



2010

# State of California Multi-Hazard Mitigation Plan *Executive Summary*



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**2010 State of California Multi-Hazard Mitigation Plan  
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## **Introduction**

The purpose of the State of California Multi-Hazard Mitigation Plan, also known as the State Hazard Mitigation Plan (SHMP), is to significantly reduce deaths, injuries, property damage, and other disaster losses caused by natural and human-caused hazards in California. The SHMP documents past and current hazard mitigation activities and presents current goals, strategies, and actions for reducing future disaster losses throughout the state.

The State of California is required to have a Federal Emergency Management Agency (FEMA)-approved multi-hazard mitigation plan to be eligible for disaster recovery assistance and mitigation funding. FEMA approval of the SHMP provides the basis for the state, local governments, and tribal organizations to receive federal post-disaster recovery and mitigation funds. FEMA approval of the 2007 SHMP has enabled California to receive approximately \$200 million following disasters between January 2007 and December 2009. This amount included \$160 million in Public Assistance infrastructure restoration grants and \$40 million in Hazard Mitigation Grant Program grants. Without a FEMA-approved SHMP, California would not have received these funds.

The SHMP fulfills FEMA requirements and provides direction and guidance on implementation of hazard mitigation by state agencies, local governments, tribal governments, and the private sector. The SHMP reflects California's cultural, societal, economic, and environmental conditions and acknowledges numerous regulatory and compliance issues facing the state. It is intended to set the tone for the implementation of hazard mitigation practices that will build a safe and resilient California.

## **The 2010 SHMP – An Enhanced State Mitigation Plan**

The 2010 SHMP also meets the requirements for an Enhanced State Mitigation Plan under Rule 44 Code of Federal Regulations (CFR) Part 201.4 published by FEMA. FEMA designated the 2010 SHMP as an Enhanced State Mitigation Plan on October 6, 2010. FEMA designation of the SHMP as an Enhanced State Mitigation Plan provides additional post-disaster funding to the state.

To enable FEMA approval as an Enhanced State Mitigation Plan, the 2010 SHMP describes the state's system and strategy for tracking mitigation projects, demonstrates that the state is capably managing these in relation to SHMP goals, and shows that California is a "proactive leader in implementing a comprehensive statewide program" (44 CFR Section 206.401).

## **California – What's at Stake**

California is an extraordinarily large, diverse, and complex state. Its people, economy, infrastructure, and environment are assets worthy of protection from natural and human-caused disasters. With 38 million people and 12 percent of the U.S. population, California is not only the most populous state in the nation but also culturally, ethnically, economically, ecologically, and politically diverse.

### What is Hazard Mitigation?

FEMA defines hazard mitigation as “any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards.” For the purposes of the SHMP, hazards include both natural and human-caused. A “hazard” is defined by FEMA as “any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other loss.”

Hazard mitigation generally involves alteration of physical environments, significantly reducing risks and vulnerability to hazards by altering the built environment so that life and property losses can be avoided or reduced. Mitigation also makes it faster and less expensive to respond to and recover from disasters.



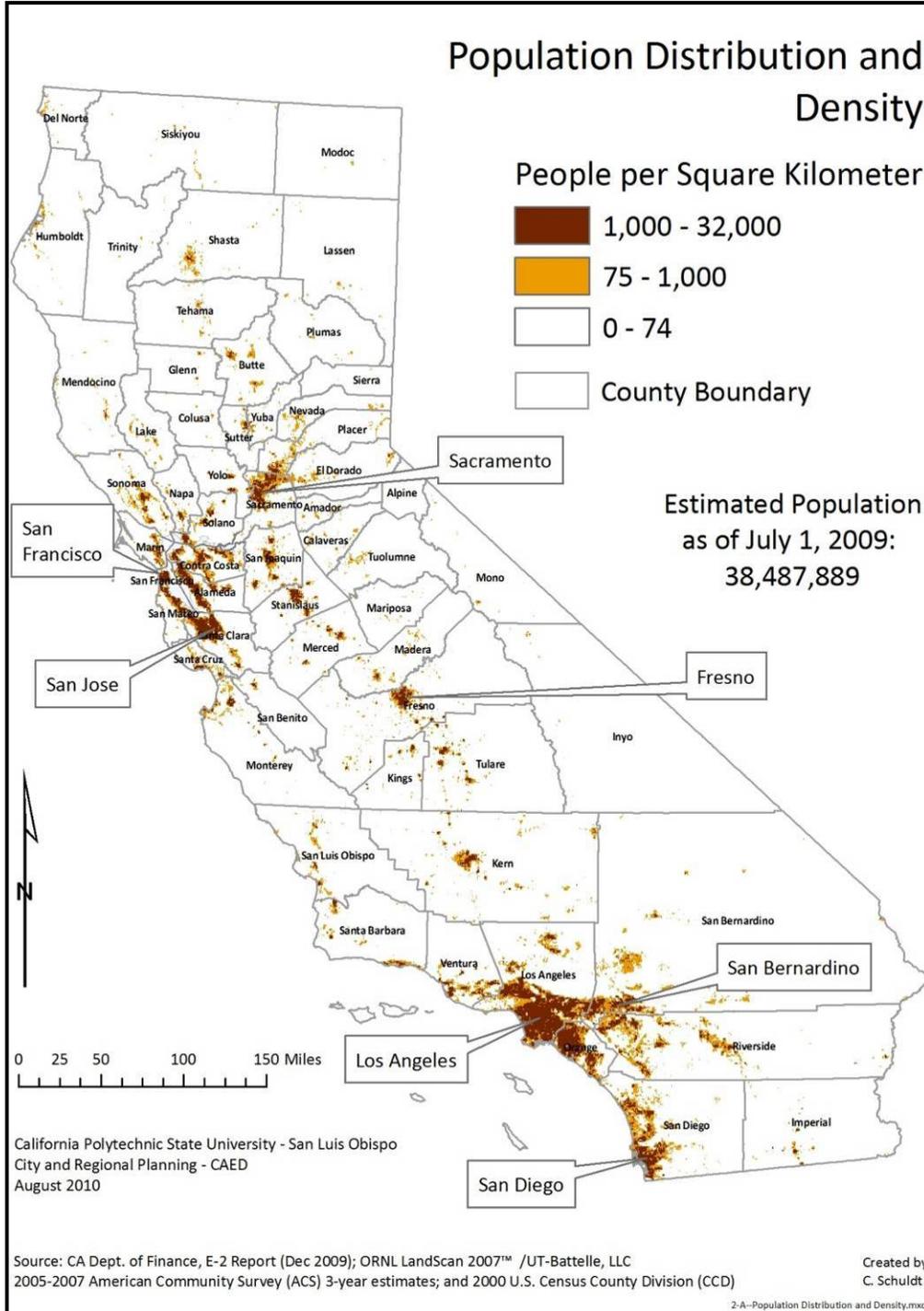
For example, the 2004 Yountville Flood Barrier Wall Project (see photo above) helped the town of Yountville, California avoid an estimated \$1.6 million in losses when the Napa River flooded in December 2005. In Santa Barbara County, the 1998 acquisition of land vulnerable to wildfires and landslides helped avoid an estimated \$1.8 million in losses when fire swept through the area in November 2008.

Hazard mitigation differs from emergency preparedness. The latter focuses on activities designed to make a person or community more ready to take appropriate action in a disaster with emergency response, equipment, food, shelter, and medicine. Hazard mitigation and emergency preparedness go hand-in-hand, however, because when time or financial limitations preclude desirable long-term mitigation actions, emergency preparedness fills the void by enabling people to take the safest possible response actions in the face of damage or losses that may be unavoidable.

California has the nation’s largest industrial belt, stretching much of the way from Sacramento to San Diego and including global headquarters for computer, movie-television, and digital-entertainment industries. It is also the nation’s largest agricultural producer. If it were a separate nation, it would have the eighth largest economy in the world; thus, a catastrophic disaster could adversely affect the national and world economies. This confluence of demographic, economic, and environmental characteristics makes mitigating hazards in California both difficult and very important.

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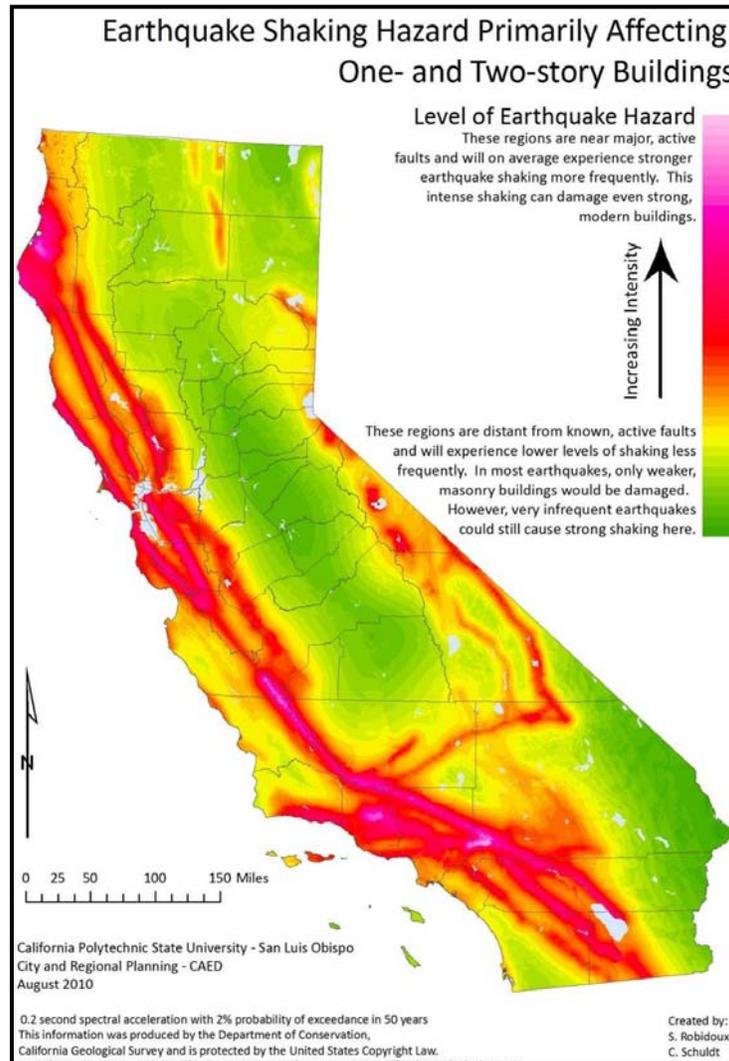
Over the past five decades, disasters and corresponding losses have grown rapidly, as has California's population. Three hazards – earthquakes, fires, and floods – are the predominant sources of disaster since 1950. Other hazards include levee failure, landslides, tsunamis, and climate-related hazards.



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**Earthquakes**

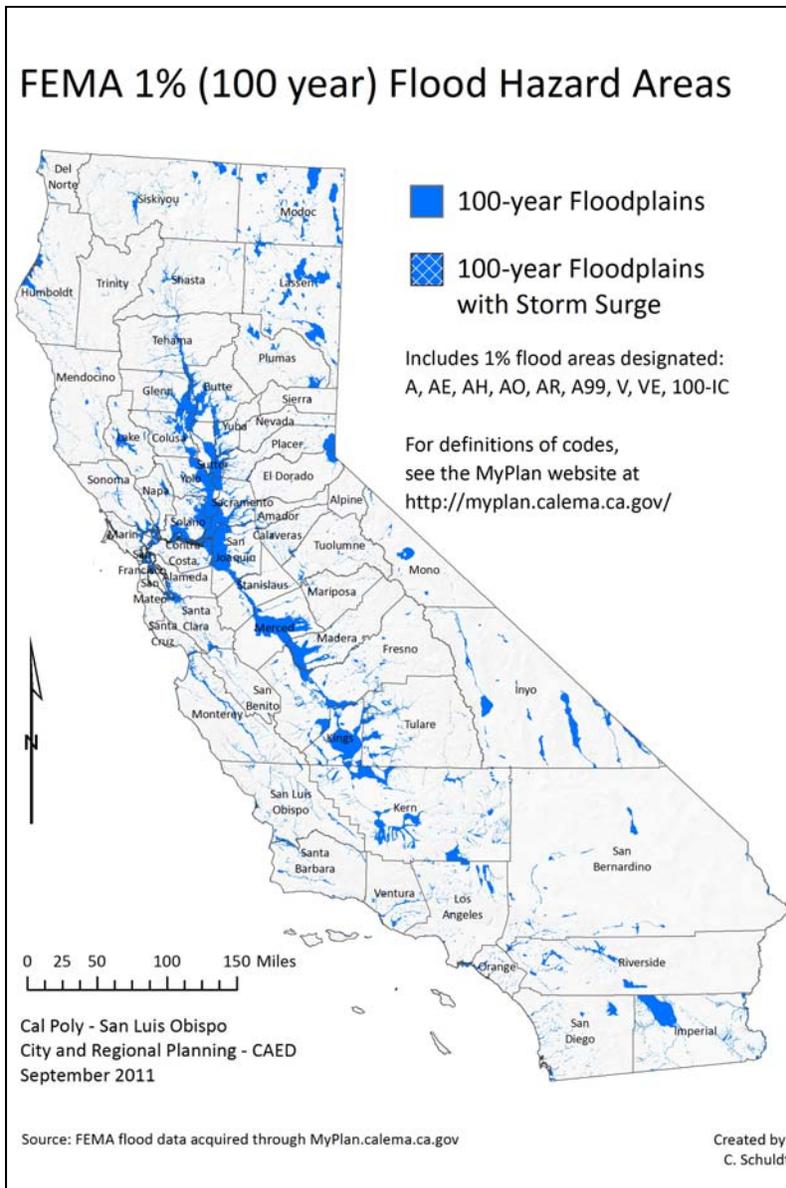
Earthquakes represent the most destructive source of hazards, risk, and vulnerability in California. They occur less frequently than other types of disasters but account for the greatest combined losses (deaths, injuries, and damage costs). Since 1950, earthquake disasters have claimed 203 lives and resulted in 18,962 injuries and more than \$8 billion in disaster costs administered by the California Emergency Management Agency (Cal EMA). California Geological Survey maps show that vulnerability to earthquakes is widespread and includes many populated areas. Hazards associated with earthquakes include shaking, ground failure, and tsunamis (waves triggered by land displacement in oceans and lakes).



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**Floods**

Floods are the second most frequent disaster source and account for the second highest combined losses in California. Since 1950, 30 percent of federally declared disasters in the state were the result of floods. During this time, flood disasters claimed 292 lives and resulted in 759 injuries and more than \$4.8 billion in Cal EMA-administered disaster costs. The map below shows that many areas of the state – including populated areas – are vulnerable to flooding.

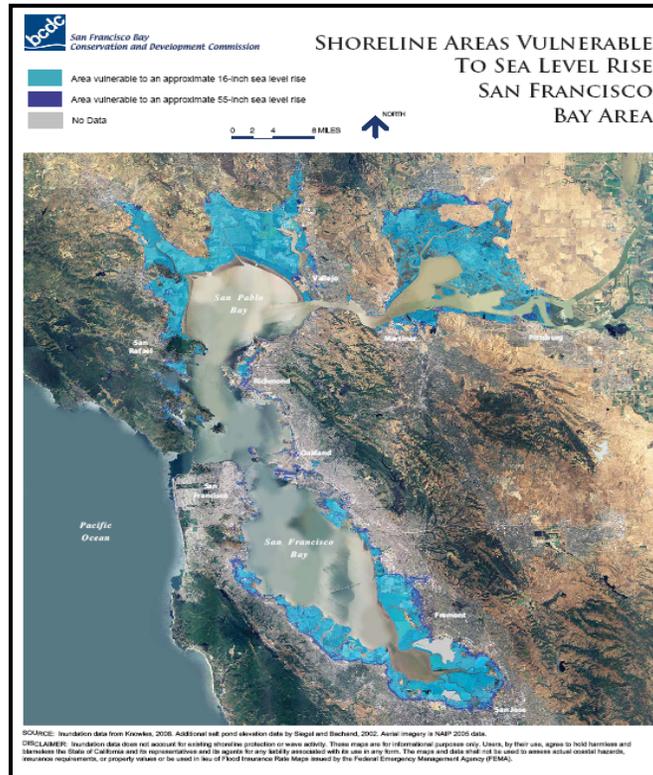




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### Climate Change

Climate change is a relatively new and increasingly important factor in hazard mitigation planning. Climate change intensifies the impacts of many natural hazards and is already affecting California. The state has seen rising sea levels, increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, and changes in precipitation. Extreme weather events, such as heat waves, wildfires, droughts, and floods, are likely to be some of the earliest impacts of climate change. Actions to reduce carbon emissions and adapt to climate change are becoming increasingly important.



### Other Hazards

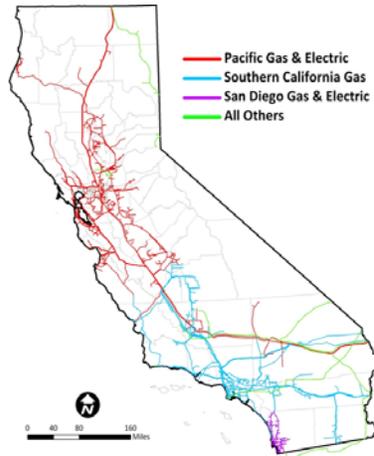
Other natural hazards also intensify disaster losses. For example, levee failure is a hazard in the Sacramento-San Joaquin Delta region, where levees are critical for delivering irrigation water to 3 million acres and drinking water to over 23 million people. Weak levees are a matter of grave concern to agriculturalists, water agencies, homeowners, and policy-makers. In coastal regions, which are home to much of the state's population, industry, and infrastructure, landslide risk is high. Average annual landslide losses in California are estimated at about \$100 million.



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Additional hazards of concern in California include dam failure, energy shortage, epidemics and pandemics, hazardous materials releases, oil spills, natural gas pipeline hazards, insect pests, marine invasive species, radiological accidents, terrorism, volcanoes, air pollution, airline crashes, civil disturbances, cyber terrorism, hurricanes, and train accidents, explosions, and chemical releases.

**California Natural  
Gas Pipelines**



**The Planning Process**

The 2010 SHMP is an update of the 2007 SHMP. An overall goal of the 2010 SHMP update process was to facilitate mitigation action across the boundaries of federal and state agencies, local governments, business and industry, and non-profit private sector organizations.



While Cal EMA has lead responsibility for the development and maintenance of the SHMP, the document was produced in collaboration with multiple state agencies and other groups. A State Hazard Mitigation Team (SHMT) representing 65 state agencies and cooperating private organizations met regularly starting in July 2009 to update plan goals, strategies, and actions reflected in the SHMP.

A series of 2010 SHMP drafts were prepared. These included an administrative draft for review by the SHMT, along with a public comment draft and a FEMA-approval draft adopted by the Cal EMA Secretary in September 2010. Public outreach included an interest group survey and online public comments.

The SHMP is subject to regular review and systematic, ongoing updates. FEMA requires that it be updated every three years. It is a “living” document that reflects the state’s ongoing hazard mitigation commitment, planning, and implementation actions. The approved plan is available for download and review at Cal EMA’s Hazard Mitigation Web Portal ([http://hazardmitigation.calema.ca.gov/docs/2010\\_SHMP\\_Final.pdf](http://hazardmitigation.calema.ca.gov/docs/2010_SHMP_Final.pdf)).

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**Important Factors in the SHMP Update Process**

The 2010 SHMP reflects the following important factors that were considered in the update process and ultimately incorporated into the updated plan:

- Integrating mitigation efforts for all hazards
- Hazard mitigation as an element of long-term sustainability, smart growth, and the economic health of state
- Recognizing climate change as a factor in many hazards, including flood, drought, and wildfire, and identifying mitigation where possible
- Enhanced mapping and analysis
- Making the SHMP useful for local planners by providing updated hazard information and explaining the relationship between state and local mitigation efforts
- Implementing a State Mitigation Assessment Review Team (SMART) loss avoidance tracking system to assess the effectiveness of mitigation projects
- Outreach and opportunities for public participation, including involvement by the State Hazard Mitigation Team (SHMT)

**2010 SHMP Vision, Mission and Goals**

The SHMP sets forth a vision, mission, goals, and objectives and discusses a general strategic framework for mitigation, including overall state mitigation priorities and goals and objectives related to Local Hazard Mitigation Plans.

**Vision and Mission**

The vision of the 2010 SHMP is a safe and resilient California through hazard mitigation. The mission of the 2010 SHMP is to integrate current laws and programs into a mitigation system that will guide the state in significantly reducing potential casualties and damage as well as physical, social, economic, and environmental disruption from disasters.

**Goals**

The goals of the 2010 SHMP – which remain the same as those in the 2007 SHMP – are as follows:

***Goal 1: Significantly reduce life loss and injuries.*** This goal involves reducing potential casualties from disasters through long-term physical changes that make places and buildings safer through mitigation investments and actions.

***Goal 2: Minimize damage to structures and property, as well as disruption of essential services and human activities.*** This goal includes structures as an important aspect of both life safety and property damage and reflects the desired outcome of minimizing disruption of essential services (e.g., police, fire, and medical response) as well as normal human activities after a disaster.

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**Goal 3: Protect the environment.**

**Goal 4: Promote hazard mitigation as an integrated public policy.** This goal suggests both governmental and societal attention to the need for mitigation.

For each goal, the 2010 SHMP identifies corresponding objectives, which remain essentially the same as those in the 2007 SHMP. Goals and objectives are listed in Chapter 2 of the 2010 SHMP.

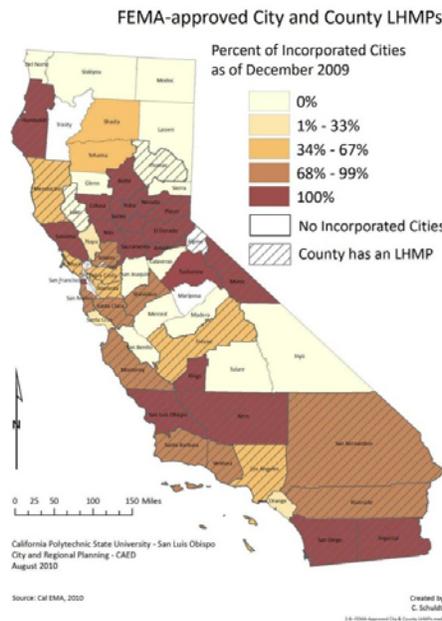
### The SHMP and Local Mitigation Planning

#### **Local Hazard Mitigation Plans**

The federal Disaster Mitigation Act of 2000 requires that local governments prepare Local Hazard Mitigation Plans (LHMPs) as a precondition for receiving certain hazard mitigation grant funds. It also requires that states review LHMPs as part of the state hazard mitigation planning process. The intent is two-fold: (1) to gather hazard, vulnerability, and mitigation information from the local level for use in state-level planning; and (2) to ensure that state and local hazard mitigation planning is coordinated to the greatest extent practical.

The Cal EMA Hazard Mitigation Program (HMP) administers the LHMP program for the state. Cal EMA supports and assists local governments in the development of LHMPs and tracks the progress and effectiveness of plan updates and projects. It provides local governments with information on integrating hazard identification, risk assessment, risk management, and loss prevention into a comprehensive approach to hazard mitigation and helps them identify cost-effective mitigation measures and projects.

As of December 2009, California had 324 incorporated cities, 37 counties, and 388 special districts with FEMA-approved, locally adopted LHMPs, for a total of 749 jurisdictions with LHMPs.



### The SHMP and Local Mitigation Planning *(continued)*

#### ***Benefits of State/Local Cooperation***

Since adoption of the 2007 SHMP, California has made significant progress in coordination of state and local hazard mitigation planning. Cal EMA is working with the SHMT and local governments to link hazard mitigation planning definitions, criteria, standards, and best practices between the state and local levels. Such cooperation is evidenced by numerous cases in which local mitigation achievements were prompted by federal-state legislation and financial incentives.

One example evolving from state legislation is the very successful unreinforced masonry (URM) building retrofit program of the City of San Luis Obispo, in which over 100 seismically vulnerable URM structures in the downtown area have been strengthened to withstand earthquakes. The downtown area is an economically vital part of the city. Seismic retrofits will help assure not only life safety but greater business continuity in future earthquakes.

An example of a community successfully taking advantage of financial incentives is Roseville, which became the first Class 1 city in the U.S. under the Community Rating System of the National Flood Insurance Program, reducing flood insurance rates to 45 percent of the full rate. Roseville's expenditures of \$12.8 million were matched with \$11.2 million in federal grants passed through the state for flood protection improvements. Property acquisition yielded an estimated benefit-to-cost ratio of 8:1, or \$8 in flood losses avoided for every \$1 spent by the City of Roseville.

## **2010 SHMP Mitigation Strategies and Actions**

### **Eight Key Strategies**

The 2010 SHMP maintains and provides for continued progress on the following eight key strategies established by the 2007 SHMP in order to achieve the goals and objectives set forth in the SHMP:

**1. Adopt Legislation Formalizing California's Comprehensive Mitigation Program.** New actions are under way encouraging broader use of post-disaster financial incentives for cities and counties that jointly adopt Local Hazard Mitigation Plans (LHMPs) and General Plan Safety Elements. Major action has been taken to identify a long-term program for managing Delta levee repair and maintenance, water supply and use, and environmental issues. Local General Plans must now address flood hazard mitigation.

**2. Strengthen Inter-Agency Coordination Actions, Including State and Local Linkages.** A major step forward in strengthening inter-agency coordination was the consolidation of the former Governor's Office of Emergency Services (OES) and the Governor's Office of Homeland Security (OHS). The State Hazard Mitigation Team (SHMT) has been strengthened through formation of three strategic work groups: Cross-Sector Communications and Knowledge-Sharing, Mitigation Progress Indicators and Monitoring, and Land Use Mitigation. Additionally, Cal EMA is conducting one-day LHMP preparation workshops for city, county, special district, and tribal organization representatives.

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**3. Broaden Public and Private Sector Mitigation Linkages.** Cal EMA has extended its outreach to citizen, business, and local government groups. An invitation to participate in an online survey and subsequent teleconference was distributed to over 700 business and professional associations, local governments, and metropolitan planning organizations (MPOs).

**4. Set Targets for Measuring Future Progress.** The SHMT has given special attention to setting targets to measure mitigation progress. The Mitigation Progress Indicators and Monitoring Strategic Work Group has recommended standardization of mitigation definitions as well as establishment of baselines against which to measure and monitor. It has begun to assemble illustrative local mitigation success stories for posting on the Cal EMA Hazard Mitigation Web Portal.

**5. Enhance Data Systems and GIS Modeling.** A GIS Technical Advisory Working Committee (GIS TAWC) has actively guided mitigation-related GIS applications, including new sub-county level modeling. Advancements include expanded mapping of completed federally funded mitigation projects, and creation of MyPlan, a GIS map server that consolidates hazard mapping from multiple sources into a single online website (<http://myplan.calema.ca.gov/>) providing local governments with customized GIS hazards maps.

**6. Establish a Mitigation Registry for Communicating Progress.** A substantial step forward has been enhanced use of a Cal EMA database covering FEMA funded hazard mitigation grants issued in California since 1988 for the State Mitigation Assessment Review Team (SMART) loss avoidance tracking system. Meanwhile, Cal EMA has placed previously reviewed FEMA-revised LHMPs in California on its Hazard Mitigation Web Portal (<http://hazardmitigation.calema.ca.gov/>).

**7. Expand Mitigation Project Loss Avoidance Tracking Through the SMART System.** Full implementation of the SMART loss avoidance tracking system – established by the 2007 SHMP for post-disaster assessment of mitigation projects – is under way. Cal EMA and the California State University (CSU) system are implementing a 2010 agreement for post-disaster deployment of pre-trained CSU faculty through workshops designed to train faculty drawn from 23 CSU campuses to conduct post-disaster loss avoidance assessments.

**8. Connect Mitigation Planning with Regional Planning.** Cal EMA has encouraged the Strategic Growth Council (SGC) to include LHMPs as a planning activity eligible for grant funds the SGC provides in setting regional targets for greenhouse gas emissions reduction. In addition, many multi-agency LHMPs have been prepared by counties and councils of governments. The Land Use Mitigation Strategic Work Group is promoting integration of hazard mitigation into sustainable growth strategies being formulated by regional planning bodies.

## **Overview of Mitigation Progress**

The 2010 SHMP includes 52 summaries of mitigation progress made, together with details of related plans, programs, and projects contributing to California's resiliency. A sampling of significant mitigation progress related to each type of hazard is provided below.

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## **Earthquake Mitigation Progress**

Important earthquake hazard mitigation progress includes the following:

- *Earthquake Drills.* The Great California ShakeOut earthquake drill and public readiness initiative is educating the public about ways to reduce personal injury and building damage in earthquakes. Approximately 5.5 million Southern Californians participated in the first Shakeout earthquake drill organized by Earthquake Country Alliance and partner organizations in November 2008. Subsequent drills have been held statewide annually in the fall, involving larger numbers of participants.
- *Building Code Requirements for Existing Homes.* The California Earthquake Authority (CEA) worked with the California Building Standards Commission to facilitate the August 2010 adoption of the first California Building Code for existing residential structures. This sets standards for new investments by the CEA in strengthening seismically vulnerable homes through grants to homeowners. Special training is also being provided for contractors and inspectors. Pilot programming in two markets is planned for roll-out during 2011.
- *Mobile Home Regulations.* The California Department of Housing and Community Development (HCD) revised its regulations in October 2009 to require that fuel-gas burning water heaters in new mobile homes be seismically braced upon installation. This regulation encompasses existing mobile homes by requiring seismic bracing to be demonstrated on re-sale or rental. The current high priority for future mobile home mitigation is adoption of a requirement (expected in 2011) for installation of fire sprinkler systems in new manufactured homes.
- *Seismic Hazards Mapping.* Progress continues on the California Geological Survey (CGS) Seismic Hazards Mapping Program, which maps areas affected by liquefaction, ground shaking, and earthquake-induced landslides for mandatory reference by local governments when issuing building permits. The mapping program has delineated seismic hazard zones for most of the San Francisco Bay and greater Los Angeles metropolitan areas over the past 15 years. CGS has completed two additional Seismic Hazard Zone Maps since 2007, and an additional three are under way.



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**Flood Mitigation Progress**

Important flood mitigation progress includes the following:

- *Flood Risk Management Legislation.* In the latter part of 2007, the California Legislature passed and the Governor signed five interrelated bills – Senate Bills (SB) 5 and 17 and Assembly Bills (AB) 5, 70, and 156 – aimed at addressing flood protection and liability and helping direct use of bond funds. A sixth bill passed in 2007, AB 162, requires additional consideration of flood risk in local land use planning throughout California. Some of the requirements of the 2007 flood risk management legislation apply statewide, others are additive to provisions applicable to lands within the Sacramento-San Joaquin Valley, and others apply solely to lands within the Sacramento-San Joaquin Drainage District. For example, under SB 5, the Central Valley Flood Management Planning Program (<http://www.water.ca.gov/cvfmp>) is being pursued to develop integrated, sustainable flood management for areas protected by state-federal flood protection systems in the Central Valley. A Central Valley Flood Protection Plan is being prepared for adoption by mid-2012.
- *Guidance for Local Governments.* The state Department of Water Resources (DWR) has prepared a guidance document that describes the new legislative requirements that affect city and county local planning responsibilities such as General Plans, zoning ordinances, development agreements, tentative subdivision maps, and other actions. The document, entitled “Implementing California Flood Legislation into Local Land Use Planning: A Handbook for Local Communities” (available at [www.water.ca.gov/LocalFloodRiskPlanning/](http://www.water.ca.gov/LocalFloodRiskPlanning/)), is intended to help cities and counties comply with the new legislation.
- *Flood Mapping.* Based on bond proposals (Propositions 1E and 84) passed by voters in 2006, DWR has been preparing maps showing the 200-year flood areas in the Central Valley (Sacramento River and San Joaquin River drainages) under its FloodSAFE program. DWR is required by law to prepare levee flood protection zone maps and to provide yearly flood risk notices to property owners within such levee protection zones.



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**Wildfire Mitigation Progress**

Important wildfire mitigation progress includes the following:

- *Updated Fire Zone Mapping.* The California Department of Forestry and Fire Protection (CAL FIRE) has remapped state and local fire responsibility areas to provide updated map zones, based on new data, science, and technology that will create more accurate zone designations so that mitigation strategies are implemented in areas where hazards warrant these investments. Adopted in November 2007, the zones provide specific designation for application of defensible space and building standards consistent with known wildfire impacts on people, property, and natural resources in state responsibility areas (<http://frap.fire.ca.gov/projects/hazard/fhz.html>).
- *New Requirements for Very High Fire Hazard Severity Zones.* New fire safety requirements for residential development in Very High Fire Hazard Severity Zones (VHFHSZ) were adopted by the California Building Standards Commission and became effective in January 2008. These requirements apply to VHFHSZ in all state responsibility areas. CAL FIRE has made recommendations for VHFHSZ for over 200 cities (<http://frap.fire.ca.gov/projects/hazard/fhz.html>). Many local governments have made similar designations under their own authority. Current Fire Hazard Severity Zone mapping is available for 2007 and 2008 for most local responsibility areas. These maps must be ratified by local government agencies and the state for full adoption.
- *2010 Strategic Fire Plan.* The California State Board of Forestry and Fire Protection approved the 2010 Strategic Fire Plan in June 2010. The Strategic Fire Plan forms the basis for assessing California's complex and dynamic natural and human-made environment and identifies a variety of actions to minimize the negative effects of wildland fire. The vision of the Strategic Fire Plan is for a natural environment that is more resilient and human-made assets that are more resistant to the occurrence and effects of wildland fire through local, state, federal, and private partnerships. The entire 2010 Strategic Fire Plan can be viewed at:

[http://www.bof.fire.ca.gov/board\\_committees/resource\\_protection\\_committee/current\\_projects/resources/strategicfireplan\\_june2010\\_06-04\\_photos.pdf](http://www.bof.fire.ca.gov/board_committees/resource_protection_committee/current_projects/resources/strategicfireplan_june2010_06-04_photos.pdf)



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### **Progress on Mitigation of Other Hazards**

Important examples of mitigation progress involving other hazards include the following:

- *Levee Hazard Mitigation.* The two bond measures (Propositions 1E and 84) from 2006 appropriated roughly \$4.9 billion to mitigate levee hazards. This money has been allocated both to immediate measures to address levee failure mitigation backlogs as well as to long-range planning. One example is the Delta Risk Management Strategy (DRMS), a program to develop a comprehensive assessment of levee risk in the Delta. Under DRMS, the Department of Water Resources is inventorying the existing levee system, compiling existing and new subsurface data, building a GIS-based platform containing all relevant levee information, and developing a risk-based framework to rank levee hazards so that bond money can be spent cost-effectively ([www.water.ca.gov/floodmgmt/dsmo/sab/drmsp](http://www.water.ca.gov/floodmgmt/dsmo/sab/drmsp)).
- *Landslide Mapping.* The California Geological Survey began releasing maps of earthquake-induced landslide zones under the Seismic Hazards Mapping Act in 1998 and has now completed 13 high-risk quadrangle earthquake-induced landslide hazards maps. An additional 11 maps are under way. Maps showing the locations of existing landslides in a community are useful for land use decision-making because they target areas to be avoided or remediated before construction can safely proceed. Many communities have used such maps as part of the Safety Elements of their General Plans and/or Local Hazard Mitigation Plans.
- *Planning for Tsunami Hazards.* The State Tsunami Program ([www.tsunami.ca.gov](http://www.tsunami.ca.gov)), a joint enterprise of Cal EMA and the California Geologic Survey (CGS), has made substantial progress in mapping tsunami hazards. In December 2009, a set of new statewide tsunami inundation maps was released to the public. These second-generation maps were developed for use in evacuation planning and improve on the accuracy and coverage of previous maps. To facilitate dissemination, user-friendly websites were constructed providing access to the new inundation maps, county evacuation plans, and general tsunami information. Additionally, new educational products, such as CGS Tsunami Notes and tsunami lesson plans, were designed for the California educational standards.
- *Drought Contingency Plan.* In response to the drought that started in 2007, Governor Arnold Schwarzenegger issued Drought Proclamations and Executive Orders in 2008 and 2009 directing state agencies to take immediate actions to manage the crisis. DWR responded, with strong support from Cal EMA and other agencies, by developing the first state Drought Contingency Plan (DCP). Published in November 2010, the DCP identifies an integrated, regional approach to addressing drought, drought action levels, and appropriate agency responses as drought conditions change. It calls for coordination and clearly defined roles and responsibilities of federal, state, and local agencies, and timely dissemination of information to decision-makers. The final Drought Contingency Plan is available at: [http://www.water.ca.gov/drought/docs/Final\\_CA\\_Drought\\_Contingency\\_Plan-11-18-2010a.pdf](http://www.water.ca.gov/drought/docs/Final_CA_Drought_Contingency_Plan-11-18-2010a.pdf)

## **2010 SHMP Implementation Projects**

To add impetus to the 2010 SHMP, Cal EMA has launched implementation projects focused on key aspects of mitigation. These include the following:

- *SMART Loss Avoidance Tracking System.* Cal EMA has implemented the State Mitigation Assessment Review Team (SMART) loss avoidance tracking system to enable systematic post-disaster field evaluation of completed mitigation projects. Depending upon the size and severity of an event and the nature of previously completed mitigation projects in the affected area, office reviews may be followed by a detailed onsite SMART project evaluation using trained and certified field evaluators to conduct technical reviews to document loss avoidance based on the project Benefit-Cost Analysis (BCA). Cal EMA has entered into a Memorandum of Understanding with the California State University system to provide faculty from the 23 state university campuses to serve as project evaluation field investigators to examine mitigation project outcomes after disasters. Initial training of a field investigator pool has been completed for deployment in future disasters.
- *MyPlan One-Stop GIS Hazards Map Server.* Cal EMA and the California Natural Resources Agency are jointly creating MyPlan.gov, a new Internet map service website providing access to GIS hazards mapping useful in preparing and updating Local Hazard Mitigation Plans (LHMPs), General Plan Safety Elements, Local Coastal Plans (LCPs), and hazard mitigation grant projects. Key purposes of MyPlan are to give users efficient access to online GIS hazards mapping datasets acquired from federal and state agencies, support preparation of high-quality GIS-based local hazard maps, and improve local capabilities for writing more effective hazard mitigation documents and making better decisions. Phase 1 work on MyPlan is going online in 2011. Phase 2 is seen as an enhancement, with modifications and adjustments to meet broader needs. Phase 2 will begin when funds become available through a grant from FEMA Region IX, including expansion on a multi-state basis.
- *Cal VIVA Assessment of State-Owned Buildings.* The California Vital Infrastructure Vulnerability Assessment (Cal VIVA) is assessing the vulnerability of state-owned buildings and determining retrofit measures to protect occupants. The objective is to accelerate strengthening of state-owned buildings seen as critical for continuity of operations following earthquakes and other disasters. Initially focusing on two dozen buildings, Cal VIVA will be expanded to include annual vulnerability assessments for larger numbers of buildings and other hazards.
- *Climate Adaptation Policy Guide.* Cal EMA and the California Natural Resources Agency are jointly undertaking preparation of a Climate Adaptation Policy Guide for local governments. A key purpose of the guide is to help communities become more resilient through informed local planning leading to reduced losses from climate change impacts such as flooding, severe storms, mudslides, levee failure, wildfires, extreme heat, prolonged drought, and sea level rise. The Climate Adaptation Policy Guide will provide guidance regarding policies for adapting to climate change impacts for cities, counties, special districts, and tribal organizations based on the region of the state in which they are located.

## **Why the 2010 SHMP Is Important to California**

This Executive Summary has highlighted just some of the ways in which the 2010 SHMP is important to California. It has described:

- How Cal EMA, in addition to its familiar emergency response operations and preparedness planning, is also working with local government and private sector partners to help build greater long-term resilience to disasters, thereby protecting California's economic and general well-being
- How progress is being made to minimize losses and response costs and to facilitate quicker, less costly recovery from disasters
- What state and local governments have done to maximize the mitigation opportunities, taking real-life, on-the-ground actions to create communities that will be more permanently resilient in the face of disaster.

The 2010 SHMP is a proactive strategy for reducing disaster losses and building overall resilience. It protects California's economy and environment from preventable losses and helps bring funding to state and local hazard mitigation initiatives and projects. It assesses mitigation progress, creates benchmarks for future action, and provides a coordinating frame of reference for state-local mitigation actions. In these ways, the 2010 SHMP helps create more resilient and sustainable urban and rural communities throughout California.