, passed in 2012, required the California Environmental Protection Agency (CalEPA) to develop an Urban Heat Index. Released in 2015, the Index provides a quantifiable score for each urban census tract. <i>Responsible Agency: CalEPA</i>	Goal 1, Objectives 1, 2 Goal 4, Objectives 1, 2, 5, 6
Climate Change and Extreme Heat	Reduce health risks associated with increased temperatures due to climate change	<u>Completed:</u> Released in 2017, the Heat Committee of the Climate Action Team’s Public Health Work Group developed “Preparing for Extreme Heat in California: Guidance and Recommendations”. <i>Responsible Agency: CDPH, Cal EPA</i>	Goal 1, Objectives 1, 2 Goal 4, Objectives 1, 2, 3, 4, 5, 6, 7
Heat Research <i>See Progress Summary 9.J</i>	Quantify the extent and severity of an urban heat island in California	<u>Completed:</u> This project being undertaken jointly by the Governor’s Office of Planning & Research and Cal EPA is to develop a method to quantify the average temperature increase in California communities due to the Urban Heat Island Effect. <i>Responsible Agency: OPR, Cal EPA</i>	Goal 1, Objectives 1, 2 Goal 4, Objectives 2, 3, 5, 6, 7

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
TREE MORTALITY HAZARD MITIGATION			
Tree Mortality Assessment <i>See Table 9.Q</i>	Reduce the risk to the public and infrastructure by identifying and removing dead and dying trees.	<u>New:</u> The Governor established the interagency Tree Mortality Task Force in October 2015 to address public safety hazards associated with the state’s epidemic tree mortality. <i>Responsible Agencies: Multiple</i> <u>New:</u> The Task Force Action Plan identified 10 high hazard zones where tree mortality coincides with critical infrastructure. Caltrans is working with landowners to perform tree removal work. <i>Responsible Agency: Caltrans</i>	Goal 2, Objectives 2, 4, 5 Goal 3, Objectives 2, 3, 4 Goal 4, Objectives 1, 2, 3, 4, 5
Tree Mortality Grant Program	Remove dead and dying trees that pose a threat to public safety and reduce wildfire threat.	<u>New:</u> CAL FIRE awarded over \$15 million for 2016 and 2017 under the State Responsibility Area Fire Prevention Program and the Tree Mortality Grant Program. <i>Responsible Agency: CAL FIRE</i>	Goal 1, Objective 1, 2 Goal 2, Objectives 4, 5 Goal 3, Objectives 2, 3, 4 Goal 4, Objectives 1, 2, 3, 5, 6
HAZARDOUS MATERIALS RELEASE HAZARD MITIGATION			
Refinery Safety	Improve public and worker safety through enhanced oversight of refineries and strengthen emergency preparedness	<u>New:</u> In 2017 refinery safety regulations were changed to improve worker and community safety. <i>Responsible Agencies: Cal OES and Cal OSHA.</i>	Goal 1, Objectives 1, 2, 3, 4 Goal 2, Objectives 2, 3, 5 Goal 3, Objective 5 Goal 4, Objectives 5, 6
OIL SPILL HAZARD MITIGATION			
Oil Spill Planning <i>See progress Summary 9.K</i>	Prevent and mitigate the effects of oil spills impacting both land and water environments.	<u>New:</u> The most recent version of the State Oil Spill Contingency Plan was released in 2017. <i>Responsible Agency: Office of Spill Prevention and Response</i> <u>New:</u> The 2015-2020 Strategic Plan requires the State Lands Commission develop regulatory requirements to identify systemic risks at marine oil terminals. <i>Responsible Agency: SLC</i>	Goal 1, Objectives 1, 2, 4 Goal 2, Objectives 1, 2, 3, 5 Goal 3, Objectives 3, 4, 5 Goal 4, Objectives 2, 6
NATURAL GAS PIPELINE HAZARD MITIGATION			
Gas Pipeline Safety See <i>Progress Summary 9.L</i>	Improve gas pipeline safety practices	<u>New:</u> In 2013, PG&E established a gas control center to monitor operation of its transmission pipelines and distribution mains. In 2017 it developed a Gas Safety Plan. <i>Responsible Agency: PG&E, PUC</i>	Goal 1, Objectives 1, 2, , 4, 5, Goal 2, Objectives 1, 2, 3, 5, 6 Goal 3, Objective 5 Goal 4, Objective 5, 6, 7

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
TRAIN ACCIDENTS RESULTING IN EXPLOSIONS AND/OR TOXIC RELEASES HAZARD MITIGATION			
Rail Safety	Examine rail safety concerns related to the transport of crude oil.	<u>New:</u> The Governor convened an Interagency Working Group in 2014 which collaborated to identify and map areas along oil train routes with potential high vulnerability and identified the location of hazmat response teams. The Working Group also published a Preliminary Findings and Recommendations Report in June 2014. <i>Responsible Agency: Cal OES</i>	Goal 1, Objectives 1, 2 Goal 2, Objectives 1, 5 Goal 3, Objective 5 Goal 4, Objective 5, 6, 7
WELL STIMULATION AND HYDRAULIC FRACTURING HAZARDS HAZARD MITIGATION			
State Regulation of Well Stimulation	Regulate well stimulation procedures and identify/limit impacts.	September 2013. The California Department of Natural Resources completed a report on well stimulation treatments in 2015. Five state agencies as well as a national laboratory are involved in oversight and regulatory activities. <i>Responsible Agency: CNRA</i>	Goal 1, Objectives 1, 2, Goal 2, Objective 5 Goal 3, Objectives 2, 3, 4, 5 Goal 4, Objectives 4, 5, 8
TERRORISM HAZARD MITIGATION			
Homeland Security Strategy	Reduce the impact of human-made disaster events through a coordinated effort of capacity-building for state and local agencies.	<u>New:</u> The Homeland Security Advisory Committee (HSAC) was created in 2016 to advise the Cal OES Director on a 2017-2020 Homeland Security Strategy. <i>Responsible Agency: Cal OES</i>	Goal 1, Objectives 1, 2, 3, 4 Goal 2, Objective Goal 3, Objective Goal 4, Objectives 1, 6, 7
Homeland Security Grant Programs	Prioritize and allocate federal funding resources to support California's Homeland Security Strategy.	<u>New:</u> Homeland Security Grant expenditures from 2012-2016 total more than \$500 million. <i>Responsible Agency: Cal OES</i>	Goal 1, Objectives 1, 2, 3, 4 Goal 2, Objective Goal 3, Objective Goal 4, Objectives 1, 6, 7, 8
CYBER THREATS HAZARD MITIGATION			
Cyber Security Policy	Adopt a Program Management Framework (PMF) that protects highest value assets through a management and risk-based approach.	<u>New:</u> The PMF provides a simplified set of 30 objectives for state agencies to use as a focus area for building, assessing, and managing their security programs. <i>Responsible Agency: California Department of Technology (CDT)</i>	Goal 2, Objective 6
Annual Vulnerability Assessments	Coordinate 35 vulnerability assessments each calendar year.	<u>New:</u> AB 670, passed in 2015 requires CDT to coordinate independent security assessments of state agencies every two years. <i>Responsible Agency: CDT</i>	Goal 1, Objective 1 Goal 2, Objective 6

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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
Security Audit Program	Measure the effectiveness of security policies and guidelines.	<u>New:</u> In 2016, the program was piloted in six state entities. <i>Responsible Agency: CDT</i>	Goal 2, Objective 6
State Emergency Plan	Establish cross-agency collaboration to address cyber security threats.	<u>New:</u> Added CA-ESF 18 as a new Emergency Support Function that recognizes cyber security as an emerging hazard. <i>Responsible Agency: Cal OES</i>	Goal 2, Objective 6
Cyber Security Integration Center (CISC) & Task Force	Reduce the likelihood and severity of cyber incidents that could damage the economy, critical infrastructure, or public and private sector computer networks, through state agency coordination.	<u>New:</u> In 2013, Cal OES and CDT initiated the Cyber Security Task Force to address the growing need for integrated action. <i>Responsible Agency: Cal OES</i> <u>New:</u> In 2015 Executive Order B-34-15 designated Cal OES to lead the CISC. <i>Responsible Agency: Cal OES</i> <u>New:</u> In 2016, Cal OES co-located the CISC with the State Threat Assessment Center (STAC) to ensure collaboration and communication across threats. <i>Responsible Agency: Cal OES</i>	Goal 2, Objective 6
Protecting Critical Power Grid Infrastructure	Protect power grid integration from cyber threats.	<u>New:</u> In 2014, the PUC funded CES-21, California Energy Systems for the 21st Century to address the growing need for integrated action. <i>Responsible Agency: California Public Utilities Commission</i>	Goal 2, Objective 6

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
LOCAL HAZARD MITIGATION PLANS			
Planning and Technical Assistance <i>See Section 5.1</i>	Identify and communicate with local governments to promote local hazard evaluation and mitigation planning and to assist in developing local hazard mitigation plans Increase the number of LHMPs in the state through enhanced planning and technical assistance.	<u>Ongoing:</u> Cal OES, FEMA RIX, and local and tribal jurisdictions coordinated efforts to address the influx of LHMPs submitted and needing approval between Fall 2017 and Spring of 2018. As a result of these efforts, the number of successful approved and/or approved pending adoption LHMPs helped to significantly increase the state's planning coverage from 42.7 percent in July 2017 to 73.8 percent as of June 1, 2018. <i>Responsible Agency: Cal OES</i>	Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives

Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
<p>Planning and Technical Assistance</p> <p><i>See Section 5.1</i></p> <p><i>Map 2.E</i></p>	<p>Provide technical assistance, guidance, resources, and tools to local governments for all aspects of local hazard mitigation planning</p>	<p><u>Ongoing:</u> LHMP Training Workshops continue to be offered around the State. <i>Responsible Agency: Cal OES</i></p> <p><u>Ongoing:</u> MyPlan, a multi-agency collaborative effort provides hazard maps for use by local jurisdictions in developing their LHMPs. <i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, All Objectives</p> <p>Goal 2, All Objectives</p> <p>Goal 3, All Objectives</p> <p>Goal 4, All Objectives</p>
<p>Planning and Technical Assistance</p> <p><i>See Section 1.2.3</i></p> <p><i>See Section 1.3</i></p> <p><i>See Section 4.3.1</i></p>	<p>Establish consistent definitions for common concepts, such as critical facilities, loss estimates, risk assessment, and hazard types.</p>	<p><u>New:</u> The Hazard Mitigation Division conducts LHMP training on a statewide basis which includes information on standardized definitions for common concepts. <i>Responsible Agency: Cal OES</i></p>	<p>Goal 1, Objectives 1,</p> <p>Goal 3, Objective 1</p> <p>Goal 4, Objective 2, 7</p>
<p>Integration of Local and State Mitigation Efforts</p> <p><i>See Progress Summary 3.E</i></p> <p><i>See Section 5.3.2.6</i></p>	<p>Encourage local jurisdictions to take advantage of the financial benefits of AB 2140 by either creating integrated LHMP Safety Elements or by adopting their LHMP as an annex to their Safety Element (SE).</p>	<p><u>Ongoing:</u> Outreach program to local agencies regarding implementation of AB 2140 is provided through both formal and informal technical training and assistance. As of May 2017, 41 jurisdictions have integrated their LHMP's and SE's. An additional 82 jurisdictions refer to their LHMP in their SE. <i>Responsible Agency: Cal OES, OPR</i></p>	<p>Goal 1, Objectives 3</p> <p>Goal 2, Objectives 2, 3 –</p> <p>Goal 3, Objective 1</p> <p>Goal 4, Objectives 1, 2, 3, 4</p>

<p>Integration of Local and State Mitigation Efforts</p> <p><i>See Progress Summary 3.A</i> <i>See Progress Summary 3.C</i> <i>See Progress Summary 3.F</i> <i>See Progress Summary 4.A</i> <i>See Progress Summary 7.G</i> <i>See Progress Summary 7.I</i> <i>See Progress Summary 8.A</i> <i>See Progress Summary 8.B</i> <i>See Progress Summary 9.D</i> <i>See Section 5.3</i></p>	<p>Prepare resource materials to assist local governments in achieving consistency with other hazard mitigation and land use plans, and to comply with state legislative requirements.</p>	<p><u>New:</u> The Central Valley Flood Protection Plan was adopted, implementing previous flood mitigation and general plan legislation. <i>Responsible Agency: Cal OES, OPR</i></p> <p><u>New:</u> Legislation was adopted requiring localities in certain fire hazard zones to incorporate fire risk in general plan safety elements. In Progress: Cal OES is working with the Governor’s Office of Planning and Research (OPR) to incorporate information on hazard mitigation planning into General Plan Guidelines. <i>Responsible Agency: Cal OES, OPR</i></p> <p><u>Completed:</u> DWR has published the Delta Vision Report identifying a long-term plan and program for managing the Delta levee, water supply and use, and environmental issues. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> The Sustainable Groundwater Management Act was passed into law in September 2014. It requires local jurisdictions with medium and high priority basins to develop Groundwater Sustainability Plans within 20 years. <i>Responsible Agency: DWR</i></p> <p><u>New:</u> The 2017 General Plan Guidelines published by OPR requires the inclusion of content on climate change and environmental justice within the General Plan, either as stand- alone elements or integrated into other elements. It also summarizes how a general plan or climate action plan can be consistent with CEQA Guidelines. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> In response to Executive Order B-30-15, the Technical Advisory Group (TAG) and Sub-TAGs were convened by the Office of Planning and Research (OPR). The group, representing multiple state, regional and local agencies as well as non-governmental organizations and the private sector, met from April 2016 through January 2017. The TAG produced guidance for state agencies. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> The Integrated Climate Adaptation and Resiliency Program (ICARP) was convened in 2016 through SB 246. ICARP produces a variety of tools and guidance to promote integration of climate change adaptation. <i>Responsible Agency: OPR</i></p> <p><u>New:</u> The CalBRACE project provides resources and technical assistance for state and local public health departments to build climate adaptation capacity and enhance resilience at the local and regional levels.</p>	<p>Goal 1, All Objectives Goal 2, All Objectives Goal 3, All Objectives Goal 4, All Objectives</p>
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Program Area	Mitigation Action	2018 Progress	Goals and Objectives Addressed
		<p><u>Ongoing:</u> CAL FIRE updated SRA and LRA Very High Fire Hazard Severity Zones (VHFHSZ) Maps for the state in draft form in 2014, officially released in 2017. An on-line viewer reflects annual updates to SRA and LRA VHFHSZs. <i>Responsible Agency: CAL FIRE</i></p> <p><u>Completed:</u> Revised Fire Hazard Severity Zone Maps have been developed by the Board of Forestry for adoption by local governments. <i>Responsible Agency: CAL FIRE and Board of Forestry</i></p>	

APPENDIX D– PROGRESS TRACKING OUTREACH PLAN

Progress Tracking OUTREACH PLAN

SHMP Implementation Monitoring and Progress Review 2013-2018

This Outreach Plan is intended to track ongoing implementation and review progress of hazard mitigation activities identified in the 2013 State Hazard Mitigation Plan (SHMP), as well as other current HM efforts, through outreach to State Hazard Mitigation Team agencies; other state agencies involved in HM; local and regional emergency managers; and local jurisdictions.

OUTREACH PLAN GOALS:

The outreach is an ongoing effort, intended as an ongoing “dialogue” between the SHMP preparers, the SHMT, and various entities currently involved in hazard mitigation efforts. While intended to track implementation and progress, this outreach effort will also contribute to active information sharing and cross sector communications as the outreach team communicates with individuals involved in HM activities, sharing information from one individual to the next during the outreach process.

The outreach effort will also allow for 1) dissemination of information regarding upcoming SHMP update activities and deadlines and 2) requests to individuals for feedback and participation in the update process.

Outreach goals stem from the requirements listed in the FEMA State Mitigation Plan Review Guide (effective March 2016) and California’s commitment to continued progress in hazard mitigation efforts around the State.

- Outreach Goal 1: *To track and monitor mitigation progress around the state.*
- Outreach Goal 2: *To maintain contact and coordinate with state and local agencies undertaking mitigation projects.*
- Outreach Goal 3: *To communicate mitigation progress between agencies and promote HM communication across sectors.*
- Outreach Goal 4: *To obtain feedback from state and local agencies on the effectiveness of their HM projects.*

LINKAGE TO STATE MITIGATION PLAN REVIEW GUIDE ELEMENTS

Section 3 of FEMA’s State Mitigation Plan Review Guide (guide) provides detailed guidance in the form of “elements” linked to a specific regulation within 44CFR §201. While considered the minimum requirements for what must be included in a state mitigation plan, these elements provide a good outline for SHMP outreach efforts. Following are the elements directly related to outreach, implementation, and progress tracking which this outreach plan addresses:

- Element S2: *Does the plan describe how the state coordinated with other agencies and stakeholders?*
- Element S17: *Is there a description of the method and schedule for keeping the plan current*
- Element S18: *Does the plan describe the systems for monitoring implementation and reviewing progress?*

OUTREACH TASK 1: CURRENT SHMT MEMBER CONTACT

Purpose: Many members of the SHMT are affiliated with agencies involved with hazard mitigation efforts and will have current information regarding their agencies' HM programs as well as current related policies, legislation, directives, etc, which require certain HM actions by the agency. The goal of our outreach efforts includes tracking these HM actions to assess implementation; as well as communicating information provided through interviews with other agencies; and gathering data that may feed into SHMP update efforts.

Actions:

- 1) Using current SHMT roster, make calls to "interview" contacts for HM activities.
- 2) Prioritize outreach first to agencies involved with HM for the "big three" (EQ, Flood, Fire) plus Climate Change related.
- 3) Second priority to all other hazards following the order presented in chapter 6 of the 2013 SHMP
- 4) Prioritize outreach calls to agencies/stakeholders of the following sectors:
 - o Emergency management
 - o Economic development
 - o Land Use and development
 - o Housing
 - o Health and social services
 - o Infrastructure
 - o Natural and cultural resources
- 5) Confirm SHMT contact is still active with SHMT, and if not, obtain information for new contact individual.
- 6) Interview regarding HM. With info from interview, complete HM update form, email to member for confirmation.
- 7) Provide update of upcoming SHMP update schedule and milestones.
- 8) Catalog update summary by date.

OUTREACH TASK 2: PROGRESS SUMMARY UPDATES

Purpose: Track progress summaries from 2013 SHMP and prepare a 2016 update to be used as basis for 2018 SHMP update. A total of 62 progress summaries were included in the 2013 SHMP. (*Note – this may overlap with Outreach Task 1.*)

Actions:

- 1) Contact project representatives via phone (or email).
- 2) Conduct phone interview regarding project status versus reporting in the 2013 SHMP.
- 3) Prepare written update summary and email to project rep for confirmation.
- 4) Catalog update summary by date.

OUTREACH TASK 3: LOCAL JURISDICTION CONTACT

Purpose: While local jurisdictions are required to generally report on grant funded projects, the goal of this outreach is to look for success stories and also understand challenges jurisdictions faced and how they overcame them, which may not come across in grant reporting, that could benefit other jurisdictions to hear about.

Actions:

- 1) Using Cal OES HMGP recipient list, develop a list of local jurisdictions to contact.
- 2) "Interview" local jurisdiction contacts about their a) successes, b) challenges, c) lessons learned.
- 3) Prepare summary of each interview, select potential candidates to be added as "Best Practices" feature in 2018 SHMP and/or consider a new feature called "Hazard Mitigation Lessons Learned".

- 4) Catalog project summary by date.

OUTREACH TASK 4: ADDING NEW SHMT MEMBERS/EXPANDING STAKEHOLDER CONTACTS

Purpose: To ensure maximum inclusion of stakeholder groups and encourage and input by groups previously not represented in the SHMT for the 2018 SHMP update process.

Target groups for outreach and inclusion with SHMT:

- County Emergency Managers
- Major City Emergency Managers (SF, LA, SD, SAC, OAK, SB, FRES, BAKO, etc)
- All Local Jurisdictions - LHMP Contact Person(s) and emergency managers
- Local and regional planners
- California Special Districts Association and special districts
 - ABAG – Association of Bay Area Governments
 - SCAG – Southern California Association of Governments
 - Other special districts
- Local Government Commissions
- Councils of Governments
- Tribal Emergency Managers
- Faith based disaster assistance groups
- Land Conservancies
- Other “grassroots” organizations
- Utilities
- Organizations/Agencies addressing Climate Change and Regional Climate Change Collaborative Entities
 - Office of Environmental Health Hazard Assessment (OEHHA)
 - Climate Resolve (UCLA)
 - LARC – Los Angeles Regional Climate Collaborative
- Other groups from the following sectors:
 - Economic development
 - Land Use and development
 - Housing
 - Health and social services
 - Infrastructure
 - Natural and cultural resources

OTHER GENERAL OUTREACH TASKS:

Purpose: The intent of these general outreach efforts is to maintain contact with the SHMT and stakeholders so that they are aware of the progress of HM around the state and also continued implementation tracking and update efforts.

Tasks:

- 1) Monthly (or quarterly) emails to SHMT – intended to maintain contact with the team and let them know of upcoming actions.
- 2) Newsletter – intended to document feature HM progress and maintain contact with team.

RESULTS OF OUTREACH TASKS

Purpose: As part of the ongoing implementation tracking effort results of all outreach efforts will be officially summarized in a document with standard information fields (contact name, date of interview, interviewer name, specific hazard, project name, project details) and maintained as part of the SHMP.

Actions:

- 1) Prepare written summaries of each communication.
- 2) Confirm details of summary with individual interviewed via email.
- 3) Maintain “catalog” of these HM update summaries by year/quarter.
- 4) Reference each year’s updates as an annex amendment to the adopted 2013 SHMP.
- 5) Use catalog of summaries to start 2018 SHMP update process.

SCHEDULE

October 2016-March 2017:	Outreach Task 1
February-April 2017:	Outreach Task 2
February-April 2017:	Outreach Task 3
May-December 2017:	Outreach Task 4

Last Updated November 1, 2016

Progress Tracking - OUTREACH PLAN

SHMP Implementation Monitoring and Progress Review 2013-2018

OUTREACH CALLS

INTERVIEW QUESTIONS TO STATE AGENCIES OR SHMT MEMBERS:

- 1) What is current status of programs previously discussed in 2013 SHMP?
- 2) Does your agency have any new hazard mitigation programs/projects? If yes:
 - a. What hazard is being addressed,
 - b. What is timeline for project,
 - c. What is source of funding (federal grant funding or state funding),
 - d. Are other agencies involved in the project?
 - e. What does the project hope to accomplish? Project goals?
 - f. If program is completed, did it meet its goals?
- 3) Do you have any hazard mitigation project success stories that should be featured as a special "best practices" article in the 2018 SHMP or in an upcoming issue of our new HM newsletter?
- 4) How do your current hazard mitigation activities align with the four goals (and/or objectives) of the 2013 SHMP?
- 5) How do your HM activities meet or respond to requirements of recent HM legislation (last 10 years)?
- 6) What are your agency's HM priorities?
- 7) How have your HM priorities changed since the 2013 SHMP was published?
- 8) How do your future HM priorities align with the 2013 SHMP goals?
- 9) Does your agency follow an overall plan for mitigation efforts? If yes, how do your current mitigation actions align with the goals of that plan?
- 10) Do you have any maps/photos/exhibits/documents that should be used or referenced in the 2018 SHMP update?

INTERVIEW QUESTIONS TO COGS:

- 1) What hazard mitigation services has your COG provided in the last 5 years?
 - a. Regional data collection services?
 - b. Regional hazard mapping services?
 - c. Regional hazard assessment services?
 - d. Direct technical assistance to your member cities and counties?
- 2) How many LHMPs do you consider your COG to be the primary author of?

APPENDICES

- 3) What is the total population served by your COG in 2015?
- 4) How do your services align with the SHMP four goals and objectives
- 5) In the next 3-7 years what programs or services will you be putting HM activities funding and staffing toward?

INTERVIEW QUESTIONS FOR LOCAL GRANT FUNDED PROJECT CONTACTS:

(Assumes the basic premise of the project is already known through grant reports submitted by the local jurisdiction):

- 1) Is your HM project still in process or complete? If not completed yet, do you anticipate completing on schedule, or when?
- 2) Did your project proceed as anticipated?
- 3) What were the biggest challenges your project faced?
- 4) What were the best lessons learned from the project?
- 5) What advice would you share with other jurisdictions getting to start a HMGP project, based on your jurisdiction's experience?
- 6) Does your jurisdiction ever coordinate HM with other agencies or jurisdictions?
- 7) What are your jurisdiction's HM priorities?
- 8) How do your priorities align with the 2013 SHMP goals?
- 9) Do you have any maps/photos/exhibits/documents that should be used or referenced in the 2018 SHMP update?
- 10) Does your agency follow an overall plan for mitigation efforts? If yes, how do your current mitigation actions align with the goals of that plan?
- 11) What HM projects does your jurisdiction hope to do in the next 3-7 years?

Last Updated November 1, 2016

State of California Hazard Mitigation

Progress Tracking Interview Report

DATE OF INTERVIEW:

PERSON CONDUCTING INTERVIEW:

CONTACT INFORMATION

INTERVIEW CONTACT PERSON:

CONTACT PERSON EMAIL AND
PHONE NUMBER:

AGENCY INFORMATION

CONTACT AGENCY:

SUMMARY OF CONTACT AGENCY
CAPABILITIES:

WHICH OF THE FOLLOWING
DESCRIBES THIS AGENCY:

- a. Emergency management
- b. Economic development
- c. Land use and development
- d. Housing
- e. Health and social services
- f. Infrastructure
- g. Natural and Cultural Resources

PROGRAM INFORMATION

HAZARD ADDRESSED BY
PROGRAM:

PROGRAM NAME AND
DESCRIPTION:

OTHER AGENCIES INVOLVED IN
PROGRAM:

PROGRAM LOCATION(S):

PROGRAM FUNDING SOURCE:

PROGRAM START DATE:

PROGRAM END DATE:

PROGRAM GOALS/OBJECTIVES:

DID PROGRAM MEET ITS GOALS?:

IS PROGRAM PART OF AN OVERALL
MITIGATION PLAN BY AGENCY?

CHALLENGES/OBSTACLES FACED
BY PROGRAM:

SUCCESSES ACHIEVED BY PROGRAM:

SHMP LINKAGE INFORMATION

IF PROGRAM PART OF AN OVERALL MITIGATION PLAN BY AGENCY, IS SUCH OVERALL MITIGATION PLAN LINKED TO SHMP OR OTHER MITIGATION PLANS?

LINKAGE WITH SHMP/SHMP GOALS :

LINKAGE TO STATE LAW OR POLICY:

OTHER INFORMATION

INTERVIEW SUMMARY:

OTHER COMMENTS:

ACTION ITEMS:

Last Updated November 1, 2016

APPENDICES

APPENDIX E – CALIFORNIA DISASTER HISTORY, 1950-2018

Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
December 2017 California Wildfires & Debris Flows	Fire	Fires	DR-4353 GP 2017-12	2017	Santa Barbara, Ventura Los Angeles, San Diego, Santa Barbara, Ventura	12/07/2017	1/02/2018	21		
December 2017 California Wildfires	Fire	Fires	EM-3396	2017	Los Angeles, Riverside, San Diego, Santa Barbara, Ventura		12/08/2017	Reported under Thomas Fire (FM-5224)		
Lilac 5 Fire	Fire	Fires	FM-5228 GP 2017-12	2017	San Diego	12/07/2017	12/07/2017			
Skirball Fire	Fire	Fires	FM-5227 GP 2017-12	2017	Los Angeles	12/07/2017	12/06/2017			
Rye Fire	Fire	Fires	FM-5226, GP 2017-12	2017	Los Angeles	12/07/2017	12/05/2017			
Creek Fire	Fire	Fires	FM-5225GP 2017-12	2017	Los Angeles	12/07/2017	12/05/2017			
Thomas Fire	Fire	Fires	FM-5224	2017	Santa Barbara, Ventura		12/05/2017	2		
Inyo and Mono Snowmelt	Snowmelt		GP 2017-11	2017	Inyo, Mono					
October 2017 California Wildfires	Fire	Fires	DR-4344GP 2017-09	2017	Butte, Lake, Mendocino, Napa, Orange, Sonoma, Yuba, Nevada, Solano	10/09/2017	10/09/2017			
Canyon 2 Fire	Fire	Fires	FM-5223	2017	Orange, Riverside		10/09/2017			
Patrick Fire	Fire	Fires	FM-5222	2017	Napa, Sonoma		10/09/2017			
Sulphur Fire	Fire	Fires	FM-5221	2017	Lake		10/09/2017			
Nuns Fire	Fire	Fires	FM-5220	2017	Sonoma		10/09/2017	3		
Redwood/Potter Fires	Fire	Fires	FM-5219	2017	Mendocino		10/09/2017	9		
La Porte Fire	Fire	Fires	FM-5218	2017	Butte		10/09/2017			
Lobo Fire	Fire	Fires	FM-5217	2017	Nevada		10/09/2017			
Cascade Fire	Fire	Fires	FM-5216	2017	Butte, Yuba		10/09/2017	4		
Tubbs Fire	Fire	Fires	FM-5215	2017	Napa, Sonoma		10/09/2017	22		
Atlas Fire	Fire	Fires	FM-5214	2017	Napa, Solano		10/09/2017	6		
Alamo and Whittier Wildfires	Fire	Fires	GP 2017-08	2017	Santa Barbara					
Canyon Fire	Fire	Fires	FM-5213	2017	Orange, Riverside		9/25/2017			
Pier Fire	Fire	Fires	FM-5205	2017	Tulare		9/05/2017			
Mission Fire	Fire	Fires	FM-5204	2017	Madera		9/04/2017			
Railroad Fire	Fire	Fires	FM-5202	2017	Madera, Mariposa		9/02/2017			
La Tuna Fire	Fire	Fires	FM-5201	2017	Los Angeles		9/02/2017			

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Ponderosa Fire	Fire	Fire	GP 2017-10	2017	Butte	9/01/2017				4,562
Helena Fire	Fire	Fires	FM-5199 GP 2017-07	2017	Trinity	8/31/2017	9/01/2017			9,688,890
Modoc County Wildfires	Fire	Fires	GP 2017-06	2017	Modoc	8/02/2017				46,542
Detwiler Fire	Fire	Fires	FM-5192, GP 2017-04	2017	Mariposa	7/18/2017	7/17/2017			
Wall Fire	Fire	Fires	FM-5189, GP 2017-05	2017	Butte	7/09/2017	7/09/2017			
February 2017 Storms	Flooding and Mudslides	Storms	DR-4308, GP 2017-03	2017	Alameda, Alpine, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Norte, El Dorado, Glenn, Humboldt, Kings, Lake, Lassen, Marin, Mariposa, Modoc, Mono, Monterey, Napa, Nevada, Plumas, Sacramento, San Benito, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tuolumne, Yolo, Yuba, Tule River Tribe	3/07/2017	4/01/2017	8		(DR-4308) 119,834,925 (GP 2017-03) 331,137
Late January 2017 Storms	Flooding and Mudslides	Storms	DR-4305	2017	Alameda, Calaveras, Contra Cost, El Dorado, Inyo, Kern, Los Angeles, Mendocino, Modoc, Mono, Napa, Orange, Riverside, Sacramento, San Diego, San Luis Obispo, San Mateo, Santa Barbara, Santa Cruz, Trinity, Tuolumne, Yolo	2/10/2017	3/16/2017			14,320,716
Potential Failure of Oroville Dam Emergency Spillway	Other		EM-3381	2017	Butte, Sutter, Yuba		2/14/2017			

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
January 2017 Storms	Flooding and Mudslides	Storms	DR-4301	2017	Alameda, Amador, Butte, Calaveras, Contra Costa, El Dorado, Humboldt, Inyo, Lake, Lassen, Marin, Mendocino, Merced, Mono, Monterey, Napa, Nevada, Placer, Plumas, Sacramento, San Benito, San Luis Obispo, Santa Clara, Santa Cruz, Shasta, Sierra, Siskiyou, Solano, Sonoma, Sutter, Trinity, Tuolumne, Yolo, Yuba		2/14/2017			39,956,354
December 2016 Storms	Storms	Storms	GP 2016-05	2016	Del Norte	1/23/2017				274,823
Cedar Fire	Fire	Fires	FM-5150	2016	Kern, Tulare		8/22/2016			1,441,015
Blue Cut Fire	Fire	Fires	FM-5147	2016	San Bernardino		8/16/2016			2,266,434
Chimney Fire	Fire	Fires	FM-5146	2016	Lake		8/14/2016			52,798,980
Clayton Fire	Fire	Fires	FM-5145, GP 2016-04	2016	Madera	9/15/2016	8/14/2016			(FM-5145) 13,579,947, (GP 2016-04) 14,826,022
Pilot Fire	Fire	Fires	FM-5144	2016	San Bernardino		8/08/2016			3,187,835
Goose Fire	Fire	Fires	FM-5140	2016	Fresno		7/31/2016			6,538,221
Soberanes Fire	Fire	Fires	FM-5137	2016	Monterey		7/28/2016	1		2,267,213
Sand Fire	Fire	Fires	FM-5135	2016	Los Angeles		7/23/2016	1		5,128,119
Sage Fire	Fire	Fires	FM-5132	2016	Los Angeles		7/09/2016			1,993,954
Erskine Fire	Fire	Fires	FM-5131, GP 2016-03	2016	Kern	6/24/2016	6/23/2016	2		(FM-5131) 4,433,146, (GP 2016-03) 26,610,979
Fish Fire	Fire	Fires	FM-5129	2016	Los Angeles		6/21/2016			1,394,208
Border 3 Fire	Fire	Fires	FM-5128	2016	San Diego		6/19/2016	2		12,759,142
Old Fire	Fire	Fires	FM-5124	2016	Los Angeles		6/05/2016			1,923,392
Valley & Butte Fires	Fire	Fires	DR-4240, GP 2015-03	2015	Calaveras, Lake	8/27/2015	9/22/2015	Reported under individual fires below		(DR-4240) 242,803,440, (GP 2015-03) 2,401,287
Valley Fire	Fire	Fires	FM-5112	2015	Napa, Sonoma		9/12/2015	4		3,029,711
Butte Fire	Fire	Fires	FM-5111	2015	Amador		9/10/2015	2		3,191,496
Rocky Fire	Fire	Fires	FM-5093	2015	Madera	8/02/2015			30,857,410	
Wragg Fire	Fire	Fires	FM-5091	2015	Napa, Solano, Yolo		7/23/2015			13,934,643
North Fire	Fire	Fires	FM-5089	2015	San Bernardino		7/17/2015			851,448
Round Fire	Fire	Fires	GP 2015-01	2015	Mono	2/26/2015				5,607,764

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
December 201										
Applegate Fire	Fire	Fires	FM-5082	2014	Placer		10/08/2014			4,199,623
King Fire	Fire	Fires	FM-5081	2014	El Dorado, Placer		9/17/2014			17,367,831
Boles Fire	Fire	Fires	FM-5079	2014	Siskiyou	10/06/2014	9/15/2014			5,327,462
Courtney Fire	Fire	Fires	FM-5078	2014	Madera		9/14/2014			3,440,104
South Napa Earthquake	Earthquake	Earthquake	DR-4193, GP 2014-02	2014	Napa, Solano, Sonoma	8/24/2014	9/11/2014	1	285	(DR-4193) 33,897,764 (GP 2014-02) 233,042
Bridge Fire	Fire	Fires	FM-5077	2014	Mariposa		9/05/2014			3,340,241
Oregon Fire	Fire	Fires	FM-5076	2014	Trinity		8/25/2014			1,960,046
Way Fire	Fire	Fires	FM-5075	2014	Kern		8/19/2014			2,566,094
Junction Fire	Fire	Fires	FM-5074	2014	Madera		8/19/2014			3,469,116
Day Fire	Fire	Fires	FM-5070	2014	Modoc		8/03/2014			9,800,752
Bald Fire	Fire	Fires	FM-5069	2014	Lassen, Shasta		8/03/2014			2,060,557
Oregon Gulch Fire	Fire	Fires	FM-5068							
GP 2014-04	2014	Siskiyou	10/06/2014	8/02/2014			(FM-5068) 1,137,283, (GP 2014-04) 11,621,359			
Eiler Fire	Fire	Fires	FM-5067	2014	Shasta		8/02/2014			8,062,197
Butts Fire	Fire	Fires	FM-5057	2014	Napa		07/02/2014			5,180,771
Cocos Fire	Fire	Fires	FM-5055, GP 2014-01	2014	San Diego	05/14/2014	05/14/2014			(FM-5055) 10,313,305, (GP 2014-01) 2,131,397
Poinsettia Fire	Fire	Fires	FM-5054	2014	San Diego	05/14/2014	05/14/2014			1,459,862
Colby Fire	Fire	Fires	FM-5051	2014	Los Angeles		01/16/2014			
Rim Fire	Fire	Fires	DR-4158, GP 2013-02	2013	Mariposa, Tuolumne	10/23/2013	12/13/2013			(DR-4158) 24,465,538, (GP 2013-02) 174,688
Inyo July 2013 Storms	Storms	Storms	GP 2013-01	2013	Inyo	9/30/2013				3,837,141
Clover Fire	Fire	Fires	FM-5050	2013	Shasta		9/10/2013	1		4,558,433
Rim Fire	Fire	Fires	FM-5049	2013	Mariposa	10/23/2013	8/23/2013			469,673
Silver Fire	Fire	Fires	FM-5041	2013	Riverside		8/12/2013			5,721,361
Falls Fire	Fire	Fires	FM-5040	2013	Riverside		8/06/2013			1,715,016
Powerhouse Fire	Fire	Fires	FM-5025	2013	Los Angeles		6/02/2013			2,023,801
Springs Fire	Fire	Fires	FM-5024	2013	Ventura		5/02/2013			8,332,445
Summit Fire	Fire	Fires	FM-5023	2013	Riverside		5/02/2013			2,221,604
Shockey Fire	Fire	Fires	FM-5021	2012	San Diego		9/24/2012	1	3	108,959
Ponderosa Fire	Fire	Fires	FM-5007	2012	Shasta, Tehama		8/19/2012		7	477,537
Wye Incident	Fire	Fires	FM-5004	2012	Lake		8/13/2012		3	84,613
Comanche Complex	Fire	Fires	FM-2971	2011	Kern		9/11/2011		6	6,472,957

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Keene Complex	Fire	Fires	FM-2970	2011	Kern		9/11/2011			3,996,343
Canyon Fire	Fire	Fires	FM-2961	2011	Kern		9/05/2011			8,787,604
Hill Fire	Fire	Fires	FM-2955	2011	San Bernardino		9/02/2011			1,280,591
Tuolumne Feb 2011 Storms	Storms	Storms	GP 2011-03	2011	Tuolumne					509,329
March 2011 California Tsunami	Tsunami	Earthquake	DR-1968	2011	Del Norte, Monterey, Santa Cruz	3/11/2011	4/18/2011	1	1	39,617,379
Modoc Jan 2011 Storms	Storms	Storms	GP 2011-01	2011	Modoc	3/03/2011				385,788
December 2010 Statewide Storms	Storms	Storms	DR-1952	2010 - 2011	Inyo, Kern, Kings, Madera, Mariposa, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Tulare	12/21/2010, 12/23/2010, 12/24/2010, 12/30/2010	1/26/2010			66,318,201
Via Scott Incident	Other		GP 2010-16	2010	San Diego	12/01/2010				73,981
Richmond Sinkhole	Other	Storms	GP 2010-15	2010	Contra Costa					10,586,339
November Storms	Storms	Storms	GP 2010-14	2010	Calaveras, Tuolumne	11/30/2010, 12/09/10				160,280
Contaminated Drinking Water Supply	Other		GP 2010-13	2010	San Bernardino	11/20/2010				0
Galleria Incident	Fire	Fires	GP 2010-12	2010	Placer	10/22/2010				478,119
Canyon Fire	Fire	Fires	FM-2858	2010	Kern	9/15/2010	9/15/2010		7	883,828
Glenview Fire (San Bruno Explosion)	Fire (Explosion)	Fires (Explosion)	FM-2856 (GP 2010-09)	2010	San Mateo	9/09/2010	9/09/2010			
Yuba County Wildfires	Fire	Fires	GP 2010-08	2010	Yuba	8/28/2010				34,829
Post Fire	Fire	Fires	FM-2852	2010	Kern	8/25/2010	8/24/2010			1,664,357
Crown Fire	Fire	Fires	FM-2851	2010	Los Angeles		7/29/2010			6,565,808
West Fire	Fire	Fires	FM-2850	2010	Kern	7/27/2010	7/27/2010			5,833,041
Bull Fire	Fire	Fires	FM-2849	2010	Kern	7/27/2010	7/26/2010			631,156
Pacific Storm Drain Outfall	Storms	Storms	GP 2010-04	2010	San Mateo					896,520
Baja Earthquake	Earthquake	Earthquake	DR-1911	2010	Imperial	4/05/2010	5/07/2010			39,384,403
2010 Severe Winter Storms	Flood, debris & mud flows	Storms	DR-1884	2010	Calaveras, Imperial, Los Angeles, Riverside, San Bernardino, Siskiyou	1/21/2010, 1/22/2010, 1/27/2010	3/08/2010	2	*	37,056,584
Humboldt Earthquake	Earthquake	Earthquake	GP 2010-01	2010	Humboldt	01/12/2010				11,966,685
Santa Cruz County Storms	Flood	Storms	GP 2009-13	2009	Santa Cruz County					4,483,715
Sheep Fire	Fire	Fire	FM 2841	2009	San Bernardino County		10/4/2009			1,500,883

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Imperial County Storms	Flood	Storms	GP 2009-10	2009	Humboldt County	9/18/2009				458,749
Guiberson Fire	Fire	Fire	FM 2839	2009	Ventura County		9/22/2009		10	10,869,516
Pendleton Fire	Fire	Fire	FM 2836	2009	San Bernardino County		9/1/2009		1	4,383,907
Oak Glen Fire	Fire	Fire	FM 2833	2009	San Bernardino County		8/31/2009		4	5,247,456
49er Fire	Fire	Fire	FM 2832	2009	Orange County		8/31/2009			1,196,092
San Bernardino Fire	Fire	Fire	GP 2009-09	2009	San Bernardino County					95,020
Big Meadow Fire	Fire	Fire	GP 2009-07	2009	Mariposa County	8/29/2009				21,299
Monterey County Wildfires	Fire	Fire	GP 2009-06	2009	Monterey County	8/28/2009				37,991
LA County Wildfires	Fire	Fire	GP 2009-05	2009	Los Angeles County			0	6	9,286,724
Station Fire	Fire	Fire	FM 2830	2009	Los Angeles County		8/28/2009	2	23	19,053,328
PV Fire	Fire	Fire	FM 2828	2009	Los Angeles County		8/28/2009	0	0	317,175
Yuba Fire	Fire	Fire	FM 2825	2009	Nevada County, Yuba County		8/15/2009		41	10,013,956
Lockheed Fire	Fire	Fire	FM 2824	2009	Santa Cruz County		8/13/2009		10	23,977,717
Fresno Drought	Drought	Drought	GP 2009-02	2009	Fresno County	6/19/2009				0
Jesusita Fire	Fire	Fire	FM 2817	2009	Santa Barbara County		5/6/2009		0	32,588,540
November 2008 Winds/Wildfires	Fire	Fire	GP 2008-11	2008	San Bernardino County	11/18/2008				164,663
Freeway Complex	Fire	Fire	FM 2792	2008	San Bernardino County		11/15/2008		0	
November 2008 California Wildfires	Fire	Fire	FEMA DR-1810-CA	2008	Los Angeles, Orange, Riverside, and Santa Barbara counties		11/18/2008	0	28	221,219
Wildfires	Fire	Fire	GP 2008-10	2008	San Bernardino County	10/13/2008				82,985,527
Sesnon Fire	Fire	Fire	FM 2789	2008	Los Angeles County, Ventura County		10/13/2008			2,634,935
Marek Fire	Fire	Fire	FM 2788	2008	Los Angeles County		10/12/2008			6,060,351
Gladding Fire	Fire	Fire	FM 2786	2008	Placer County		9/1/2008			3,227,824
Firestorms and Flooding	Fire	Fire	GP 2008-09	2008	Los Angeles County	4/27/2008				
Twentynine Palms Thunderstorms	Flood	Storms	GP 2008-08	2008	San Bernardino County					4,629
Ridgecrest Thunderstorms	Flood	Storms	GP 2008-07	2008	Kern County					0
Cathedral City Flooding	Flood	Storms	GP 2008-06	2008	Riverside County					0
Inyo Severe Thunderstorms	Flood	Storms	GP 2008-05	2008	Inyo County	7/15/2008				352,789
Modoc Storms	Flood	Storms	GP 2008-04	2008	Modoc County					909,499

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Central Valley Drought	Drought	Drought	GP 2008-03	2008	Calaveras, Kern, Madera, Merced, Sacramento, San Joaquin, Stanislaus, Tulare counties	6/12/2008				0
2008 Mid-Year Fires								15	*	
(excluded EM-3287)	Fire	Fire	GP 2008-02	2008	Humboldt County	6/28/2008			1	4,394,159
2008 Mid-Year Fires	Fire	Fire	EM-3287	2008	Butte, Kern, Mariposa, Mendocino, Monterey, Plumas, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Trinity counties		6/28/2008			
Wild Fire	Fire	Fire	FM 2776	2008	Napa County		6/22/2008		10	330,856,351
Martin Fire	Fire	Fire	FM 2772	2008	Santa Cruz County		6/11/2008		1	1,275,377
Humboldt Fire	Fire	Fire	FM 2771	2008	Butte County		6/11/2008		16	3,714,441
Ophir Fire	Fire	Fire	FM 2770	2008	Butte County		6/10/2008	15	*	18,134,595
Summit Fire	Fire	Fire	FM 2766	2008	Santa Clara, Santa Cruz counties		5/22/2008		1	44,903
Santa Anita Fire	Fire	Fire	FM 2763	2008	Los Angeles County		4/27/2008			13,980,269
2008 January Storms	Flood	Storms	GP 2008-01	2008	Alameda, Butte, Colusa, Del Norte, El Dorado, Glenn, Kings, Mendocino, Nevada, Placer, Sacramento, San Francisco, Sierra, Sutter, Yolo, Yuba counties	1/5/2008				2,570,876
Martin's Ferry Bridge	Other	Bridge Damage	GP 2007-16	2007	Humboldt County	12/21/2007				8,871,077
Bay Area Oil Spill	Other	Accident	GP 2007-15	2007	Alameda, Contra Costa, Marin, San Francisco, San Mateo, Solano, Sonoma counties	11/9/2007				0
2007 Southern CA Fires	Fire	Fire	FEMA DR-1731-CA	2007	Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Ventura counties		10/21/2007	10	139	198,562,023
I-5 Major Collision	Road Damage	Accident	GP 2007-13	2007	Los Angeles County	10/14/2007				66,465
Mount Soledad Landslide	Landslide	Landslide	GP 2007-12	2007	San Diego County	10/3/2007				7,509,266
Angel Fire	Fire	Fire	FM 2729	2007	San Diego County		9/15/2007			4,444,159
Imperial Microburst	Flood	Storms	GP 2007-11	2007	Imperial County	9/16/2007				1,232,315
Butler 2 Fire	Fire	Fire	FM 2728	2007	San Bernardino County		9/15/2007			4,944,213

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Canyon Fire	Fire	Fire	FM 2708	2007	Los Angeles County		7/8/2007			517,152
Zaca Fire	Fire	Fire	GP 2007-09	2007	Santa Barbara County, Ventura County	8/18/2007		43		4,265,384
Needles Rainstorm	Flood	Storms	GP 2007-08	2007	San Bernardino County	7/25/2007				345,508
Inyo Complex	Fire	Fire	FM 2706	2007	Inyo County		7/6/2007			772,241
Creek Fire	Fire	Fire	FM 2702	2007	Shasta County		6/29/2007	3		178,678
Angora Fire	Fire	Fire	FM 2700	2007	El Dorado County		6/24/2007			947,668
2007 Drought	Drought	Drought	GP 2007-05	2007	Kings County, Riverside County	6/19/2007				0
Island Fire (Catalina)	Fire	Fire	FM-2694	2007	Los Angeles		5/10/2007			
Griffith Park Brush Fire	Fire	Fire	FM-2691	2007	Los Angeles		5/8/2007			2,508,441
241 Fire	Fire	Fire	FM-2683	2007	Orange		3/11/2007			1,622,014
2007 Severe Freeze	Freeze	Freeze	DR-1689	2007	Fresno, Imperial, Kern, Los Angeles, Monterey, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Tulare, Ventura counties		3/13/2007			2,700,400
Shekell Fire Complex	Fire	Fire	2006-13	2006	Ventura	12/4/2006				105,849
Esperanza Fire	Fire	Fire	2006-09	2006	Riverside	10/26/2006		5	17	11,083,665
Day Fire	Fire	Fire	2006-08	2006	Ventura	9/24/2006				2,050,612
Orchard Fire	Fire	Fire	FM-2676	2006	Riverside	9/19/2006	9/16/2006			315,525
Junction Fire	Fire	Fire	FM-266, DC 2006-07	2006	Trinity		7/29/2006			3,168,140
Major Levee Erosion	Flood	Levee break	DC 2006-06	2006	Trinity	9/19/2006				43,913
Horse Fire	Fire	Fire	FM-2656	2006	San Diego		7/24/2006		23	2,121,800
Lake Tahoe Sewage Spill	HazMat	Sewage spill	SBA-10224	2006	El Dorado					
Sawtooth Fire Complex	Fire	Fire	2006-05	2006	San Bernardino	7/13/2006		1	17	12,346,391
Corcoran Water Well Failure	Facility	Water Well Failure	2006-04	2006	City of Corcoran (Kings County)	6/23/2006				362,988
Ferguson Rockslide	Landslide	Landslide	SBA-10535	2006	Mariposa (Merced River)					

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
2006 June Storms	Flood	Storms	DR-1646	2006	Alameda, Amador, Calaveras, El Dorado, Lake, Madera, Marin, Merced, Napa, Nevada, Placer, San Joaquin, San Mateo, Santa Cruz, Sonoma, Stanislaus, Tuolumne counties + statewide HM		6/5/2006			45,219,721
2006 April Storms	Flood	Storms	2006-03	2006	Fresno, Kings, Mariposa, Tulare	4/10/2006				11,227,273
Levee Erosion	Flood	Levee break	DC 2006-02	2006	City of East Palo Alto (San Mateo County)	3/28/2006				551,736
Sierra Fire	Fire	Fire	FM-2630	2006	Orange, Riverside		2/6/2006		8	161,790
2005/06 Winter Storms	Flood	Storms	DR-1628	2005 2006	Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Del Norte, El Dorado, Humboldt, Lake, Lassen, Marin, Mendocino, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, San Luis Obispo, San Mateo, Santa Cruz, Sierra, Siskiyou, Solano, Sonoma, Sutter, Trinity, Yolo, Yuba counties + statewide HM		2/3/2006			203,050,747
2005-06 Winter Storms	Flood	Storms	2006-01	2005	Fresno, Kings, Shasta, Tulare counties	1/12/2006				1,275,237
Hurricane Katrina Evacuations	Economic	Hurricane	EM-3248	2005	All 58 counties		9/13/2005			763,576
Extreme Rainfall	Flood	Storms	DC 2005-06	2005	Sierra County	11/7/2005				504,323
School Fire	Fire	Fire	FM-2586	2005	Ventura County		11/18/2005			4,468,439
Border #50 Fire	Fire	Fire	FM-2585	2005	San Diego County		10/6/2005			3,406,702
Woodhouse Fire	Fire	Fire	FM-2584	2005	Riverside County		10/5/2005		3	1,040,087
Severe Thunderstorms and Flash Flooding	Flood	Storms	DC 2005-06	2005	California City (Kern), City of Needles & Town of Yucca Valley (San Bernardino)	9/26/2005				615,945
Topanga Fire	Fire	Fire	FM-2583	2005	Los Angeles, Ventura		9/28/2005			19,787,415
Sundevil Fire	Fire	Fire	FM-2582	2005	San Diego		9/5/2005		31	233,530
Manton Fire	Fire	Fire	FM-2580	2005	Tehama, Shasta		8/26/2005			4,048,525
Quartz Fire	Fire	Fire	FM-2571	2005	Madera		7/25/2005			1,428,429
Rain and Flooding (Modoc)	Flood	Storms	GP 2005-04	2005	Modoc	5/1/2005				295,809

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
March Storms and Landslide (San Mateo)	Flood	Storms	GP 2005-05	2005	San Mateo	3/1/2005				337,252
2005 March Flooding (Mariposa)	Flood	Flood	GP 2005-03	2005	Mariposa	3/1/2005				2,758,943
2005 Floods Excluded from DR-1585	Flood	Storms	GP 2005-02	2005	Kern, San Bernardino, San Diego, Santa Barbara	2/1/2005				8,055,058
2005 February Storms	Flood	Storms	DR-1585	2005	Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura	3/16/2005	4/14/2005			101,189,489
2005 January Winter Storms	Flood	Storms	DR-1577, GP2005-01	2005	Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Ventura, Kern (HM only)	1/12/2005	2/4/2005			281,765,975
Death Valley Flood	Flood	Flood	DC 2004-08	2004	Inyo	11/1/2004				186,052
Old Hwy Fire	Fire	Fire	FM-2555	2004	Mariposa		9/13/2004		3	2,691,934
Geysers Fire	Fire	Fire	FM-2554	2004	Sonoma		9/4/2004		19	2,434,325
Pattison Fire	Fire	Fire	FM-2553	2004	Calaveras		9/4/2004		2	3,625,196
Bear Fire (Mariposa)	Fire	Fire	FM-2552	2004	Mariposa		9/3/2004			1,118,783
Lake Fire	Fire	Fire	FM-2548	2004	Shasta	8/23/2004	8/14/2004			204,470
French Fire	Fire	Fire	FM-2547	2004	Shasta	8/23/2004	8/14/2004		20	14,608,538
Oregon Fire	Fire	Fire	FM-2545	2004	Butte		8/11/2004		3	822,904
Bear Fire (Shasta)	Fire	Fire	FM-2544	2004	Shasta	8/23/2004	8/11/2004		10	7,612,263
Stevens Fire	Fire	Fire	FM-2541	2004	Placer		8/8/2004		9	3,469,004
Calaveras Complex	Fire	Fire	FM-2540	2004	Calaveras		8/8/2004		14	4,656,887
Deep Fire	Fire	Fire	DC 2004-06	2004	Tulare	8/1/2004				
Crown Fire	Fire	Fire	FM-2535	2004	Los Angeles		7/21/2004			2,604,924
Foothill Fire	Fire	Fire	FM-2534	2004	Los Angeles		7/18/2004			4,319,501
Melton Fire	Fire	Fire	FM-2533	2004	Riverside		7/17/2004			2,715,200
Hollow Fire	Fire	Fire	FM-2532	2004	El Dorado		7/14/2004			179,440
Lakeview Fire	Fire	Fire	FM-2530	2004	Riverside		7/14/2004			74,349
Mataguay Fire	Fire	Fire	FM-2529	2004	San Diego		7/14/2004		7	2,084,052
Pine Fire	Fire	Fire	FM-2528	2004	Los Angeles		7/14/2004			9,028,675
Gaviota Fire	Fire	Fire	FM-2519	2004	Santa Barbara		6/5/2004		44	6,143,627
San Joaquin Levee Break	Flood	Levee break	DR-1529	2004	San Joaquin	6/4/2004	6/30/2004			27,214,428
Cerritos Fire	Fire	Fire	FM-2517	2004	Riverside		5/4/2004		10	5,816,297
Eagle Fire	Fire	Fire	FM-2516	2004	Riverside		5/4/2004		8	6,257,005
Pleasure Fire	Fire	Fire	FM-2515	2004	Riverside		4/26/2004			
Daly City Flooding	Flood	Flood	DC 2004-02	2004	San Mateo	2/1/2004				337,614

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Snowstorm (Trinity)	Snow	Storms	DC 2004-01	2004	Trinity	1/1/2004				1,122,549
San Simeon Earthquake	Earthquake	Earthquake	DR-1505	2003	San Luis Obispo, Santa Barbara	12/23/2003	1/13/04			64,558,853
Flash flooding	Flood	Storms	GP 2003-04	2003	Los Angeles	11/14/2003				903,275
Whitmore Fire	Fire	Fire	FM-2508	2003	Shasta		10/28/2003			1,999,031
California Wildfires	Fire	Fire	DR-1498	2003	Ventura, Los Angeles, San Bernardino, Riverside, San Diego	10/26/2003	10/27/2003	24	246	177,515,291
Mountain Fire	Fire	Fire	FM-2507**	2003	Riverside		10/26/2003			
Paradise Fire	Fire	Fire	FM-2506**	2003	San Diego		10/26/2003			
Cedar Fire	Fire	Fire	FM-2505**	2003	San Diego		10/26/2003			
Simi Fire	Fire	Fire	FM-2504*	2003	Ventura		10/26/2003			
Old Fire	Fire	Fire	FM-2503*	2003	San Bernardino		10/25/2003			
Verdale Fire	Fire	Fire	FM-2502*	2003	Los Angeles, Ventura		10/25/2003			
Grand Prix Fire	Fire	Fire	FM-2501*	2003	San Bernardino		10/23/2003			
Pass Fire	Fire	Fire	FM-2500*	2003	Riverside		10/21/2003			
Bridge Fire	Fire	Fire	FM-2497	2003	San Bernardino		9/5/2003			784,529
Locust Fire	Fire	Fire	FM-2491	2003	Riverside		8/19/2003			1,319,887
<i>**fires above</i>										
2003 August Storms	Flood	Storms	DC 2003-02	2003	Imperial, Inyo, San Bernardino		8/1/2003			4,126,902
Canyon Fire	Fire	Fire	FM-2487	2003	Riverside		7/25/2003			3,681,947
Railroad Fire	Fire	Fire	FM-2475	2003	Riverside		7/3/2003			276,200
Tejon Fire	Fire	Fire	FM-2474	2003	Kern		6/29/2003			1,323,296
Sawmill Fire	Fire	Fire	FM-2473	2003	Kern		6/27/2003			946,806
Bark Beetle Infestation	Economic	Insect pest	GP 2003	2003	San Bernardino, San Diego, Riverside	3/7/2003				
Pacific Fire	Fire	Fire	FM-2466	2003	Los Angeles		1/7/2003			2,017,043
State Road Damage	Road damage	Flood	GP 2003	2003	Alameda, Colusa, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Trinity	1/1/2003				
Exotic Newcastle Disease Epidemic	Agricultural	Disease	GP 2003	2003	Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura	1/3/2007				
Late Storm '02	Flood	Storms	DC 2003-01	2003	Humboldt, Mendocino, Trinity	1/1/2003				5,875,940
Mexican Fruit Fly (San Diego)	Agricultural	Insect pest	GP 2002	2002	San Diego	12/1/2002				
Croy Fire	Fire	Fire	FM-2465	2002	Santa Clara		9/25/2002			8,700,329
Williams Fire	Fire	Fire	FM-2464	2002	Los Angeles		9/23/2002			6,028,991

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Sierra Fire	Fire	Fire	FM-2463	2002	Placer		9/19/2002			720,595
Leona Fire	Fire	Fire	FM-2462	2002	Los Angeles		9/3/2002			2,410,655
Squirrel Fire	Fire	Fire	FM-2461	2002	Shasta		9/3/2002			2,931,942
Pines Fire	Fire	Fire	FM-2456	2002	San Diego		7/30/2002			26,820,605
Deer Fire	Fire	Fire	FM-2450	2002	Kern		7/21/2002			926,099
Louisiana	Fire	Fire	FM-2433	2002	San Bernardino		6/27/2002			1,445,999
BlueCut Fire	Fire	Fire	FM-2425	2002	San Bernardino		6/17/2002			1,256,818
Copper Fire	Fire	Fire	FM-2417	2002	Los Angeles		6/6/2002			2,927,981
Antonio Fire	Fire	Fire	FM-2405	2002	Orange		5/13/2002			467,678
Gavilan Fire	Fire	Fire	FM-2396	2002	San Diego		2/11/2002			3,035,562
Trinity Wildfire	Fire	Fire	DC 2001-05	2001	Trinity	9/1/2001				242,935
Calaveras Wildfire	Fire	Fire	GP 2001-04	2001	Calaveras	9/10/2001				6,693,498
Modoc/Siskiyou Drought	Drought	Drought	GP 2001-03	2001	Modoc, Siskiyou	5/4/2001				14,858,480
Rio Dell Water Shortage	Economic	Drought	GP 2001-02	2001	City of Rio Dell					
(Humboldt County)	3/16/2001				2,523,425					
2001 March Storms	Flood	Storms	DC 2001-01	2001	Los Angeles, San Luis Obispo, Santa Barbara	3/1/2001				9,353,703
Energy Emergency	Economic	Greed	GP 2001	2001	All 58 counties	1/1/2001				
Napa Earthquake	Earthquake	Earthquake	DR-1342	2000	Napa	9/6/2000	9/14/2000			17,700,867
Windstorms	Wind	Storms	DC 2000-02	2000	Los Angeles	4/1/2000				78,081
Millbrae Landslide	Landslide	Landslide	DC 2000-01	2000	San Mateo	2/1/2000				8,206,349
Mudslides (San Bernardino)	Landslide	Landslide	DC 99-04	1999	San Bernardino	7/26/1999				67,272,822
1999 August Fires	Fire	Fire	EM-3140	1999	Butte, Humboldt, Napa, Plumas, San Bernardino, Shasta, Tehama, Trinity, Tuolumne, Yuba	8/26/1999	9/1/1999			1,154,573
Sonoma Road Failure	Road damage	Flood	GP 99-03	1999	Sonoma	3/29/1999				396,521
Beaumont Wind Storms	Wind	Storms	DC 99-02	1999	San Bernardino	2/1/1999				4,019
Avenal Water Pipeline Failure	Facility	Pipeline rupture	DC 99-01	1999	City of Avenal (Kings County)	2/1/1999				256,609
1998 Freeze	Freeze	Freeze	GP 98-02, DR-1267	1998	Fresno, Kern, Kings, Madera, Merced, Monterey, Riverside, Tulare, Ventura	12/29/1998	2/9/1999			17,481,385
1998 Winter Storms	Flood	Storms	GP 98-01	1998	Siskiyou, Shasta, Kings, Madera	2/26/1998, 4/16/1998, 5/15/1998				

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1998 El Nino Floods	Flood	Storms	DR-1203	1998	Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, Fresno, Glenn, Humboldt, Kern, Kings, Lake, Los Angeles, Marin, Mendocino, Merced, Monterey, Napa, Orange, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Ventura, Yolo, Yuba, Del Norte	Proclaimed	2/9/1998	17		385,141,192
Floods (Orange)	Flood	Flood	97-04	1997	Orange	12/10/1997				
Fires (Yuba)	Fire	Fire	97-02	1997	Yuba	10/1/1997				
1997 January Floods	Flood	Storms	DR-1155	1997	Alpine, Amador, Butte, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Lake, Lassen, Modoc, Napa, Nevada, Plumas, Sacramento, San Joaquin, Sierra, Siskiyou, Solano, Sonoma, Sutter, Tehama, Trinity, Yuba, Calaveras, Madera, Mono, Monterey, Placer, San Benito, San Luis Obispo, San Mateo, Santa Cruz, Shasta, Stanislaus, Tuolumne, Yolo, Contra Costa, Fresno, Marin, Tulare, Mariposa, Merced, Santa Clara, Alameda, San Francisco, Kings, Mendocino	1/2/97 - 1/31/97	1/4/1997	8		194,352,509
1996 Southern California Firestorms	Fire	Fire	EM-3120	1996	Los Angeles, Orange, San Diego, Ventura	10/1/1996	Emergency Dec only		5	12,589,808
1996 Severe Fires	Fire	Fire	96-04	1996	Los Angeles, Orange, San Diego, City of San Buenaventura (Ventura)	10/22/1996				
Lake County Fire	Fire	Fire	DC 96-03	1996	Lake	8/1/1996				

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Torrential Winds and Rain	Flood	Storms	GP 96-01	1996	Humboldt, Mendocino, Plumas, Sacramento, San Francisco, San Mateo, Santa Cruz, Shasta	1/2/1996				
Humboldt County Flooding	Flood	Flood	GP 96-02	1995	Humboldt	12/95				
Vision Fire (Marin)	Fire	Fire	DC 95-05	1995	Marin	10/95				
1995 Late Winter Storms	Flood	Storms	DR-1046	1995	All counties except Del Norte	Proclaimed	1/10/1995	17		132,040,111
1995 Severe Winter Storms	Flood	Storms	DR-1044	1995	Los Angeles, Orange, Humboldt, Lake, Sonoma, Butte, Colusa, Contra Costa, Del Norte, Glenn, Kern, Lassen, Mendocino, Modoc, Monterey, Napa, Placer, Plumas, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz, Tehama, Ventura, Yolo, Yuba, Alpine, Amador, Nevada, Riverside, Sacramento, San Bernardino, San Mateo, Shasta, Sutter, Trinity, San Diego, Alameda, Marin, Fresno, Kings, El Dorado, Madera, Solano, Siskiyou	1/6/95 - 3/14/95	1/13/1995	11		221,948,347
1994 Humboldt Earthquake	Earthquake	Earthquake	GP 94-03	1994	Humboldt	12/29/1994	Not declared			1,300,000
Mediterranean Fruit Fly (Ventura)	Agricultural	Insect pest		1994	Ventura	10/7/1994	Not declared			
San Luis Obispo Fire - Hwy 41	Fire	Fire	GP 94-02	1994	San Luis Obispo	8/24/1994	Not declared		12	6,382,235
Salmon fisheries	Economic	Unknown	DR-1038	1994	Del Norte, Humboldt, Mendocino, Sonoma	5/20/1994	9/20/1994			30,300,000
Northridge Earthquake	Earthquake	Earthquake	DR-1008	1994	Los Angeles, Ventura, Orange	1/17/94, 1/24/94	1/17/1994	57	11,846	6,115,103,071
Mediterranean Fruit Fly (Riverside)	Agricultural	Insect pest		1993	Riverside	12/93	Not declared			
1993 Southern California Firestorms	Fire	Fire	DR-1005	1993	Los Angeles, Ventura, San Diego, Orange, Riverside, San Bernardino	10/27/93, 10/28/93	10/28/1993	4	162	83,032,567
Klamath Earthquake	Earthquake	Earthquake	DC 93-03	1993	Modoc	10/93				

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
New River Pollution	HazMat	Sewage spill	DC	1993	Imperial	10/6/1993	Not declared			
Tornado	Tornado	Tornado	DC 93-02	1993	Imperial	9/10/1993	Not declared			
Tijuana River Pollution	HazMat	Sewage spill	DC	1993	San Diego	9/10/1993	Not declared			
Flash flooding	Flood	Flood	DC 92-06 - 92-09	1993	San Bernardino	1/93				
1992 Late Winter Storms	Flood	Storms	DR-979	1992	Alpine, Los Angeles, Humboldt, Napa, Santa Barbara, Culver City (Los Angeles County), City of Los Angeles (Los Angeles County), Contra Costa, Mendocino, Sonoma, Fresno, Imperial, Madera, Monterey, San Bernardino, Sierra, Tehama, Trinity, Tulare, Modoc, Orange, Riverside, Lassen, Siskiyou, Plumas, San Diego	1/7/93 - 2/19/93	1/15/1993	20	10	226,018,111
Fountain Fire	Fire	Fire	DR-958	1992	Calaveras, Shasta	8/21/1992	8/29/1992		8	38,152,133
Landers/Big Bear Earthquake	Earthquake	Earthquake	DR-947	1992	Riverside, San Bernardino, Los Angeles	6/28/1992	6/28/1992	1	402	15,579,530
1992 Humboldt Earthquake	Earthquake	Earthquake	DR-943	1992	Humboldt	4/25/1992	5/5/1992		356	17,829,642
Los Angeles Civil Unrest	Civil Unrest	Civil Unrest	DR-942	1992	Los Angeles	4/29/1992	5/22/1992	53	2,383	122,431,732
Point Loma Sewage Spill	HazMat	Sewage spill	GP	1992	San Diego, City of Chula Vista, City of Coronado, San Diego	2/6/92, 2/7/92	Not declared			
1992 Winter Storms	Flood	Storms	DR-935	1992	Los Angeles, Ventura, City of Los Angeles, Kern, Orange, San Bernardino	2/12/92, 2/19/92	2/25/1992	5		53,897,542
Sweet potato Whitefly	Agricultural	Insect pest		1991	Imperial, Riverside		Not declared			12,700,000
East Bay Hills Fire	Fire	Fire	DR-919	1991	Alameda County	10/20/1991	10/22/1991	25	150	56,996,503
Sierra Madre Earthquake	Earthquake	Earthquake	GP 91-04	1991	Los Angeles	7/5/1991	Not declared	1	30	33,500,000
1991 Heavy Rains	Flood	Storms	GP 91-01 - 91-03	1991	San Bernardino, San Diego	4/1/1991				

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1990 Freeze	Freeze	Freeze	DR-894	1990	Santa Cruz, Fresno, Glenn, Imperial, Kern, Mendocino, Monterey, Riverside, San Benito, San Bernardino, San Diego, San Mateo, Santa Barbara, Santa Clara, Solano, Sonoma, Tulare, Ventura, Alameda, Butte, Colusa, Los Angeles, Madera, Marin, Merced, Napa, San Joaquin, San Luis Obispo, Sutter, Yolo, Yuba, Stanislaus, Tehama	12/19/90-1/18/91	2/11/1991			856,329,675
Santa Barbara Drought	Drought		GP 1990	1990	Santa Barbara	11/13/1990	Not declared			
Finley Fire/ Yosemite Fire	Fire	Fire	GP 90-01, GP 90-02	1990	Mariposa, Kern, Tehama	8/13/90, 8/14/90	Not declared	1	84	548,000,000
1990 Drought	Drought	Drought		1990	City of Santa Barbara (Santa Barbara County)	7/17/1990	Not declared			
Santa Barbara Fires	Fire	Fire	DR-872	1990	Los Angeles, Santa Barbara, Riverside, San Bernardino	6/28/90, 6/29/90	6/30/1990	3	89	4,061,861
Mexican Fruit Fly	Agricultural	Insect pest	GP 1990	1990	Los Angeles, San Diego	5/14/1990	Not declared			
Mediterranean Fruit Fly (Riverside)	Agricultural	Insect pest	GP 1990	1990	Riverside	4/18/1990	Not declared			
Upland Earthquake	Earthquake	Earthquake	GP 89-07	1990	Los Angeles, San Bernardino	3/9/90, 3/13/90	Not declared		38	12,034,150
1990 Severe Storms	Flood	Storms	GP 989-06	1990	Butte, Nevada	2/22/1990	Not declared	1	17	11,500,000
Mediterranean Fruit Fly	Agricultural	Insect pest	GP 1989	1989	Orange, Mariposa	11/20/1989	Not declared			
Loma Prieta Earthquake	Earthquake	Earthquake	DR-845	1989	Alameda, Monterey, San Benito, San Mateo, Santa Clara, Santa Cruz, San Francisco, Contra Costa, Marin, City of Isleton (Sacramento County), City of Tracy (San Joaquin County), Solano	10/18/89 - 10/30/89	10/18/1989	63	3,757	888,662,382
Mediterranean Fruit Fly (San Bernardino)	Agricultural	Insect pest	GP 1989	1989	San Bernardino	10/3/1989	Not declared			
Mediterranean Fruit Fly (Santa Clara)	Agricultural	Insect pest	GP 1989	1989	Santa Clara	9/6/1989	Not declared			

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Mediterranean Fruit Fly (Los Angeles)	Agricultural	Insect pest	GP 1989	1989	Los Angeles	8/9/1989	Not declared			
Fires (Los Angeles)	Fire	Fire	GP 88-03	1988	Los Angeles	12/9/1988	Not declared		2	12,400,000
Forty-Niner Fire	Fire	Fire	FM-2071	1988	Nevada		9/13/1988			
Fires (Forty-Niner, Miller, Fern)	Fire	Fire	DR-815	1988	Shasta, Solano, Yuba, Nevada	9/11/88-9/20/88	9/13/1988			
Wildland Fires (Calaveras)	Fire	Fire	GP 88-01	1988	Calaveras	7/21/1988	Not declared			
Mediterranean Fruit Fly	Agricultural	Insect pest	GP 1988	1988	Los Angeles	7/21/1988	Not declared			
Fire and Wind Driven Waves	Fire	Fire		1988	City of Redondo Beach (Los Angeles County)	6/15/1988	Not declared			25,000,000
1988 Fires	Fire	Fire	GP 87-07	1988	Los Angeles	5/88				
1988 Storms	Flood	Storms	GP 87-06	1988	Santa Barbara, City of San Buenaventura					
(Ventura County)	1/26/1988	Not declared			49,416,200					
Coastal Storms	Flood	Storms	DR-812	1988	Los Angeles, Orange, San Diego, San Bernardino, Ventura	1/21/1988	2/5/1988			
Imperial County Earthquake	Earthquake	Earthquake	GP 87-03	1987	Imperial	11/23/1987	Not declared		94	2,638,833
Wildfires/ Flooding/ Mud Slides	Fire	Fire	GP 87-01	1987	San Diego	11/19/1987	Not declared			5,371,150
Whittier Earthquake	Earthquake	Earthquake	DR-799	1987	Monterey Park (Los Angeles County), City of Whittier (Los Angeles County), Los Angeles, Orange	10/2/87 - 10/5/87	10/7/1987	9	200+	358,052,144
Stanislaus Fire Complex	Fire	Fire	FM-2065	1987	Mariposa		9/2/1987			
1987 Wildland Fires	Fire	Fire	GP	1987	Colusa, Del Norte, Butte, Fresno, Humboldt, Inyo, Kern, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Placer, Plumas, Riverside, San Bernardino, Shasta, Sierra, Siskiyou, Trinity, Tulare, Tuolumne	9/10/87, 9/3/87	Not declared	3	76	18,000,000
Acorn Fire	Fire	Fire	GP	1987	Alpine	8/3/1987	Not declared		3	8,500,000
Mediterranean Fruit Fly	Agricultural	Insect pest	GP	1987	Los Angeles	8/25/1987	Not declared			

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Del Monte Fire	Fire	Fire	GP	1987	Monterey	5/1/1987	Not declared		8	15,000,000
Earthquake (Riverside)	Earthquake	Earthquake	GP 86-02	1986	Riverside	10/86				
Plane Crash	Air Disaster	Manmade		1986	City of Cerritos (Los Angeles County)	8/31/1986	Not declared	82	2	
Heavy Rains	Flood	Storms		1986	Monterey, Siskyou	3/26/1986	Not declared			400,000
1986 Storms	Flood	Storms	DR-758	1986	Humboldt, Napa, Sonoma, Glenn, Lake, Marin, Modoc, Sacramento, Santa Clara, Santa Cruz, Solano, Yuba, Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Lassen, Mendocino, Nevada, Placer, Plumas, San Joaquin, Sierra, Sutter, Tehama, Tuolumne, Yolo, Fresno, Madera, San Mateo, Alameda, Contra Costa, Del Norte, Trinity, Mono, San Benito, Shasta	2/18-86 - 3/12/86	2/18/1986	13	67	407,538,904
Wheeler Fire	Fire	Fire		1985	Ventura	10/14/1985	Not declared	1	2	
Hydrilla Infestation	Invasive Species	Aquatic Plant Pest		1985	Shasta	9/13/1985	Not declared			
Hidden Valley Lake Fire	Fire	Fire	FM-2055	1985	Lake		7/11/1985			
Lexington Fire	Fire	Fire	FM-2054	1985	Santa Clara		7/11/1985			
1985 Statewide Fires	Fire	Fire	DR-739	1985	San Diego, City of Los Angeles (Los Angeles County), San Luis Obispo, Monterey, Santa Clara, Santa Cruz, Ventura	7/1/85 - 7/11/85	7/18/1985	3	470	64,845,864
1984 Floods	Flood	Flood	GP 84-02, GP 84-03	1984	Inyo, Mono		9/1/1984			
1984 Storms (Kern)	Flood	Storms	GP 84-01	1984	Kern		Not declared			1,600,000
Morgan Hill Earthquake	Earthquake	Earthquake	EM-4043	1984	Santa Clara		4/25/1984		27	7,265,000
High Tides / Storms	Flood	Storms	GP 83-06	1984	Contra Costa	1/1/1984				
Bradford Levee Failure	Flood	Levee break	GP 83-05	1983	Contra Costa, Alameda	12/9/83, 1/18/84	Not declared			10,909,785
Mexican Fruit Fly	Agricultural	Insect pest		1983	Los Angeles	11/4/1983	Not declared			

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
San Bernardino Flooding	Flood	Flood	84-01	1983	San Bernardino	11/83				
1983 Summer Storms	Flood	Storms	DR-690	1983	Inyo, Riverside, San Bernardino	8/29/1983	8/29/1983	3		34,689,155
Colorado River Flooding	Flood	Flood	DR-687	1983	Riverside, San Bernardino, Imperial	6/23/83, 6/28/83	7/1/1983			4,640,315
Coalinga Earthquake	Earthquake	Earthquake	DR-682	1983	Fresno	5/2/1983	5/3/1983		47	31,076,300
River Junction Storms	Flood	Storms	83-02	1983	San Joaquin	3/83				
High Winds	Wind	Storms	83-01	1983	Yuba, Los Angeles	3/83				
1983 Floods	Flood	Flood	82-19	1983	Los Angeles	3/83				
Winter Storms	Flood	Flood	DR-677	1982	Contra Costa, San Joaquin, Sacramento, Marin, San Mateo, Los Angeles, San Diego, Alameda, Orange, San Benito, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sonoma, Ventura, Trinity, Colusa, Lake, Mendocino, Monterey, San Luis Obispo, Solano, Yolo, Butte, Glenn, Kern, Kings, San Bernardino, Sutter, Tehama, Merced, Del Norte, Fresno, Madera, Napa, Placer, Riverside, Stanislaus, Tulare, Humboldt, Mariposa, Nevada, Yuba	12/8/82-3/21/83	2/9/1983			523,617,032
High Tides and Rains	Flood	Storms		1982	Contra Costa, Sacramento, San Joaquin	12/8/1982	Not declared			6,964,998
Rain and Flooding (Imperial)	Flood	Storms	DC 82-17	1982	Imperial	12/82				
Rains Causing Agricultural Losses	Agricultural	Storms	GP	1982	Fresno, Madera, Merced, Monterey, Kern, Tulare, Sacramento, San Joaquin, Solano, Stanislaus, Yolo	10/26/1982	Not declared			345,195,974
Dayton Hills Fire	Fire	Fire	GP	1982	Los Angeles, Orange, Ventura	10/10/1982	Not declared			19,277,102
1982 Heavy Rains	Flood	Storms	GP 82-16	1982	Inyo	9/27/1982	Not declared			6,161,320
McDonald Island Levee Break	Flood	Levee break	DR-669	1982	McDonald Island (San Joaquin County)	8/24/1982	8/24/1982			11,561,870
Orange Fire	Fire	Fire	DR-657	1982	Orange	4/21/1982	4/21/1982			50,877,040

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Heavy Rains and Flooding	Flood	Storms	DC 82-03	1982	Amador, Calaveras, Madera, Mono, Sacramento, Santa Clara, Santa Cruz, Sierra, Yuba	4/1/1982				
1982 Winter Storms	Flood	Storms	DR-651	1982	Alameda, Santa Clara, Solano, San Joaquin, Contra Costa, Humboldt, Marin, San Mateo, Santa Cruz, Sonoma	1/5/82 - 1/9/82	1/7/1982	33	481	273,850,000
Strong Winds & Fire	Fire	Fire	82-01	1981	Humboldt	10/81				
1981 Mediterranean Fruit Fly Infestation	Agricultural	Insect pest		1981	Contra Costa, Los Angeles, San Benito, Stanislaus, Santa Cruz, San Mateo	8/8/81 - 9/25/81	Not declared			22,000,000
Atlas Peak Fire	Fire	Fire		1981	Napa	6/24/1981	Not declared			31,000,000
Major Brush Fire	Fire	Fire	GP	1981	Napa	6/1/1981				
Imperial County Earthquake	Earthquake	Earthquake	DC 81-02	1981	Imperial	4/1/1981				
Wave Action & High Tides	Flood	High Tides	DC 81-01	1981	San Mateo	3/81				
1980 Mediterranean Fruit Fly Infestation	Agricultural	Insect pest	GP-1980 Medfly	1980	Alameda, Santa Clara	12/1/1980				
1980 Southern California Fires	Fire	Fire	DR-635	1980	San Bernardino, Los Angeles, Orange, Riverside	11/18/1980, 11/25/80	11/18/1980			64,795,200
Jones Tract Levee Break	Flood	Levee break	DR-633	1980	San Joaquin	9/30/1980	9/30/1980			21,510,956
Owens Valley Earthquake	Earthquake	Earthquake		1980	Mono	5/28/1980	Not declared		9	2,000,000
1980 April Storms	Flood		80-01 - 80-25	1980	Alpine, Amador, El Dorado, Inyo, Lake, Marin, Monterey, Placer, Plumas, San Mateo, Santa Cruz, Sierra, Solano, Stanislaus, Tuolumne, Calaveras	4/1/1980				
1980 March Storms	Flood	Storms		1980	Stanislaus, Monterey, Solano, Santa Cruz	3/5/1980	Not declared			
1980 Winter Storms	Flood	Flood	DR-615	1980	Santa Barbara, Los Angeles, Orange, Riverside, Ventura, San Bernardino, San Diego	2/21/80, 2/7/80, 2/19/80	2/21/1980			
Delta Levee Break	Flood	Levee break	EM-3078	1980	Contra Costa, Sacramento, San Joaquin	1/23/1980	1/23/1980			17,388,013

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Gasoline Shortage	Economic	OPEC		1979	Alameda, Contra Costa, Los Angeles, Marin, Monterey, Orange, Riverside, San Francisco, San Diego, Santa Clara, Santa Cruz, San Mateo, Ventura, San Bernardino, Sonoma	5/8/79 - 11/13/79	Not declared			
Imperial Earthquake	Earthquake	Earthquake	DR-609	1979	Imperial	10/16/1979	10/16/1979		91	21,197,250
1979 Fires	Fire	Fire		1979	Santa Barbara, Ventura, Los Angeles, El Dorado	9/28/79, 9/21/79, 9/20/79	Not declared			9,970,119
1979 Severe Storms (Riverside)	Flood	Storms	DR-594	1979	Riverside	7/26/1980	7/27/1979			25,867,100
Excessive Rains	Flood	Storms		1979	Riverside					
1979 Storms and Floods (San Diego)	Flood	Storms	DC 79-01	1979	San Diego	2/1/1979				
1978 Los Angeles Fire	Fire	Fire	EM-3067	1978	Los Angeles	10/24/1978	10/29/1978	1		61,279,374
Laguna Landslide	Landslide	Landslide	DR-566	1978	City of Laguna Beach (Orange County)	10/5/1978	10/9/1978			16,595,000
PSA Air Crash	Air Disaster	Manmade		1978	City of San Diego (San Diego County)	1/15/1979	Not declared	150		
Inyo County Flooding	Flood	Flood	GP 78-13	1978	Inyo	9/1/1978				
Santa Barbara Earthquake	Earthquake	Earthquake		1978	Santa Barbara	8/15/1978	Not declared		65	12,987,000
1978 Winter Storms	Flood	Storms	DR-547	1978	Inyo, Mono, San Diego, San Luis Obispo, Kings, Monterey, Kern, Los Angeles, Orange, Riverside, San Bernardino, Santa Barbara, Tulare, Ventura	3/9/78, 2/27/78, 2/13/78	2/15/1978	14	21	117,802,785
Heavy rains excluded	Flood	Storms	DC 78-06-11	1978	Santa Clara, Solano, Sonoma, Tuolumne, Colusa	2/13/1978				
1978 Storms	Flood	Storms	GP 78-03/04	1978	Humboldt, Mendocino, Santa Cruz	1/27/78, 1/20/78	Not declared			6,126,409
Heavy Rains (Marin)	Flood	Storms	DC 78-02	1978	Marin	1/1/1978				
1978 Storms and Flooding	Flood	Storms	GP 78-01/03	1978	Riverside, San Diego	1/26/1978				

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1977 Storms	Flood	Storms	GP 77-05	1977	San Diego, Kern, Humboldt, City of Arvin (Kern County)	1/10/78, 12/23/77, 1/22/77, 12/21/77	Not declared			38,009,035
Heavy Rainstorms	Flood	Storms	DC 77-03/04	1977	Imperial, Mendocino, Riverside	10/1/1977				
Threat of Floods	Flood	Fire	GP	1977	Monterey, Riverside	9/8/1977	Not declared			6,110,000
Imperial County Flooding	Flood	Storms	GP 77-02	1977	Imperial	8/23/1977	Not declared			28,498,469
Desert Hot Springs Heavy Rains	Flood	Storms	DC 77-01	1977	Imperial	8/31/1977				
Scarface Fire	Fire	Fire	FS-2028	1977	Modoc		8/1/1977			
Sycamore Fire	Fire	Fire		1977	Santa Barbara	7/27/1977	Not declared			25,540,755
1977 Heavy Rains and Windstorms	Flood	Storms	DC 76-03/04	1977	San Bernardino	1/1/1977				
1976 High Winds and Flooding	Flood	Storms	DR-521	1976	Imperial, Riverside, San Bernardino, San Diego	9/13/76, 9/22/76	9/21/1976			120,132,771
1976 Heavy Rains and Windstorms	Flood	Storms	DC 76-02	1976	San Diego	9/1/1976				
1976 Drought	Drought	Drought		1976	Alpine, Calaveras, Colusa, Fresno, Glenn, Madera, Merced, San Diego, San Joaquin, Solano, Stanislaus, Sutter, Tuolumne, Alameda, Butte, Contra Costa, Kings, Los Angeles, Riverside, San Luis Obispo, Tulare, Yolo, Amador, Monterey, Napa, Nevada, San Benito, San Bernardino, Tehama, San Mateo, Marin	2/9/76, 2/13/76, 2/24/76, 3/26/76, 7/6/76	Not declared			2,664,000,000
1975 Fires	Fire	Fire		1975	Los Angeles	11/24/1975	Not declared			19,486,960
Heavy Rain and Snow (Kern)	Flood	Storms	DC 75-04	1975	Kern	11/1/1975				
Butte Earthquake	Earthquake	Earthquake	DC 75-03	1975	Butte		8/1/1975			
Heavy Rain and Snow (El Dorado)	Flood	Storms	DC 75-01	1975	El Dorado	2/1/1975				
1974 Storms	Flood	Storms	DR-432	1974	Mendocino	4/23/1974	5/7/1974			4,475,900

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
Gasoline Shortage	Economic	OPEC		1974	Alameda, Contra Costa, Los Angeles, Orange, Riverside, San Mateo, Solano, Santa Clara, Ventura	2/28/74, 3/4/74, 3/10/74	Not declared			
Storms (Santa Cruz)	Flood	Storms		1974	Santa Cruz	2/28/1974	Not declared			763,267
1974 Storms	Flood	Storms	DR-412	1974	Humboldt, Shasta, Siskiyou, Trinity, Glenn, Mendocino, Tehama	1/17/74, 1/18/74	1/25/1974			35,192,500
Boulder Fire	Fire	Fire		1973	San Diego	12/12/1973	Not declared			215,700
1973 Fires	Fire	Fire		1973	Los Angeles	7/16/1973	Not declared			1,300,000
Eucalyptus Tree Freeze	Freeze	Freeze	DR-373	1973	Alameda, Contra Costa	4/4/1973	5/25/1973			
Southern Pacific Railroad Fires and Explosions (Roseville)	Fire	Explosion		1973	Sacramento, Placer	4/30/1973	Not declared		37	2,925,000
Storms and Floods (San Mateo)	Flood	Storms		1973	City of Pacifica (San Mateo County)	4/11/1973	Not declared			700,000
Storms and Floods (Mendocino)	Flood	Storms		1973	Mendocino	3/15/1973	Not declared			1,523,200
1973 Freeze	Freeze	Freeze		1973	Butte	2/28/1973	Not declared			300,000
1973 Storms and Floods	Flood	Storms		1973	Colusa, Glenn, Napa, Placer, Sutter, Yuba	2/28/1973	Not declared			1,864,000
1973 High Tides	Flood	High Tides		1973	Ventura	2/1/1973	Not declared			1,027,000
Coastal Flooding	Flood	Storms	DR-364	1973	Marin, San Luis Obispo, City of South San Francisco (San Mateo County), Santa Barbara, Solano, Ventura	1/23/73, 1/30/73, 2/8/73, 2/28/73	2/3/1973			17,998,250
1972 Heavy Rains and Mud Slides	Flood	Storms		1972	Monterey	10/24/1972	Not declared			720,000
1972 Severe Weather	Flood	Storms		1972	Sutter	9/3/1972	Not declared			2,004,300
1972 Freeze (Lake)	Freeze	Freeze		1972	Lake	7/13/1972	Not declared			357,000
1972 Drought	Drought	Drought		1972	Glenn, San Benito, Santa Clara	7/3/1972	Not declared			8,000,000
Andrus Island Levee Break	Flood	Levee break	DR-342	1972	Sacramento	6/21/1972	6/27/1972			23,681,630

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1972 Freeze	Freeze	Freeze		1972	Fresno, Kings, Tulare, Merced, Kern, Madera, San Benito, Stanislaus, El Dorado, Tehama, Placer, Nevada, San Joaquin, Colusa, Siskiyou, Modoc, Santa Clara	4/17/72, 5/22/72, 5/31/72	Not declared			111,517,260
Exotic Newcastle Disease Epidemic	Agricultural	Disease		1972	Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura, Santa Barbara	4/10/72, 5/22/72	Not declared			10,000,000
1972 Continuing Storms	Flood	Storms	DR-329	1972	Del Norte, Humboldt	2/28/1972, 3/28/72	4/5/1972			6,817,618
1972 Storms	Flood	Storms	DR-316	1972	Santa Barbara	1/3/1972	2/11/1972			2,660,000
1971 Fires	Fire	Fire		1971	Santa Barbara	10/13/1971	Not declared	4		9,000,000
1972 High Tides	Flood	High Tides		1971	Ventura	5/19/1971	Not declared			250,000
San Fernando Earthquake	Earthquake	Earthquake	DR-299	1971	Los Angeles	2/9/1971	2/9/1971	58	2,000	483,957,000
Fires (Riverside)	Fire	Fire		1970	Riverside	12/22/1970	Not declared			3,200,000
1970 Fires	Fire	Fire	DR-295	1970	City of Oakland (Alameda County), Los Angeles, Ventura, San Diego, Kern, San Bernardino, Monterey, Riverside	9/24/70, 9/28/70, 10/1/70, 10/2/70, 10/20/70, 11/14/70	9/29/1970	19		223,611,000
1970 Storms and Floods	Flood	Storms		1970	Contra Costa	4/10/1970	Not declared			
1970 Freeze	Freeze	Freeze		1970	Napa, Sonoma, Mendocino, San Joaquin, Lake	5/1/70, 5/19/70, 6/8/70, 6/10/70, 7/24/70	Not declared			19,749,200
1970 Landslide (Los Angeles)	Landslide	Storms		1970	City of Los Angeles (Los Angeles County)	3/10/1970	Not declared			8,500,000
1970 Riots	Civil Unrest	Civil Unrest		1970	Santa Barbara	2/26/1970	Not declared		12+	300,000
Fire (Tuolumne)	Fire	Fire		1970	City of Sonora (Tuolumne County), Tuolumne	2/26/1970	Not declared			2,300,000
1970 Landslide (Oakland)	Landslide	Storms		1970	City of Oakland					
(Alameda County)	2/10/1970	Not declared			11,500,000					

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1970 Northern California Flooding	Flood	Flood	DR-283	1970	Butte, Colusa, Glenn, Lake, Lassen, Marin, Modoc, Plumas, Shasta, Siskiyou, Tehama, Trinity, Sutter, Yuba, Del Norte, Alameda, El Dorado, Mendocino	1/27/1970, 2/3/1970, 2/10/1970, 3/2/1970	2/16/1970			27,657,478
Berkeley Riots (Alameda County)	Civil Unrest	Civil Unrest		1969	City of Berkeley					
Santa Barbara Oil Spill (Santa Barbara Channel)	HazMat	Offshore Oil Platform spill		1969	Coastal Areas of Southern California					
1969 Freeze	Freeze	Freeze		1969	San Diego	2/5/1969	Not declared			10,000,000
1969 Storms	Flood	Storms	DR-253	1969	Los Angeles, San Luis Obispo, Fresno, Inyo, Riverside, San Bernardino, Santa Barbara, Tulare, Ventura, Amador, El Dorado, Kern, Kings, Madera, Modoc, Mono, Monterey, Orange, Placer, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Tuolumne, Mariposa, Merced, Calaveras, San Benito, Sierra, Contra Costa, Humboldt, Mendocino, Sonoma, Plumas, Tehama, Yuba, Butte, Marin, Yolo	1/23/69, 1/25/69, 1/28/69, 1/29/69, 2/8/69, 2/10/69, 2/16/69, 3/12/69	1/26/1969	47	161	300,000,000
Heavy Snow Runoff	Flood	Snow melt	DR-227	1969	Kings	1/28/1996	8/15/1969			2,812,500
1968 Riots	Civil Unrest	Civil Unrest		1968	City of Richmond (Contra Costa County)	8/2/1968	Not declared			
Woodson Fire	Fire	Fire		1967	Los Angeles, Orange, San Diego, Ventura	1/7/1967	Not declared			11,345,000
1966 Landslides	Landslide	Landslide		1966	Redwood City	12/16/1966	Not declared			100,000
1966 Winter Storms	Flood	Storms	DR-223	1966	Kern, Riverside, Tulare, San Bernardino, San Luis Obispo, Monterey, City of Escondido (San Diego County), Inyo	12/9/66, 12/13/66, 12/16/66, 12/23/66	1/2/1967			28,761,041
1966 Riots	Civil Unrest	Civil Unrest		1966	San Francisco	9/27/1966	Not declared		42	
1966 Rains	Flood	Storms	DR-212	1966	Humboldt	1/14/1966	1/22/1966			6,918,000

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1965 Heavy Rainfall	Flood	Storms	DR-211	1965	Riverside, San Bernardino, Ventura, San Diego	11/24/65, 11/26/65, 12/23/65	12/7/1965, 1/3/1966			21,843,739
1965 Fires	Fire	Fire		1965	Marin, Napa, Placer, Solano, Sonoma	9/18/1965	Not declared			
1965 Riots	Civil Unrest	Civil Unrest		1965	Los Angeles	8/14/1965	Not declared	32	874	44,991,000
1965 Landslide	Landslide	Landslide		1965	City of Los Angeles (Pacific Palisades area), Los Angeles County	6/21/1965	Not declared			6,488,600
Flooding and Landslides	Flood	Storms		1965	City of Burbank, Los Angeles	1/5/1965	Not declared			
1964 Late Winter Storms	Flood	Storms	DR-183	1964	Del Norte, Humboldt, Shasta, Mendocino, Colusa, Glenn, Lassen, Plumas, Sierra, Siskiyou, Sonoma, Sutter, Tehama, Trinity, Amador, Butte, El Dorado, Modoc, Nevada, Placer, Yuba, Alpine, Lake, Sacramento, Yolo, Marin	12/22/64, 12/23/64, 12/28/64, 1/5/65, & 1/14/65	12/29/1964			213,149,000
1964 Tsunami (Marin)	Tsunami	Earthquake		1964	Marin	9/15/1964	Not declared			
Fires and High Winds	Fire	Fire		1964	Napa, Sonoma, Santa Barbara	9/22/64, 9/23/64, & 9/25/64	Not declared			16,500,000
1964 Storms	Flood	Storms		1964	Los Angeles	4/3/1964	Not declared			1,610,300
1964 Tsunami (Del Norte)	Tsunami	Earthquake	Unknown	1964	Del Norte	3/28/1964	4/1/1964	12		10,000,000
Weldon Fire	Fire	Fire		1964	Los Angeles	3/16/1964	Not declared			2,000,000
1964 Heavy Rains	Flood	Storms		1964	Humboldt	2/10/1964	Not declared			1,407,000
Baldwin Hills Dam Failure	Flood	Dam Failure	DR-161	1963	Los Angeles	12/16/1963	12/21/1963			5,233,203
High Tides and Heavy Surf	Flood	High Tides		1963	Orange, City of Redondo Beach		Not declared	5		500,000
1963 Floods and Rains	Flood	Storms	Unknown	1963	Alpine, Nevada, Placer, Plumas, Sierra, Amador, Colusa, El Dorado, Glenn, Lake, Lassen, Tehama, Santa Clara, Santa Cruz, Siskiyou, Yolo, Tulare, Mono, Trinity, Yuba	2/7/63, 2/26/63, 2/29/63, & 4/22/63	145 (2/25/63)			

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1963 Floods	Flood	Storms		1963	Northern California (boundaries of San Luis Obispo, Ventura, Los Angeles, and San Bernardino counties to the Oregon State Line)	2/14/1964	Not declared			
1962 Floods and Rains	Flood	Storms		1962	Alameda, Butte, Contra Costa, Modoc, Napa San Mateo, Sierra, Sutter, Yuba, Placer, Trinity, Lassen	10/17/62, 10/25/62, 10/30/62, & 11/4/62	10/24/1962			4,000,000
Fires and Explosions	Fire	Fire		1962	Alameda	9/14/1962	Not declared	1	12	500,000
Flood and Rainstorm	Flood	Storms	DR-122	1962	Los Angeles, Ventura	2/16/62 and 2/23/62	3/6/1962			
Bel Air Fires	Fire	Fire	DR-119	1961	Los Angeles (Bel Air area)		11/16/1961		103	
1961 Widespread Fires	Fire	Fire		1961	Amador, Butte, El Dorado, Napa, Nevada, Placer, San Diego, Sonoma, Tehama	9/8/1961	Not declared			5,696,813
1961 Widespread Fires (Madera)	Fire	Fire		1961	Madera		Not declared	2		
High Tides and Waves	Flood	Storms		1961	Ventura	1/16/1961	Not declared			
1960 Widespread Fires	Fire	Fire		1960	Lassen, Plumas, Shasta, Sierra, Tehama	8/16/1960	Not declared			3,075,000
1960 Major Fires	Fire	Fire		1960	Los Angeles, San Bernardino	7/21-22/60	Not declared		12	10,000,000
1959 Heavy rains	Flood	Storms		1959	Tokay grape producing areas of Northern California	9/17/1959	Not declared	2		100,000
Potential Flood Damage and Landslides as a Result of Fires	Flood	Fire	CDO 59-01	1959	Los Angeles	1/8/1959	Not declared			
1958 April Storms & Floods	Flood	Storms		1958	Statewide	4/2/1958	4/4/1958	13	several	24,000,000
1958 February Storms & Floods	Flood	Storms	CDO 58-03	1958	Northern California (Southern boundaries of Santa Cruz, Santa Clara, Stanislaus, Tuolumne, Alpine counties to the Oregon border)	2/26/1958	Not declared			
High Tides	Flood	High Tides	CDO 58-02	1958	City of Imperial Beach, San Diego County	1/31/1958	Not declared			
Newton Fires (Monrovia Fires)	Fire	Fire	CDO 58-01	1958	Los Angeles	1/3/1958	Not declared	1	23	
Heavy Rains	Flood	Storms		1957	Cherry-producing areas of Northern California	Not Proclaimed	Not declared		2	6,000,000

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Disaster Name	Disaster Type	Disaster Cause	Disaster #	Year	Counties and Cities Declared	State Proclamation	Federal Declaration	Deaths*	Injuries*	Cost of Damage (\$)*
1956 Fires	Fire	Fire	DR-65	1956	Los Angeles (Malibu area), Ventura		12/29/1956	1	Several hundred	70,000,000
1955 Floods	Flood	Flood	DR-47	1955	Statewide	12/22/1955	12/23/1955	74		200,000,000
Fire, Flood, and Erosion	Flood	Flood	DR-28	1954	Los Angeles, San Bernardino	Not Proclaimed	Federal funds made available			
1950 Floods	Flood	Flood	OCD 50-01	1950	Statewide	11/21/1950	Not declared	9		32,183,000

*Death, injury and cost data pending
Source: Cal OES

APPENDIX F – HAZARD MITIGATION LEGISLATION REFERENCED IN THE 2018 SHMP

To obtain full text of California legislation, conduct a search on the California Legislation Information website:
<http://leginfo.legislature.ca.gov/>

2018 LEGISLATION

Senate Bill 100 (climate)

2017 LEGISLATION

Assembly Bill 398 (climate)

Assembly Bill 2800 (climate change and state infrastructure)

Senate Bill 1 (transportation)

Senate Bill 109 (Greenhouse Gas Reduction Fund)

Senate Bill 525 disadvantaged communities)

Senate Bill 1278 (flood)

2016 LEGISLATION

Assembly Bill 1550 (climate with focus on disadvantaged communities)

Assembly Bill 1613 (Greenhouse Gas Reduction Fund)

Assembly Bill 2722 (climate and social equity)

Senate Bill 32 (climate)

Senate Bill 380 (natural gas storage)

Senate Bill 438 (earthquake)

Senate Bill 859 (Greenhouse Gas Reduction Fund)

Senate Bill 1000 (environmental justice)

Senate Bill 2800 (climate change)

2015 LEGISLATION

Assembly 670 (information technology security)

Assembly Bill 1071 (supplemental environmental projects)

Assembly Bill 1171 (regional transportation)

Assembly Bill 1482 (climate)

Senate Bill 88 (water resources and social equity)

Senate Bill 246 (climate)

Senate Bill 350 (Clean Energy and Pollution Reduction Act)

Senate Bill 379 (climate)

Senate Bill 380 (natural gas storage)

2014 LEGISLATION

Assembly Bill 52 (Tribal communities)

Assembly Bill 1471 (water quality)

Assembly Bill 1739 (groundwater)

Senate Bill 1168 (groundwater)

Senate Bill 1319 (groundwater)

2013 LEGISLATION

Assembly Bill 127 (fire)
Assembly Bill 217 (solar electricity)

Senate Bill 4 (oil and gas)
Senate Bill 135 (earthquake)
Senate Bill 743 (transportation)

2012 LEGISLATION

Assembly Bill 296 (transportation)
Assembly Bill 578 (pipeline safety)
Assembly Bill 861 (public utility)
Assembly Bill 1241 (fire)
Assembly Bill 1965 (flood)

Senate Bill 200 (delta levee maintenance)
Senate Bill 535 (climate change)
Senate Bill 1090 (disadvantaged communities)
Senate Bill 1241 (local hazard mitigation planning in SRA and VHFHSZ)
Senate Bill 1278 (flood)

2011 LEGISLATION

Senate Bill 90 (earthquake; amendment to HFSSA)
Senate Bill 244 (disadvantaged communities)
Senate Bill 836 (renewable energy)

2010 LEGISLATION

Senate Bill 1070 (flood)

2009 LEGISLATION

Assembly Bill 1175 (toll facilities)

Senate Bill x7-6 (groundwater)
Senate Bill 499 (earthquake; amendment to Alquist Hospital Facilities Seismic Safety Act)

2008 LEGISLATION

Senate Bill 375 (transportation)
Senate Bill 732 (established Strategic Growth Council for water quality and flood control)

2007 LEGISLATION

Assembly Bill 5 (flood)
Assembly Bill 70 (flood)
Assembly Bill 156 (flood)
Assembly Bill 162 (flood)
Assembly 1470 (solar technology)

Senate Bill 5 (flood)
Senate Bill 17 (flood)
Senate Bill 97 (analyzation of GHG emissions)

2006 LEGISLATION

Assembly Bill 32 (climate)

Senate Bill 1661 (earthquake; amendment to Alquist Hospital Facilities Seismic Safety Act)

Assembly Bill 2140 (general Plans: safety element)

PRE-2006 LEGISLATION

Assembly Bill 144 (funding for Bay Area toll bridge)

Assembly Bill 304 (2005) (earthquake)

Assembly 1165 (2005) (energy resources)

Assembly Bill 1553 (2001) Environmental Justice)

Assembly Bill 1965 (2000) (flood)

Senate Bill 60 (1997) (earthquake)

Senate Bill 226 (1997) (earthquake)

Senate Bill 547 (1986) (earthquake)

Senate Bill 1369 (2003) (fire)

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APPENDIX G– EARTHQUAKE HAZARD MITIGATION LEGISLATION, 1933-2017

Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Dam Safety Act	1929	Dam Safety	Institution / Regulation	After the 1928 collapse of the Saint Francis Dam in Ventura County killed more than 450 people, California passed the Dam Safety Act to regulate the construction and maintenance of all non-federal dams. DWR’s Division of Safety of Dams administers the Dam Safety Act and periodically inspects dams to ensure their safety. Fees paid by dam owners fund the Division’s work.	
Field Act [AB 2342]	1933	School seismic safety	Regulation	In 1933, one month after the Long Beach Earthquake destroyed 70 schools, seriously damaged 120 others, and caused minor damaged to 300 more, California passed the Field Act to ensure seismic safety in new public schools. The Act establishes regulations for the design and construction of K-12 and community college buildings. The Division of the State Architect within DGS enforces the Field Act. The Field Act requires all new school building construction to be designed based on high level building standards adopted by the state; plans and specifications prepared by state-registered designers.	Education Code §17281, et seq.
Riley Act [AB 2391]	1933	General building safety	Institution / Regulation	Following the 1933 Long Beach Earthquake, the state also passed the Riley Act which requires local governments to have building departments that issue permits for new construction and alterations to existing structures and conduct inspections. Permit fees paid by building owners generally fund the work of local building departments. The Act also set minimum seismic safety requirements that have since been incorporated into all building codes; set minimum seismic safety requirements.	AB 2391

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Garrison Act	1939	School seismic safety	Regulation	Requires school boards to assess building safety of pre-Field Act schools; ordered modernization of non-Field Act compliant structures	
California Environmental Quality Act (applies to all natural and other hazards)	1970	Environmental quality	Regulation	Requires environmental review of “discretionary” development projects. If significant impacts are found, an environmental impact report (EIR) is required, together with mitigation of significant impacts.	Resources Code §21000, et seq., http://ceres.ca.gov/ceqa/stat
Hospital Safety Act	1971	Seismic Safety	Regulation	The loss of emergency functions and hospital collapses due to the 1971 San Fernando Earthquake prompted passage of the Hospital Seismic Safety Act of 1973. This Act regulates the design, construction, and alteration of hospitals for the protection of life and property and so that they will remain functional after disasters. OSHPD enforces this Act.	
Strong Motion Instrumentation Act [SB 1374]	1972	Earthquake monitoring	Program	The state passed the Strong Motion Instrumentation Act in 1972 in response to the extensive damage to buildings and bridges caused by the 1971 San Fernando Earthquake. The earthquake highlighted the need for more data on strong ground shaking during earthquakes and on the response of structures to the shaking. Establishes statewide network of strong motion instruments to gather vitals of earthquake data-gathering instruments for the engineering and scientific communities for essential structures; requires Division of Mines and Geology to monitor instruments. Data obtained from the strong motion instruments is used to recommend changes to building codes, assist local governments in the development of their general plans, and help emergency response personnel in the event of a disaster.	PRC §§2700-2709.1

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Seismic Safety General Plan Element [SB 519] (applies to all natural hazards)	1972	Seismic safety policy	Policy	Requires city and county general plans to include a seismic safety element	GC §65302
Alquist-Priolo Earthquake Fault Zoning Act [SB 520]	1972	Seismic zone mapping	Program / Regulation	The state passed the Alquist-Priolo Earthquake Fault Zoning Act in 1972 to mitigate the hazard of surface faulting to structures built for human occupancy. The law was another response to the 1971 San Fernando Earthquake, which produced extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act requires the state geologist to prepare maps of major fault traces and zones. The Act also prohibits construction of new buildings used for human occupancy on the surface trace of active faults and requires geologic site investigation prior to issuance of building permit.	PRC §§2621-2630
State Capitol Seismic Evaluation [SCR 84]	1972	Seismic evaluation			
Alquist Hospital Facilities Seismic Safety Act of 1973 [SB 352, SB 519]	1973	Essential building seismic safety	Regulation / Institution	Regulates the design, construction, and alteration of hospitals; set seismic safety standards for new hospitals; created an advisory Hospital Building Safety Board	HSC §129675, et seq.
Seismic Safety Commission Act	1975	Seismic safety policy	Institution	This Act establishes independent commission to advise Governor, Legislature, state and local governments on reduction of earthquake risk. The mission of CSSC is "to provide decision makers and the general public with cost-effective recommendations to reduce earthquake losses and expedite recovery from damaging earthquakes." The commission is also	Business and Professions Code §1014

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
				responsible for implementing the California Earthquake Hazards Reduction Act, which requires CSSC to “prepare and administer a program setting forth priorities, funding sources, amounts, schedules, and other resources needed to reduce statewide earthquake hazards.”	
Highway Emergency Fund [AB 387]	1975	Infrastructure repair	Program	Establishes Highway Emergency Fund to provide assistance to local jurisdictions for repair or replacement of highways damaged by earthquakes	
Seismic design of LNG facility [SB 1081]	1975	Essential facility seismic safety	Regulation	Requires seismic design of a liquefied natural gas terminal be addressed by PUC	
Earthquake hazard reduction program [SB 1279]	1978	Seismic hazard mitigation	Policy	Directs CSSC to assess policy and program implications of earthquake prediction and to develop seismic safety program and financing plan for the state. CSSC issued its first comprehensive earthquake hazard mitigation plan, Guiding Action: Goals and Policies to Strengthen Earthquake Safety in California, in 1979. The CSSC prepared a strategic seismic safety program and financing plan, Earthquake Hazards Management: An Action Plan for California, in 1982. After the passage of the California Earthquake Hazard Reduction Act of 1986, CSSC prepared California at Risk, a series of comprehensive five-year programs for earthquake mitigation.	
Mobile home bracing devices [SB 360]	1980	Seismic hazard mitigation	Regulation / Program	Requires mobile home bracing devices; required HCD to administer program, test devices, issue certifications	
Hospital inspections [SB 961]	1980	Seismic evaluation	Program		

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Earthquake insurance [AB 2865]	1983	Earthquake insurance	Regulation / Policy	Requires insurance companies to offer earthquake insurance; [repealed concurrent causation theory for earthquake damage]	Insurance Code §§100-124.5; Insurance Code §§1063.50-1063.68
Alquist Hospital Facilities Seismic Safety Act of 1983 [SB 1953]	1983	Essential building seismic safety	Policy / Regulation	Requires design and construction standards for hospitals; requires that after Jan. 1, 2008 any general acute care hospital building determined to be at potential risk of collapse or poses a risk of significant loss of life be used only for nonacute care	HSC §§130000-130070
Earthquake Education Act [SB 1893]	1983	Education and preparedness	Program		PRC §2805, et seq.
Earthquake preparedness [AB 2662]	1983	Education and preparedness	Program		
California Earthquake Hazard Reduction Act [SB 548]	1985	Seismic hazard mitigation	Program	After the 1985 Mexico City Earthquake, in 1986 California passed the Earthquake Hazards Reduction Act, which called for a coordinated state program to implement new and expanded activities to significantly reduce earthquake threat. The program is coordinated by CSSC, which is required to specify priorities, funding sources and amounts, schedules, and other resources. Although historically funded by the state general fund, since the 2003-2004 fiscal year, the program was funded by fees imposed on property insurance companies. The Act authorizes CSSC to develop a statewide plan to reduce earthquake hazards.	GC §8870, et seq.
Unreinforced Masonry Building Act	1986	General building seismic safety	Program	In response to the 1983 Coalinga Earthquake, in 1986 the state legislature enacted the Unreinforced Masonry Building Law, which requires local governments in high seismic regions (within Seismic Zone 4) of California to inventory unreinforced masonry buildings, establish mitigation programs, and report progress to the CSSC.	GC §§8875-8875.10

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Essential Services Building Seismic Safety Act of 1986 [SB 122]	1986	Essential building seismic safety	Regulation	Also in response to the 1985 Mexico City Earthquake, in 1986 the state passed the Essential Services Building Seismic Safety Act to require enhanced regulatory oversight by local governments during the design and construction of new essential service facilities. The Division of the State Architect within DGS enforces this Act. The Act sets seismic safety design and review standards for critical facilities such as police and fire stations and emergency communications and operations facilities; enforced by DSA	HSC §16000, et seq.
Katz Act	1987	School seismic safety	Regulation	Requires all private schools to develop disaster plans and an earthquake emergency procedure system	Education Code §§35295-35297
SB 920	1989	Government building seismic safety	Policy	Requires CSSC to develop a state policy on acceptable levels of earthquake risk for new and existing state-owned buildings by January 1, 1991	Revenue and Taxation Code §74.5
Bridge Seismic Retrofit Program [SB 2104]	1990	Essential facility seismic safety	Program	Requires Caltrans to prepare an inventory of all state-owned bridges which require strengthening or replacement to meet seismic-safety standards, and prepare plan and schedule for completion.	
Earthquake Safety and Public Buildings Rehabilitation Bond Act of 1990 [Prop 122]	1990	Essential building seismic safety	Program / Institution	Proposition 122 was passed by voters in June 1990 after the 1989 Loma Prieta Earthquake revealed vulnerabilities in state-owned and essential services buildings. The bond measure authorized the state to issue \$300 million in general obligation bonds for the seismic retrofit of state and local government buildings (\$250 million for state-owned buildings and \$50 million for partial financing of local government essential services facilities). The Seismic and Special Programs Section of the DGS Real Estate Services Division administers Proposition 122 grant programs.	GC §§8878.50-8878.52

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Seismic Hazards Mapping Act	1990	Seismic hazard mapping	Program	The Seismic Hazards Mapping Act, passed in 1990, directs the Department of Conservation to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking; tsunami hazards were added to the act in 1992. The purpose of the Act is to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating these seismic hazards. The Act requires geotechnical investigations to identify hazards and formulate mitigation measures before permitting most developments within mapped Zones of Required Investigation.	PRC §§2690-2699.6
	1990	Essential building seismic safety	Policy	Establishes seismic safety standards for ambulatory surgical centers; requires fixed medical equipment (floor, roof or wall mounted) to be installed using services of licensed architect or structural engineer; and requires inspection every five years	HSC §1226.5
Private Schools Act	1990	School seismic safety	Enhancement	Extends Field Act to new private schools	
AB 631	1990	Manufactured/Mobile home bracing devices	Enhancement	Requires HCD to adopt regulations governing the installation of earthquake-resistant bracing systems on manufactured homes or mobile homes	HSC §18613.5, et seq.
AB 1890	1990	Water heater bracing devices	Regulation	Requires new and replacement water heaters to be braced and anchored	HSC §§19210-19214
AB 3313	1990	Seismic retrofit guidelines	Regulation	Requires DSA and Building Standards Commission to develop and adopt seismic retrofit guidelines for state buildings, including those owned by CSU and UC	
Executive Order D-86-90	1990	Executive Order	Program	Requires Caltrans to prepare plan to review and retrofit transportation structures; requests UC and requires CSU to give priority consideration	

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
				to seismic safety in allocation of funds for construction projects	
Charter Schools Act	1992	School seismic safety	Retraction	Makes Field Act provisions optional for charter schools	
Hospital Seismic Retrofit and Replacement Program [SB 1953]	1994	Essential building seismic safety	Enhancement	The state legislature passed Senate Bill 1953 after the 1994 Northridge Earthquake revealed vulnerabilities in older hospitals. The law requires hospitals to undertake non-structural retrofits of emergency and surgical rooms by 2002 and collapse-avoidance retrofits by 2008. Establishes timeline and guidelines for hospitals and achieve full compliance with the Alquist Hospital Seismic Safety Act by 2030. OSHPD enforces this Act.	SB 1953
Marine Oil Terminal Program	1994	Essential facilities seismic safety	Program	After the 1994 Northridge Earthquake, the State Lands Commission received a hazard mitigation grant from FEMA to develop standards for the evaluation, retrofit, and maintenance of new and existing marine oil terminals. In 2003, the Commission issued its proposed regulations and plans to hold hearings prior to their consideration for adoption. The proposed regulations would help limit the potential and size of oil releases after earthquakes and tsunamis by requiring upgrades of older terminals. Fees to be paid by marine oil terminal owners would fund the state's oversight of this program.	
California Earthquake Authority [AB 13, SB 1993]	1996	Earthquake insurance	Institution	Creates the California Earthquake Authority; authorized CEA to issue policies of basic residential earthquake insurance	Insurance Code §§10089.5-10089.54
AB 425	1997	School seismic safety	Retraction	Authorizes community college district to acquire for use any offsite facility constructed prior to Jan. 1, 1998 that meets structural requirements of the 1976 UBC, but does not meet requirements of Education Code §81130 if it has	Education Code §§81149, 81530.5

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
				gone through an inspection by a structural engineer whose report is reviewed by DGS	
AB 865	1997	School seismic safety	Retraction	Authorizes school district to lease a commercial building prior to Jan. 1, 2003 that does not meet the requirements of the Field Act provided that the building was constructed in accordance with seismic safety standards for commercial buildings within earthquake zones	Education Code §17285
AB 300	1999	School seismic safety	Program	Requires DGS to conduct inventory of public school buildings that are concrete tilt-up or have non-wood frame walls that do not meet requirements of 1976 UBC by Dec. 31, 2001	Education Code §17317
SB 1122	1999	School seismic safety	Program	Requires OES, in cooperation with State Department of Education, DGS and SSC to develop an educational pamphlet for use by K-14 personnel to identify and mitigate risks posed by nonstructural earthquake hazards	GC §8587.7
AB 2791	2000	School and essential facility seismic safety	Policy / Regulation	Authorizes DGS to issue a stop work order when construction on a public school, community college, or essential services facility is not being performed in compliance with Field Act	Education Code §§17307.5, 81133.5; HSC §16017.5
SB 1729	2000	School seismic safety	Policy / Regulation	Requires geological and soil engineering studies by competent personnel if prospective school site is located within boundaries of special studies zone or within an area designated as geologically hazardous in safety element	Education Code §17212, et seq.
AB 656	2001	Essential building seismic safety	Regulation	Authorizes, for county-owned general acute care hospital buildings, a 1-year extension of Jan. 1, 2002 deadline for Non-structural performance Category-2 requirements until if hospital is removed from general acute care service and completion of specified replacement by Jan. 1, 2003	HSC §§130063.1-2
SB 1898	2003	Seismic gas valve shut-off device	Policy / Regulation	Authorizes local governments to adopt ordinances requiring installation of earthquake	HSC §§19180-83; HSC §§19200-05

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
				sensitive gas shutoff devices in buildings due to motion caused by an earthquake; allows DSA to establish a certification procedure for installation	
AB 3032	2003	URM building retrofit	Policy	Exempts owners of retrofitted URM buildings from compliance with posted entry-area earthquake warning signs	GC §§8875.8, 8875.9
AB 3033	2003	URM building retrofit	Policy	Prohibits a city or county from imposing additional non-seismic building improvements to retrofit of URM building if building or site conditions unrelated to the improvements	AB 3033
AB 216	2005	Essential facility seismic safety	Program	Allocates \$143 million for BART Tube Seismic Strengthening	Streets & Highways Code §30914(c)(21)
AB 144	2005	Toll-bridge retrofit	Program	Authorizes retrofit of state-owned toll bridges using seismic toll surcharge	Streets & Highways Code §188.4
AB 304	2005	"Soft Story" buildings	Policy	Soft-story residential buildings are multi-story wood-frame structures that may have inadequately braced lower stories that may not be able to resist earthquake motion. AB 304 encourages cities and counties to address the seismic safety of soft-story residential buildings and encourages local governments to initiate efforts to reduce the seismic risk in vulnerable soft-story residential buildings. AB 304 requires the seismic retrofit of these buildings to comply with a nationally recognized model code relating to the retrofit of existing buildings or substantially equivalent standards. The bill replaces the word "reconstruction" with "seismic retrofit" in provisions governing earthquake hazardous building reconstruction and defines seismic retrofit for purposes of provisions governing earthquake protection.	HSC §19610-19616
SB 167	2005	Essential facility seismic safety	Policy	Exempts hospitals subject to state seismic standards for hospitals from 2008 deadline if	HSC §130030, §130070

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
				governing body agrees to comply with 2030 standards by 2020.	
Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 [Proposition 1B]	2006	Essential facility seismic safety	Program	Provides \$125 million funding for seismic retrofit work on local bridges, ramps, and overpasses; establishes Local Bridge Seismic Retrofit Account	GC §8879.23(i)
AB 127	2006	Community College Facilities	Policy	Gives Community Colleges the option to comply with California building code or the Field Act	§81052
SB 135	2013	Earthquake early warning system	Program	Directed the Governor's Office of Emergency Services, in collaboration with other relevant institutions and government agencies, to create an early warning system to provide a short alarm before the main force of an earthquake hits. Prohibited the use of General Fund dollars in the development of the warning system.	
SB 438	2015	Earthquake early warning system	Policy	Eliminated the prohibition of the General Fund as a source of funding for the earthquake early warning system. Created the California Earthquake Early Warning Program and the California Earthquake Early Warning Advisory Board within the Governor's Office of Emergency Services.	
SB 494	2015	California Earthquake Safety Fund	Program	Created the California Earthquake Safety Fund and would require moneys in the fund be used for seismic safety and earthquake-related programs, including the earthquake early warning system, upon annual appropriation by the Legislature.	

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APPENDIX H– FLOOD HAZARD MITIGATION LEGISLATION, 1933-2017

Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Flood Control Law of 1946	1946	Flood control infrastructure cost sharing	Policy	Establishes state interest in and cooperation with the federal government in construction of flood control projects	Water Code §12800, et seq.
Cobey-Alquist Flood Plain Management Act	1965	Floodplain management	Program / Regulation	Authorizes review of floodplain management plans, establishes floodplain regulations, and regulates designated floodway use and reimbursement costs for federal flood control projects	Water Code §§8400-8415, §8401(c)
California Emergency Services Act	1970	Property disclosure	Regulation	Establishes disclosure obligations of seller or agent of seller of property in special flood hazard area, or in area of potential flooding	GC §§8589.3, 8589.4
Executive Order B-30-77	1977	Essential building flood safety	Program	Floodplain management for state buildings	Exec. Order B-30-77
Flood Emergency Action Team	1997			Creates Flood Emergency Action Team	Exec. Order
California Watershed Protection and Flood Prevention Law [AB 793]	1999				Water Code §12850
Floodplain Management Task Force [AB 1147]	2000	Floodplain management strategy	Institution	Recommends creation of the Flood Emergency Action Team to recommend floodplain management strategies designed to reduce flood losses and maximize the benefits of floodplains	AB 1147
Safe Drinking Water, Watershed Protection and Flood Protection Act [Proposition 13, AB 1584]	2000	Local flood control projects	Program	Provides funding to local agencies for locally sponsored, federally authorized flood control projects; provides funding for Flood Protection Corridor Program and flood control mapping	Proposition 13
Water Code §128		Flood disaster response	Policy	Enables DWR to respond to flood damage to property of general or state interest	Water Code §128
Flood Control Law		Flood control infrastructure construction	Policy	Allows any city to incur indebtedness to finance the construction of flood control infrastructure	Water Code §8000

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002					
[Proposition 50]	2002	Flood control infrastructure improvement	Program	Allocates funding available for grants for planning and implementation of multipurpose flood control programs; eligibility for funding dependent on project being designed to improve flood management	Water Code §79651(h)
Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 [Proposition 84]	2006	Critical flood control infrastructure evaluation	Program	Allocates \$275 million in funding for levee inspection and evaluation; map floodplains including rural areas with potential for urbanization and high density urban areas; improve effectiveness of emergency response; provides funding for critical immediate flood control needs throughout state; provides funding for assistance to local land-use planning	PRC §75030, et seq.
Disaster Preparedness and Flood Prevention Bond Act of 2006 [Proposition 1E, AB 140]	2006	Flood control infrastructure improvement	Program	Allocates \$3.0 billion in funding for evaluation, repair, reconstruction, or replacement of flood control infrastructure; improve or add flood control facilities; reduce risk of levee failure in Delta; develop flood hazard maps	PRC §5096.8, et seq.
AB 162	2007	Land Use Requirements	Policy	Requires cities and counties to address flood-related matters in the land use, conservation, safety, and housing elements of their general plans	GC §65302, 65303.4, 65352, 65584.04, 65584.06, 65300.2, and 65302.7.
AB 70	2007	Flood Liability	Policy	Requires that a city or county may be required to contribute a fair and reasonable share of the increased flood liability caused by its unreasonable approval of developments following the failure of a state flood control project	Water Code §8307

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
SB 5	2007	Central Valley Flood Protection Plan	Policy	Requires the Department of Water Resources and the Central Valley Flood Protection Board to prepare and adopt a Central Valley Flood Protection Plan by 2012, and establishes flood protection requirements for local land-use decisions consistent with the Central Valley Protection Plan	GC §65007, 65302.9, 65860.1, 65865.5, 65962, and 66474.5. HSC §50456. Water Code §8200, 9600
SB 1278	2012	Central Valley Flood Protection	Policy	Requires local governments in the Central Valley to amend general plans by July 2015 in accordance with Central Valley Flood Protection Plan. Requires local governments to make findings that property in undetermined risk areas have met the urban level of flood protection. Exempts DWR flood plain maps from CEQA and state endangered species act.	Amends Sec. 65302.9, 65860.1 of the Government Code, and Section 9610 of the Water Code
AB 1965	2012	Flood mapping	Policy	Requires DWR, on or before July 2, 2013, to release flood plain map and available data on water surface elevation of flooding in urban areas, as specified (Sacramento-San Joaquin Valley). Exempts maps from OAL review and approval, and limits DWR liability based upon the reasonable exercise or performance of discretionary or ministerial function	Amends Sec. 65007 of the Government Code
SB 753	2013	Central Valley Flood Protection	Policy	Clarified and expanded enforcement authority of the CVFPB with regard to encroachments onto facilities of the SPFC.	
SB 5	2017	Flood control infrastructure improvement	Policy	Placed Proposition 68 on June 2018 ballot which includes \$550 million for these flood management areas: Delta (\$50 million), Central Valley (\$350 million), multi-benefit projects (\$300 million), storm water/mudslide flood projects (\$100 million), and urban multi-benefit projects (\$100 million).	

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
SB 92	2017	Dam safety	Policy	Bolstered certain dam safety provisions in the California Water Code and Government Code which affects how DWR Division of Safety of Dams oversees dam safety in cooperation with the California Office of Emergency Services. DWR has updated the classification of the public safety risk of all state jurisdictional dams based on downstream hazard potential and reviews of critical appurtenant structures. For significant, high, and extremely high hazard dams under state jurisdiction, DWR will approve inundation maps prepared by dam owners for the failure of the dam and identified critical appurtenant structures under various failure scenarios unique to the dam and shall make approved dam failure inundation maps publicly available. For all dams under state jurisdiction that are not low hazard dams, Emergency Action Plans will be required utilizing these inundation maps. The California Office of Emergency Services shall review and approve the Emergency Action Plan based on the approved dam inundation map(s) prepared by the dam owner.	California Water Code 6160 and 6161
AB 1270	2017	Dam safety	Policy	Requires annual inspections for dams deemed to be high hazards, sets standards for inspections, and requires periodic review of dams' original design and construction records. It also requires inspectors to consult periodically with independent experts and makes inspection reports public.	California Water Code 6102.5 and 6103

APPENDIX I – WILDFIRE HAZARD MITIGATION LEGISLATION, 1933-2017

Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Organic Act	1887			Set aside National Forest Reserves	
State Fire Responsibility Act	1965	State Areas of Responsibility	Policy	Requires State Board of Forestry to classify all lands in state in which financial responsibility of preventing and suppressing fires is primarily the responsibility of the state; defines SRA land	PRC §4125
Z'berg Nejedly Forest Practice Act	1973	Forest resource improvement	Policy	Restores, enhances, and maintains productivity of timberlands while giving consideration to their varied public benefits; exempts certain vegetation management practices related to fuel reduction and establishing fuel breaks	PRC §4511, et seq., 4584(j)
California Forest Improvement Act of 1978	1978	Forest resource improvement	Program	Allows (DFW) to enter into agreements with eligible landowners to undertake forest resource improvement work; establishes practices that will improve long-term quality of forested lands in terms of timber productivity, retention of soil cover and value for wildfire	PRC §§4790-4799.05
Designate Hazardous Fire Areas [SB 1972 - Campbell]]	1979	Fire hazard zone designation	Policy / Regulation	Designates hazardous fire areas, regulates the use of fireworks and other hazardous materials within these designated areas; fire prevention reduction standards on railroad right of way	PRC §§4254, 4255, 4258, 4259, 4260, 4296.5
SB 78 - Ayala	1981	Fire hazard classification; building regulations	Policy / Regulation	Establishes State Responsibility Area (SRA) fire hazard classification and zoning, roof and attic openings, and HCD roofing regulations	PRC §4291.5; HSC §13108.5
SB 799 - Mello	1981	Firework regulation	Regulation	Bans the use of fireworks in SRA Fire Hazard Zones	PRC §§4254-4255, 4258-4260
	1989	Safety element review	Policy / Regulation	Requires State Board of Forestry to review the safety element of counties which contain state responsibility areas and make appropriate recommendations	PRC §4128.5
Natural Hazard Disclosure requirements [AB 1812 - Cortese]	1989	Natural hazard disclosure	Policy / Regulation	Requires Natural Hazard Disclosure for wildfire in SRA	PRC §4291, et seq.
Minimum fire safety regulation in SRA [SB 1075 - Rogers]]	1991	Minimum fire safety	Policy / Regulation	Sets minimum fire safety regulation in SRA	PRC §4290

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Very High Fire Hazard Severity Zones; Fire Hazard Zoning in Local Area of Responsibility (LRA) [AB 337 - Bates]	1992	Fire hazard zone designation	Policy / Regulation	Establishes designation of Fire Hazard Zoning in Local Responsibility Area (LRA)	GC §§51178-51188; HSC §13108.5
AB 3819 - Brown	1995	Fire hazard building safety	Policy / Regulation	Class A roof and Model Ordinance for defensibility of space and structures	GC §§51178.5, 51189; HSC §§13108.5, 13132.7; PRC §42205
AB 747 - Brown	1995	Fire hazard building safety	Policy / Regulation	Sets timeline for testing of Class A, B, C roof and shingles	HSC §13132.7
AB 1195 - Torlakson	1997	Fire hazard zone designation	Institution	Requires local agencies to designate Very High Fire Hazard Severity Zones upon recommendation from CAL FIRE; creates the Emergency Response Training Advisory Committee	Civil Code §§2079.11, 1102.6c, GC §§8589.3-8589.5, 51179, 51183.5, PRC §§2621.9, 2694, 2696, 4125, 4136
Natural Hazard Disclosure for wildfire in LRA and Very High Fire Hazard Severity Zones [AB 6X, AB 1195]	1998	Natural hazard disclosure	Regulation	Establishes disclosure obligations of seller or agent of seller of property in LRA and Very High Fire Hazard Severity Zones; facilitated by Natural Hazard Disclosure Statement	Civil Code §1103, et seq.; GC §51183.5
AB 423	1999	Fire hazard building safety	Policy	Lists wood roofing materials that have passed at least five years of the ten-year weather test; insurance companies honor replacement cost coverage for increased cost of fire retardant roofing materials	HSC §13132.7
California Clean Water, Clean Air, Safe Neighborhood Parks and Coastal Protection Act of 2002 [Proposition 40, AB 1602]	2002	Fuel reduction program	Program	Establishes program with goal to reduce wildland fuel loadings that pose threat to watershed resources and water quality	PRC §5096.3
AB 1216	2002	Fire hazard building safety	Regulation	Expands fire safety building standards in areas with high fire risk to various components (not listed)	PRC §4291, GC §51189
Governor's Blue Ribbon Fire Commission	2003	Review of fire response	Program	Reviews firefighting effort of Southern California wildfires; presents recommendations to policy makers that will promote fire safe environment in WUI	
Defensible Space regulations [SB 1369]	2004	Fire hazard building safety	Regulation	Requires persons in SRA to maintain additional firebreak by removing all brush, flammable vegetation or combustible growth located 30 to 100 feet from building or structure or to property line	PRC §4291(b)

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
Forest Fire Protection Act of 2004 [AB 2420]	2004	Forest resources	Policy	Authorized the Board of Forestry and Fire Protection to create a Healthy Forest Fire Prevention Exemption which would exempt from the requirements of the Forest Practice Act the harvesting of trees and other commercial forest products for the purpose of reducing the rate of fire spread, fire duration and intensity, fuel ignitability, and ignition of tree crown	PRC §4584
SB 502	2005	Weed and vegetation	Policy	Broadened the types of vegetation that homeowners in very high fire risk areas may retain when conducting fire safe clearances around their homes	GC §51182, HSC §14875, PRC §4291
SB 1084	2005	Forest practices	Policy	Established several new fire prevention strategies designed to reduce the threat of wildfire and enhance wildfire suppression resources	PRC §4442.6, 4464, 4475.5, 4476, 4480
SB 841	2006	Fire protection: fire breaks	Policy	Allows a landowner to remove any or all vegetation within 300 feet of specific structures, including hospitals, adult residential care facilities, schools, above ground storage tanks, and hazardous materials facilities, for the purpose of constructing a firebreak or other appropriate vegetation management techniques	PRC §4291.3
		Fire Hazard Severity Zones	Policy	Directs the California Department of Forestry and Fire Protection (CAL FIRE) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZs), define the application of various mitigation strategies to reduce risk associated with wildland fires. State Responsibility Areas (SRAs) were originally mapped in 1985 and last updated in 2007.	PRC §4201-4204 Government Code 51175-89

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Legislation	Adoption Date	Subject	Type of Legislation	General Provisions	Citation
SB 1595	2008	Fuels management: forest	Policy	Amended defensible space requirements that separate structures from surrounding vegetation and other potential wildfire fuels (recast these requirements in terms of fuels management instead of vegetation management). Required the Department of Forestry and Fire Protection (CAL FIRE) to develop a guidance document on fuels management, and added certain wind events to the fire modeling for CAL FIRE's designation of a very high fire hazard severity zones as specified that are deemed major causes of wildfire spread	GC §51175; PRC §4202
AB 2859	2008	Public resources: fire prevention	Policy	Facilitated and increased fuel treatment and clearance by exempting certain treatment activities	PRC §4527, 4716
Wildfire Prevention Assistance Act of 2008 [AB 1883]	2008	Fire: inmate crews and non-profit organizations	Policy	Authorizes CAL FIRE to enter into a contract with a non-profit organization for the purposes of using inmate crews for fire prevention work	PRC §4953
SCR 80	2008	Fire safe councils	Resolution	Resolution adopted in State Senate Rules Committee, recognizes California Fire Safe Councils as one of state leading community-based wildfire preparedness organizations	Resolution Statutes Chapter 116
SB 1241	2012	Local wildfire hazard planning	Policy	Mandates wildfire planning responsibilities to local agencies through requirements regarding 1) wildfire updates to general plans; 2) mandatory findings for subdivision approvals in state responsibility areas (SRAs) and very high fire hazard severity zones (VHFHSZs); and 3) California Environmental Quality Act (CEQA) checklist updates for wildfire safety.	GC §65302, §65302.5, §51177
Senate Bill 109	2017	Budget Act of 2017, Funding Wildfire Mitigation	Budget Allocation	Allocates \$220 million from the Greenhouse Gas Reduction Fund to CAL FIRE to address fire protection and resource management to mitigate wildfire. The funds appropriated to CAL FIRE are intended to be used for state and local healthy forest and fire prevention programs and projects that improve forest health and reduce greenhouse gas emissions caused by uncontrolled wildfires, including, but not limited to, vegetation management, forest overgrowth reduction, biomass energy generation, and measures to ensure future wildfires are more consistent with historic regenerative fire regime.	

APPENDIX J – TOP 10 CALIFORNIA REPETITIVE LOSS COUNTIES (BY TOTAL PAYMENT) SUMMARY FOR 2017

RANK	County Name	Total Payments	Losses
1	SONOMA COUNTY	\$14,459,027.40	84
2	SACRAMENTO COUNTY	\$3,493,233.74	18
3	NAPA COUNTY	\$3,400,511.89	19
4	LAKE COUNTY	\$1,932,269.89	23
5	MARIN COUNTY	\$1,775,553.77	17
6	ORANGE COUNTY	\$1,566,960.13	14
7	VENTURA COUNTY	\$961,027.19	2
8	SANTA CRUZ COUNTY	\$870,860.55	11
9	SOLANO COUNTY	\$720,862.16	4
10	MONTEREY COUNTY	\$712,764.84	6
	<i>Top Ten RL Total</i>	<i>\$29,893,071.56</i>	<i>198</i>
	<i>State RL Total</i>	<i>\$34,391,238.81</i>	<i>240</i>
	<i>Percent State Total</i>	<i>86%</i>	<i>83%</i>

Source: Cal OES PDFM Program

APPENDIX K – TOP 10 CALIFORNIA SEVERE REPETITIVE LOSS COUNTIES (BY TOTAL PAYMENT) SUMMARY FOR 2017

RANK	County Name	Total Payments	Losses
1	SONOMA COUNTY	\$25,890,063.53	168
2	LOS ANGELES COUNTY	\$4,352,364.05	29
3	LAKE COUNTY	\$2,843,481.57	23
4	MARIN COUNTY	\$2,926,282.69	23
5	NAPA COUNTY	\$3,701,700.46	21
6	SAN DIEGO COUNTY	\$1,776,475.24	13
7	SACRAMENTO COUNTY	\$2,630,155.62	13
8	SANTA CRUZ COUNTY	\$1,335,298.47	11
9	ORANGE COUNTY	\$1,114,848.77	7
10	VENTURA COUNTY	\$1,532,655.21	7
	<i>Top Ten SRL Total</i>	<i>\$48,103,325.61</i>	<i>315</i>
	<i>State SRL Total</i>	<i>\$56,328,665.68</i>	<i>374</i>
	<i>Percent State Total</i>	<i>85%</i>	<i>84%</i>

Source: Cal OES PDFM Program

APPENDIX L – MITIGATION GRANTS NOI AND SUBAPPLICATION PROCESSES

From Funding Opportunity to Close Out: An Overview of Typical Steps in the Life of a Grant

For California jurisdictions and subapplicants, the entire process for most HMGP, PDM, and FMA grants will entail the following overall steps:

1. FEMA announces Notice of Funding Opportunity (NOFO) for grant funding provided after a declared disaster or by congressional appropriation
2. Cal OES HMGP or PDM/FMA programs create documents that announce the grant opportunity and open a filing period for subapplicant submittals of a Notice of Interest (NOI). Cal OES sends out notification to interested parties and posts information on the Cal OES mitigation web page.
3. Submitted NOIs are reviewed for eligibility by Cal OES grants staff. Eligible subapplicants are notified.
4. Subapplication training and technical assistance is offered by Cal OES grants staff (jointly with FEMA grants staff).
5. Subapplication submission period for local jurisdictions to submit to Cal OES (by mail for HMGP subapplications and through eGrants for PDM/FMA subapplications).
6. Cal OES grants staff reviews, scores and ranks subapplications.
7. If subapplications are not complete, Cal OES sends a letter to the subapplicant requesting more information.
8. Cal OES forwards recommended subapplications to FEMA (HMGP only)
9. Cal OES develops full grant application to FEMA with subapplications accepted (PDM/FMA only)
10. State application submittal to FEMA – for nationwide competitive grants (PDM/FMA only)
11. FEMA review and evaluation - nationwide competitive grants (PDM/FMA only)
12. Grant/Subgrant award – the subapplicant becomes the subrecipient
13. Project work (period of performance). Subrecipients submits quarterly reports. Cal OES generates quarterly reports to FEMA
14. Subrecipient completes project.
15. Grant/Subgrant closeout. Cal OES sends letter requesting closeout documents. Subrecipient submits closeout documents. Once all completed closeout documents are received, Cal OES submits closeout documents to FEMA. FEMA closes project.

Example 6-page instruction document for filing a Notice of Interest for Pre-disaster Mitigation (PDM) or Flood Mitigation Assistance (FMA) Grants



PRE-DISASTER AND FLOOD MITIGATION ASSISTANCE GRANT PROGRAMS

INSTRUCTIONS FOR FILING A NOTICE OF INTEREST (NOI)

Please read the following instructions prior to completing the Notice of Interest (NOI). The NOI can be found at <http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/pre-disaster-flood-mitigation>

DEADLINE: The Cal OES deadline to submit an NOI is Friday, August 4, 2017.

Accurate and complete answers are required to determine eligibility and expedite the review process. NOIs must be submitted electronically and each section must be answered in the space provided. Please direct any questions regarding completion of the NOI to PDFM@caloes.ca.gov.

Introduction

Federal funding is provided under the Robert T. Stafford Emergency Assistance and Disaster Relief Act (Stafford Act). FEMA's 2017 NOFO provides information on federal funding priorities and limits, criteria and other critical information related to this funding cycle. Please pay close attention to critical State information from OES regarding NOI and subapplication deadlines and criteria that all jurisdictions must follow to apply for funding.

The Unified Hazard Mitigation Assistance (HMA) Guidance provides information on applicant and activity eligibility as well as other requirements, including performance period, cost-effectiveness, environmental review, and required documentation. The HMA Guidance is available at <https://www.fema.gov/hazard-mitigation-assistance-program-guidance>. Please review all eligibility requirements before submitting an NOI.

Submission of an NOI is the first step in the Pre-Disaster Mitigation (PDM) or the Flood Mitigation Assistance (FMA) Program subapplication approval process. Cal OES will review each NOI for eligibility and consistency with established 2017 PDM and FMA priorities.

The Notice of Interest Form

An NOI is required for each proposed project or plan submitted. All NOIs are reviewed for eligibility by OES. Jurisdictions submitting an eligible NOI will be notified and invited to submit a subapplication for the 2017 PDM and/or FMA funding cycle. Cal OES will only accept NOIs/subapplication for mitigation activities selected through this process

The following provides detailed guidance on completing the NOI form:

1. Program (select one): Select the type of program PDM or FMA
2. This NOI is for a (select one): Select one. Identify if your NOI describes a planning or project activity.
3. Eligible Subapplicant Type: Select one. Eligible subapplicants include city, state, county or special district. *Tribal governments submit directly to FEMA. If your entity does not fall into one of these categories, you are not eligible to apply for PDM or FMA funding, but may be sponsored by an eligible entity.
4. Hazard Type: Select one. Use “Multi-Hazard” for planning activities.
5. Mitigation Activity Type: Select one. Cal OES will only accept NOIs describing eligible activities.
6. Climate Resilient Mitigation: Does this activity incorporate climate resilient mitigation activities and/or encourage the integration of adaptation measures into local planning and development practices?

Climate Resilient Mitigation Activities (CRMA) may include Aquifer Storage and Recovery (ASR), Floodplain and Stream Restoration (FSR), and Flood Diversion and Storage (FDS); and pre- or post-wildfire mitigation activities or any mitigation action that utilizes green infrastructure approaches.
7. Activity Costs:

PDM Program: The federal share for project NOIs must not exceed \$4,000,000. For local hazard mitigation plans, the funding limits are \$125,000 for a single jurisdiction new or updated plan, and \$250,000 for a multi-jurisdiction new or updated plan.

PDM Subapplicant Cost Share: Cost share is required under this program. Federal funding is available for up to 75 percent of the eligible activity costs. The remaining 25 percent of eligible activity costs must come from non-Federal sources.

FMA Program: There is no established federal funding share set for the FMA program.

FMA Subapplicant Cost Share: Federal funding is available for up to 75 percent of the eligible activity costs. FEMA may contribute up to 100 percent Federal cost share for Severe Repetitive Loss (SRL) properties. FEMA may contribute up

NOTICE OF INTEREST INSTRUCTIONS

- to 90 percent Federal cost share for Repetitive Loss (RL) properties.
8. Benefit Cost Analysis (BCA) FEMA will only consider applications that use a FEMA-approved methodology to demonstrate cost-effectiveness. Planning and Management cost sub-applications do not require a BCA. FEMA provides BCA software (Version 5.3.0) that allows subapplicants to calculate the BCA. Written materials and training are also available. The FEMA BCA software utilizes the OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*. For BCA policies, overviews, and software, see <http://www.fema.gov/benefit-cost-analysis> .
9. Have the Cost-Sharing Funds been secured? **NOTE:** The letters of commitment for cost share must be in place at the time of subapplication submittal.
10. Activity Title/Name: Provide a name that clearly reflects the proposed activity. The name selected in the NOI must match the name used if an application is submitted.
11. Population:
 For Planning NOIs: Identify the population of the jurisdiction applying for the planning grant using current census data. For multi-jurisdictional plans identify the total population of all jurisdictions covered by the plan and list the name of each jurisdiction.
 For Project NOIs: Identify the population that will directly benefit from the proposed project implementation.
12. Activity Location:
 For Planning NOIs: Identify a central location and address for the lead agency.
 For Project NOIs: Provide the latitude and longitude in degrees (six decimal places) defining the activity location.
 If the activity involves more than one location, provide the latitude and longitude at the center of the proposed project area and a general description of the project area.
13. Describe the problem to be mitigated:
 Describe the need for this activity. The problem statement must include a description of the hazards being addressed, i.e. fire, flood, earthquake, drought, etc.
 Planning NOIs must specify the geographic area and the jurisdictions that will be addressed by the plan. Include hazards types and the population of the geographic area served by the plan.

NOTICE OF INTEREST INSTRUCTIONS

Project NOIs must identify the natural hazard and the risk to the facility that is being considered. Include historical information on damages and the reoccurrence interval of that hazard.

14. Scope of Work:

The scope of work must include the following:

For Planning NOIs: The scope of work must include the following:

- a) Specify if the proposal is for a new Local Hazard Mitigation Plan (LHMP) or an update to a current LHMP.
- b) Specify if the LHMP is for a single jurisdiction or multiple jurisdictions and list the jurisdictions that will be incorporated into the plan.
- c) If the proposed activity is a plan update, the NOI must clarify whether the plan being updated was previously funded by a hazard mitigation grant.
- d) The NOI must also provide information on the planning process, data collection and risk assessment process, and plan approval and adoption process. The NOI should also discuss other mitigation activities/initiatives taken by the applicant in preparation for the planning activity.
- e) The LHMP must incorporate climate resilient mitigation activities and/or encourage the integration of adaptation measures into local planning and development practices.
- f) Provide information on whether the plan being updated was previously in compliance with AB 2140 and if the plan was adapted to the Safety Element of a General Plan.
- g) In a separate paragraph, the NOI must provide information on the planning capabilities of the applicant based on previous successful grant compliance/completion.

For Project NOIs: The scope of work must include the following:

- a) A purpose statement that demonstrates the proposed project will reduce the risk from the effects of natural hazards to life, property, essential services, or critical facilities. Identify all the benefits that will result from the project's implementation.
- b) A project description that is clear and concise, and includes the location of the proposed project, the

- proposed conceptual design, the means of implementation, and the basic dimensions of the project and the project area.
- c) A statement of the level of protection of the proposed project versus the existing level of protection.
 - d) A description of any existing engineering drawings or any environmental documents that relate to the project and describe any possible impacts to the environment or historic structures from the project's implementation.
 - e) For flood projects or any project in the FEMA mapped floodplain, identify if the project location(s) on a FEMA flood map and state the flood zone designation, document the community's participation in the National Flood Insurance Program (NFIP), and determine if any of the structures have flood insurance or are on FEMA's severe repetitive loss list.
 - f) A description of the project life and the long-term maintenance requirements.
15. Performance Period: Indicate the length of time, in months, needed to complete the activity. The 2017 NOFO will provide dates of the PDM/FMA Period of Performance.
16. National Flood Insurance Program All subapplicant's for the FMA program must be participating in the NFIP, and must not be withdrawn or suspended.
17. Duplicate Programs: Indicate if this activity is eligible for funding from another federal program such as the United States Army Corps of engineers, FEMA Public Assistance Program, or the US Department of Agriculture/Department of the Interior Healthy Forest Reform Act of 2002.
18. Local Hazard Mitigation Plan Requirement Not required for planning activities. Provide a narrative that identifies how the proposed activity is consistent with your LHMP. Be specific; identify the page number and/or section number from your plan.
- Include a narrative that quantifies the criticality of the project with respect to the overall population of the community
19. LHMP Approval Date: Identify the date subapplicant's Local Hazard Mitigation Plan (LHMP) was approved by FEMA.

20. Subapplicant Name: Provide the name of the subapplicant applying for grant funds. Subapplicant names must be consistent with the FIPS#.
21. Subapplicant Address: Provide the mailing address for the sub- applicant. Include city, county, state and zip code.
22. Name of Person Completing NOI: Provide the first and last name of the person completing the NOI.
23. FIPS #: Provide the Federal Identification Processing System number for the subapplicant. If the subapplicant does not have or know their FIPS number, contact Cal OES.
24. DUNS #: Provide the Data Universal Numbering System number for the subapplicant. If the subapplicant does not have or know their DUNS number, call Dunn & Bradstreet at 1-866-705-5711.
25. Legislative Districts: Provide only the number of the legislative districts listed. If the project site is located in a different district than the subapplicant address, please provide both.
26. Subapplicant Authorized Agent (AA): The person(s) authorized by the subapplicant’s governing body to act on behalf of the subapplicant to execute an NOI for the purpose of obtaining federal financial assistance. Provide the position title or name of the person(s) that will serve in this position.

Forms used to designate the AA will be provided upon sub-grant approval. The AA will also be required to sign standard assurances to accept grant funds. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
27. Project Manager/Working Contact: The person Cal OES will contact with questions and/or requests for information. Provide the first and last name, title, address, phone and fax numbers and e-mail address.
28. Project Manager/Working Contact (Alternative): The person Cal OES will contact with questions and/or requests for information when the primary contact is not available. Provide the first and last name, title, address, phone and fax numbers and e-mail address.

If you have any questions or comments, please contact the Pre-Disaster and Flood Mitigation Assistance Division at: PDFM@caloes.ca.gov or at (916) 845-8150.

APPENDICES

Example PDM/FMA Planning Grant NOI Consistency and Subapplication Review and Ranking Checklist

Reviewer's Name:	<input type="text"/>	Review Date:	<input type="text"/>	
Peer Review:	<input type="text"/> 1st	<input type="text"/> 2nd		
Applicant Name:	<input type="text"/>			
Name of Plan:	<input type="text"/>			
FIPS number verified:	<input type="text"/>			
Cal OES No.	<input type="text"/>	MANAGER REVIEW	<input type="text"/>	

	YES	NO	
1	<input type="checkbox"/>	<input type="checkbox"/>	Was an NOI submitted for this application and approved?
2	<input type="checkbox"/>	<input type="checkbox"/>	SOW in application is consistent with NOI?
3	<input type="checkbox"/>	<input type="checkbox"/>	The SOW describes the Plan will result in a FEMA approvable and Local adopted plan.
4	<input type="checkbox"/>	<input type="checkbox"/>	All planning activities are clearly identified and defined per HMA pg 60; Includes deliverables, tasks and schedule.
5	<input type="checkbox"/>	<input type="checkbox"/>	Climate Change Assessment / Resilient Mitigation Activities (CRMA) will be included
6	<input type="checkbox"/>	<input type="checkbox"/>	Requested Fed share does not exceed Amount <input type="text"/> \$125,000 (single jurisdiction) or \$250,000 (multiple jurisdictions)
7	<input type="checkbox"/>	<input type="checkbox"/>	Submitted Crosswalk (Updates only)
8	<input type="checkbox"/>	<input type="checkbox"/>	Submitted a letter of commitment for each identified participating jurisdiction
9	<input type="checkbox"/>	<input type="checkbox"/>	A current local matching funds commitment letter is submitted? Date funds are available: <input type="text"/>

CONTINUE ONLY IF ALL ANSWERS ARE "YES" - Explanations / clarifications regarding "No"

RANKING FACTORS			
	Points		
a.	<input type="text"/>	Small Impoverished Community? -1pt Did subapplicant provide verification of small, impoverished community?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b.	<input type="text"/>	New multi-jurisdictional County Plan - 7 pts	Number <input type="text"/>
	<input type="text"/>	New multi-jurisdictional Non County - 6 pts	Number <input type="text"/>
	<input type="text"/>	Updated multi-jurisdictional plan - 5 pts	Number <input type="text"/> PLAN EXPIRATION DATE <input type="text"/>
c.	<input type="text"/>	New single jurisdictional - 4 pts	
	<input type="text"/>	Updated single jurisdictional plan - 3 pts	PLAN EXPIRATION DATE <input type="text"/>
d.	<input type="text"/>	The SOW, budget and budget narrative, work schedule are complete, connected and consistent - 3 pts	
e.	<input type="text"/>	The LHMP will be adopted into the Safety Element of the General Plan (AB 2140)- 1 pt	
f.	<input type="text"/>	The Jurisdiction demonstrates capability to complete the planning process: Planner/ Sufficient Management Team, etc.- 2 pts	
g.	<input type="text"/>	The Planning Team, Process and Outreach efforts includes coordination and participation with key stakeholder groups.- 3 pts	
	<input type="text"/>	0 TOTAL POSSIBLE POINTS	

Use the REMARKS area below to discuss overall credibility and completeness of application

REMARKS

Revised 10-2-17

Risk Analysis:

The application must specify the geographic area that will be addressed by the planning activity and the population of that geographic area. The application must contain information on the hazards common to the geographic area and should included historical information on the recurrence of those hazards within the last five years. The information on hazards should be supported by the Cal OES "My Plan" website at <http://myplan.caloes.ca.gov/> depicting the severity of hazards in the targeted area.

The hazard mitigation planning scope of work (SOW) must describe the development of a hazard mitigation plan that complies with the requirements identified in 44 CFR Part 201. See attached reference guide (worksheet tab) for additional information

APPENDICES

Example PDM/FMA Project Grant NOI Consistency and Subapplication Review and Ranking Checklist

Reviewer's Name: Review Date:

Peer Review: 1st 2nd

Applicant Name:

Name of Project:

FIPS no. verified:

Cal OES No.: **MANAGER REVIEW:**

	Yes	No	Eligibility Criteria: All must be "Yes"			
1	<input type="checkbox"/>	<input type="checkbox"/>	Was an NOI submitted for this application and approved?			
2	<input type="checkbox"/>	<input type="checkbox"/>	SOW in application is consistent with NOI.			
3	<input type="checkbox"/>	<input type="checkbox"/>	Project must have a BCR of 1.0 or greater.		BCR is?	<input type="text"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	Does applicant have a FEMA-approved LHMP currently in place?		Date approved?	<input type="text"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	Is the proposed project consistent with the current LHMP?			
6	<input type="checkbox"/>	<input type="checkbox"/>	Requested federal share does not exceed \$4 million (PDM only).		\$	<input type="text"/>
7	<input type="checkbox"/>	<input type="checkbox"/>	Is there a new local matching fund commitment letter attached to application? Date Funds Available			<input type="text"/>
8	<input type="checkbox"/>	<input type="checkbox"/>	The project must reduce risk to an identified hazard(s). Verified?			
9	<input type="checkbox"/>	<input type="checkbox"/>	Environmental Section Review. EVERY applicable question on application is answered?			
10	<input type="checkbox"/>	<input type="checkbox"/>	Did the sub applicant provide the FEMA EHP Checklist with the application?			
			FMA Project Applications:			
11	<input type="checkbox"/>	<input type="checkbox"/>	All properties included in project must be NFIP Insured. Verified?			
12	<input type="checkbox"/>	<input type="checkbox"/>	Subapplicant must participate in NFIP (and not suspended). Verified?			
			Eligible Points Ranking Criteria			
a.	<input type="checkbox"/>		BC Ratio: 1 - 3 = 3 pts. 4 - 6 = 4 pts. 7 or more = 5 pts.			
b.	<input type="checkbox"/>		The project is located in a high hazard area. *Verify on My Plan 2 pts.			
c.	<input type="checkbox"/>		**For All Flood Projects - Is project area compliant with EO 11988 1 pt.			
d.	<input type="checkbox"/>		The project protects/enhances a vulnerable critical facility or infrastructure. 2 pts.			
e.	<input type="checkbox"/>		Is the LHMP adopted as part of Safety Element of General Plan (AB 2140 compliant) 1 pt.		Yes	No
			Project Description:			
f.	<input type="checkbox"/>		Does the project description include a detailed explanation of how the SOW elements will be accomplished? 1 pt.			
g.	<input type="checkbox"/>		The SOW, budget and budget narrative, work schedule are complete, connected, feasible and consistent 3pts.			
h.	<input type="checkbox"/>		Is there a thorough description of methodology and alternatives for selecting this project? 1 pt.			
i.	<input type="checkbox"/>		Does subapplicant demonstrate sufficient capability and staff to manage the project? 2 pts.		Yes	No

APPENDICES

FEMA PDM Priorities:					
j.	<input type="checkbox"/>	Does the proposed project include Climate Resilient Mitigation Activities (CRMA)? 6 pts. If yes, state the mitigation activity, e.g. (flood diversion, green infrastructure methods, floodplain restoration			
k.	<input type="checkbox"/>	Is the subapplicant a small, impoverished community? 5pt. Did subapplicant provide verification of small, impoverished community?	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Yes</td> <td style="padding: 2px;">No</td> </tr> </table>	Yes	No
Yes	No				
l.	<input type="checkbox"/>	Is this a non-flood mitigation/non-acquisition/elevation/mitigation reconstruction? 4 pts.			
m.	<input type="checkbox"/>	Is this an acquisition, elevation or mitigation reconstruction projects? 3 pt.			
n.	<input type="checkbox"/>	Is this purchasing a generator for a critical facility as identified in LHMP? 2 pt.			
FEMA FMA Priorities:					
o.	<input type="checkbox"/>	Community Flood Mitigation: A) Advanced Assistance can be used to develop mitigation strategies and obtain data to prioritize, select, and develop community flood hazard projects for future funding. and/or B) Community Flood Mitigation Projects that benefit communities with high participation and favorable standing in the NFIP. 10pts			
p.	<input type="checkbox"/>	Projects that will mitigate flood damage to at least 50 percent of structures included in the subapplication that meet the definition of a Severe Repetitive Loss (SRL) property. At least two separate NFIP claim payments have been made with the cumulative amount of such claims exceeding the market value of the insured structure. 6pts.			
q.	<input type="checkbox"/>	Projects that will mitigate flood damage to at least 50 percent of structures included in the sub-application that meet the definition of a Repetitive Loss (RL) property: Have incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25% of the market value of the structure at the time of each flood event. 4 pts.			
r.	<input type="checkbox"/>	Projects that will mitigate flood damage for at least 50 percent of structures included in the sub-application that meet the definition of a SRL property: four or more separate NFIP claim payments have been made with the amount of each claim exceeding \$5,000 and with the cumulative amount of claims payments exceeding \$20,000. 3 pts.			
s.	<input type="checkbox"/>	Projects that will mitigate flood damage for the largest number of NFIP-insured properties at the neighborhood level 2 pts.			
State Extra Points:					
t.	<input type="checkbox"/>	Does Community participate in the Community Rating System (CRS) for flood - 1 pt. What is the ranking?	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Yes</td> <td style="padding: 2px;">No</td> </tr> </table>	Yes	No
Yes	No				
u.	<input type="checkbox"/>	Is the Flood Plan adopted into Safety Element of General Plan (2007 Legislation) 1 pt.	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Yes</td> <td style="padding: 2px;">No</td> </tr> </table>	Yes	No
Yes	No				
Total pts.	<input type="text" value=""/>	65 TOTAL POSSIBLE POINTS	2 STATE EXTRA POINTS POSSIBLE		
Use the REMARKS area below to discuss overall credibility and completeness of application and BCA.					
Remarks:					

Example HMGP Grant NOI Consistency and Subapplication Review and Scoring Checklist

Subapplicant General Information

DR #	
Reviewers Name (Cal OES and FEMA)	
Review Date	
Subapplicant	
Activity Type	
Regular, 5% or Plan	
Project Name	
FEMA Project Number	
Cal OES Project Number	
FIPS	
Total Project Cost	
Fed share	
Non-fed share	

Initial Eligibility Criteria

	Criteria	Reviewer Notes
	Did Cal OES receive the subapplication by the deadline/post-marked by the deadline?	
	Does project have a BCR equal to or greater than 1.0?	
	Does subapplicant have a FEMA-approved LHMP or one in progress?	
	Is the proposed project consistent with the current LHMP?	
	Is the federal share requested within the State established threshold?	
	Is Period of Performance 36 months or less?	
	Was an NOI submitted for this subapplication and determined to be eligible?	
	Is Statement of Work (SOW) in subapplication consistent with NOI?	

APPENDICES

	Criteria	Reviewer Notes
	Were TWO (2) identical hard copies with CDs of subapplication and all attachments submitted?	
	Is subapplication complete, including: SOW, Budget, Work Schedule, EHP, Alternatives?	

Other Eligibility Criteria

	Criteria	Reviewer Notes
	Is the subapplicant an eligible applicant (state, local government, special district, PNP)?	
	Does the project address a repetitive problem or a problem that poses a significant risk to public health and safety if left unsolved?	
	When completed, will this project contribute to a long-term standalone solution of the identified problem?	
	Are project activities clearly identified in the SOW?	
	Are there two other alternatives identified other than the Proposed Action (can include No Action and one other)?	
	Was appropriate BCA module used and are all BCA inputs (other than default) documented appropriately?	
	Do the budget line items reflect elements identified in the scope of work? If not, explain.	
	Do budget items represent eligible and reasonable costs?	
	Does the budget include items (such as large lump sums, equipment exceeding \$5,000, etc.) needing additional information?	
	Does the project duplicate other Federal Programs (PA, NRCS, USACE, etc.)?	
	Is the project located in a Special Flood Hazard Area?	
	Has work begun on the project?	
	Is the match letter sufficient (signed by official, source of funding identified and eligible and date funds available)?	
	Does the application include photos and maps?	
	Has subapplicant signed application?	

Cal OES Scoring Criteria

	Yes=1 point No=0 points	Criteria (all are Y or N unless otherwise stated)
A		Benefit Cost Ratio 1.0-2.9 = 1 point 3.0-4.9 = 2 points 5.0+ = 3 points
B		Benefit Cost documentation, consistency and credibility
C		SOW, Budget and Work Schedule consistent?
D		Budget Narrative included?
E		Project description and dimensions provided?
F		Photos included (per project site)?
G		Maps and clear identification of project location?
H		Staging location identified?
I		Engineering Drawings/Technical Drawings included?
J		Maintenance Addressed?
K		Environmental Questionnaire (Cal OES) complete?
L		FEMA EHP Checklist provided and complete?
M		Evidence of EHP consultation with state or Federal Agency?
N		Flood project? (flood disaster)
O		Project in a declared county?
P		Does the project include Climate Resiliency Mitigation Actions (CRMA)?
Q		The subapplicant has never received HMGP funding before. If no, provide: DR# Cal OES#
TOTAL		Total Points Possible = 19. Tie goes to the greater benefit cost ratio!

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APPENDIX M – MITIGATION GRANTS MANAGEMENT AND CLOSEOUT PROCESSES

Example 6-page Site Performance Assessment form used by hazard mitigation grants staff during site visits



SITE VISIT PERFORMANCE ASSESSMENT

Program: Hazard Mitigation Grant Program - HMGP HMGP Disaster# _____
 Pre-Disaster Mitigation Program - PDM PDM Year# _____
 Flood Mitigation Assistance Program - FMA FMA Year# _____

Cal OES Project ID# _____ Date(s) of site visit: _____

Subrecipient: _____

Project title: _____

Project manager: _____

Federal share: \$ _____ Non-Federal share: \$ _____

Total project award: \$ _____ \$ 0 Reimbursed funds to date: \$ _____

Type of visit: Kick-off Subrecipient self-assessment
 In-process Other: _____
 Completion/Close-out certification

Persons interviewed during site visit:

<u>NAME</u>	<u>TITLE</u>	<u>AGENCY</u>

Name, Cal OES Project Reviewer

Name, Cal OES Manager

Signature, Cal OES Project Reviewer

Date

Signature, Cal OES Manager

Date

Site Visit Performance Assessment Report

Project # _____

1. PROJECT SUMMARY

Instructions: Describe the project details and attach pictures taken during site visit.

2. SCOPE OF WORK STATUS - Title 2 CFR § 200.210(d) and Title 2 CFR § 200.308(b)

Instructions: Secure a current copy of the project work schedule (example: Gantt Chart).

- | | Yes | No | N/A | Unsure |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Any work changes to the project since the original application was awarded? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. If yes, was a change in scope of work request submitted and approved by Cal OES/FEMA? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Describe the progress being made toward achieving the project milestones and objectives? | | | | |

Provide additional information and potential areas of concern covered in this section:

3. COST-SHARE (MATCH) REQUIREMENTS - Title 2 CFR § 200.306(b)(1)

Instructions: Inform the Subrecipient of the required cost-share supporting documentation that must be retained as described in Title 2 CFR § 200.306(b)(1).

- | | Yes | No | N/A | Unsure |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) What is the source of the cost-share funds or In-kind match? _____
Cash: \$ _____ In-kind: \$ _____ | | | | |
| b) Is the local cost-share/match requirement being met?
<i>Document any actual/potential barriers identified.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Is adequate source documentation retained to support the current cash or in-kind cost-share contributions? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Provide additional information and potential areas of concern covered in this section:

Site Visit Performance Assessment Report

Project # _____

4. FINANCIAL MANAGEMENT REVIEW - Title 2 CFR § 200.302(3), Title 2 CFR § 200.403-405 and Title 2 CFR § 200.501.

Instructions: Secure the responses from an individual knowledgeable about the financial record system.

- | | Yes | No | N/A | Unsure |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Is a financial management system maintained that accurately identifies grant expenditures? <i>Please describe system in comments below.</i>
<i>Example: Grant specific general ledger workbook detailing each expenditures purpose, invoice #, payee, amount, check #, and date of the transaction.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Are the expenditures supported by sufficient source documentation, including original records, invoices, receipts, and proof of payment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Are any of the costs being reimbursed by Cal OES/FEMA also being reimbursed by another Federal grant? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Was an HMA program specific audit performed per Title 2 CFR § 200.501?
<i>Non-Federal entities that expend \$750,000 or more in Federal awards during a fiscal year must have a single or program-specific audit conducted for that year.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Is the Subrecipient familiar with Sub-award close-out procedures?
<i>FEMA HMGP Sub-award Close-out FAQ help sheet.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) If a contractor is hired with grant funds, is there a process to monitor/verify the contractor is following Federal guidelines per Title 2 CFR § 200.501(g)?
<i>Describe the monitoring system below.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Provide additional information and potential areas of concern covered in this section:

5. QUARTERLY PROGRESS REPORTS & REIMBURSEMENT REQUESTS - Title 2 CFR § 200.328(b)(1) and [FEMA Quarterly Progress Report FAQs help sheet](#)

Instructions: Review submission of progress and quarterly reports for timeliness. Document reasons/barriers preventing timely submission (if applicable).

- | | Yes | No | N/A | Unsure |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Does the Subrecipient understand the reporting requirements of the quarterly progress reports and reimbursement requests? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Has the Subrecipient met all quarterly progress report due dates? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Is there system that supports the information reported on the progress reports and reimbursement requests? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Provide additional information and potential areas of concern covered in this section

Site Visit Performance Assessment Report

Project # _____

6. GRANT FUNDED PERSONNEL - Title 2 CFR § 200.430(i)(1)

Instructions: Secure an example of the timesheets the Subrecipient utilizes.

Yes No N/A Unsure

- a) Were detailed personnel activity reports (timesheets) used for each grant funded position? *This includes management, paid staff, and volunteers.*
- b) Do the timesheets display detailed grant related activities performed for each grant funded employee?
- c) Are timesheets for paid staff and volunteers signed and approved by a supervisor?

Provide additional information and potential areas of concern covered in this section:

7. PROCUREMENT POLICIES - Title 2 CFR § 200.318-320

Instructions: Retain copy of the Subrecipient's written procurement policy.

Yes No N/A Unsure

- a) Is a written procurement procedures policy maintained?
- b) Is the Subrecipient familiar with the procurement requirements for the following:
 - i. *Micro-purchases? – Less than \$3,500*
 - ii. *Small purchase procedures? – Less than \$150,000*
 - iii. *Sealed bids? – \$150,000 or more*
 - iv. *Competitive proposals? – \$150,000 or more*
 - v. *Non-competitive proposals? – Rarely allowable*
- c) Were full and open competition procedures followed prior to the awarding of the contract(s)?
Examples: Invitations for bids, formal advertising, unreasonable requirements were not placed on potential contractors, and solicitation from minority businesses as required by Title 2 CFR §200.319 and Procurement Checklist.
- d) Were the contractors/sub-contractors verified not to be suspended or debarred from participating in a Federal contracts by self-certification or by reviewing www.Sam.gov?
- e) Is a documented price/cost analysis maintained for each service contract awarded and equipment item(s) purchased with grant funds? *(If applicable)*

Records need to support the reasons why the contractor(s), service provider(s), and equipment item(s) were selected. See [FEMA Cost/Price Analysis Guide](#).

Provide additional information and potential areas of concern covered in this section:

Site Visit Performance Assessment Report

Project # _____

8. CONTRACT PROVISIONS/CLAUSES – Title 2 CFR § 200.323, Title 2 CFR § 200.433, Title 2 CFR § 200 Appendix II and Required Contract Clauses.

Instructions: Inform the Subrecipient of the required contract provisions for product and service contracts.

- | | Yes | No | N/A | Unsure |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Do the contracts include all the required contract provisions and clauses?
<i>Examples: Address debarment and suspension, EEO, anti-lobbying, acceptance of all Federal regulations and policies, termination procedures and all others as required. See <u>Required Contract Clauses</u> guidance.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Are time and materials or cost-plus-fee/percent contracts utilized? <i>(Not allowed)</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Are all estimated contingency provisions removed from the contracts? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Provide additional information and potential areas of concern covered in this section:

9. ENVIROMENTAL/HISTORIC PRESERVATION REVIEW

Instructions: Secure the responses from an individual knowledgeable about the Environmental/Historic Preservation process.

- | | Yes | No | N/A | Unsure |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| a) Did any of the grant funded activities trigger an EHP review? <i>If yes, please explain.</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Were the descriptions and supporting documents provided to FEMA for the EHP review maintained? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Was an EHP triggering activity started before receiving authorization from FEMA? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Provide additional information and potential areas of concern covered in this section:

Site Visit Performance Assessment Report

Project # _____

10. CONCLUSION

Instructions: Indicate project status, potential environmental/historical compliance issues, recommendations, and summary of observations made during the site review.

Attached Documents:

- #_____ Site visit pictures
- Project work schedule
- Timesheet example
- Written procurement policy
- Environmental and/or Historical Preservation documents
- Other: _____

APPENDIX N – GIS RISK EXPOSURE ANALYSIS METHODOLOGY

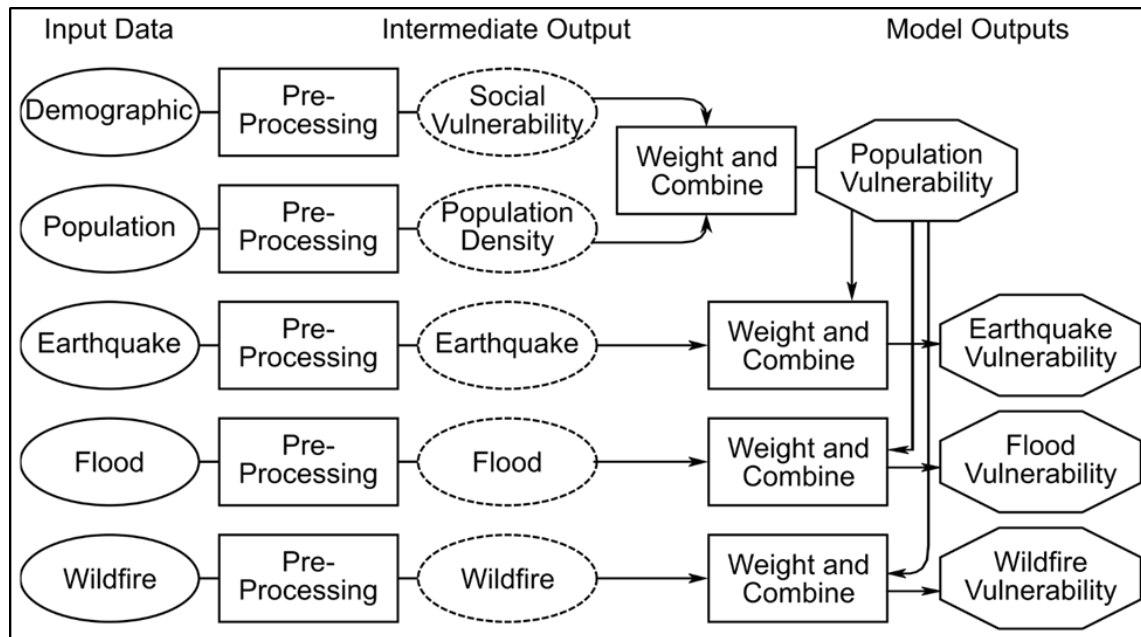
Introduction

The risk assessment included a hazard vulnerability analysis for the state. This involved spatially integrating data related to multiple natural hazards with a social vulnerability model based on derived from multiple socio-economic and demographic indicators. For the purposes of this annex, social vulnerability represents the cumulative influence that socio-economic and demographic characteristics exert on differential hazard outcomes. This annex provides an overview of the methods used to conduct the analysis.

Methodological Overview

Figure M.1 shows the general hazard vulnerability analysis beginning with acquiring input social and hazard data for each location in an approximately 1 kilometer grid covering the State. Social vulnerability and population density outputs were weighted and combined to create a final population vulnerability output. The population vulnerability output was then weighted and combined with each of the hazard layers to create earthquake, flood, and wildfire vulnerability outputs. A more detailed description of the methodology used to create the social vulnerability index, as well as the specific population and hazard event pre-processing and model-weighting approaches is included below.

Appendix Figure N.1: Conceptual Work Flow for Base Map Processing



Social Vulnerability

A subset of the GIS Technical Advisory Working Committee developed the index used to represent social vulnerability in this analysis. This work group chose to use a hierarchical modeling approach to develop its social vulnerability index. Hierarchical approaches use a conceptual model to identify the sub-indices that comprise social vulnerability, and the indicators associated with each sub-index. The framework provided by the conceptual model guides the selection of variables used to construct the vulnerability index. Appendix Table N.1 shows the conceptual model developed for this analysis, including the sub-indices, indicators, and the specific variables used to represent each indicator.

Appendix Table N.1: Social Vulnerability Index Conceptual Model and Associated Variables

Sub-Index	Indicator	Variable
<i>Differential Access to Resources and Information</i>	Poverty/ Income	Annual housing costs to income ratio
	Education	Percent of the population 25 or older without a high school diploma or equivalent
	Housing Tenure	Percent renter occupied housing units
	Gender	Percent female population
	Food Access	Modified Retail Food Environment Index (mRFEI)
<i>Cultural or Linguistic Isolation</i>	Linguistic Isolation	Percent of population 5 or older who speak English less than very well
	Minority Status	Percent non-white or Hispanic population
<i>Access and Functional Needs</i>	Disability	Percent of population with a disability
	Long-term care facility residents	Beds in licensed long-term care facilities per person
	Age	Percent of population 65 or older, or younger than 5
	Vehicle Access	Percent of households with no available vehicles

The variables in Appendix Table N.1 were collected for each ZIP Code Tabulation Area (ZCTA, a rough approximation of ZIP codes used by the US Census Bureau) in the State. The mRFEI variable used to represent food access was adapted from the methodology used by the Centers for Disease Control³⁴⁰ so that it could be calculated using 2014 ZIP Code Business Statistics data from the US Census Bureau. Information on the number of beds in licensed long-term care facilities was obtained from the Office of Statewide Health Planning and Development.³⁴¹ All other variables were from the 2015 American Community Survey 5-year estimate datasets.³⁴²

All input variables were processed to insure that higher values corresponded to higher vulnerability, and were then rescaled so that values for each variable ranged between a minimum of zero and a maximum of one. Weights for the variables within each sub-index, as well as weights for sub-indices overall, were generated using an Analytical Hierarchy Process (AHP) approach. In this approach, members of the social vulnerability working group completed surveys in which they were asked to rate the relative importance of each pair of variable in each sub-index. Respondents then rated the relative importance of each pair of sub-indices.

The geometric mean across all respondents was then calculated for each pair-wise comparison, and this information was used to generate weights for the variables in each sub-index as well as for the sub-indices. The final variable weights shown in Appendix Table N.2 were generated by multiplying each variable weight by the weight for the sub-index in which it was located. Rescaled input variables for each ZCTA were then multiplied by the appropriate weight, and the resulting values were summed to create the final social vulnerability index values.³⁴³

³⁴⁰ Centers for Disease Control. 2011. Census Tract Level State Maps of the Modified Retail Food Environment Index (mRFEI). Available online at: http://ftp.cdc.gov/pub/Publications/dnpao/census-tract-level-state-maps-mrfei_TAG508.pdf. Last accessed 30 May 2017.

³⁴¹ OSHPD. 2017. Long-Term Care Facilities licensed as of December 31, 2016. Datafile: LTCListing_Dec2016.xlsx. Available online at: http://www.oshpd.ca.gov/documents/HID/FacilityList/LTCListing_Dec2016.xlsx. Last Accessed 26 Jan 2017.

³⁴² Various approaches were used to replace missing values, including the use of spatial lag/local average values.

³⁴³ It is important to note that due to the changes in the methodology used to calculate the social vulnerability index, it is not appropriate to compare values between this and the social vulnerability indices used in previous SHMPs.

Appendix Table N.2: Social Vulnerability Model Weights

Indicator	Model Weight
Poverty/Income	0.190
Disabilities	0.126
Food Access	0.105
Education	0.093
Linguistic Isolation	0.090
Vehicle Availability	0.087
Age	0.072
Minority Status	0.071
Long-term care facility residents	0.069
Housing tenure	0.054
Gender	0.043

The subjective decisions made in the construction of composite indicators influence the resulting values. Uncertainty analyses, in which thousands of alternative indices are built using varying approaches, are used to understand the influence of these subjective decisions on the resulting index values. For this analysis, reasonable alternatives were identified for the set of indicators used to represent each sub-index, the method used to rescale the input variables, and the variable weights used.

Four thousand ninety six³⁴⁴ iterations of the model were ran using varying combinations of these alternatives. The absolute value of the difference between the baseline index rank for each ZCTA and the index rank for each of the alternative models was calculated, and the average value of these differences was used to assess the degree to which changes in index construction impacted the resulting index values.

The average absolute difference in ranks was 180.9. Given that the maximum possible change in ranks was 1770, this represents an average change of about 10% of the maximum possible. This seems a relatively small average change, suggesting that the social vulnerability model is fairly robust to the changes in index construction considered in the uncertainty analysis. This leads to increased confidence in the performance of the index.

Population and Hazard Event Data Pre-processing

General pre-processing steps were applied to each input dataset to prepare them for use. This primarily included steps to fit each dataset to the approximately 1 kilometer grid (more precisely a 30 second x 30 second) used in the analysis. Additional pre-processing steps applied to individual input layers are described below.

Population

Population distribution was represented using LandScan 2015 data. LandScan contains an estimate of “ambient population” for every location in a 30 second x 30 second (approximately 1 kilometer) grid covering the state. These data were used to calculate the population density for each grid cell within the state. This was done by dividing the LandScan population estimate by the area of each grid cell in kilometers.

Flood

Statewide flood hazards were represented in this analysis using FEMA DFIRM data where available. These data were not, however, available for the entirety of Alpine, Placer, and San Francisco Counties, and for portions of Sutter and Siskiyou Counties. Preliminary DFIRM data were therefore used to represent flood hazards in Placer and San Francisco Counties. Information from the preliminary DFIRM data for San Francisco County was used to replace existing DFIRM data in where there was limited overlap between the two. Portions of Sutter and Siskiyou Counties

³⁴⁴ The number of scenarios required for the uncertainty/sensitivity analysis using a SOBOL sampling method implemented in the SimLab uncertainty/sensitivity analysis software, as per Tate, E. 2012. Social Vulnerability indices: a comparative assessment using uncertainty and sensitivity analysis. *Natural Hazards*. 63(2):325-347 and Saisana M, Saltelli A, Tarantola S. 2005. Uncertainty and sensitivity analysis techniques as tools for the quality assessment of composite indicators. *J Roy Stat Soc* 168(2):307–323

that lacked DFIRM data, as well as the entirety of Alpine County, were considered to be in flood zone D for the purposes of this analysis. Finally, numerical values were assigned to various locations based on either the DRFIRM flood zone or zone subtype fields. These values are shown in Appendix Table N.3.

Appendix Table N.3: Flood Data Numerical Values

Flood Zone	Assigned Value
A, AE, AH, AO, A99, V, VE	5
X500 (flood zone X and zone subtype of: 0.2 PCT ANNUAL CHANCE FLOOD HAZARD, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD CONTAINED IN CHANNEL, or AREA WITH REDUCED FLOOD RISK DUE TO LEVEE)	3
X (remainder of flood zone X)	2
D	1
Open Water, Area Not Included	0

Wildfire

Wildfire hazards were represented in the analysis using draft Fire Threat 2014 data from CAL FIRE. Numerical values for use in the vulnerability index were assigned to different fire threat categories as shown in Appendix Table N.4.

Appendix Table N.4: Fire Threat Data Numerical Values

Fire Threat Level	Assigned Value
Extreme	5
Very High	4
High	3
Moderate	2
Low or None	1
Undetermined, No Data	No Data

General Modeling Outputs

Once the preceding general and specific pre-processing steps were completed, each intermediate output (social vulnerability, population density, earthquake hazard, flood hazard, and wildfire hazard) was rescaled so that their minimum values equaled zero and their maximum values equaled 1. These intermediate outputs were then combined to create the six final model outputs. These included:

1. Population Vulnerability
2. Earthquake Vulnerability
3. Flood Vulnerability
4. Wildfire Vulnerability

These outputs were calculated by multiplying the appropriate data layers by the assigned weight and summing the results. Appendix Table N.5 gives a summary of the input layers and weights used to generate each final output.

Appendix Table N.5: Input Data Layers and Weights Used to Generate Final Model Outputs

Final Model Output	Data Layers	Assigned Weights
Population vulnerability	Social vulnerability Population density	1/3 2/3
Earthquake vulnerability	Earthquake hazard Population vulnerability	0.5 0.5
Flood vulnerability	Flood hazard Population vulnerability	0.5 0.5
Wildfire vulnerability	Wildfire hazard Population vulnerability	0.5

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APPENDIX O – SHMP ACRONYM LIST

A

AB – Assembly Bill
ABAG – Association of Bay Area Government
ACAMS – Automated Critical Asset Management System
ACP – Asian Citrus Psyllid
ACS – American Community Survey
ADA – Americans with Disabilities Act
AEL – Annualized earthquake loss
AELR – Annualized earthquake loss ratio
AFFED – Alluvial Fan Floodplain Evaluation and Delineation
AFTF – Alluvial Fan Task Force
AGPA – Associate Governmental Program Analyst
AISC – American Institute of Steel Construction Seismic Provisions
ALS – Automated Ledger System
ANSS – Federal Advanced National Seismic System
APA – Approved pending adoption
APCD – Air Pollution Control Districts
APG – California Adaptation Planning Guide
APSA – Aboveground Petroleum Storage Act
AQMD – Air Quality Management Districts
ARB – Air Resources Board
ARC – American Red Cross
ARCCA – Alliance of Regional Collaboratives for Climate Adaptation
ARFVTP – Alternative and Renewable Fuel and Vehicle Technology Program
ARP – Average return periods
ART – Adapting to Rising Tides
ASCE – American Society of Civil Engineers

B

BAER – Burn Area Emergency Response
BAM – Best Available Maps
BAU – Business As Usual
BayREN – Bay Area Regional Energy Network
BCA – Benefit Cost Analysis
BCR – Benefit Cost Ratio
BCDC – San Francisco Bay Conservation and Development Commission
BCSH – California Business Consumer Services and Housing Agency
BDCP – Bay Delta Conservation Plan
BDPL – Bay Division Pipeline
BIA – Bureau of Indian Affairs
BICEPP – Business and Industry Council for Emergency Planning and Preparedness
BLM – Bureau of Land Management
BMP – Best Management Practices
BOC – Business Operations Center
BoF – California Board of Forestry
BP3 – Best Practice Pilot Program
BSC – Building Standards Commission
BSE – Bovine spongiform encephalopathy
BUOC – Business and Utility Operations Center

C

CA-ESFs – California Emergency Support Functions
CAGs – Community Assistance Grants
CAIRS – California AI Incident Reporting System
CAISO – California Independent System Operator
CalARP – California Accidental Release Prevention
CalBRACE – California Building Resilience Against Climate Effects
Cal-CSIC – California Cybersecurity Integration Center
Cal DOJ – California Department of Justice
CalEMA – California Emergency Management Agency
CalEPA – California Environmental Protection Agency
CALFED – Collaboration among State and Federal Agencies to Improve California’s Water Supply
CAL FIRE – California Department of Forestry
Cal OES – California Governor’s Office of Emergency Services
CalOSHA – Division of Occupational Safety and Health
CalREP – California Radiological Emergency Preparedness
CalSTA – California State Transportation Agency
Caltrans – California department of Transportation
Cal VIVA – California Vital Infrastructure Vulnerability Assessment
CAPSS – Community Action Plan for Seismic Safety
CAR – Communities at Risk
CARB – California Air Resources Board
CARES – California Animal Response Emergency System
CAS – Climate Adaptation Strategy
CASGEM – California Statewide Groundwater Elevation Monitoring Program
CAT – Climate Action Team
CBC – California Building Code
CBSC – California Building Standards Commission
CCC – California Coastal Commission
CCHP – Climate Change and Health Equity Program
CCIC – Central California Intelligence Center
CCLU – Climate Change Land Use and Infrastructure
CCP – Citizen Corps Program
CCR – California Code of Regulations
CCTAG – Climate Change Technical Advisory Group
CCTC – California Cyber Training Complex
CDC – Centers for Disease Control and Prevention
CDFW – California Department of Fish
CDEC – California Data Exchange Center
CDFA – California Department of Food and Agriculture
CDOJ – California Department of Justice
CDPH – California Department of Public Health
CDPH OHE – California Department of Public Health’s Office of Health Equity
CDPR – California Department of Parks and Recreation
CDSS – California Department of Social Services
CDT – California Department of Technology
CEA – California Earthquake Authority
CEBC – California Existing Building Code
CEC – California Energy Commission
CEQA – California Environmental Quality Act
CERT – Community Emergency Response Team

CEPA – California Environmental Protection Agency
 CESA – California emergency Services Association
 CES-21 – California Energy Systems for the 21st Century
 CFA – California Fire Alliance
 CFAA – Cooperative Forestry Assistance Act
 CFDA – California Department of Food and Agriculture
 CFF – California’s Flood Future
 CFIP – California Forest Improvement Program
 CFR – Code of Federal Regulations
 CFSC – California Fire Safe Council
 CGS – California Geological Survey
 CHHS – California Health and Human Services
 CHBC – California Historical Building Code
 CHP – California Highway Patrol
 CID – Center for Infectious Disease
 CI/KR – Critical Infrastructure and Key Resources
 CIP – Critical Infrastructure Protection Unity
 CIRB – Construction Industry Research Board
 CISAC – California Invasive Species Advisory Committee
 CISN – California Integrated Seismic Network
 CMSC – California Maritime Security Council
 CNRA – California Natural Resources Agency
 COG – Continuity of Government
 CO-CAT – Coastal and Ocean Resources Working Group for the Climate Action Team
 COOP – Continuity of Operations
 CoSMoS – Centralization of Supply Management Operations
 CP – California Polytechnic State University, San Luis Obispo
 CPG – Comprehensive Preparedness Guide
 CPUC – California Public Utilities Commission
 CRMP – California Residential Mitigation Program
 CRS – Community Rating System
 CSD – Department of Community Services and Development
 CSI – California Solar Initiatives
 CSLC – California State Lands Commission
 CSSC – California Seismic Safety Commission
 CSSG – Community Safety and Sustainability Group
 CSTI – California Specialized Training Institute
 CSU – California State University
 CSURMA – CSU Risk Management Authority
 CUEA – California Utilities Emergency Association
 CUPAS – Certified Unified Program Agencies
 CVFED – Central Valley Floodplain Evaluation and Delineation
 CVFPB – Central Valley Flood Protection Board
 CVFPP – Central Valley Flood Protection Plan
 CVP – Central Valley Project
 CWAP – Clean Water Action Plan
 CWCG – California Wildfire Coordination Group Interagency Prevention Committee
 CWP – California Water Plan Update
 CWPPs – Community Wildfire Protection Plans

D

DCDC – Division of Communicable Disease Control

DCP – Drought Contingency Plan
DCPP – Diablo Canyon Power Plant
DFG – (California Department of Fish and Wildlife)
DFW – Department of Fish and Wildlife
DGS – Department of General Services
DHCS – Department of Health Care Services
DHS – Department of Homeland Security
DIR – Department of Industrial Relations
DLIS – Delta Levees Investment Strategy
DMA – Disaster Mitigation Act
DMA2K/DMA 2000 – Disaster Mitigation Act of 2000
DOD – Department of Defense
DOGGR – Division of Oil, Gas, and Geothermal Resources
DOI – Department of the Interior
DOT – Department of Transportation
DRMS – Delta Risk Management Study
DRU – Disaster Resistant University
DSA – Division of the State Architect
DSC – Delta Stewardship Council
DTSC – Department of Toxic Substances Control
DWR – Department of Water Resources

E

EAP – Emergency Action Plan (for dam safety)
ECA – Earthquake Country Alliance
ECAA-ED – Energy Conservation Assistance Act which includes the Education Subaccount
ECL – Emergency Classification Levels
EDIS – Emergency Disaster Information System
EERI – Earthquake Engineering Research Institute
EIR – Environmental Impact Report
EJ – Environmental Justice
EMAP – Emergency Management Accreditation Program
EMSA – Emergency Medical Services Authority
ENSO – El Nino Southern Oscillation
EO – Executive Order
EOM – Emergency Operations Manual
EORP – Emergency Operations Response Plan
EPA – Environmental Protection Agency
EPCRA – Emergency Planning and Community Right-to-Know Act
EPZ – Emergency Planning Zones
EQIP – Environmental Quality Incentives program
ERBS – Earthquake-Resistant Bracing Systems
ESC – Emergency Services Coordinator
ESRI (Arc GIS Server) – Environmental Systems Research Institute
ETS – Engineered tie-down systems

F

FAST – Functional Assessment Service Team
FCP – Flood Corridor Program
FEMA – Federal Emergency Management Agency
FEMA LAS – FEMA Loss Avoidance Study
FEMA RIX – FEMA Region IX
FERC – Federal Energy Regulatory Commission
FFMP – Flash Flood Monitoring and Prediction
FHSZs – Fire Hazard Severity Zones
FIRM – Flood Insurance Rate Map
FLAME Act – Federal Land Assistance, Management, and Enhancement Act
FMA – Flood Mitigation Assistance Program
FMAG – Fire Management Assistant Grant
FMD – Foot and Mouth Disease
FMP – Floodplain Management Plan
FPCP – Flood Protection Corridor Program
FRAs – Federal Responsibility Areas
FRAP – Fire Resource and Assessment Program
FSC – local Fire Safe Councils
FO-F12 – Fujita Tornado Scale

G

GAR – Geotechnical Assessment Report
GAR – Governor’s Authorized Representative
GDR – Geotechnical Data Reports
GER – Geotechnical Evaluation Report
GGRF – Greenhouse Gas Reduction Funds
GHG – Greenhouse Gas
GIF – Geospatial Innovation Facility
GIS – Geographic Information System
GIS TAWC – GIS Technical Advisory Committee
GOR – Geotechnical Overview Report
GOV – Government Code
GPG – General Plan Guideline
GP – General Plan
GPMT – General Plan Guidelines Data Mapping Tool
GPS – Global Positioning Status
GSAs – Groundwater Sustainability Agencies
GSPs – Groundwater Sustainability Plans
GWh – Gigawatt hours

H

HAZUS – Hazards United States
HCD – California Department of Housing and Community Development
HCP – Habitat Conservation Plan
HFRA – Healthy Forests Restoration Act
HFSSA – Hospital Facilities Seismic Safety Act
HI – Heat Index
HLP – Huanglong Bing
HM – Hazard Mitigation
HMA – Hazard Mitigation Assistance

HMG – Hazard Mitigation Grants
 HMGP – Hazard Mitigation Grant Program
 HMIS – Hazardous Material Inventory Statements
 HMMP – Hazardous Material Management
 HSAC – Homeland Security Advisory Committee
 HSGS – Homeland Security Grant Section
 HSGP – Homeland Security Grant Program
 HSS – Homeland Security Strategy
 HUD – Department of Housing and Urban Development
 HVA – Hazard Vulnerability Assessment

I

IA – Individual Assistance
 IBC – International Building Code
 ICARP – Integrated Climate Adaptation and Resilience Program
 ICS – Incident Command System
 IEPR – Integrated Energy Policy Report
 IFC – International Fire Codes
 IMP – Implementation and Maintenance Plan
 IMS – Internet Mapping Service
 IMT – Internet Mapping Tool
 InSAR – Interferometric Synthetic Aperture Radar
 IPCC – Intergovernmental Panel on Climate Change
 ISCC – Invasive Species Council of California
 ISO – Independent System Operator

J

JFO – Joint Field Office
 JPA – Joint Powers Agreement
 JRIC – Joint Regional Intelligence Center

K

KSHB – Kuroshio Shot Hole Borer
 kW – Kilowatt

L

LAC – Los Angeles County Fire Department
 LADBS – Los Angeles Department of Building and Safety
 LADWP – Los Angeles Department of Water and Power
 LAFD – Los Angeles City Fire Department
 LARC – Los Angeles Regional Collaborative for Climate Adaptation and Sustainability
 LCP – Local Coastal Programs
 LEA – Local educational agencies
 LEBLS – Lower Elkhorn Basin Levee Setback
 LECs – Local Emergency Planning Committees
 LHD – Local health department
 LHIP – Landslide Hazard Identification Program
 LHMP – Local Hazard Mitigation Plan
 LLAP – Local Levee Assistance Program
 LNG – Liquid Natural Gas

LNGTEMS – LNG Terminal Engineering and Maintenance Standards
 LOC (earthquake)
 LPDM – Legislative Pre-Disaster Mitigation
 LRA – Local Responsibility Areas
 LUP – Land use plan
 LVC – Lassen Volcanic Center
 LWDA – Labor Workforce Development Agency

M

MASH – Multi-family Affordable Solar Housing
 MFD – Marine Facilities Division
 MGM – Mitigation Grant Management
 MISA – Marine Invasive Species Act
 MMC – Multi-hazard Mitigation Council
 MMI – Modified Mercalli Intensity
 MMRS – Metropolitan Medical Response System
 MMS – Minerals Management Services
 MMT – Million metric tons
 MOA – Memorandum of Agreement
 MOTEMS – Marine Oil Terminal Engineering and Maintenance Standards
 MOUs – Memorandum of Understandings
 MPOs – Metropolitan planning organizations
 MW – Megawatts
 mRFEI – Modified Retail Food Environment Index

N

NASA – National Aeronautics and Space Administration
 natech – natural disaster which triggers a technological accident
 NCCP – Natural Community Conservation Plan
 NCEI – National Centers for Environmental Information
 NCIPP – National Critical Infrastructure Prioritization Program
 NCP – National Contingency Plan
 NCRIC – Northern California Regional Intelligence Center
 NCSS – Northern California Seismic System
 NEHRP – National Earthquake Hazard Reduction Program
 NEPA – National Environmental Policy Act
 NFIA – National Flood Insurance Act
 NFIF – National Flood Insurance Fund
 NFIP – National Flood Insurance Program
 NFIRS – National Fire Incident Reporting System
 NGA – Next Generation Attenuation
 NGPSA – Natural Gas Pipeline Safety Act
 NHDs – Natural Hazard Disclosures
 NH3 – Ammonia
 NID – National Inventory of Dams
 NIMS – National Incident Management System
 NIS – Network Information Services
 NMF – National Mitigation Framework
 NMFS – National Marine Fisheries Service
 NOAA – National Oceanic and Atmospheric Agency
 NOAA CSC – National Oceanic and Atmospheric Administration Coastal Services Center

NOI – Notice of Intent
 NOI – Notice of Interest
 NOX – Nitrogen oxide
 NPC – Non-structural Performance Category
 NPP – Nuclear power plant
 NPS – National Park Service
 NRC – National Resource Council
 NRC – Nuclear Regulatory Commission
 NRCS – Natural Resources Conservation Service
 NTHMP – National Tsunami Hazard Mitigation Program
 NTSB – National Transportation Safety Board
 NTWC – National Tsunami Warning Center
 NULE – Non-Urban Levee Evaluations
 NWS – National Weather Service

O

OAFN – Office for Access and Functional Needs
 OCIAC – Orange County Intelligence Assessment Center
 OCOF – Our Coast Our Future
 OCS – Outer Continental Shelf
 OEHA – Office of Environmental Health Hazard Assessment
 OEM – Office of Emergency Management
 OFSM – Office of the State Fire Marshal
 OHA – Office of Health Affairs
 OHE – Office of Health Equity
 OIE – World Organization for Animal Health
 OMB – Office of Management and Budget
 OMC – Operations and Maintenance Center
 OMRR&R – Operations, maintenance, repair, rehabilitation, and replacement
 OPA – Oil Pollution Act
 OPC – Ocean Protection Council
 OPR – California Governor’s Office of Planning and Research
 OPS – Office of Pipeline Safety
 ORNL –
 OSFM – Office of the State Fire Marshal
 OSHPD – Office of Statewide Health Planning and Development
 OSPR – Office of Spill Prevention and Response
 OTC – Once-Through Cooling

P

PA – Participating Agencies
 PA – Public Assistance
 PAGs – Protection Action Guides
 PDD – National Presidential Policy Directives
 PDF – Portable document file
 PDM – Pre-Disaster Mitigation Program
 PEER – Pacific Earthquake Engineering Research Center
 PERI – Public Entity Risk Institute
 PETS – Pet Evacuation and Transportation Standards Act
 PGA – Peak Ground Acceleration
 PG&E – Pacific Gas and Electric Company
 PHMSA – Pipeline and Hazardous Materials Safety Administration

PIANC – Permanent International Association of Navigation Congresses
 PIER – Public Interest Energy Research
 PIH – Poison-by-inhalation
 PIOP – Pandemic Influenza Operational Plan
 PIPA – Pipeline and Informed Planning Alliance
 PIPES Act – Pipelines and Enhancing Safety
 PM₁₀ – Airborne particle mas with aerodynamic diameter less than 10Aum
 PM_{2.5} – Airborne particle mas with aerodynamic diameter less than 2.5Aum
 PNSN – Pacific Northwest Seismic Network
 Policy AC – Policy Advisory Committee
 PPD – Presidential Policy Directive
 PPD-21 – Presidential Policy Directive-21
 ppm – Parts per million
 PRC – Public Resources Code
 PSEP – Pipeline Safety Enhancement Program
 PSHA – Probabilistic seismic hazard analysis
 PSHB – Polyphagous Shot Hole Borer
 PSM – Process Safety Management
 PTC – Positive train control
 PTHA – Probabilistic Tsunami Hazard Analysis
 PUC – California Public Utilities Commission
 PV – Photovoltaics

Q

QR – Quick response

R

RACER – Remedial Alternatives and Cost Estimate Report
 RCRC – Rural County Representatives of California
 RCRC – Regional Council of Rural Counties
 RCP – Regional Contingency Plan
 RCP – Representative Concentration Pathways
 RD&D – Research, Development, Demonstration, and Deployment
 RFMP – Regional Flood Management Plans
 Risk MAP – Risk Mapping, Assessment, and Planning
 RL – Repetitive Loss
 RMP – Risk Management Plan
 ROG – Reactive Organic Compounds
 RPU – Radiological Preparedness Unit
 RRT – Regional Response Team
 RSIA08 – Railroad Safety Improvement Act of 2008
 RTP – Regional Transportation Plan

S

SAC-SJ – Sacramento-San Joaquin
 SAFCA – Sacramento Area Flood Control Agency
 SAFER – Seismic Action Plan for Facilities Enhancement and Renewal
 SAFRR – Science Application for Risk Reduction
 SAS – Self-anchored suspension
 SASH – Single-Family Affordable Homes

SB – Senate Bill
 SBA – Small Business Administration
 SCAT – Shoreline Cleanup and Assessment Techniques
 SCC – State Coastal Conservancy
 SCEC – Southern California Earthquake Center
 SCS – Sustainable Communities Strategy
 SCSN – Southern California Seismic Network
 SDF – Special District Facility
 SDG&E – San Diego Gas and Electric
 SD-LECC – San Diego Law Enforcement Coordination Center
 SEATs – State Emergency Assessment Teams
 SEMS – Standardized Emergency Management System
 SEP – State of California Emergency Plan
 SEP – Supplemental environmental projects
 SERA – Special Emergency Response and Assistance
 SFA – State Fire Assistance
 SFHA – Special Flood Hazard Areas
 SFM – State Fire Marshal
 SFP – Spent fuel pool
 SGC – Strategic Growth Council
 SGMA – Sustainable Groundwater Management Act
 SHELDUS – Spatial Hazard Events and Losses Database for the United States
 SHM – Seismic Hazard Mapping
 SHMP – State Hazard Mitigation Plan
 SHMT – State Hazard Mitigation Team
 Sierra CAMP – Sierra Climate Adaptation and Mitigation Partnership
 SILC – State Independent Living Council
 SIOSC – State Interagency Oil Spill Committee
 SLC – State Lands Commission
 SLO – San Luis Obispo
 SLR – Sea-level Rise
 SMART – State Mitigation Assessment Review Team
 SoCal Gas – Southern California Gas
 SONGS – San Onofre Nuclear Generating Station
 SOX – Sulphur Oxides
 SPC – Structural Performance Category
 SPFC – State Plan on Flood Control
 SPUR – San Francisco Bay Area Planning and Urban Research Association
 SRA – State Responsibility Area
 SRAFPF – State Responsibility Area Fire Prevention Fund
 SRL – Severe Repetitive Loss
 SSIA – State Systemwide Investment Approach
 STAC – State Threat Assessment Center
 STAS – State Threat Assessment System
 SUV – Sport utility vehicle
 SV – Social Vulnerability
 SWEEP – State Water Efficiency and Enhancement Program
 SWP – State Water Project
 SWRCB – State Water Resource Control Board
 S2S – Sub-seasonal to Seasonal

T

TAC – Technical Advisory Council
TACs – Toxic Air Contaminants
TAG – Technical Advisory Group
TEA21 – Transportation Equity Act of the 21st Century
THIRA – Threat Hazard Identification and Risk Assessment
TIH – Toxic-by-inhalation
TLOs – Terrorism Liaison Officers
TM – Tree Mortality
TMTF – Tree Mortality Task Force
TNC Coastal Resilience
TRB – Transportation Research Board
Tribal AC – Tribal Advisory Committee
TRPA – Tahoe Regional Planning Agency

U

UASI – Urban Security Initiative
UC – University of California
UCERF – Uniform California Earthquake Rupture Forecast
UFRR – Urban Flood Risk Reduction
UICDS – Unified Incident Command and Decision Support
ULE – Urban Levee Geotechnical Evaluations
UMC – Uniform Minimum Credit
UOC – Utility Operations Center
UPAAG – Unified Program Administration Advisory Group
URAMP – Utilities Regional Assessment of Mitigation Priorities
URT – Unified Reporting Tool
URM – Unreinforced Masonry Act
USACE – U.S. Army Corps of Engineers
USBR – United States Bureau of Reclamation
USC – University of Southern California
USCG – United States Coast Guard
USDA – United States Department of Agriculture
US DOT – U.S. Department of Transportation
USFS – United States Forest Service
USFWS – United States Fish and Wildlife Service
USGS – U.S. Geological Survey
USGS CalVO – United States Geological Survey California Volcano Observatory

V

VBDS – Vector-Borne Disease Section
VHFHSZs – Very High Fire Hazard Severity Zones
VMP – Vegetation Management Program
VNS – Volcano Notification Service
VOC – Volatile Organic Compounds

W

WEE – Western Equine Encephalomyelitis Virus
WFLC – Wildland Fire Leadership Council
WIFFS – Western Institute for Food Safety and Security
WIPP – Waste Isolation Pilot Plant
WG – Working Group
WIC – Women, Infants, and Children
WNV – West Nile Virus
WSIP – Water System Improvement Program
WUI – Wildland-Urban Interface

Z

ZEV – Zero-emission vehicles

APPENDIX P – 2018 SHMP REFERENCES

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