CHAPTER 7 - ENHANCED PLAN CRITERIA ACHIEVEMENTS PROGRAM

CHAPTER CONTENT

7.1 INTEGRATION WITH OTHER PLANNING INITIATIVES

Under FEMA guidance for Enhanced Plans 44 CFR Section 201.5(b)(1), a state must detail how its plan is specifically integrated into other state, regional, and FEMA initiatives providing primary guidance for mitigation-related activities. Examples include integrating hazard mitigation actions and priorities with those of other state plans, passing laws and regulations mandating such integration, and/or working with regional planning authorities and councils of government.

Chapter 2 of the 2013 SHMP identifies state mitigation goals and objectives, identifies state funding priorities, and addresses local mitigation planning goals and objectives as well as integration of state and local mitigation efforts.

Chapter 3 presents a general legal, institutional, and policy framework facilitating advances in integrating mitigation practice in California. It describes state mitigation strategies that emphasize horizontal coordination between state agencies and the private sector, as well as vertical coordination among federal, state, and local agencies.

Chapter 4 examines the complex relationships involving California's disaster history, growth factors exacerbating hazards and risk, development trends, vulnerable populations and new statewide climate change mitigation and adaptation planning initiatives. Notably, the Global Warming Solutions Act of 2006 and the California Climate Adaptation Strategy of 2009 integrate hazard mitigation planning with statewide greenhouse gas mitigation and climate change adaptation environmental initiatives.

Chapters 5 and 6 review in detail multiple statewide, regional, and local hazard mitigation programs, strategies, and projects addressing specific natural hazards. Chapter 5 focuses on plans and projects aimed toward mitigating earthquake, flood, and wildfire hazards, risks, and vulnerabilities. Chapter 6 describes mitigation initiatives geared toward reducing losses from secondary hazards, such as levee failure, landslides, tsunamis, and climate change impacts, as well as other more technological hazards such as dam failure and hazardous materials releases.

Chapter 7 directly addresses the issue of integration with other planning initiatives by providing information on multiple dimensions—legislative, policy, institutional, content, functional, and financial — and offering examples of how these dimensions are being manifested in day-to-day action.

7.1.1 SHMP INTEGRATION WITH EMERGENCY MANAGEMENT

As pointed out in other chapters, the SHMP plays a fundamental role in comprehensive, integrated emergency management in California. Among other things, it identifies and analyzes the consequences of the risks associated with human-caused and natural hazards, together with vulnerabilities of people and property associated with such risks, and mitigation programs devised to lessen their impact. Timely and effective hazard mitigation has multiple benefits, including the following:

- Minimizes deaths, injuries, and other negative disaster impacts on the public
- Reduces disaster losses to property, facilities, and infrastructure
- Minimizes negative impacts on the environment and economic condition of the state
- Lessens the work of emergency responders
- Assures greater continuity of government operations, including continued delivery of services
- Creates conditions by which recovery can happen more quickly and be less costly
- Heightens public confidence in the jurisdiction's governance
- Lowers the overall costs of response and recovery

The 2013 SHMP identifies these benefits as an integral part of its various chapters, providing detailed evidence of the value of reducing specific hazards, risks, and vulnerabilities to achieve such benefits. Such benefits are reflected in the SHMP goals in Chapter 2, strategies and action in Chapter 3, risk assessment overview in Chapter 4, evaluation of primary and other hazards and their mitigation in Chapters 5 and 6, and the description of California's comprehensive mitigation program management in Chapter 7.

Accreditation by the Emergency Management Accreditation Program

The 2013 SHMP has been prepared in a manner meeting contemporary nationwide standards for integration of hazard mitigation with other phases of emergency management, including preparedness,

response, and recovery. On April 13, 2012, California's emergency management program was granted full accreditation by the Emergency Management Accreditation Program (EMAP) and formal notification was sent from EMAP to Governor Brown. EMAP is a voluntary, standards-based, peer-reviewed assessment and accreditation process for government programs throughout the country. Accreditation is a means of demonstrating that a program meets national professional standards for emergency management.

For more information regarding EMAP visit: http://www.emaponline.org/

7.1.2 LEGISLATIVE AND POLICY INTEGRATION

As noted previously in Chapters 2 and 3, a substantial body of state law dealing with hazards has grown over the past several decades. Crafted over several decades in response to a succession of disasters (see Chapter 3, Section 3.1 and Annex 2, Guide to California Hazard Mitigation Laws, Policies and Institutions), legislation has been largely incremental, addressing specific issues perceived as problems in response to disasters. This body of law is being knit together into an integrated structure through annual legislative review and action.

Incremental adjustment is the general process used by the California legislature and the executive branch to address state issues. Mitigation planning and policy, therefore, follow state practice. This process was enhanced by disaster events taking place elsewhere. For example, Hurricane Katrina in 2005 raised the visibility of potential levee failure in the San Francisco-San Joaquin-Sacramento Area Delta region, stimulating passage by California voters of $4.9 billion in Delta levee strengthening bonds in November 2006. Similarly, the 2005 Southeast Asian tsunami led to publication of California tsunami run-up mapping and modeling in 2009. The importance of new tsunami mapping is reinforced by the Great East Japan (Tohoku) earthquake and tsunami in March 2011.

Examples of legislative and executive level integration of mitigation have included state-local and public-private sector integration initiatives. Assembly Bill 2140, passed by the California Legislature in 2006, integrates hazard mitigation policy at the state and local levels by providing financial incentives for cities and counties to adopt LHMPs as part of their local general plan safety elements, separately required under California law and covering similar subject matter. Another tool for an integrated state strategy is Governor Schwarzenegger's 2006 Executive Order S-04-06 directing state agencies to develop stronger public-private partnerships for disaster mitigation, preparedness, and emergency services.

7.1.3 INSTITUTIONAL INTEGRATION

Parallel to this general movement toward formal integration was enhancement of state-level coordination through expansion of the State Hazard Mitigation Team (SHMT). With the revision of the 2013 SHMP, the SHMT has grown to over 80 agencies and organizations, and includes representatives of city and county associations as well as the private sector. The SHMT has been involved at every significant step of 2013 SHMP preparation, including provision of update information and review of the goals and objectives of the state mitigation strategies. Utilization of materials provided by member agencies reflects substantial integration of state mitigation policy under SHMP Goal 4 (see Chapter 2).

Progress in substantive horizontal coordination is particularly exemplified through formation and operation of three strategic working groups and the GIS Technical Advisory Working Committee (GIS TAWC). Comprised of one dozen or more volunteers from participating organizations, these groups met during the fall of 2009 to work out critical issues, including cross-sector communication, mitigation progress monitoring, and land use mitigation, as well as development of a GIS website to aid LHMP development.
For information on findings and recommendations of the SHMT strategic work groups and GIS TAWC, see Chapter 3. For a comprehensive profile of functions, hazard mitigation responsibilities and enabling laws guiding SHMT organizations, see Appendix S.

Integration of California state efforts is an ongoing process. In 1991, integration was strengthened by Governor's Executive Order W-9-91, which authorized the Director of OES, to assign specific emergency functions to state agencies through administrative orders. These orders were subsequently updated to require agencies to establish hazard mitigation as an integral element in program delivery.

For example, the Department of Water Resources (DWR) 2006 FloodSAFE initiative has three goals: 1) reduce flood risk to Californians, their homes and properties; 2) develop a sustainable flood management system; and 3) reduce the consequences of floods when they do occur. These goals reinforce the goals of this SHMP.

Augmenting horizontal integration are various agency programs and actions demonstrating vertical integration. For example, in response to passage of AB 162 (2007), which requires inclusion of floodplain mapping in various elements of local general plans, DWR published in 2010 a user guidebook for local governments, reinforcing state and local floodplain management linkages. AB 162 and SB 5 (2007) directed cities and counties to integrate flood hazards into general plans statewide and also required local general plans in the Central Valley to be revised to be consistent with the Central Valley Flood Protection Plan, adopted in 2012. Additionally, SB 1241 (2012) directs counties in CAL FIRE'S State Responsibility Areas (SRA) and Very High Fire Hazard Severity Zones to take special precautionary measures related to wildfire hazards and threats.

It is important to note that each agency on the SHMT represents a potential link between state and local government. Most agencies have long-established relationships with first responders, city managers, county administrative officers, and other local government entities, such as the Delta Protection Commission (www.delta.ca.gov). Examples of such vertical coordination include 1) CAL FIRE administration of the vegetation management program, which involves private property owner participation and volunteer Fire Safe Council support; and 2) Department of Water Resources administration of flood mitigation assistance activities.

7.1.4 CONTENT INTEGRATION

Progress has been made in integrating the content of mitigation planning during the 2013 SHMP preparation. This substantially reinforces the preceding history of policy and institutional integration. With appropriate adjustments, the 2013 SHMP goals and objectives are parallel to the 2007 and 2010 efforts. These goals continue to reflect the state's vision of safety for the citizens, reduction in property loss, attention to the environment, and integration of efforts among a broad-based set of mission-driven agencies.

Content integration is reinforced by process integration through consolidation of the former Governor's Office of Emergency Services (OES) and the Office of Homeland Security (OHS). Cal OES has strengthened its role as a coordinator among agencies in regards to mitigation as well as preparedness, response, and recovery programs and linkages. It is seen by other agencies as a focal point for coordination as they implement their mitigation missions and responsibilities. For example, the Governor's Office of Planning and Research looks to Cal OES for information it needs to provide mitigation planning guidance to the 482 cities and 58 counties in California.

The updated GIS-based maps in Chapters 4 through 6 provide a valuable tool for reexamination of mitigation strategies and priorities in the future, opening the door of technology to 21st century mitigation planning in California and, for the first time, examining the interrelationships among the primary impact hazards of earthquakes, floods, and wildfires within California's regions. MyPlan is an excellent example of integrating GIS information from several state agencies and offering it to local governments through the internet to use in multi-hazard planning.

7.1.5 FUNCTIONAL INTEGRATION

The 2013 SHMP includes editorial attention to the multiple links between mitigation and emergency preparedness planning. For example, in Chapter 3 the relationship of the SHMP to emergency management planning is discussed in Section 3.1.2. Additionally, the Chapter 5 GIS-based risk assessment is incorporated by reference in the State Emergency Plan (SEP).

Examination of 436 FEMA-approved, locally adopted LHMPs in the 2007 SHMP pointed out that 34 percent of LHMPs used the STAPLE/E method from FEMA guidance and 38 percent directly or indirectly linked mitigation planning to local general plans. The most recent review has found that original findings from the 2007 SHMP are still valid (see Annex 4, California Local Hazard Mitigation Plan Status Report).

7.1.6 FINANCIAL INTEGRATION

Funding for mitigation planning and projects in California comes from a variety of sources. The diversity of funding sources provides stability and continuity to projects and lessens the downside of single source funding. The following are examples of the scope and variety of funding that occurs at the state level.

The FEMA mitigation grant programs have provided support for over 155 LHMPs (single- and multiple-agency plans). The major bridge retrofit (seismic safety) and levee improvement (seismic and flood) programs are bond-supported. Educational programs of the California Seismic Safety Commission are funded through fees on insurance policies and an insurance settlement derived from the Northridge Earthquake. Special funds and the state general fund provide support for various other legislatively mandated programs. The California Earthquake Authority is funded through insurance policy premiums. The work of the California Utilities Emergency Association (CUEA) is membership-supported.

An important example of financial integration of mitigation planning was passage of Assembly Bill 2140 (2007), mentioned previously. This bill provides incentives for LHMP preparation by authorizing cities and counties to adopt an LHMP as part of their general plan safety elements. This authorizes the California legislature to provide to such cities and counties a state share of costs exceeding 75 percent of total state-eligible post-disaster costs under the California Disaster Assistance Act. It also requires Cal OES to give future priority to assistance to local jurisdictions without an LHMP to prepare and adopt one.

7.2 PROJECT IMPLEMENTATION CAPABILITY

The Enhanced Plan must document the state's project implementation capability, identifying and demonstrating the ability to implement the plan 44 CFR Section 201.5(b)(2)(i) and (ii)), including:

- Established eligibility criteria for multi-hazard mitigation measures
- A system to determine the cost effectiveness of mitigation measures, consistent with OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs and to rank the measures according to the state's eligibility criteria

The Cal OES Hazard Mitigation Grants (HMG) Branch administers the following federal hazard mitigation grant programs, each of which is addressed in this section:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)
- Legislative Pre-Disaster Mitigation (LPDM)
- Flood Mitigation Assistance (FMA)

- Severe Repetitive Loss (SRL) *(On July 6, 2012, President Obama signed the Biggert-Waters Flood Insurance Reform Act of 2012, which combined the SRL funding into the FMA program, and created a combined National Flood Mitigation Fund.)*

7.2.1 HAZARD MITIGATION GRANT PROGRAM (HMGP)

The Hazard Mitigation Grant Program (HMGP) is authorized by Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (the Stafford Act), Title 42, United States Code (U.S.C.) 5170c. The key purpose of HMGP is to ensure that the opportunity to take critical mitigation measures to reduce the risk of loss of life and property from future disasters is not lost during the reconstruction process following a disaster. HMGP is available, when authorized under a Presidential major disaster declaration, in the areas of the State requested by the Governor. The amount of HMGP funding available to the applicant is based upon the estimated total Federal assistance to be provided by FEMA for disaster recovery under the Presidential major disaster declaration. California is eligible to apply for up to 20% of the cost of recovery for the declared disaster.

Special (5%) Initiative Activities

FEMA has established a special five-percent initiative policy for the HMGP to fund mitigation activities selected by the state that may not otherwise comply with all minimum eligibility requirements. These activities are often difficult to evaluate for cost effectiveness and eligibility. The proposed activities to be submitted under the five-percent set-aside initiative are identified and selected at the discretion of the Cal OES Director, based on recommendations of the State Hazard Mitigation Officer and in consideration of the SHMP goals and objectives. Further information concerning this special initiative may be found in Section 7.2.8 and Appendix Q.

7.2.2 PRE-DISASTER MITIGATION (PDM) GRANTS

The Pre-Disaster Mitigation (PDM) Program is authorized by Section 203 of the Stafford Act, 42 U.S.C. 5133. The PDM program is designed to assist States, Territories, Indian Tribal governments, and local communities with implementation of sustained pre-disaster natural hazard mitigation programs to reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding from future disasters. Funding for the PDM Program is allocated annually in the federal budget.

7.2.3 LEGISLATIVE PRE-DISASTER MITIGATION (LPDM) GRANTS

LPDM grants had previously been authorized by a Joint Explanatory Statement in the annual federal appropriations budget. Although the federal budget no longer designates funds for specific projects, several projects previously allocated funds under the LPDM grant program are still in process. Funds awarded through the LPDM are applied toward the appropriation for the designated fiscal year. Proposed activities must be in conformance with the PDM eligibility criteria defined in the HMA Unified Guidance. All projects must be cost-effective.

7.2.4 FLOOD MITIGATION ASSISTANCE (FMA) GRANTS

The Flood Mitigation Assistance (FMA) Program was authorized by Section 1366 of the National Flood Insurance Act of 1968, as amended (NFIA), 42 U.S.C. 4104c, with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP).

7.2.5 SEVERE REPETITIVE LOSS (SRL) GRANTS

The Severe Repetitive Loss (SRL) Program was authorized by Section 1361A of the NFIA, 42 U.S.C. 4102a, with the goal of reducing flood damages to residential properties that have experienced severe repetitive losses under flood insurance coverage. These reductions in damages are intended to result in the greatest

savings to the National Flood Insurance Fund (NFIF) in the shortest period of time. The State Hazard Mitigation Officer has appointed an SRL point-of-contact person who has created an account on Data Exchange, the Repetitive Loss Database. Cal OES has contacted communities with SRL properties informing them of the availability of the SRL program and providing guidance regarding requirements. The state coordinates with the communities with the most Severe Repetitive Loss properties to encourage them to develop and update their Local Hazard Mitigation Plans (LHMPs). The identified communities are given preference in the award of flood project and/or planning grants (See Appendix Q).

On July 6, 2012, President Obama signed the Biggert-Waters Flood Insurance Reform Act of 2012, which combined the SRL funding into the FMA program, and created a combined National Flood Mitigation Fund. The PDM, FMA and SRL programs are subject to the availability of appropriation funding, as well as any program specific directive or restriction made with respect to such funds.

California is actively pursuing Severe Repetitive Loss projects as evidenced by funding issued over the last three years (see Section 7.5, Table 7.F for grant distribution information). Between 2010 and 2012, SRL grants were issued to both Sonoma County and Monterey County. Both counties are included in California's top ten list of repetitive loss counties (see Appendix P for complete list).

7.2.6 DETERMINING COST EFFECTIVENESS

All hazard mitigation applications must be cost-effective to meet FEMA submission requirements. Proposed activities must meet the criteria described in OMB Circular A-94 Guidelines. Cal OES uses the FEMA Mitigation Benefit-Cost Analysis (BCA) Toolkit, which incorporates the discount rate and present-day value in the benefit-cost ratio calculations. Cal OES provides benefit-cost training to potential applicants as part of the application workshops which allows the applicants to perform their own analyses. Cal OES staff reviews the analyses for the credibility of data used to determine the benefit-cost ratio and provides necessary assistance to the applicant.

7.2.7 THE PROPOSAL PROCESS

Prior to 2011, Cal OES conducted a separate competitive review of applications each time funds became available for any of the HMA Programs. In 2011, information was received through a FEMA sponsored conference that the average cost of developing and processing a hazard mitigation application was estimated to be in excess of $20,000.

Subsequent research revealed that between 2008 and 2011, Cal OES had received over 160 project applications that had not been selected through the competitive process for further review and funding by FEMA. This led to a realization that a substantial amount of time, effort, and expense (exceeding $3,200,000) had been spent on applications that were not utilized. During 2011 and 2012, the Cal OES HMG Division streamlined the application process to allow interested parties to propose hazard mitigation activities in a single standardized process for all hazard mitigation grant programs without the expense of developing a full application.

This new process uses the electronic Notice of Interest (NOI) process previously used to determine eligibility, and expands the use of that process to competitively rate the fundamental nature of the proposed hazard mitigation activity. Interested parties can propose concepts for hazard mitigation activities online through an open continual process without the need of expending the time, effort and expense of developing a full application until their proposed concept is selected for application development. This prevents interested parties from wasting valuable resources on the development of full applications that are not selected through a competitive process. Once an interested party submits an NOI proposing a hazard mitigation activity, that NOI is rated by a team of three raters with expertise in hazard mitigation. The hazards discussion required as part of the NOI must show use of and consistency with Cal OES's MyPlan Internet Map service in defining and assessing hazards and related vulnerabilities.

Subsequent to the rating process, bonus points are awarded for flood project or planning activities addressing areas containing SRL properties (See Appendix Q). The NOI is then ranked on statewide lists by County, type of hazard addressed, and type of mitigation activity. Once the NOI has been rated and ranked, it never has to be submitted again.

When funding becomes available through any of the programs listed above, proposed activities are selected for application development based on the highest ranked NOIs in comparison with the specific priorities and criteria of the program that has available funding. This process is depicted in Chart 7.B and is described in detail in the following sections. This new process was originally announced in a letter dated August 15, 2012, which was sent via email to all Interested Parties for HMA grant programs, and was subsequently posted to the Cal OES website. Complete information on this process is available to the public on the Cal OES website at http://www.calema.ca.gov/HazardMitigation/Pages/Hazard-Mitigation-Assistance.aspx.

Since that time, this new process has been demonstrated in numerous presentations conducted throughout the State, including conferences sponsored by FEMA; the Floodplain Managers Association; the California Department of Water Resources; the California Emergency Services Association; the Governor's Office of Planning and Research; the California Specialized Training Institute; and Congressman Ed Royce. In addition, when Cal OES receives notification that FEMA has approved a Local Hazard Mitigation Plan, it forwards a statement notifying the local planners of eligibility to apply for funding.

7.2.8 THE RATING PROCESS

There are three distinct types of NOI's listed below. All three NOI types use the same NOI form. The three types of NOI are explained below. The rating criteria are displayed in Appendix Q:

1. The project NOI rating process
2. The Special (5%) Initiative NOI rating process
3. The planning NOI rating process

Project NOI Rating

All Project NOIs received are reviewed by Cal OES staff to confirm the applicant and project eligibility. Eligible applicants include State and local governments, special districts, public colleges and universities, and private nonprofit organizations designated in the Code of Federal Regulations (CFR) 44 Section 206.434(a) in all jurisdictions in California. Information on eligible activities may be found in the FEMA Unified HMA Guidance. An email is sent to the subapplicants notifying them of the results of the eligibility review.

Special (5%) Initiative NOI Rating

The Special Initiative, also known as the Five Percent (5%) Initiative is authorized under a special provision of the Hazard Mitigation Grant Program (HMGP) specified under Part IX, A.11 of the 2013 FEMA Unified HMA Guidance (page 84). This provision allows Cal OES to use up to 5% of the funds available under a HMGP grant for projects that would not otherwise meet the eligibility criteria of a local HMGP project. Hazard mitigation activities proposed in an NOI which meet these criteria are rated with the same procedures described for Project NOIs, but using special criteria displayed in the rating form (See Appendix Q).

Planning NOI Rating

Hazard mitigation planning activities proposed in an NOI are rated with the same procedures described for Project NOIs, but using special criteria.

For a detailed discussion of the Project NOI, the Special (5%) Initiative NOI and the Planning NOI Rating processes, go to Appendix Q.

7.2.9 THE SELECTION PROCESS

Once rated, the NOI is ranked on statewide lists by County, type of hazard, and activity type (e.g. local project, special initiative, or planning activity). Those lists serve as a demonstration of the prioritized hazard mitigation needs of the State of California. Once an NOI is ranked on those lists, it will remain on the lists until it is either selected for application development or withdrawn by the applicant.

When funding becomes available, the ranked list of NOIs is considered for the available funding with respect to the specific eligibility criteria and requirements of the specific program providing the funding. The highest ranked NOIs meeting the basic eligibility criteria are reviewed to ensure that they meet all federal and state criteria for the specific funds available, and that they are consistent with the State mitigation priorities. Recommendations will then be made to the Governor's Authorized Representative (GAR) based on the highest ranked activities meeting the criteria along with other strategic criteria (such as geographic location and program priorities).

As an example: a selection process for HMGP funding may recommend the highest ranked activities located in the counties that suffered the greatest damages as a result of the declared disaster; whereas the selection process for FMA funding may recommend the highest ranked activities that will protect properties insured under the National Flood Insurance Program. Potential applicants with mitigation activities selected for application development are notified by letter and invited to develop a full application non-competitively. Cal OES staff are assigned to assist in the development of the application to the extent feasible. A public announcement of the selected activities is posted on the Cal OES website along with appeal guidelines for those not selected. Those NOIs not selected for application development remain on the state lists for later consideration as other funding sources become available.

(Continued on next page)

Table 7.A: Hazard Mitigation Grants 2013 Application Process

New Application Steps	
1	The new application process for Hazard Mitigation grants is open indefinitely for continuous filing of a Notice of Interest (NOI) proposing hazard mitigation projects or planning activities.
2	Potential applicants may download the NOI Announcement Letter and the NOI Instructions from the Cal OES website at http://www.calema.ca.gov/HazardMitigation/Pages/Hazard-Mitigation-Assistance.aspx.
3	Potential applicants may complete the NOI form online and submit it electronically.
4	The NOI is reviewed by Cal OES to confirm the eligibility of the applicant and the project and to confirm that the NOI has not been previously rated and ranked.
5	An email is sent to the applicant providing notification of the results of the initial review.
6	The NOIs are reviewed and scored by a team of three hazard mitigation experts.
7	The scores of the three raters are averaged for each NOI. Subsequent to the rating process, bonus points are awarded to NOIs proposing flood project or planning activities addressing areas containing SRL properties (see Appendix Q). The final score is entered into a database which ranks the NOIs by score in categories by County, by hazard type, and by activity type.
8	An email is sent to the applicant providing notification of the results of the rating process. The ranked lists are available for public viewing on the Cal OES website.
9	When funds become available, applicants are selected from the list based on the ranked score in conjunction with other strategic criteria such as geographical location and the programmatic priorities of the funding source. More applicants are selected than can be funded in order to allow for attrition during the development process.
10	A public notice is posted on the Cal OES website announcing the projects selected for application development along with instructions for appealing this decision.
11	Selected applicants are sent a letter inviting them to develop an application and are assigned an Emergency Services Coordinator (ESC) for assistance. The ESC works with the applicant to ensure that the application is developed in accordance with Cal OES standards.
12	Once the application meets the Cal OES standards, it is submitted to FEMA for funding, or is held pending the availability of additional funds. FEMA conducts further reviews, including environmental and historic preservation reviews, and obligates funds once the application is finally approved.

7.2.10 THE APPEALS PROCESS

Appeal Guidelines are posted on the Cal OES website. The purpose of these guidelines is to provide a process for resolution of disputes between a potential grant applicant and the Cal OES concerning a decision not to select a plan or project for application development. The only Cal OES actions subject to appeal are the decisions not to select a potential applicant's plan or project for application development in connection with a competitive review of a Notice of Interest (NOI). An Appellant must have standing to appeal; i.e., the appeal must demonstrate that the appellant is directly affected by the selection decision and identify grounds for appeal.

The averaged rated score of the NOI does not constitute grounds, and is not subject to appeal. The appeal must show that (a) Cal OES procedures, criteria or priorities (as announced with the selection decisions) were not followed with respect to the appellant in making the selection decision regarding the Appellant's NOI; AND (b) this failure constitutes a sufficiently substantial error to justify a change in the selection decision. The only remedy available under this appeals process is for an Appellant to be selected for application development. Selection for application development does not guarantee funding.

To review the Appeal Guidelines, visit: http://www.calema.ca.gov/HazardMitigation/Pages/Hazard-Mitigation-Assistance.aspx

7.3 PROGRAM MANAGEMENT CAPABILITY

The Enhanced Plan must demonstrate that the state has the capability to effectively manage all mitigation grant programs and provide a record of the following [DMA 2000, Section 201.5(b)(2)(iii A-D)]:

- Meeting all mitigation grant application time frames and submitting complete, technically feasible, and eligible proposed activities applications with appropriate supporting documentation
- Preparing and submitting accurate environmental information and benefit-cost analyses.
- Submitting complete and accurate quarterly progress and financial reports on time
- Completing all mitigation grant activities, including financial reconciliation, within established performance periods.

The Governor of the State of California has designated Cal OES as the State Administrative Agency for the implementation of FEMA funding, including funds available through the various Hazard Mitigation Assistance (HMA) grant programs. In addition, Cal OES serves as the State Administrative Agency for numerous other federal grant programs administered by the Department of Homeland Security; the Bureau of Justice Assistance; the Violence Against Women Grant Office; the Department of Health and Human Services; the National Institute of Justice and other federal funding agencies. In order to competently administer these federal grant programs, Cal OES has established an extensive infrastructure for the support of grants administration.

This infrastructure includes a very large contingent of full time professional staff dedicated to the review, approval, processing, oversight, monitoring and payment of federal grants and subgrants to state and local agencies for the implementation of the federal and state programs. Within this larger infrastructure, Cal OES has organized the Office of Grants Management, which administers more than 70 separate grant programs to more than 1,400 grant recipients. There are several different organizational units within the Office of Grants Management, including the Hazard Mitigation Grants (HMG) Division (see Chart 7.A). The HMG Division is responsible for the programmatic oversight of the HMA grant programs in collaboration with FEMA, state and local partners and stakeholders. It fulfills this responsibility through the processes discussed in the following sections.

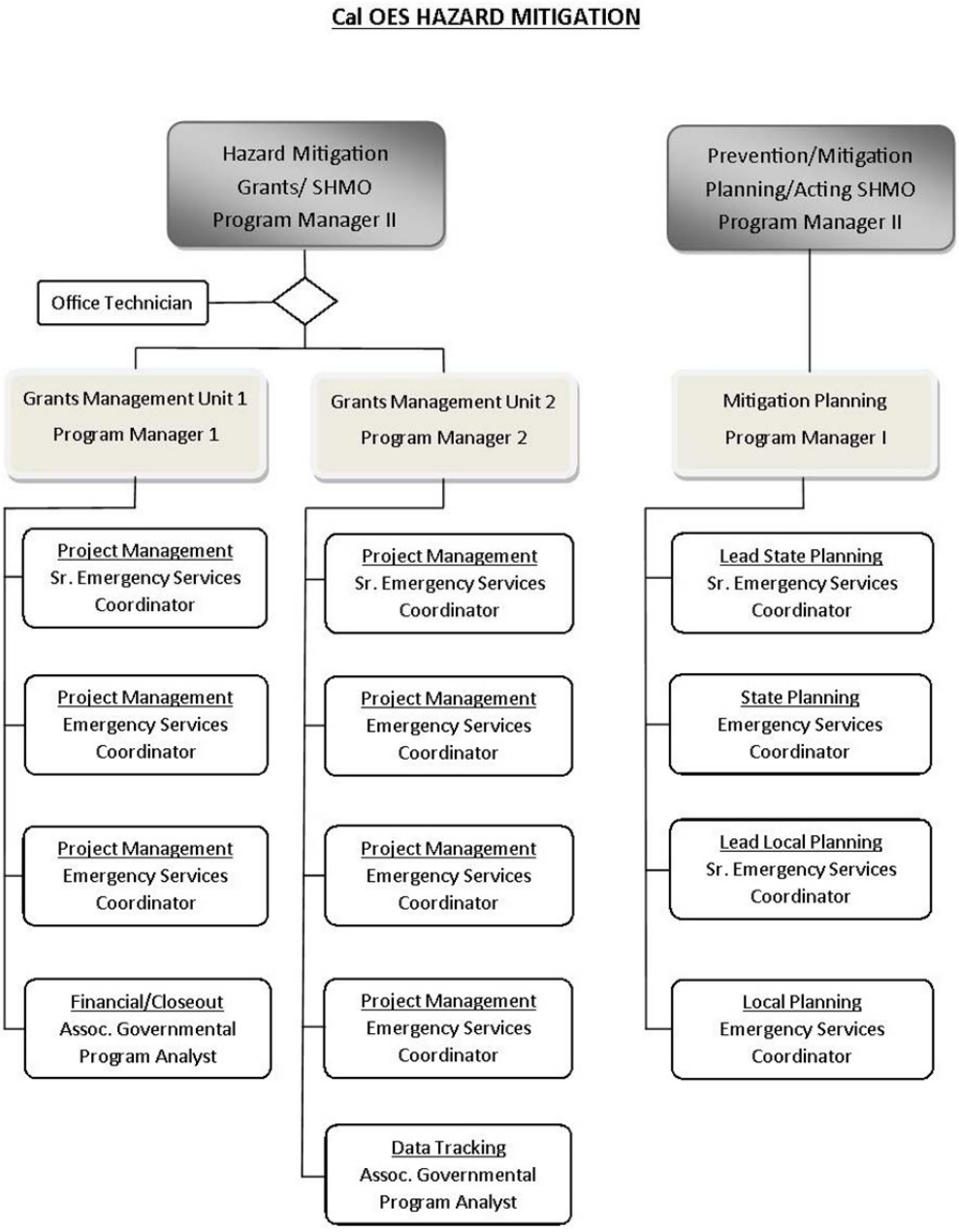
7.3.1 ADMINISTRATION

The HMG Division has successfully administered the HMA grants for more than twenty years, and has a successful record of meeting mitigation grant application time frames and submitting complete, technically feasible, and eligible proposed activity applications with appropriate supporting documentation. Over the past three years, the HMG Division has established 87 new hazard mitigation project and planning grants in 38 counties utilizing more than $42 million in federal funds. The functions of the Hazard Mitigation Grants Division include:

- Working with communities to develop appropriate grant applications for the HMA Grant Programs;
- Administer Active Grants
- Closeout Completed Grants

Chart 7.A presents the two branches of Cal OES's Hazard Mitigation: planning and grants.

Chart 7.A: Cal OES Hazard Mitigation Program Organization



Source: Cal OES

7.3.1.1 THE APPLICATION DEVELOPMENT PROCESS

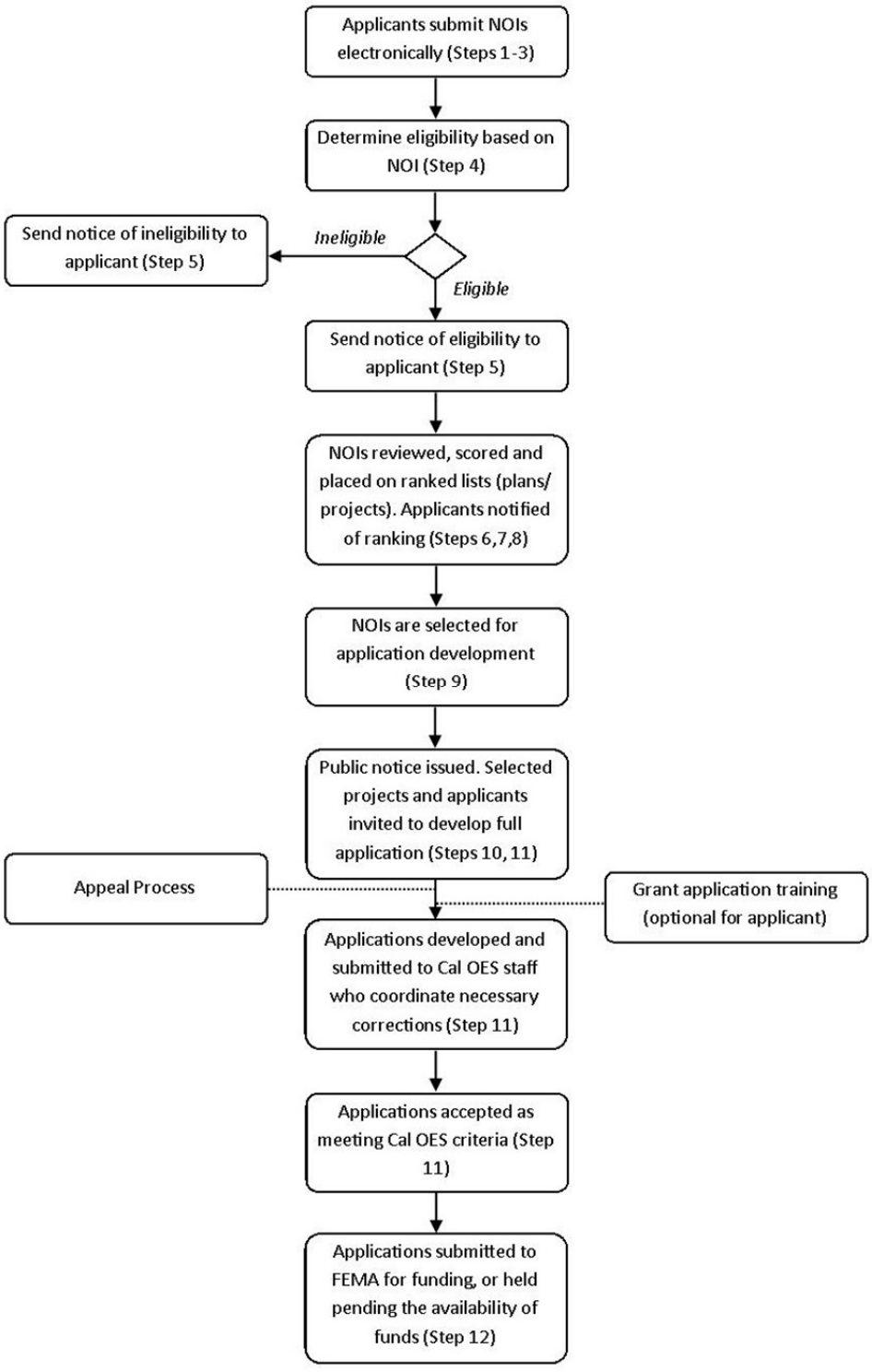
When federal funding becomes available from any of the HMA Grant Programs, the HMG Division selects project and planning activities for application development using the project selection process described in Sections 7.2.7 through 7.2.10 and depicted in Chart 7.B. Within this section, the terms "applicant" and "application" are used in a broad sense to refer to the "subapplicant" and the "subapplication".

Once a project or planning activity is selected for application development, the applicant is contacted to ensure that they are still interested in developing the application, and are sent a formal letter of invitation to develop an application non-competitively. An Emergency Services Coordinator (ESC) is assigned to work with the applicant on the development of the application, and subsequently sends them information on the specific program that the application is for (e.g. HMGP, PDM, or FMA) as well as the necessary forms and instructions. The applicant is instructed to submit the Benefit Cost Analysis (BCA) as the first step in the development of a project application, and is advised that the BCA must demonstrate a Benefit Cost Ratio (BCR) of 1.0 or greater in order for the application to be eligible. The ESC assists the applicant on the BCA as necessary and reviews the submitted BCA to ensure that it was completed correctly.

If the applicant is unable to achieve a qualifying BCR, they are informed that their project is not eligible, and are advised not to expend any further effort or cost. Another project is then invited to develop an application in its place. Once the applicant has submitted a qualifying BCA, the ESC continues to work with the applicant on the development of the application by reviewing draft portions of the application as it is developed and providing suggestions for improvement. The ESC is equipped with detailed checklists that facilitate the review of the applications. Once the application has achieved a satisfactory review, it is either submitted to FEMA for funding or held pending the availability of funds. Those applications held pending the availability of funds have priority over the development of new applications when funds become available.

Once an application is submitted to FEMA for funding, the HMG Division coordinates with the applicant and FEMA to provide any additional information necessary for FEMA to approve the application and obligate the funds, including the Environmental Review and verification of the Benefit Cost Analysis (see Section 7.3.2).

Chart 7.B: State of California Mitigation Grant Application Development Process



Source: Cal OES

7.3.1.2 THE GRANT ADMINISTRATION PROCESS

Once funds have been obligated for a grant by FEMA, the HMG Division establishes a Grant Award Agreement between Cal OES and the grantee, and administers that grant in accordance with the Grant Administration Procedures posted on the Cal OES website, along with applicable provisions of the FEMA Hazard Mitigation Assistance Unified Guidance and Title 44 of the Code of Federal Regulations. Each grant is assigned an Emergency Services Coordinator to provide assistance to the grantee and provide oversight on the implementation of the grant. All grant information is managed by the Mitigation Grants Management (MGM) Lotus Notes database. The MGM database includes the following information for all grants:

- Executive Summary
- Applicant Information
- Project Information
- Application Review
- Project Monitoring
- Financial
- Closeout Information

All grantees are required to report project status on a quarterly basis (see Section 7.3.3). The HMG Division has dedicated an Associate Governmental Program Analyst (AGPA) position to maintain the programmatic and financial information in the MGM database, and an AGPA position to coordinate the Closeout Process. In addition, the HMG Division coordinates with the Cal OES Grants Monitoring Branch to ensure that grants are implemented in compliance with federal and state laws and regulations (see Section 7.3.5).

7.3.1.3 THE GRANT CLOSEOUT PROCESS

Once a grant project or planning activity has been completed, the HMG Division coordinates the process of closing that grant, as described in Section 7.3.6.

7.3.2 ENVIRONMENTAL REVIEW AND BENEFIT-COST ANALYSES

The State of California ensures that all applicants have provided all required environmental information and benefit-cost analyses including required documentation for all data sources and thorough description of calculations and assumptions. This information is recorded in the MGM database and used in the tracking, monitoring, and closeout of mitigation activities.

Cal OES relies on the staff of FEMA Region IX to conduct environmental reviews for construction projects seeking hazard mitigation grant funding from the HMA program. Before FEMA approval of a hazard mitigation grant, the project activities must comply with all applicable federal, state, and local codes and standards including the California Environmental Quality Act and the National Environmental Policy Act (PL 91-190, as amended).

7.3.3 QUARTERLY PROGRESS REPORTING

The State of California submits complete and accurate quarterly progress and financial reports on time. Quarterly reports based on measurable outcomes are generated by the grantee and reported to Cal OES. Cal OES compiles the reports, assesses the programmatic and financial components, and then enters the information into a database before sending the reports to FEMA. The reports include:

- Percentage completion of the project
- Progress on milestones identified in the original schedule
- Overall assessment of the schedule

- Adherence to budget (including over- and under-reporting)

If grantees do not submit timely and accurate quarterly reports or the reports indicate problems associated with the above components, Cal OES suspends payments pending resolution.

On the following pages, Map 7.A shows FEMA-funded hazard mitigation projects approved for the following years: 1988 through 2000, 2001 through 2003, 2004 through 2006, 2007 through 2010, and 2010 through 2012. Map 7.B and Map 7.C show FEMA-funded hazard mitigation projects in the San Francisco Bay Area and Los Angeles Area in relation to relative vulnerability to all hazards.

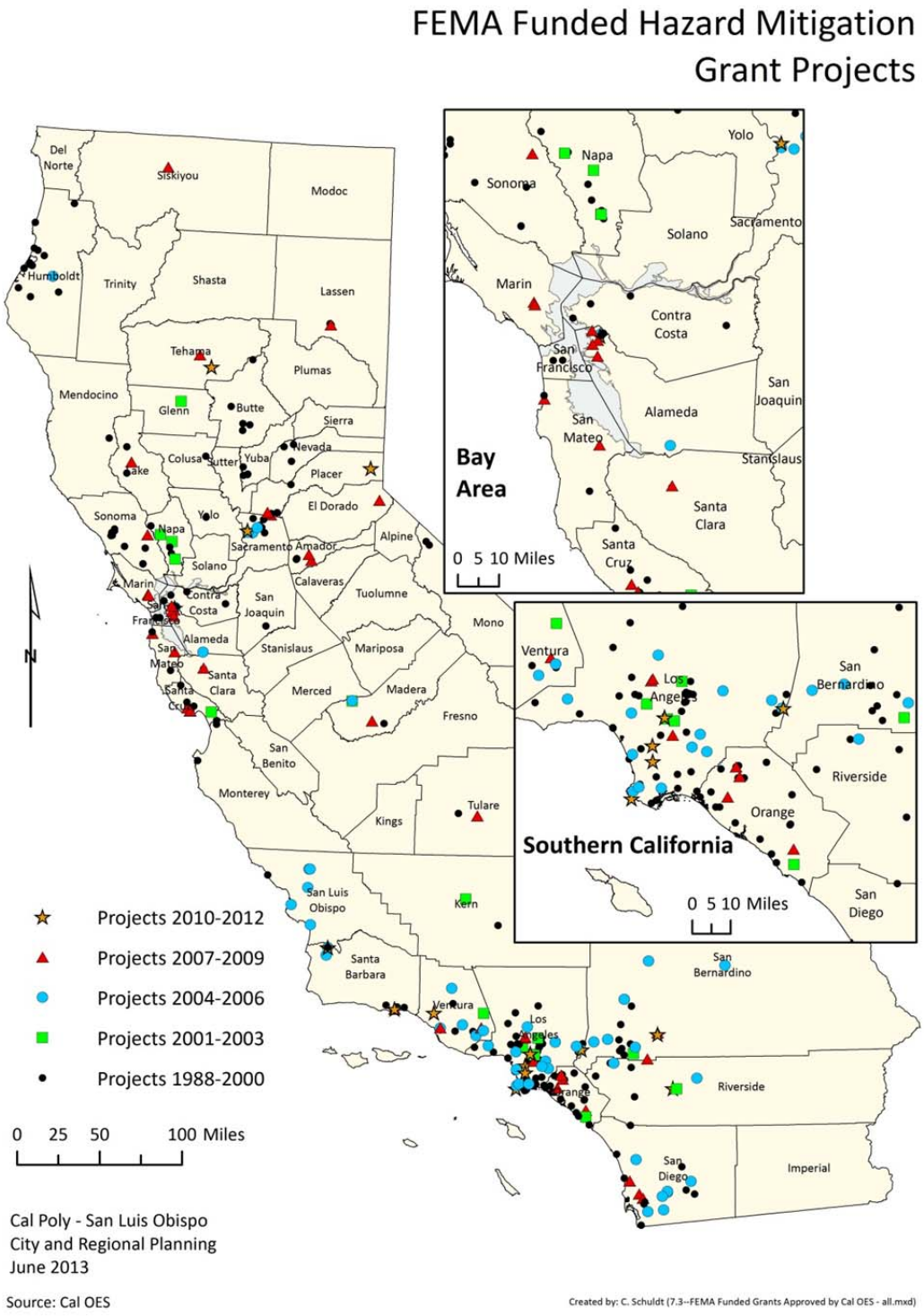
7.3.4 ENHANCEMENTS TO PREVIOUS LOCAL ASSISTANCE MONITORING PROCESS

The HMG Division provides oversight of individual grants to monitor the progress of the project, ensure the timely and accurate reporting of fiscal and programmatic data, and assist the grant recipient with the administrative complexities of managing the grant. This process includes site visits with project personnel to review the progress of the project and discuss the implementation of the grant. In 2010, the HMG Division standardized the reporting procedures to capture information resulting from the site visits. The resulting Site Visit Report form (see example in Appendix Q) is designed to capture information on all of the following:

- Identifying information on the grant visited
- The identity of the person conducting the site visit
- The purpose of the site visit
- The project personnel involved in the site visit
- A narrative description of the site visit
- The outcomes of the site visit

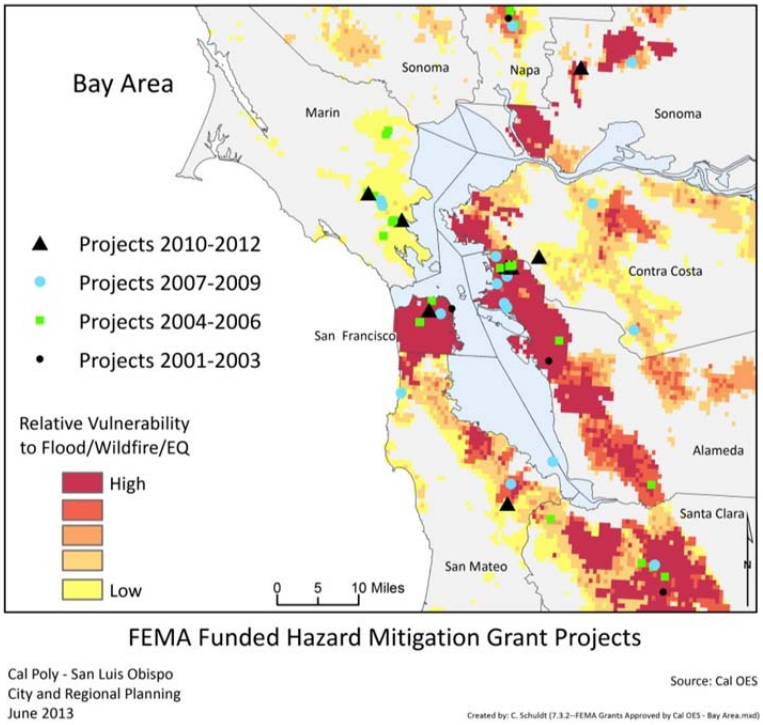
Between 2010 and 2012, the HMG Division conducted 66 site visits of local hazard mitigation projects. All of these visits are documented in Site Visit Reports, reviewed and approved by management, retained in the files of Cal OES, and available to the public upon request.

MAP 7.A: FEMA-Funded Hazard Mitigation Grant Projects



As shown in Map 7.A, Cal OES is tracking mitigation grant projects geographically by geocoding each location for ease of reference. *(Online or download viewers can zoom in for a closer view of the information on this map.)*

MAP 7.B: FEMA-Funded Hazard Mitigation Grant Projects – Greater San Francisco Bay Area



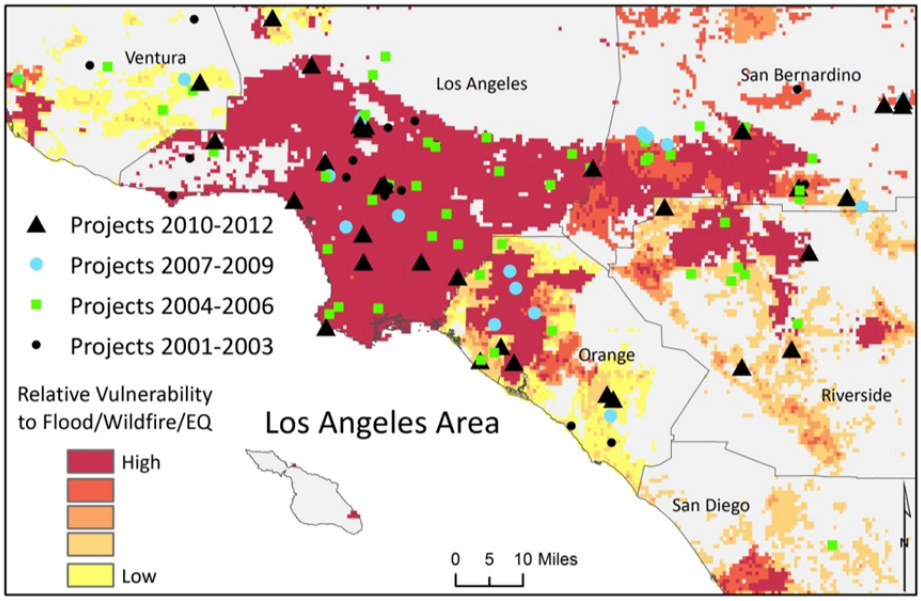
FEMA Funded Hazard Mitigation Grant Projects

Cal Poly - San Luis Obispo
City and Regional Planning
June 2013

Source: Cal OES

Created by: C. Schuldt (7.3.2--FEMA Grants Approved by Cal OES - Bay Area.mxd)

MAP 7.C: FEMA Funded Hazard Mitigation Grant Projects – Greater Los Angeles Area



FEMA Funded Hazard Mitigation Grant Projects

Cal Poly - San Luis Obispo
City and Regional Planning
June 2013

Source: Cal OES

Created by: C. Schuldt (7.3--FEMA Grants Approved by Cal OES - LA Area.mxd)

Map 7.B and Map 7.C indicate clusters of hazard mitigation projects in and around the Los Angeles area and San Francisco Bay Area, demonstrating that Cal OES is investing in mitigation projects within high-risk and high-vulnerability areas. For GIS maps showing the distribution of hazard mitigation projects in relation to the primary hazards, see Chapter 5, Sections 5.2 through 5.4.

7.3.5 MONITORING OF LOCAL ASSISTANCE

In addition to the programmatic oversight and site visits conducted by the HMG Division, the Cal OES Grants Monitoring Branch monitors grantee compliance with the terms of the Grant Award Agreement and with federal and state laws and regulations. This unit is composed of a branch chief, two unit supervisors, and approximately ten grant monitors. The unit continually conducts desk audits, procedure surveys and field monitoring visits of randomly selected grant projects. For each grant selected, a Cal OES grant monitor may visit with local officials and conduct a field review. From this review, a report is generated that identifies any areas of non-compliance and calls for corrective action. The grantee must then generate a Corrective Action Plan to be approved and monitored by Cal OES.

7.3.6 MITIGATION ACTIVITIES COMPLETION AND CLOSEOUT

The State of California completes all mitigation grant activities, including financial reconciliation, within established performance periods. This information is tracked and managed in the Mitigation Grant Management database and Cal OES financial ledger systems. The Hazard Mitigation Grants Division is responsible for the HMA grant closeout procedures. From 2010 through 2012 Cal OES successfully disbursed and closed out HMA grants worth approximately $188,600,000. No SRL subgrants were closed as of December 2012.

The closeout procedures are similar for all mitigation grant programs and are initiated when 1) the grantee informs Cal OES that they have completed their project, or 2) the performance period for the grant will soon expire. As part of the closeout procedures, the grantee is required to submit a final Request for Advance or Reimbursement of Funds form and closeout documentation. The grantee may receive a closeout letter during the project monitoring phase if, through the quarterly report, it is determined that the project appears to be ready for closeout.

For each grant program, the HMG Branch ensures that quarterly reports and closeout documents are submitted on time. As part of their closeout process, grantees are required to submit "Accomplishment Reports" that describe the proposed activities' completion and expenditures per the budget. The HMG Branch reviews these for accuracy and completeness as part of the closeout process. In addition, the HMG Branch may conduct site inspections and request audits. More information on close out procedures is included in Appendix Q.

7.4 ASSESSMENT OF MITIGATION ACTIONS

The Enhanced Plan must document the system and strategy by which the state conducts an assessment of completed mitigation actions and includes a record of the effectiveness (actual cost avoidance) of each mitigation action (DMA 2000, Section 201.5(b)(2)(iv)). The state must describe how effectiveness of each completed mitigation action is assessed and what agency or agencies are involved in the assessment, and indicate the time frame for carrying out this assessment. The state must also describe how it tracks potential losses avoided for each action taken.

Cal OES maintains the extensive Mitigation Grants Management (MGM) database that contains over 3,000 HMPG, FMA, PDM, LPDM, and SRL project work-ups, from initial application submittal through project completion. This database provides information on the scope of the projects, geo-coded location (100 percent of completed projects), and local contact. The database provides detailed tracking information that is reviewed on a regular basis by Cal OES Hazard Mitigation staff to assess status and completion of mitigation projects. This database contains over 940 obligated projects. From 2010 through 2012, 84 obligated projects were added to the database. Digital imaging is beginning to be added to recent projects. For projects that have been completed, the database is also the beginning point of assessments linked to loss avoidance.

By having a record of all applications submitted, Cal OES is able to determine if an applicant has submitted a proposed project for funding under a previous program. This helps in identifying potential projects for future funding opportunities. For example, if a project has been determined through the PDM process to be eligible, an applicant may be contacted and encouraged to apply for an HMGP program. Cal OES staff can also identify applications that have been denied previously and review any current submittals to determine if the problem has been corrected. For grant programs starting with DR-1498, a record of the Notice of Interest (NOI) is also included.

7.4.1 STATE MITIGATION ASSESSMENT REVIEW TEAM (SMART) SYSTEM

Overview

The state must describe how it records the effectiveness (actual loss avoidance) of previously funded mitigation projects and how the assessment was completed. In support of this process, Cal OES has implemented the State Mitigation Assessment Review Team (SMART) loss avoidance tracking system.

In 2005, under FEMA's direction, the Multihazard Mitigation Council conducted a study to assess the cost-effectiveness of natural hazard mitigation and found that it saved an average of $4 for every $1 of investment (MMC, 2005). However, the study was based on probabilistic hazard events rather than actual events. Because the cost-effectiveness of mitigation during actual hazard events is a critical factor in the decision to continue funding mitigation projects, FEMA developed the loss avoidance study, a methodology for determining cost-effectiveness that is based on actual hazard events. The methodology is the product of numerous studies of flood mitigation projects and the adaptation of loss avoidance concepts to mitigation projects associated with other types of hazards.

Paralleling the FEMA LAS efforts over the last decade, OES has implemented the State Mitigation Assessment Review Team (SMART) loss avoidance tracking system. Under the current process, when a disaster event occurs the OES SMART Coordinator performs an initial analysis based on its Mitigation Project Management (MGM) database to determine if a state or federal mitigation project has been funded in the area of the disaster.

The purpose of SMART is to assess mitigation projects completed prior to a disaster after the event to establish a record of the effectiveness (actual cost avoidance) of the mitigation actions. SMART system objectives are to assess the outcome of previously funded mitigation projects in a disaster area by 1) ascertaining loss avoidance performance at a given level of intensity of an event, and 2) identifying effectiveness of mitigation practices.

SMART was initially described in the 2010 SHMP as operating at two levels: 1) an overall reconnaissance using GIS to determine locations of mitigation projects completed prior to the disaster, together with interviews of involved local project administrators to determine general post-disaster outcomes, and 2) where practicable, detailed field investigations conducted to determine cost-effectiveness.

At the second, more intense level loss avoidance effectiveness is assessed by onsite review and documentation based on the project Benefit Cost Analysis (BCA). Post-disaster staffing for SMART is provided by Cal OES-certified faculty from among the 23 campuses of the California State University (CSU) system, acting in their role as Disaster Service Workers. Their assistance is available under a joint Memorandum of Understanding (MOU) between Cal OES and the CSU system.

Through SMART, all completed FEMA-funded mitigation projects have been geo-coded with location coordinates and described with other digital data. The state uses these data to conduct detailed assessments of mitigation projects and their effectiveness. Thus, all events require Cal OES staff to perform

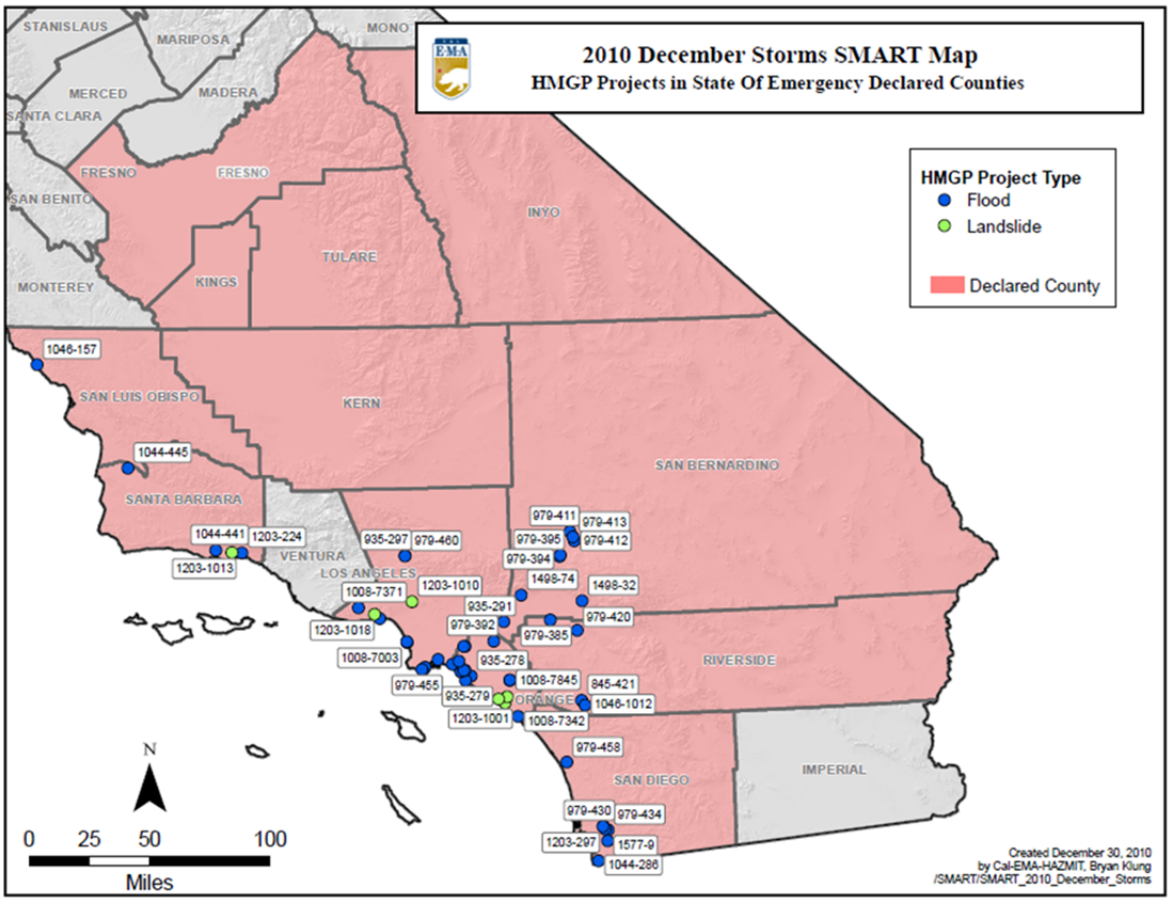
an initial MGM database analysis to identify completed mitigation projects in the area and determine whether a detailed project assessment is needed, yet not all events require activation of detailed project assessment procedures. The following describes SMART system implementation.

Office Reviews

The SMART process is initiated through an internal office review. The existing MGM data include locations, project particulars, and local contact people. The Cal OES SMART Coordinator monitors daily situation reports provided by the California Warning Center for possible flood, fire, and earthquake hazard events. Depending on the size and type of the event, the SMART Coordinator works with GIS staff to develop maps of the event zone(s) with an over-lay of completed, FEMA-funded hazard mitigation projects using data from the MGM database that correlate to hazard type. If a project is identified in the event area based on this analysis, the SMART Coordinator conducts a telephone questionnaire with a representative of the jurisdiction that initiated the project. If the project is deemed affected by the hazard event, or proved effective in preventing damages, it becomes eligible for a detailed field assessment. The office review process is documented in the SMART Coordinators Manual developed in partnership with California Polytechnic State University (Cal Poly) and the SMART Coordinator.

Map 7.D shows the locations of flood hazard mitigation projects within the counties affected by the 2010 December Storm (disaster number DR-1952). *(Online or download viewers can zoom in for a closer view of the information on this map.)*

MAP 7.D: Hazard Mitigation Grant Projects near 2010 December Storms



Detailed Project Field Assessments

Depending upon the size and severity of the event and the nature of previously completed mitigation projects in the affected area, office reviews may be followed by a detailed onsite SMART project assessment using trained and certified field assessors to conduct technical reviews to document loss avoidance based on the project Benefit-Cost Analysis (BCA).

The SMART system's detailed onsite project assessment objectives are to assess the outcome of completed mitigation projects in a disaster area by 1) ascertaining loss avoidance performance at a given level of intensity of an event, and 2) identifying effectiveness of mitigation practices. After the response phase is over, the SMART project assessment team is sent to the disaster location(s) to contact appropriate local agencies and conduct assessments of previously funded mitigation projects with a primary focus on estimating loss avoidance. Each team uses current regionally adjusted construction data and other pertinent data to estimate loss avoidance. Once an assessment is completed, the SMART report is sent back to Cal OES. This information, along with assessment forms for the type of event (earthquake, flood, wildfire, etc.) and a summary of the project background, is then placed on the Cal OES Web Portal.

Project Assessment Spatial Coverage

The SMART field assessment system approach provides statewide coverage and the support of trained assessors. Given the enormous physical size of California (over 160,000 square miles of land area, 1,100 miles of coastline), providing coverage for the state is a challenge to Cal OES and other state agencies. For this reason, Cal OES has entered into a partnership through a Memorandum of Understanding (MOU) with the California State University (CSU) system, which has 23 campus locations and expertise for conducting loss avoidance estimation.

Implementation of the SMART field assessor training system was undertaken in 2011. A key activity was to conduct several field assessor training and certification workshops by Cal Poly on behalf of Cal OES. The objective was to create a substantial pool of qualified SMART field project assessors through training and certification. When completed, the SMART workshops had trained faculty members drawn from various campuses and fields of expertise, all with capability in BCA methods.

Three initial trainings were completed in 2011 (see Table 7.B). These trainings resulted in 37 certified CSU SMART field assessors from 21 universities and agencies. These assessors are able to reach most populated areas within two hours, depending upon disaster conditions.

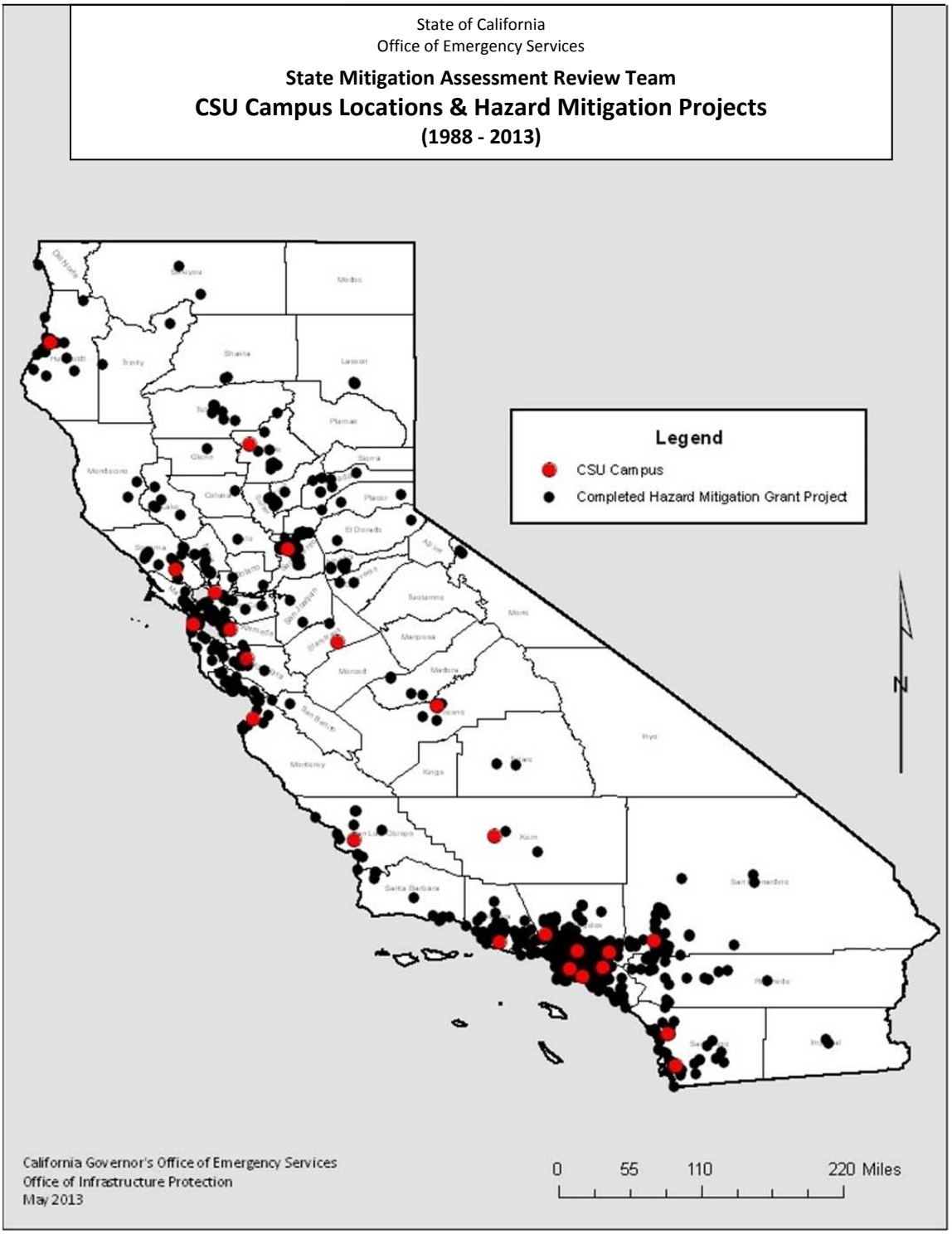
Table 7.B: Summary of SMART Assessor Training Events

Training Date	Training Location	Number of Certified Assessors
May 25, 2011	California State University Long Beach	14
June 20, 2011	California State University East Bay, Hayward	9
September 7, 2011	California State University Long Beach	14

A list of all CSU faculty with education and training in civil and structural engineering, geology, soil science, meteorology, public administration, and emergency management has been assembled as a database for team solicitation.

Prior to the training, Cal Poly developed a SMART Team Manual which was provided to all attendees, and can be downloaded from the Cal OES website at http://www.calema.ca.gov/HazardMitigation/Pages/May-25,-2011-SMART-Field-Team-Training.aspx. Map 7.E shows the close relationship between the locations of CSU campuses and completed mitigation projects.

MAP 7.E: CSU Campus Locations and Hazard Mitigation Projects



Map 7.E shows the distribution of the 23-campus CSU system in relation to federally funded hazard mitigation projects that have been completed in the past. The distribution allows quick access for trained CSU facility experts to undertake onsite post-disaster assessments to determine mitigation outcomes and effectiveness.

At different campuses, SMART teams with expertise in various types of disaster events can be in place and available to go to a location with short notice. Moreover, the CSU system has a central Office of Risk Management and Academic Affairs that serves a networking role for coordination of this effort. In addition to faculty members with wide-ranging expertise, each CSU campus has three groups that can assist with coordination of SMART team deployment: Risk Management Office, Emergency Management Coordinators (often in the campus police department), and Facilities Group (campus plans and buildings).

Executive Order W-9-91 provides Cal OES with the administrative capacity to use CSU and other state employees after a disaster event. Training for SMART team members will be provided by Cal OES and other state agencies having specialized knowledge by disaster type. For example, the Department of Water Resources can assist with training and assessment documentation related to floods. Cal OES staff provides basic forms for use by SMART team members similar to those used in preparing preliminary damage assessments.

SMART Program Implementation

The SMART concept was initiated in 2007, when Cal OES with assistance from California Polytechnic State University, San Luis Obispo, conducted a successful pilot of the SMART system using the Yountville Flood Barrier Wall Project located in Yountville, California. The project was "tested" by the December 31, 2005 flooding of the Napa River. The project cost $4.2 million, with $3.2 million funded from HMGP DR-1044 funds. The estimated loss avoidance benefits of the project comprised $1.6 million for this one event. This is considered a conservative estimate. Table 7.C summarizes loss avoidance calculations.

Table 7.C: Yountville Flood Barrier Wall Project Loss Avoidance

Category	Source	Loss Avoidance
Scenario Damages	Benefit-Cost Analysis	$1,621,664
Emergency Management (PA, Cat. A & B)	Prior Public Assistance (PA) costs	$9,870
TOTAL		$1,631,534

Source: Cal OES

A second SMART detailed project field assessment was conducted in 2009 after the devastating Santa Barbara County Tea Fire in November 2008 (DR – 1731) in connection with parcels previously acquired for landslide mitigation.

The overall benefit, or avoided loss, for the Tea Fire area Landslide mitigation action was $1,860,582 for the assumed value of the buildings and the contents of the buildings at the time of the fire. The cost of the initial mitigation project was $1,060,153, providing the overall benefit-cost ratio (BCR) for this one event of 1.75. These figures do not include additional non-assumed avoided expenditures such as dislocation costs, evacuation costs, tax dollars spent to provide fire-fighting resources in a wildfire, medical expenses for those injured in any incident, litigation costs, loss of life costs, or any other miscellaneous expense.

Cal OES subsequently carried out ongoing post-disaster SMART reconnaissance activities following federally declared disasters, including DR 1952 – Winter Storms of 2010, yielding several candidate sites - one in Santa Barbara County and two in Orange County - for detailed field investigations. The Santa Barbara investigation was conducted.at the beginning of August 2013. With the resumption of applicable funding, Cal OES and Cal Poly will resume full implementation of the SMART program with the next hazard event.

Progress Summary 7.A: Recent SMART Reviews

Progress as of 2013: Since the 2010 State Hazard Mitigation Plan was adopted, one flood disaster occurred that required activation of a SMART assessment. The December 2010 Severe Winter Storms in Southern California (DR-1952) resulted in flooding, debris, and mud flows in the Counties of Inyo, Kern, Kings, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Tulare.

Initial SMART analysis conducted in the summer of 2011 identified five mitigation projects located within four counties affected by the 2010 Severe Winter Storms for detailed project assessment. After telephone questionnaires were conducted with representatives of the five jurisdictions, it was determined that the Via Regina Interceptor Channel mitigation project was eligible for a field assessment, as described below:

1044-0441: Santa Barbara County Flood Control and Water Conservation District, Via Regina Interceptor Channel Improvements – A field assessment of this project was conducted in August, 2013. Certified SMART assessors from Cal Poly and Cal State Los Angeles performed the assessment, with observers in attendance from Cal Poly and Cal OES. The team was shown the project by the Maintenance Superintendent from the Santa Barbara Flood Control District, who had helped in the project's construction and was able to answer many questions about it. This project improved the existing V-ditch with a rectangular block channel and earthen berm to protect nearby homes. Not only has this project been successful in its original intent, but it also significantly saves the community in regular maintenance costs since the channel can readily be cleaned out using mechanical equipment (whereas the previously-existing V-ditch had to be cleaned out manually and more often).

In December 2010, there was record-setting rainfall at many locations throughout the county and the area in which the project is located was hit by a possible 5-10 year event. Three different rain gauges within three miles of the site recorded December rainfall totaling between 10.57 and 11.56 inches. During this period the project protected at least three or four homes, and possibly as many as ten. Since the project was finished, no flooding or mudflows reached the homes not only in December 2010 but also during other rainstorm events in 2001, 2005, and March 2011.

Via Regina Interceptor Channel Improvement Project, Santa Barbara County

Source: Santa Barbara County Flood Control and Water District

Completed in 1999, the project cost $28,591. Assuming that, in December 2010, it protected three homes from flooding to a depth of 1 foot, the loss avoidance (based on damage that might otherwise have occurred to both structures and contents) is conservatively estimated at around $118,500 for this one event alone. The relatively high costs of both real estate and construction in Santa Barbara mean that the actual loss avoidance was in all likelihood much larger. Even when construction costs are adjusted to 2010 dollars, there is no doubt that the benefit-cost ratio of 1.25 estimated in advance for this project significantly underestimates the true value. After this assessment was completed, the benefit cost ratio was considered closer to 4.1. After this assessment was completed, the benefit cost ratio was considered closer to 4.1.

SMART Field Assessment Via Regina Interceptor, August 2013

Source: CalOES

View of Homes Protected by Via Regina Interceptor, August 2013

Source: CalOES

Interagency Service Agreement

The Memorandum of Understanding (MOU) between Cal OES and the CSU was completed in 2010. The MOU states that the CSU recruit staff and faculty for training, travel, and field work for both pre- and post-disaster assessments and Cal OES will provide the funding needed for travel costs to training and field work events and any necessary field gear. Selection and training of SMART participants was conducted by Cal

Poly-San Luis Obispo under a separate agreement with Cal OES. Table 7.D depicts the division of general responsibilities between the state agencies.

Table 7.D: General Responsibilities under Memorandum of Understanding

	Cal OES	CSU/Cal Poly
1	Activate the SMART process	Develop assessment training and field work training for CSU teams
	Supply assessment sites	Design loss avoidance tracking system process and procedure
2	Supply background information on the projects	Initiate team training and possible certification Phase 1 = Cal Poly Phase 2 = Other CSU campuses
3	Create picture/photograph protocol/information protocols	Conduct database needs assessment – actual project data
4	Provide joint training with Cal Poly of CSU campuses and provide field gear to teams	Provide joint training with Cal OES of CSU campuses
5	Supply pre-disaster site coordinates/data (includes project description and photos upon SMART team request)	Develop pre-event field survey format/protocol/form
6	Store field report data • Database • Web Portal	Assign teams to events as they occur
7	Provide credentialing of Cal Poly and CSU SMART as needed	Provide post-disaster field reports
8	Review field assessment reports	
9	Pay travel and field gear costs. Process travel expense claims for CSU participants	
10	Store reports and maintain master database	
11	Report findings to local, state, and federal agencies	

Source: Cal OES

Table 7.E SMART Work Program Schedule

Work Task	Time Line
MOU signed	June 2010
First call for CSU faculty/staff participation distributed	August 2010
Cal OES SMART Coordinator appointed	September 2010
Cal OES file retrieval system designed	October 2010
Second call for CSU faculty/staff participation distributed	October 2010
Document training program for Cal OES staff completed	November 2010
Basic training information documents for seismic, flood, and fire events developed	December 2010
CSU training program procedures and design completed	December 2010
Triggers for different types of events established	December 2010
Participants for CSU training teams selected	December 2010
Pilot CSU training group assembled	January 2011
Discussion and logistics for training (including reimbursement processing) completed	January 2011
Pilot CSU training completed	February 2011
SMART Coordinator's Manual developed	February 2011
Program assessment process developed	March 2011

Work Task	Time Line
First round of training (for Southern, Central, and Northern California) begun (1 per month)	April - June 2011
Procedure for updating materials developed	July 2011
Third call for CSU faculty/staff participation distributed	July 2011
Training revised based on Round 1 assessments	July - August 2011
Developed telephone assessment questions based on hazard type and project type for the office reviews phase of assessment.	August 2011
Field investigation, Santa Barbara County	August 2013

Source: Cal OES

7.4.2 CALIFORNIA VITAL INFRASTRUCTURE VULNERABILITY ASSESSMENT (CAL VIVA)

The 2013 SHMP emphasizes infrastructure as essential to the state's ability to provide assistance to the people of California. Infrastructure such as transportation, utilities, and government facilities provide the state with the capacity to respond to and recovery from disasters. The resiliency (ability to survive and recover from a disaster) of the state depends on its capability to restore infrastructure quickly in disasters.

The Disaster Mitigation Act of 2000 and its implementing regulations (44 CFR 201.5 (2) (v) states that an Enhanced State Mitigation Plan must include, among other things: "A comprehensive, multi-year plan to mitigate the risks posed to existing buildings that have been identified as necessary for post-disaster response and recovery operations." Implicit in the federal provision is a reporting mechanism that will record buildings requiring mitigation, doing so on a multi-year basis.

The California Vital Infrastructure Vulnerability Assessment (Cal VIVA) project is an implementation strategy for the SHMP designed to carry out this overall purpose. Cal VIVA is developing a methodology for systematically assessing vulnerability of state-owned buildings to seismic and other hazards and to pursue building retrofit projects designed specifically to make it possible for facilities necessary for response and recovery operations to stay operable during a disaster.

Of the three increments of Cal VIVA initiated to date, two have been completed. The first increment, Cal VIVA I, had three primary activities: 1) develop a standardized methodology to identify necessary mitigations of seismic vulnerabilities in buildings that are critical to response and recovery efforts after an earthquake, 2) test the methodology and 3) improve the methodology based on lessons learned.

Cal VIVA initially focused on establishing methods for assessing seismic vulnerability of state-owned buildings and recommending retrofit actions. The analysis and retrofit for each building has been focused on primary vulnerabilities, generic seismic upgrade approaches, and order-of-magnitude cost estimates, leaving more detailed cost estimates to a later phase when retrofit funding can be secured.

The Cal VIVA project used a widely accepted, building-specific, industry standard document titled ASCE 31 (soon to combined with ASCE 41 and reissued as ASCE 41-13) to perform Tier 1 or 2 analysis procedures for the seismic assessments. A sample of critical structures was investigated by Cal Poly personnel. Based on field investigation and review of existing documentation, seismic evaluations were prepared and upgrade concepts developed for these selected buildings. The results of these field evaluations were reviewed as a means of refining the prioritization process and assessment methodology.[79]

Cal VIVA II, the second increment used the seismic vulnerability assessment methodology developed in Cal VIVA I to examine two areas: 1) the conceptual development of a prototypical department plan for mitigation of seismic vulnerabilities in critical state-owned buildings, and 2) determination of the seismic

[79] *ASCE 31-03. Seismic Evaluation of Existing Buildings. Reston, VA: American Society of Civil Engineers: 2003.*

vulnerability with resultant mitigation of selected state-owned, high-occupancy office buildings housing state employees critically needed for post-earthquake response and recovery operations. Final reports for Cal VIVA I and Cal VIVA II were issued in March 2013.

The third increment, Cal VIVA III, is testing and refining the Cal VIVA II prototypical department plan with an individual user department and producing a template that can be used by department and agencies within state government to systematically address and continuously report on critical building vulnerability and potential retrofits on a long-term basis.

The State of California has performed seismic assessments and has implemented hazard mitigation in the form of retrofits in a significant number of buildings. However these efforts were often undertaken by individual departments or agencies with no central reporting mechanism. As a result, the State does not have an overall record identifying: 1) buildings which have been strengthened, 2) buildings assessed and determined to be acceptable, or 3) buildings in either category which are needed for post-disaster response and recovery operations.

Cal VIVA III proposes establishment of a State Reporting Plan that includes a State-managed repository for data from individual state agencies and departments regarding seismic vulnerability of their state-owned buildings. Using the State Emergency Plan (SEP) and State Multi-Hazard Mitigation Plan (SHMP) as a combined foundation, the State Reporting Plan repository will identify seismically vulnerable buildings deemed necessary for post-disaster response and recovery operation and monitor their systematic upgrades over time.

Progress Summary 7.B: State Reporting Plan on Facilities Needed for Response and Recovery

Progress as of 2013: Cal VIVA III is addressing a major aspect DMA 2000 implementing regulations through proposed development of a State Reporting Plan that includes a State-managed repository for data from individual state agencies and departments regarding seismic vulnerability of their state-owned buildings. Using the State Emergency Plan (SEP) and State Multi-Hazard Mitigation Plan (SHMP) as a combined foundation, the State Reporting Plan repository will identify departments responsible for seismically vulnerable building stock deemed necessary for post-disaster response and recovery operation, and monitor their systematic upgrades over time.

The State Reporting Plan will coordinate information gathered from Cal VIVA, the Proposition 122 State Seismic Program, CSU, UC programs, and other seismic upgrade programs, providing a basis for timely further seismic upgrade actions. Cal VIVA III is being prepared in association with Earthquake Engineering Research Institute (EERI) and is scheduled for completion in November 2013.

For additional discussion on Cal VIVA, see Chapter 5, Section 5.2.3.2.

7.5 EFFECTIVE USE OF AVAILABLE MITIGATION FUNDING

The Enhanced Plan must demonstrate that the state effectively uses existing mitigation programs to achieve its mitigation goals (44 CFR Section 201.5(b)(3)). The state must document that it has fully and effectively made use of FEMA and other funding already at its disposal, such as taking full advantage of FEMA programs (FMA, HMGP, PDM, and FMA/SRL) to fund mitigation actions and using other FEMA and non-FEMA funding to support mitigation. Cal OES has used all obligated federal mitigation grant funding for the last three years.

The state uses many funds and programs to mitigate against injury, loss of life, and damage to property. Over the 2010-to-2012 period, 87 FEMA funded projects have been undertaken (see Table 7.E). These

mitigation investments are generally located in the high-hazard and high-vulnerability areas shown in the GIS modeling maps of Chapter 5 (see Section 5.1).

FEMA mitigation funds allocated are closely linked to the plan goals. Prevention or significant reduction of loss of life and injuries is the state's primary goal, and the number of earthquake (seismic) projects reflects a commitment to life safety. The criteria used by Cal OES to solicit, select, and rank projects are clear and linked to maximizing project impacts that support the state plan goals and objectives. The Cal OES objective is to expend all funds in each grant program. Cal OES attempts to maximize local opportunities for receiving federal mitigation funding by establishing a project waiting list of HMGP applicants from previous rounds.

A large number of HMGP projects fund multi-hazard planning at the local or multi-jurisdictional level. This supports one of the main goals of the Statewide Emergency Management Strategic Plan 2005-2010 that "California will institutionalize hazard identification, risk assessment, and hazard mitigation planning to reduce vulnerability and provide parameters for planning and preparedness." Table 7.F shows the distribution of mitigation grant projects from 2010 to 2012.

Table 7.F: Distribution of Major FEMA Support Grant Programs, 2010-2012[80]

FEMA Grant Program	Obligated $	Number of Projects	Counties Served
FMA	$4,477,981	6	5
SRL	$968,754	2	2
HMGP	$25,133,717	39	18
LPDM	$4,692,088	12	8
PDM	$6,839,713	28	5
Total	*$42,112,253*	*87*	*38*

Source: Cal OES Database 2012

Cal OES has used all obligated federal mitigation grant funding for the last three years. In addition to the FEMA-supported funding, California integrates its own mitigation investment funds with those provided through many sources. For example, the California Seismic Safety Commission implemented a $7-million funding program related to education, preparedness, and loss reduction. The California Earthquake Authority supported mitigation booklets, "Putting Down Roots in Earthquake Country," including one for Northern California and one for Southern California (in English and Spanish) for use in colleges and high schools. These funds come from an insurance company settlement. The Department of Water Resources has nine programs that address hazard mitigation throughout the state. The voters of California approved over $5.5 billion in bond funds in 2006 for hazard mitigation projects. The state transportation agency (Caltrans) has committed over $6 billion to retrofit and replace major bridges in the state with funds coming from the state general fund and increased bridge tolls.

7.6 COMMITMENT TO A COMPREHENSIVE MITIGATION PROGRAM

Under FEMA guidance for Enhanced Plans (DMA 2000, Section 201.5(b)(4)(i-vi)), a state must detail how its plan reflects a commitment to a comprehensive mitigation program. California's commitment to a comprehensive mitigation program is manifested through active implementation of the following programmatic efforts by all major state agencies that operate in concert with California's built environment:

1. Support for Local Hazard Mitigation Planning. Since 2010, Cal OES (formerly Cal EMA) has sponsored several dozen LHMP development workshops and presentations in various parts of the state attended by hundreds of representatives from local governments and private sector organizations. The

[80] *On July 6, 2012, President Obama signed the Biggert-Waters Flood Insurance Reform Act of 2012, which combined the SRL funding into the FMA program, and created a combined National Flood Mitigation Fund.*

workshops and presentations are provided to help local governments develop their LHMPs and to identify local mitigation opportunities. A major goal of the workshops is to familiarize participants with the content requirements of an LHMP to qualify for FEMA approval. Cal OES staff provides guidance documents, examples of approved text, and technical assistance resources to help each community reach its goal of having an approved LHMP.

Cal OES staff continues to maintain positive working relationships with local government constituents through phone, e-mail, attendance at regional meetings, and letters providing continued technical assistance support and information as needed. Cal OES initially examined 436 FEMA-approved LHMPs in 2007 to gain a better understanding of guidance and technical assistance needed in developing and updating LHMPs and is in the process of reviewing additional LHMPs approved by FEMA through December 2012 (see Annex 4, California Local Hazard Mitigation Plan Status Report).

In 2010 Cal OES staff initiated a revised LHMP training program for local governments to pass along insights learned from the 2007 LHMP review, thereby improving plan compliance. Additionally, Cal OES has placed FEMA "How To" Guides on the Cal OES web portal so constituents have easy access to additional resources for the development and updating of their local plans. The Cal OES “MyPlan” Internet Mapping Service (IMS) provides users with practical information at the local level to begin a risk assessment.

Commitment to support of local mitigation planning is further represented by the ongoing educational program operated by the California Specialized Training Institute (CSTI) in San Luis Obispo. As an outreach operation of Cal OES, CSTI has been providing training in mitigation planning to local agencies since long before the Disaster Mitigation Act was passed by Congress in 2000. Various other state agencies have also provided workshops with mitigation content, including Cal OES for FEMA grant applicants and the Disaster Resistant California Program, California Seismic Safety Commission, Department of Water Resources, Caltrans, CAL FIRE through the Fire Wise program, and California Utilities Emergency Association (CUEA) (for its members and associate members).

2. Statewide program of hazard mitigation. Chapters 2, 3, 5, and 6 have illustrated various facets of California’s statewide hazard mitigation program including legislative initiatives, mitigation councils, formation of public/private partnerships, and executive actions that promote hazard mitigation. Another statewide effort comes from CAL FIRE, which remapped fire hazard severity zones for lands for which the state has fiscal responsibility for wildland fire protection (State Responsibility Areas). CAL FIRE also prepared Very High Fire Hazard Severity recommendations for local responsibility areas, now the subject of recent legislation requiring counties to incorporate fire-safe measures into their local land use planning within these areas.

3. State provision of a portion of the non-federal match for mitigation projects. Assembly Bill 2140, passed by the legislature in 2007, authorizes financial incentives for local governments to integrate LHMPs with mandated general plan safety elements. As described in Chapter 2, AB 2140 authorizes the legislature to provide for a portion of the state share of local costs exceeding 75 percent of total state-eligible post-disaster costs under the Stafford Act to any city or county adopting an LHMP as part of its general plan safety element. In addition, $500 million of Proposition E bond funds were approved by the voters in 2006 for state flood control subventions. For information regarding the detailed provisions of AB 2140, see Appendix C.

4. Promotion of nationally applicable model codes and standards. California has led the nation in requiring local governments to adopt current versions of nationally applicable model building codes, enhanced by state laws specifically requiring local governments to address natural hazards. This applies not only for design and construction of state-sponsored mitigation projects, but also for all private construction. For example, there is new emphasis within CAL FIRE for upgrading codes related to the

wildland-urban interface (WUI) challenge. The Office of the State Fire Marshal (SFM), along with other state agencies, has issued new building and fire codes for California using the International Building Code (IBC) and the International Fire Codes (IFC) as the base documents. These new codes include provisions for ignition-resistant construction standards in the wildland-urban interface.

Additionally, on August 16, 2010, the California Building Standards Commission adopted, the Prescriptive Provisions for Seismic Strengthening of Cripple Walls and Sill Plate Anchorage of Light Wood-Frame Residential Buildings into the 2007 and 2010 California Existing Building Code. This action will help guide seismic retrofitting of existing homes in a systematic manner.

Another example affecting local development is the linking of Department of Water Resources (DWR) floodplain management programs to city and county statutory general plan processes. State law requires local commitments to comprehensive mitigation action through state-mandated general plan safety elements with which local development actions must be consistent. AB 162 (2007) modified state planning law to require inclusion of floodplain mapping in several elements of mandatory local general plans. DWR has completed a user guide for local governments to implement that law. Local governments in the Central Valley must amend their general plans and zoning to be consistent with the Central Valley Flood Protection Plan adopted in 2012. The CVFPP includes urban flooding standards which will eventually become expanded to statewide implementation under AB 162.

5. Statewide green building code. In 2010, the California Building Standards Commission adopted the nation's first mandatory green building code, the California Green Building Standards (CalGreen) Code, that became effective in January 2011. This code outlines standards for newly constructed buildings and covers all residential, commercial, hospital, and school buildings. It requires builders to install plumbing that cuts water usage by up to 20 percent, to divert 50 percent of construction waste from landfills to recycling, and to use low-pollutant paints, carpeting, and flooring. Under this code, the inspection of energy systems is mandated to ensure efficiency. For non-residential buildings, the code requires installation of different water meters for indoor and outdoor water usage. Local jurisdictions with more stringent green building codes are allowed to retain their codes. From a natural hazard mitigation perspective, this is an important step, along with implementation of AB 32, the Global Warming Solutions Act of 2006, in reducing greenhouse gas emissions that contribute to climate change (see Chapter 4).

6. Post-disaster mitigation of building risks. Additionally, through the California Seismic Safety Commission, the state has sponsored comprehensive, multi-year efforts to mitigate risks posed to existing buildings identified as necessary for post-disaster response and recovery operations. For example, after the December 23, 2003 San Simeon Earthquake, the Seismic Safety Commission assessed the need for accelerated local mitigation of unreinforced masonry buildings, stimulating the legislature to pass new occupant disclosure requirements for unreinforced masonry buildings not yet retrofitted.

7. Integration of mitigation with post-disaster recovery. Chapter 7 provides examples of how California integrates mitigation with its post-disaster recovery operations through federal and state project grants. Beyond such standard recovery and mitigation management operations are the following evolving procedures integrating mitigation with post-disaster recovery:

   - State Emergency Plan
   - Disaster Recovery and Mitigation Handbook
   - California Earthquake Loss Reduction Plan
   - California Earthquake Loss Reduction Plan Recovery Element
   - California Vital Infrastructure Vulnerability Assessment (Cal VIVA)

The SHMP is an important supporting document to the California State Emergency Plan (SEP). The SEP, adopted in June 2009, defines and describes the fundamental systems, strategies, policies, assumptions, responsibilities, and operational priorities that California uses to guide and support emergency management efforts. The SEP and the SHMP are closely interlinked; Section 8 of the SEP identifies mitigation as one of the four emergency management functions and references the role of the SHMP in describing and mitigating hazards, risks, and vulnerabilities, thereby reducing disaster losses. The SEP provides several examples of hazards, risks, and vulnerabilities giving rise to emergencies in California. However, it formally acknowledges the SHMP as the primary comprehensive hazard analysis document it relies upon for detailed hazard, risk, and vulnerability analysis, and other hazard mitigation-related information and programs. Essential elements of the SEP include:

- A description of the emergency services that are provided by governmental agencies and how resources are mobilized
- An outline of the methods for carrying out emergency operations and the process for rendering mutual aid
- An overview of the system for providing public information
- Emphasis on the need for continuity planning to ensure uninterrupted government operations

The SEP integrates mitigation planning into pre-event recovery planning. SEP Section 11, Recovery Concept of Operations, includes provisions for both 1) short-term recovery operations, which begin concurrently with or shortly after commencement of response operations; and 2) long-term recovery operations, which focus on community restoration. Depending on the severity and extent of damages, long-term recovery may continue for a number of years. It includes activities necessary both to restore a community to a state of normalcy and to strengthen the community against repetitive losses through mitigation. According to the SEP, long-term recovery may include reconstruction of infrastructure, community planning, integration of mitigation strategies into recovery efforts, and administration of eligible disaster-related federal grant programs.

SEP Section 13, State Roles and Responsibilities, spells out California Emergency Functions (CA-EFs), consisting of 17 activities paralleling Emergency Service Functions of the National Response Framework (NRF). The CA-EFs bring together discipline-specific stakeholders at all levels of government to collaborate and function within the four phases of emergency management: mitigation, preparedness, response, and recovery. The CA-EFs provide guidance to stakeholders to collaboratively mitigate, prepare for, respond to, and recover from a disaster. More information about CA-Efs is available at: http://www.calema.ca.gov/PlanningandPreparedness/Pages/Emergency-Functions.aspx

Providing a practical framework for these provisions of the SEP is the Disaster Recovery and Mitigation Handbook, published by Cal OES in July 2004 and currently maintained on Cal OES's website. This handbook provides local governments with information regarding the overall recovery process, including many state and federal mitigation and recovery programs. One of its four chapters specifically addresses hazard mitigation and loss prevention activity. Included within this chapter is a mitigation planning checklist, as well as an explanation of various hazard mitigation grant opportunities. Also included in the handbook are local, state, and federal emergency proclamation and declaration requirements; tables describing recovery program requirements; and information on how to use these programs.

The Recovery Element of the California Earthquake Loss Reduction Plan is an example of mitigation and recovery linkages in various California single-hazard mitigation plans. It includes the following basic objective: "Establish and fund a statewide earthquake recovery plan aimed at social and economic recovery in the public and private sectors through better and more responsive plans, procedures and utilization of resources." Recovery Element Action 11.1.1, to "develop a strategic Statewide Disaster

Recovery Plan," and Recovery Element Action 11.1.2, to "identify and secure sources of funding for disaster recovery and mitigation," are both classified as Very Important.

A recent example integrating mitigation with post-disaster recovery is Cal VIVA, an effort to catalog and mitigate seismically vulnerable state-owned buildings necessary for response and recovery operations. Nearing completion in 2013, Cal VIVA is leading to future planning and actions by state agencies and departments to identify and assess for possible retrofits seismically vulnerable facilities necessary to response and recovery operations prior to future damaging earthquakes. Cal VIVA will ultimately be expanded to embrace other hazards as funding permits. For more details on Cal VIVA, see Chapter 5, Section 5.2.3.

8. Major state hazard mapping efforts. Significant investments in hazard risk mapping have been made by major state agencies responsible for mitigation of California's primary hazards. For example, the California Geological Survey is implementing the Seismic Hazards Mapping Act program, which identifies ground shaking, liquefaction, landslides, probabilistic earthquake maps (www.quake.ca.gov) and other earthquake-related hazards. The Department of Water Resources is developing new 200-year flood maps that will significantly increase flood hazard information, and CAL FIRE has updated WUI and high fire hazard severity zone maps. All of these efforts combine to provide critical science-based information to benefit state and local agency users in creating and implementing effective and comprehensive mitigation projects.

9. SHMT Working Groups. In an effort to advance interagency cooperation and learning about mitigation, a survey of contact networking was conducted in 2009. This led to formation during the 2010 SHMP cycle of SHMT four working groups:

   - Cross-Sector Communications and Information Sharing
   - Mitigation Progress Indicators and Monitoring
   - Geographic Information Systems Technical Advisory Working Committee (GIS TAWC)
   - Land Use Mitigation

   As detailed in Chapter 3, the Cross-Sector Communications and Knowledge-Sharing Working Group examined messaging and other communications challenges across public and private sector organizational boundaries; the Mitigation Progress Indicators and Monitoring Working Group explored methods for enhancing mitigation progress tracking; the Geographic Information Systems Technical Advisory Working Committee (GIS TAWC) met with the Natural Resources Agency and other groups to launch MyPlan, an Internet Mapping Service (IMS) designed to provide local governments convenient single-access for GIS hazards mapping otherwise only available on multiple sites; and the Land Use Mitigation Working Group explored further issues of regional-local mitigation planning coordination.

10. Relation to THIRA and National Mitigation Framework. Cal OES is engaged in the THIRA process, and is learning from it. It will ensure, through addressing the gap analysis findings (THIRA Step 4), that proper targets can be set to help strengthen mitigation capabilities. A careful reading of Standard Plan and Enhanced Plan content of the 2013 SHMP demonstrates actions consistent with the National Mitigation Framework.

The 2013 SHMP combines such examples of integrated California comprehensive mitigation program initiatives within a coordinated planning and implementation framework for further development and refinement.

7.6.1 FORMALIZING THE COMPREHENSIVE MITIGATION PROGRAM

As discussed at greater length in Chapter 3 in relation to the eight key SHMP mitigation strategies, the framework for California's comprehensive mitigation program consists of a combination of actions taken by multiple stakeholders over time as described in preceding chapters. These include legislative mandates directing state and local agencies to plan and undertake mitigation actions; Governor's Executive Orders requiring state agencies to work together with the private sector on mitigation; voter approval of major mitigation funding through bond elections; ongoing updating of risk assessments through statewide single-hazard plans such as for earthquakes, floods, and wildfires; structural and non-structural mitigation actions taken by state agencies and commissions; and selective regional agency coordination.

As discussed above under Item 3 (State provision of a portion of the non-federal match for mitigation projects) and in Chapter 2, AB 2140 represents a significant move forward. The legislation, among other things, authorized cities and counties to adopt an LHMP prepared under the terms of DMA 2000 as part of its mandated general plan safety element and authorized the legislature to provide to such cities or counties a portion of the state share of local costs exceeding 75 percent of total state-eligible post-disaster costs under the Stafford Act. It also requires Cal OES to give preference for PDM grant fund assistance for developing and adopting an LHMP to local jurisdictions that have not adopted such a plan. Implementation of AB 2140 as an action item is providing several benefits. Among other things, it is:

- Bringing about wider inclusion of LHMPs as integral parts of local general plan safety elements
- Providing new opportunities for evaluation of state and local policies related to development in hazard-prone areas
- Helping local governments more directly address the tension between development pressure and safe land use planning through integration of Local Hazard Mitigation Plans with the policies, programs, and capabilities reflected in mandated local general plans, including the land use, circulation, housing, open space, conservation, and scenic highway elements, as well as the safety element

7.6.2 IMPLEMENTING THE COMPREHENSIVE MITIGATION PROGRAM

In California, all levels of government participate in funding disaster mitigation measures. This multi-level participation is part of California’s comprehensive mitigation approach. At the state level, billions of dollars have been spent on earthquake, flood, and wildfire mitigation measures. State voters have recently approved billions of dollars in mitigation investments yet to be spent. California’s local governments are also creative and innovative in their mitigation finance approaches. At the county and city levels, hundreds of millions of dollars have been spent on retrofitting buildings and supporting flood control. At these local levels, special bonding, sales tax districts, and tax rebate programs have been established to fund earthquake, flood, and wildfire mitigation. Most of these efforts require local voters to approve the finance mechanism, usually in the form of additional fees and taxes. Thus, Californians do use their “pocketbook” to mitigate hazards. While not all local government entities participate in the same way or level, over 50 percent of respondents to the 2007 LHMP survey looked to their own bonding capacity and local taxing mechanisms to finance mitigation.

Given this multi-agency context for financing mitigation, coordination of mitigation action is critically important to the future well-being of California. The SHMT plays an important role in coordinating participating agencies in the preparation of this SHMP. The results of its efforts will help determine the future safety of all citizens of California.

7.7 MONITORING, EVALUATING AND UPDATING THE SHMP

The SHMP is a living document that reflects the state's ongoing hazard mitigation commitment, planning, and implementation actions. Therefore the process of monitoring, evaluating, and updating is critically important to the effectiveness of hazard mitigation in California.

7.7.1 MONITORING THE SHMP

Under 44 CFR 201.2, the State Hazard Mitigation Officer (SHMO) is the state's point of contact with FEMA, other federal agencies, and local governments for mitigation planning and implementation activities required under the Stafford Act and the Flood Insurance Act. In the establishment of the Cal OES organization in 2009, a hazard mitigation program was established with two individuals jointly carrying the federally designated SHMO responsibility, one in charge of mitigation planning and the other in charge of mitigation grants.

The two individuals carrying the SHMO title have joint responsibilities for monitoring, maintaining, evaluating, and updating the 2010 SHMP. Under the direction of the two SHMOs, HMP staff participates in the development and monitoring of a wide range of state and local hazard-specific implementation plans and projects. The results of these efforts will be incorporated into a system for the continuous monitoring and updating of the SHMP. Such activities include, but are not limited to, the submittal of periodic reports by agencies involved in implementing projects or actions; site visits, phone calls, and meetings conducted by the person responsible for overseeing the plan; and ongoing meetings of the State Hazard Mitigation Team (SHMT), described at length in Chapter 3, Section 3.5.

In the past, Cal OES staff review of SHMP progress has been largely incremental. A new system of quarterly reports has been instituted to make the monitoring, evaluation, and update process more continuous and systematic. The quarterly reports examine progress toward achieving goals and evaluate implementation activities.

7.7.2 EVALUATING THE SHMP

Evaluation of the SHMP is a function of multiple stakeholders, including the SHMO and Cal OES staff, together with member agencies in the SHMT, local governments, and the public. During revision of the 2010 SHMP, a substantial plan evaluation effort has been undertaken through the SHMT, as described in Chapter 1 and Chapter 3. SHMT deliberations have included consideration of such matters as:

- Changes in the nature and magnitude of hazard problems and/or development
- Resources available committed to implementing the plan
- Technical, policy, legal, and coordination challenges to effective implementation
- Positive and negative outcomes of mitigations actions
- Extent of desired agency participation as initially expected

7.7.3 MONITORING HAZARD MITIGATION PROJECTS

Cal OES staff monitors the implementation of hazard mitigation projects, programs, and initiatives. Staff also report to the SHMO and the SHMT on the progress made toward plan goals and objectives, recommend new mitigation actions, and track the following specific events:

- Hazard events, including federally declared disasters
- FEMA approval of Local Hazard Mitigation Plans
- Advances in knowledge or understanding of hazards by other state agencies
- Changes in federal, state, and local legislation

- Performance of mitigation projects during hazard events
- Grant administration

7.7.4 SYSTEMATIC PLAN REVISION

The SHMP is being systematically updated every three years, in accordance with FEMA requirements and good planning practice. The SHMO in charge of mitigation planning reviews and recommends for approval any plan updates proposed by the SHMT.

The SHMT has played an influential role in providing input, direction, and guidance to the 2013 SHMP update process. The 2010 SHMP identified mitigation factors that would be monitored and evaluated for inclusion into the updated 2013 SHMP through the efforts of four SHMT working groups, including GIS TAWC. Recommendation for implementation of SHMP revisions and actions were based on the following factors:

- New technologies such as use of the Cal OES web portal to disseminate plan concepts and to collect information and comments, and the MyPlan IMS providing single-access online GIS hazards mapping to local governments
- New information forthcoming from agencies with scientific and/or regulatory responsibilities for primary impact hazards (i.e., additional California Geological Survey seismic mapping, CAL FIRE periodic wildfire risk map updates, and new Department of Water Resources flood maps)
- Adjustments to changes in federal or state laws, regulations, or policies

7.7.5 EXPANDED ROLE OF THE SHMT

During implementation of the 2010 SHMP, the SHMT has been charged with responsibility for working with the Cal OES (then Cal EMA) staff in monitoring, evaluating, and updating the SHMP. The SHMT met continuously as a whole through 2011, and then again from January 2013 through the present, to provide information regarding new laws, hazard conditions, and mitigation actions taken during the past three years. Establishment of the restructured SHMT promoted:

- Continuing and active participation of key state agencies and other public and private sector stakeholders in 2010 SHMP monitoring, evaluation, and updating
- Continuation of four new strategic planning working groups, initially formed to help prepare the 2010 SHMP, which worked during 2011 to help clarify SHMP mitigation priorities and targets
- Resumption in early 2013 of the full SHMT to actively move toward preparation of the 2013 SHMP
- Integration of mitigation with preparedness-, response-, and recovery-related aspects of Cal OES and other state agency functions

Regular ongoing meetings have provided an opportunity to implement the 2010 SHMP updating process as new disaster circumstances, societal conditions, and technology arise, providing a more continuous feedback loop between planning and implementation.

Page left intentionally blank