

## CHAPTER 2 – THE PLANNING PROCESS

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### About Chapter 2

*Chapter 2* outlines California’s overall hazard mitigation planning process with specific details about preparation of the 2018 State Hazard Mitigation Plan (SHMP) update, as well as SHMP implementation and maintenance efforts. Integration of hazard mitigation with other planning efforts and climate adaption efforts is also detailed. *Section 2.2, Preparing the 2018 SHMP Update*, includes information on who was involved in the planning process and how the SHMP Planning Team worked with the State Hazard Mitigation Team (SHMT) to review, analyze, and update the SHMP.

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### 2.1 CAL OES SHMP COORDINATION ROLE

The mission of the California Governor’s Office of Emergency Services (Cal OES) is to protect lives and property, build capabilities, and support local communities for a more resilient California.

The foundation for Cal OES’ coordination of state agency hazard mitigation efforts is Governor’s Executive Order W-9-91, issued in 1991, which authorized the Director of the former OES to assign specific emergency support functions to state agencies through standing administrative orders that are operational until superseded. A letter to agency secretaries on September 12, 2000, by then-Governor Davis initiated the updating of all standing orders related to emergency management and included hazard mitigation for the first time.

Standard hazard mitigation provisions in the standing administrative order included the following:

- Identify, document, and, when practical, implement those activities that potentially could reduce or lessen the impact of an emergency
- Establish hazard mitigation as an integral element in operations and program delivery as appropriate
- During a Presidential declaration of a major disaster, participate in the hazard mitigation planning process

Additionally, the State of California Emergency Plan further assigns mitigation duties to Cal OES and other state agencies under various emergency support functions and mandates support of the SHMP. As part of these mitigation duties, per the 2017 State Emergency Plan, Section 13.3 Emergency Management Activities, the lead agency for each California Emergency Support Function (CA-ESF) will:

- Identify stakeholders and engage them in the development and maintenance of the CA-ESF
- Complete a vulnerability assessment and prioritize actions to reduce vulnerabilities within the scope of the CA-ESF
- Collaborate to pool CA-ESF resources to prevent hazards and reduce vulnerability (leveraging funding, resources, and people)
- Develop strategies and processes to prevent or reduce the impact of events and reduce the need for response activities
- Support the California State Hazard Mitigation Plan (SHMP)

Cal OES' Hazard Mitigation Program is divided between two directorates: the Planning, Preparedness, and Prevention Directorate and the Response and Recovery Directorate. The Hazard Mitigation Planning, Pre-Disaster Mitigation, Flood Mitigation Assistance, and Dam Safety Planning divisions together make up Cal OES' Mitigation and Dam Safety Program, which is within the Planning, Preparedness, and Prevention Directorate. Chart 2.A shows the organization of the Planning, Preparedness, and Prevention Directorate. The Hazard Mitigation Grant Program is within the Response and Recovery Directorate.

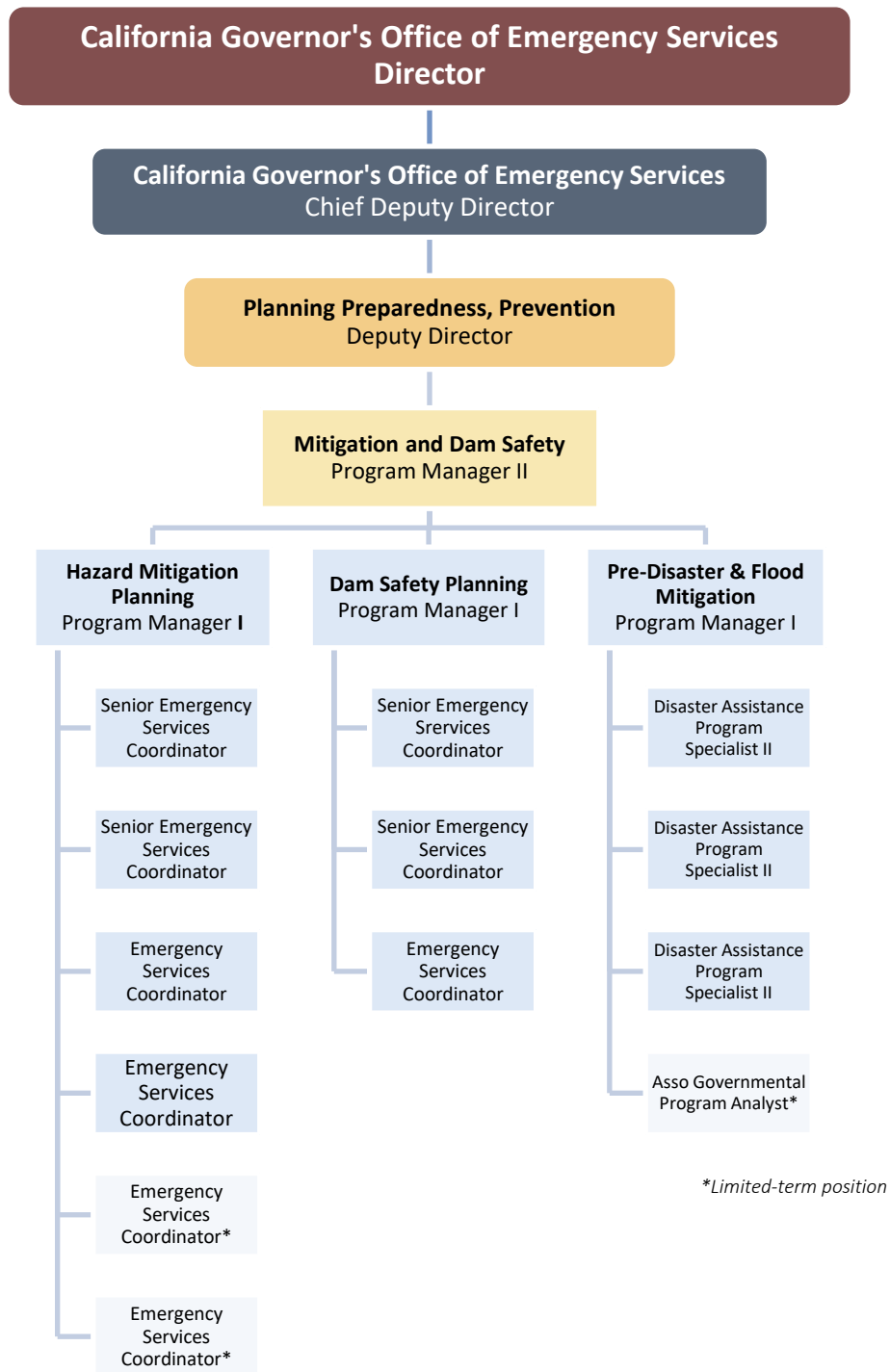
The Cal OES Hazard Mitigation Planning Division within the Planning, Preparedness, and Prevention Directorate leads the preparation of the SHMP. While Cal OES is the lead for SHMP preparation, content updates in the 2018 SHMP include significant input and participation from both Cal OES Directorates and members of the State Hazard Mitigation Team (SHMT).

The primary responsibilities of Cal OES in preparing and implementing the SHMP are to:

1. Ensure that the SHMP meets Federal Emergency Management Agency (FEMA) requirements and is approved by FEMA.
2. Coordinate the continued development of the SHMP with the SHMT, strategic working groups, and outreach to other local, tribal, public/private, state, and federal agencies.
3. Provide ample opportunities for stakeholder involvement in the update of the SHMP.
4. Administer FEMA hazard mitigation assistance programs, including the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and Flood Mitigation Assistance (FMA).
5. Support integration of local, regional, and tribal hazard mitigation efforts with the SHMP.

While the Cal OES mitigation program, through the SHMP update and implementation efforts, works to track progress of statewide hazard mitigation activities, many specific mitigation actions and activities are part of programs administered by other state agencies and departments such as the California Coastal Commission, California Geological Survey, California Seismic Safety Commission, California Department of Forestry and Fire Protection (CAL FIRE), Department of Housing and Community Development, Department of Water Resources, and the Governor's Office of Planning and Research. These agencies, and many others, play a key role in providing mitigation progress information as part of the update of the SHMP. A detailed discussion of the SHMT is included in [Section 2.2.2, Coordination Among Agencies and Departments](#).

Chart 2.A: Cal OES Planning, Preparedness, and Prevention Directorate Organization



Source: California Governor's Office of Emergency Services (Cal OES)

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## 2.2 PREPARING THE 2018 SHMP UPDATE

The SHMP is a “living” document that reflects the state’s ongoing commitment to a comprehensive statewide mitigation program. Monitoring, evaluating, and updating the SHMP every five years is critically important to the effectiveness of hazard mitigation in California by setting the mitigation goals, objectives, and strategies for the state and ensuring the state continues to remain eligible for Stafford Act funding.

Many stakeholders—including Cal OES Directorates, member agencies in the SHMT, local and tribal governments, the state and federal governments, and the public and private sectors—are involved in updating the SHMP. The 2018 SHMP Planning Team, which coordinated with SHMT members, was comprised of Cal OES staff and a support team of faculty and staff from California Polytechnic State University San Luis Obispo (Cal Poly).

To facilitate hazard mitigation progress monitoring and support hazard mitigation efforts around the state, SHMT meetings are held on an ongoing basis, where possible. These include both SHMT meetings as well as multiple strategic working group meetings (e.g. the Geographic Information Systems Technical Advisory Working Committee [GIS TAWC]), as described in detail later in this chapter.

### 2.2.1 2018 PLAN UPDATE PROCESS

An overall goal of the 2018 SHMP update process has been to facilitate mitigation action across the boundaries of federal and state agencies, local governments, tribal organizations, business and industry, and non-profit organizations. While Cal OES has lead responsibility for the development and maintenance of the SHMP, this document has been produced in collaboration and through engaged partnerships with multiple state agencies and other groups.

#### 2018 SHMP Update Preparation Schedule

During the implementation and monitoring phase begun after 2013 SHMP approval in September 2013, the SHMP Planning Team began to develop an implementation and maintenance schedule, which included a 2018 SHMP Update Preparation Schedule. This schedule was developed based on SHMT feedback and lessons learned during the 2013 SHMP update process. The schedule was updated again in early 2016 by the SHMP Planning Team a few months after a new SHMP coordinator was hired in the Cal OES Hazard Mitigation Planning Division.

An addition to the 2018 Update Preparation Schedule, which was part of SHMP update efforts, is the inclusion of an “Internal Draft of the Public Review Draft to the SHMT.” This draft allowed for a second opportunity for internal review and comment by SHMT members before the Public Review Draft was issued to the public. Milestones included in the 2018 Update Preparation Schedule were also specifically selected to ensure sufficient time for internal document processing and online posting (as applicable) prior to draft releases.

Following initial development of the 2018 Update Preparation Schedule by the SHMP Planning Team, the schedule was submitted to the Cal OES Management and Executive Teams for review and confirmation. Development and approval of the 2018 SHMP Update Preparation Schedule, as shown in Table 2.A, was the primary step taken to begin the 2018 update process. At the 2018 SHMP kick-off meeting in December 2016, the 2018 Update Preparation Schedule was released to the SHMT.

**Table 2.A: 2018 SHMP Update Preparation Schedule**

<i>September 30, 2013</i>	<i>2013 California State Hazard Mitigation Plan (SHMP) is approved as an enhanced SHMP</i>
<b>2016</b>	<b>Action</b>
December 13, 2016	2018 SHMP Project Kick Off Meeting (State Hazard Mitigation Team [SHMT] members)
December 13, 2016	Geographic Information Systems Technical Advisory Working Committee (GIS TAWC) 2018 Progress Meeting
<b>2017</b>	<b>Action</b>
February 22, 2017	SHMT/GIS TAWC Progress Meetings – <i>POSTPONED due to severe winter storms and Oroville Dam emergency</i>
April 11, 2017	SHMT Progress Meeting
July 11, 2017	California Polytechnic State University San Luis Obispo support team (Cal Poly) submits Internal Review Draft to the California Governor’s Office of Emergency Services (Cal OES) for Cal OES staff review
August 11, 2017	Deadline for Cal OES to submit Internal Draft Review comments to Cal Poly
September 12, 2017	Cal OES releases Administrative Draft for SHMT review
October 12, 2017	Deadline for comments on Administrative Draft to be submitted to Cal OES/Cal Poly
November 2017	SHMT/GIS TAWC/Other Working Group Progress Meeting – <i>POSTPONED due to statewide fire response</i>
December 13, 2017	Cal OES provides internal draft of Public Review Draft to SHMT for brief internal review ( <i>internal comments from SHMT due no later than January 10, 2018, but SHMT can also comment during public review</i> )
<b>2018</b>	<b>Action</b>
January 10, 2018	Deadline for SHMT comments on internal Public Review Draft
February 9, 2018	Cal Poly completes Public Review Draft and provides files to Cal OES for posting to Cal OES Hazard Mitigation Division web page
April 16, 2018	Cal OES releases Public Review Draft on web page to initiate 30-day public comment period
May 16, 2018	Deadline for public comment to be submitted to Cal OES
June 12, 2018	Federal Emergency Management Agency (FEMA) Review Draft completed. <i>Plan Review Tool/Crosswalk</i> finalized.
June 15, 2018	Cal OES delivers FEMA Review Draft to Region IX to initiate 45-day formal review/comment period ending July 30, 2018
By August 10, 2018	Cal OES receives FEMA Region IX comments
September 10, 2018	Cal OES sends revised SHMP back to FEMA for final review/approval
September 21, 2018	Cal OES director approves and adopts finalized 2018 SHMP; adoption letter sent to FEMA for final approval
<b>September 28, 2018</b>	<b>FEMA Region IX final approval of the 2018 SHMP</b>
<i>September 2018-2023</i>	<i>Implementation of selected 2018 SHMP components</i>

Note: Milestone dates after June 15, 2018 subject to modification based on final review process

### Key Components of the Update Process

While the 2018 SHMP Update Preparation Schedule features milestone dates for SHMT and Strategic Working Group meetings and draft and final plan releases, it does not attempt to describe specific update efforts by both the SHMP Planning Team and the SHMT. Following is a brief description of the key update efforts undertaken from July 2016 to May 2018. (*In some cases, key component efforts occurred simultaneously; therefore, the efforts are not described in chronological order.*)

In the summer of 2016, multiple meetings and phone calls between SHMP Planning Team members were held to define priorities and objectives for updating the 2018 SHMP. These priorities and objectives were presented to the Cal OES Executive Team members for review and direction. Feedback was received and incorporated leading up to the 2018 SHMP kick-off meeting, in December 2016, which helped to define the key components of the update process.

### *Plan Reorganization*

In the fall of 2016, the SHMP Planning Team began evaluating the organization and content of the 2013 SHMP.

The first reorganization step was consideration of the overall chapter structure of the document and arrangement of subsections within chapters of the 2013 SHMP. Initial review determined that guidance should be included at the beginning of the SHMP to explain how the plan is organized and how to navigate the document given its length. A new introduction chapter ([Chapter 1](#)) was created for the 2018 SHMP that pulled forward some existing 2013 SHMP information on document organization and content and expanded on those topics in a new section called "[Plan Overview: How to Use the 2018 SHMP.](#)"

Further assessment of the overall chapter organization determined that the SHMP goals and objectives chapter should be merged with the strategies and actions chapter to present "California's Mitigation Framework." Additionally, information on local hazard mitigation planning that was included in Chapters 1, 2, 3, 4, and 7 as well as Annex 1 of the 2013 SHMP have been merged and redeveloped into a single chapter (2018 SHMP [Chapter 5: California Local Hazard Mitigation Planning](#)). The intention of the new *Chapter 5* is to act as a resource for local hazard mitigation planning; facilitate stronger connections and integration among public/private, local, state, regional, tribal, and federal hazard mitigation planning; and support alignment of mitigation priorities across all levels of government.

### *Review and Update of Hazards Organization*

A hazard-specific organizational assessment was also conducted. This assessment reviewed the prioritization and grouping of hazards presented in the 2013 SHMP and earlier versions of the SHMP and considered modifications to how the hazards discussions were organized within chapters. It was determined by the 2018 SHMP Planning Team that, rather than grouping the "big three" primary hazards that affect California (earthquake, flood, and fire) in one chapter and the remaining hazards in a separate chapter, hazards would be grouped by "type" into separate chapters. See [Section 1.2](#) for a plan overview or review the *Table of Contents* for the updated hazard organization.

The proposed new chapter organization for hazard grouping was outlined and presented to the SHMT at the December 2016 kick-off meeting for discussion and consideration. Comments were received from SHMT members during the meeting and in follow-up emails sent by SHMT team members to the Cal OES SHMP Coordinator. Based on this feedback, an updated hazard organization structure was then presented to the SHMT for final review and confirmation.

### *Review and Update of SHMP Goals and Objectives*

At the outset of the 2018 update process, the 2013 goals and objectives were put forth for consideration by the SHMT. This consideration included asking the SHMT to assess each goal and objective to determine if it was still applicable or if modification was needed based on the state's mitigation progress the last few years. After initial discussion of the goals and objectives at the December 2016 SHMP update project kick-off meeting, the SHMT determined that a strategic working group should be formed to revise the language of some of the goals and objectives based on comments provided by team members.

The Goals and Objectives Strategic Working Group participated in multiple conference call meetings over the subsequent months and provided additional feedback via email to help revise the goals and objectives for the 2018 SHMP. The resulting updated goals and objectives were then presented at the April 2017 SHMT meeting and in various document releases to the SHMT for additional feedback and finalization.

### Updates to SHMP Strategies

During the April 2017 SHMT meeting, the 2013 SHMP strategies were reviewed and discussed in preparation for the 2018 update. The primary focus of this effort was to begin to determine the continued relevance of the 2013 strategies given the state's recent disasters and updated risk assessment. The overall consensus of this initial effort was an agreement that the 2013 strategies are all still relevant but could be further refined.

Following the meeting, the SHMP Planning Team internally reviewed the 2013 strategies and developed proposed refinement to strategy wording, merged and redeveloped two of the strategies, and developed proposed language for a new strategy to more directly address climate change. SHMT members provided additional feedback on the 2018 SHMP strategies and actions via the release of various 2018 SHMP draft documents for their review, and both SHMT members and the public were afforded an opportunity to provide feedback via the release of the 2018 SHMP Public Review Draft in April/May 2018. Feedback on the strategies received throughout the 2018 SHMP planning process was incorporated as appropriate before the plan went to FEMA for their initial 45-day review.

### Social Vulnerability Model Review and Update

The 2010 SHMP originally developed and introduced raster-based Geographic Information Systems (GIS) modeling to analyze vulnerability of California's population to disasters. A social vulnerability base map was developed and then combined with three separate hazard maps for earthquake, flood, and wildfire. The social vulnerability model used information from the 2010 U.S. Census to identify where vulnerable populations live using a selection of social vulnerability factors. For the 2018 SHMP update, the social vulnerability model was updated to use current data and the social vulnerability factors were evaluated by a strategic working group formed with members of the GIS TAWC—resulting in the Social Vulnerability Strategic Working Group.

### Updates to Vulnerability and Risk Assessment

Beginning in the fall of 2016 and throughout 2017, coordination efforts increased with SHMT members and other stakeholders regarding updating the risk assessment for the 2018 SHMP. Information gathered during the 2013 SHMP implementation and maintenance phase was incorporated into the 2018 draft SHMP, and communication with stakeholders increased to support efforts to gather known information that would help to update the risk assessment. Additional refinements to the risk assessment information occurred during the review and comment periods for the various document drafts provided to both SHMT members and the public.

### Gathering Mitigation and Progress Information from Stakeholders

The SHMP Planning Team solicited updates for each chapter from SHMT members following the 2018 SHMP kick-off meeting in December 2016. To facilitate the mitigation progress tracking effort, revisions were made to the Progress Tracking forms first developed in 2013. These updated forms were distributed at numerous SHMT meetings and posted on the Cal OES Hazard Mitigation Planning Division website. SHMT members were also asked to submit chapter and section updates for editorial integration by the SHMP Planning Team.

Initial response to requests to complete progress reporting forms was slower than expected due to SHMT members' workloads, competing obligations, and multiple large disaster events in the state in 2017. Beginning in January 2017, the SHMP Planning Team began a direct contact outreach campaign to collect mitigation status updates. Extensive phone and email communications were conducted with many SHMT members and other stakeholders to ensure complete updates on various vulnerability assessments, outreach efforts, and mitigation actions, projects, and legislation that have occurred since 2013.

In the 2018 SHMP, over 60 Progress Summaries track significant mitigation initiatives, strategies and actions underway or completed since approval and adoption of the 2013 SHMP.

*SHMT Administrative Drafts – Review and Comment*

Two separate administrative review drafts were issued to the SHMT in 2017 to allow multiple opportunities for SHMT review and feedback prior to release of the public review draft. Numerous SHMT members and agencies provided feedback on these drafts, which was incorporated into the document before release for public review and comment.

*Public Review Draft*

For release of the public review draft, an outreach strategy was developed to ensure the draft reached a very wide cross-section of stakeholders (in addition to previous drafts released only to SHMT members), including agency staff that are not on the SHMT, local jurisdictions, special districts, tribal organizations, and private citizens, and/or the public. The SHMP Planning Team reached out to and coordinated with the following agencies and organizations to send out an announcement of the public review draft release to their respective stakeholders and/or support distribution of the public review draft announcement:

- Governor’s Office of Planning and Research
- California Natural Resources Agency
- California Silver Jackets
- California Department of Water Resources, FloodSAFE program (included posting through their quarterly Floodplain Management Association newsletter)
- California Volunteers
- California Department of Public Health, Office of Health Equity
- Cal OES Office of Private Sector and Non-Governmental Organizations (NGOs) Coordination
- Cal OES Pre-Disaster Mitigation and Flood Mitigation Assistance (PDM/FMA)
- Cal OES Tribal
- Cal OES Office of Crisis Communications and Media Relations (posting to social media sites) and webmasters (posting announcement on Cal OES main web page and internal intranet site)
- Climate collaboratives (including the Alliance of Regional Collaboratives for Climate Adaptation and the Local Government Commission)
- Various associations of cities, counties, councils of governments, and special districts (including the California Association of Councils of Governments, the League of California Cities, etc.)
- The State Hazard Mitigation Team (SHMT) included 800 members from public, private, local, tribal, state, and federal agencies

The public review draft and instructions for providing feedback to the SHMP Planning Team were posted on the Cal OES Hazard Mitigation Planning Division website for a 30-day public review and comment period. Additional efforts to share the public review draft and socialize the 2018 SHMP can be found [Section 2.2.3, Outreach to Stakeholders](#).

Comments received from SHMT members and other stakeholders for the public review draft were reviewed, analyzed, and incorporated by the SHMP Planning Team, as applicable, before the plan was submitted to FEMA for their initial 45-day review.

*Final Submission for FEMA Review and Approval*

A FEMA Review Draft was submitted to FEMA for its formal initial 45-day review in June 2018. A two-level review of the 2018 SHMP was conducted by both a team of FEMA Region IX (FEMA RIX) reviewers as well as by a FEMA Regional Panel made up of volunteers from other regions. Following response to FEMA’s initial comments and incorporation of its feedback, a final draft was submitted back to FEMA RIX for its consideration for approval of the 2018 SHMP.

## 2.2.2 COORDINATION AMONG AGENCIES AND DEPARTMENTS

This section describes how state and federal agencies and other stakeholders were involved in the process to update the 2018 SHMP. Coordination among all engaged stakeholders is essential for both updating the SHMP and implementing it successfully.

### The State Hazard Mitigation Team (SHMT)

#### *Background*

During implementation of the 2010 SHMP, stakeholders were recruited to work with Cal OES in monitoring, evaluating, and updating the SHMP. This group of stakeholders is collectively known as the State Hazard Mitigation Team (SHMT). Initial establishment of the SHMT was intended to promote active participation of key agencies and other stakeholders in the SHMP update process to help integrate hazard mitigation with preparedness, response, and recovery efforts.

The SHMT itself is a “living” group that expands and contracts over time. The current team is composed of ongoing members who have participated in the SHMT for many years, as well as other members who are new to the SHMT for the 2018 update process. The SHMP Planning Team, consisting of Cal OES Hazard Mitigation Planning Division staff and a support team from California Polytechnic State University San Luis Obispo (Cal Poly), continuously works to create new connections with stakeholders and bring new members into the SHMT, as well as maintain strong connections with existing members. As awareness of the need for coordinated hazard mitigation and climate adaptation and resilience efforts grows, the cross-connections fostered by SHMT members from different sectors become even more important. The SHMP is only as comprehensive and as updated as the feedback and direction received from SHMT members and stakeholders, which is why it is so important for stakeholders to remain engaged with supporting SHMP update and implementation efforts.

During the implementation period following the approval of the 2013 SHMP, Cal OES Hazard Mitigation Planning Division staff worked to review and update the SHMT roster to ensure that contact information would be current and applicable for the start of the 2018 SHMP update effort. Cal OES staff continues to maintain and manage this SHMT roster, as new stakeholder contacts are added by the SHMP Planning Team. The SHMP Planning Team also encourages current SHMT members to “recruit” new members to join the SHMT, either from within or outside of their organization. The intent of outreach efforts by the SHMP Planning Team and SHMT members is to ensure that the SHMP update process is inclusive to all stakeholder groups or sectors.

The SHMT consists of over 300 agencies and organizations. The SHMT meets periodically (quarterly, if possible) to discuss hazard mitigation progress and SHMP planning efforts. Some member agencies have responsibility for state-mandated hazard mitigation activities that provide the basis for the SHMP update. The 2018 SHMP update has had robust participation and input from federal, state, tribal, regional, and local SHMT members. Additionally, FEMA RIX representatives routinely attend SHMT meetings and Cal OES also schedules regular internal meetings with FEMA RIX staff to discuss both specific and broad topics related to LHMPs and the SMHP.

The SHMP Planning Team continues to expand the SHMT roster by identifying and recruiting new organizations and entities that may not yet be represented. For a complete list of member agencies, see [Appendix A](#).

#### *Role in the 2018 SHMP*

The SHMT has been instrumental in the development of the 2018 SHMP, which contains substantial new information about individual agency mitigation program responsibilities. The SHMT has assessed, evaluated, and carried out the following activities and functions related to the 2018 SHMP coordination efforts:

- Assessed state agency hazard mitigation roles
- Identified new legislative initiatives
- Actively worked together to maintain a sustainable statewide hazard mitigation program

- Reported on changes in hazards, agency progress toward achieving mitigation goals and ongoing projects, and new opportunities arising through advancements in technology, knowledge, or completed work
- Worked to keep current on significant changes, and new technologies in mitigation
- Encouraged cross-sector mitigation communication and knowledge-sharing
- Maintained and supported MyPlan, an online GIS hazards Internet Mapping Service (IMS) supporting local hazard mitigation planning
- Participated in strategic working groups to provide input on updates to SHMP content
- Reviewed the administrative drafts of the 2018 SHMP and recommended refinements

Following approval of the 2013 SHMP, the SHMT continued to meet annually in 2014, 2015, and 2016 to facilitate implementation of the SHMP and maintain communication and integration between agencies and stakeholders. While the Geographic Information Systems Technical Advisory Working Committee (GIS TAWC) continued to meet largely on the same schedule as the SHMT (see Table 2.B), the other strategic working groups initially established in 2010-2012 were not continued. However, other new strategic working groups were developed to support the 2018 SHMP update. The strategic working groups are discussed further in the next section.

Beginning in December 2016, the SHMT met to kick off the 2018 SHMP update process. The SHMT then met multiple times during 2017 and 2018 to initiate, review, and update various elements and drafts of the 2018 SHMP. These efforts helped to produce administrative drafts, a public review draft, a FEMA review draft, and a final 2018 SHMP for adoption by the Cal OES Director on behalf of the Governor and the State of California.

To ensure that the 2018 SHMP reflects current and ongoing mitigation efforts around the state, input to content updates come directly from SHMT members. For example, the California Department of Water Resources (DWR) provides input on flood hazards, the California Geological Survey (CGS) provides updates on earthquake and geologic hazards, and so on.

Recommendations for 2018 SHMP revisions and actions were based on:

- Adjustments or changes in federal or state laws, regulations, and/or policies and creation of new state laws, regulations, or policies
- New information from state agencies with scientific and/or regulatory responsibilities for hazard mitigation (e.g., additional CGS seismic mapping, CAL FIRE periodic wildfire fire map updates, and new DWR flood maps and user handbook)
- New technologies, such as use of the interactive hazard online map viewers (e.g., CAL FIRE's tree mortality viewer)
- New priorities such as emphasis on social vulnerability and environmental justice, and efforts to further integrate with the state's climate adaptation planning strategies

### **Local Stakeholder Participation**

Also contributing to the 2018 SHMP update is the local preparation and adoption of 502 FEMA-approved Local Hazard Mitigation Plans (LHMPs) as of February 28, 2018, including those of 258 cities and counties and 244 special districts. As of February 28, 2018, according to FEMA, another 20 LHMPs covering a total of 99 additional jurisdictions were approvable pending adoption. Local governments are in a unique position to encourage grassroots organizations, public and private organizations, and the general public to directly participate in planning for increased safety and sustainability of their own communities through the LHMP update process. Overall trends and patterns in these updates are in turn reflected in the 2018 SHMP.

The LHMP preparation and approval process provides a source of local hazard mitigation planning contacts to Cal OES. The SHMP Planning Team also increased efforts as part of the 2018 SHMP update to add local stakeholders to the SHMT so they can help to offer local perspective during the SHMP update and implementation processes.

In 2017, the SHMP Planning Team assessed the linkage of the SHMT to local planning efforts and found that many more local jurisdictions and tribal governments could be invited to participate in the SHMT. In part, this need

stemmed from local government personnel changes resulting in many of the SHMT contacts for local jurisdictions being outdated and no longer active. To address this the SHMP Planning Team began a focused outreach effort to local jurisdictions and tribal governments to obtain updated information for jurisdictions' staff contacts for their LHMPs. Cal OES Hazard Mitigation and Cal OES Tribal Office continue to work toward strengthening integration between tribal governments and state mitigation planning and grant funding opportunities.

For additional information on local and tribal hazard mitigation planning, see [Chapter 5](#). For additional information on hazard mitigation grant funding, see [Chapter 10](#).

### **Facilitating Collaboration through the SHMT Strategic Working Groups**

The strategic working group concept was initially implemented in the fall of 2009 to address various SHMP-related issues pertaining to interagency coordination, mitigation progress, and strategy implementation by bringing together SHMT members from different agencies in smaller focused topic groups to allow for in-depth discussion. These strategic working group efforts are key action steps in supporting 2018 SHMP Goal 4: *Promote Integrated Mitigation Policy*. (For detailed information about the 2018 SHMP goals, see [Chapter 3, Section 3.3](#)).

While the SHMT meetings have provided a positive forum for engaging team members in the SHMP update and revision process as a whole, the strategic working groups engage in a direct and more meaningful way where more detailed review or input is needed in the update process. The strategic working groups are held on a voluntary participation basis, with SHMT members encouraged to participate in the groups about which they feel knowledgeable and interested. Strategic working group meetings can range in size from 5 to 40 people.

Strategic working groups activated for the 2018 SHMP update effort included the groups described below.

#### **Geographic Information Systems Technical Advisory Working Committee (GIS TAWC)**

The Geographic Information Systems Technical Advisory Working Committee (GIS TAWC) provides ongoing guidance for hazard data integration and open platform dissemination. The GIS TAWC's primary function is to provide technical context and framework for assembling hazards information that may then be used by citizens and municipal governments for all planning purposes.

The GIS TAWC was created jointly by Cal OES, the California Natural Resources Agency (CNRA), and other interested entities to advance GIS in hazard mitigation and to assist in the SHMP update process. It has met since 2009. In the fall of 2011, the GIS TAWC helped develop and launch MyPlan, a new online GIS hazards data Internet Mapping Tool (IMT). The MyPlan IMT was originally intended to assist local governments in preparing GIS-based hazards maps to support local hazard mitigation planning and hazard mitigation grant projects.

The GIS TAWC continues to meet to support further refinement and development of MyPlan and to advise on SHMP maps and other related GIS/hazard mitigation issues. For more information about MyPlan, see [Chapter 3, Section 3.11](#). As shown in Table 2.B, GIS TAWC meetings were often scheduled following SHMT meetings.

**Table 2.B: SHMT and GIS TAWC Strategic Working Group Meetings 2014-2018**

Meeting Type	Date of Meeting	Meeting Objective
State Hazard Mitigation Team (SHMT)	October 15, 2014	2013 State Hazard Mitigation Plan (SHMP) implementation and progress tracking
Geographic Information System Technical Advisory Working Committee (GIS TAWC)	October 15, 2014	MyPlan II development
SHMT	December 4, 2015	2013 SHMP implementation and progress tracking
GIS TAWC	December 4, 2015	MyPlan II development/2013 SHMP implementation and progress tracking
SHMT	May 10, 2016	2013 SHMP implementation and progress tracking
GIS TAWC	May 10, 2016	MyPlan II development/2013 SHMP implementation and progress tracking
SHMT	December 13, 2016	2018 SHMP update kick off meeting
GIS TAWC	December 13, 2016	2018 SHMP update kick off meeting/social vulnerability model update
SHMT	April 11, 2017	Assessment of SHMP goals, objectives, strategies
GIS TAWC	April 11, 2017	Social vulnerability model update

#### 2018 SHMP Goals and Objectives Strategic Working Group

This working group was formed at the outset of the 2018 SHMP update process as a result of initial discussions about the current relevance of the 2013 SHMP goals and objectives. Following SMHT discussion, a working group was tasked with soliciting input and preparing a draft set of revised goals and objectives for review by the entire SHMT.

The working group members were drawn from a broad cross-section of agencies involved in hazard mitigation risk assessment, policies, and programs, including Cal OES, Governor’s Office of Planning and Research, California Earthquake Authority, California Seismic Safety Commission, Department of Water Resources, Board of Forestry, California Coastal Commission, California Department of Public Health, Bureau of Land Management, and a tribal planning consultant.

This working group met via a series of teleconferences and communicated via email from December 2016 to May 2017 to evaluate and update the SHMP goals and objectives.

#### Social Vulnerability Model Update Strategic Working Group

This working group was developed from the GIS TAWC to provide input for the update of the social vulnerability model originally developed for the 2010 SHMP. During preliminary discussions about social vulnerability model redevelopment at the December 2016 GIS TAWC meeting, the GIS TAWC determined that a separate working group should be formed to provide specific feedback to the model update process. This working group met via a series of teleconferences and communicated via email from December 2016 to May 2017 to assess the 2010 model structure, weighting, and inputs.

The working group members were drawn from Cal OES (Office of Access and Functional Needs), California Coastal Commission, California Department of Public Health, California Department of Public Health Office of Health, Bureau of Land Management, a tribal planning consultant, and Four Twenty Seven, a private sector consulting firm. The results of the meetings produced an updated hazard analysis and social vulnerability model that took into consideration social equity and environmental justice elements, as well as vulnerable populations. The modeling results were used to help inform maps included in [Section 4.4, Environmental Justice, Equity, and Hazard Mitigation in California](#), and prepared for some of the 2018 SHMP risk assessments found in [Chapters 6 through 9](#). For additional information on the updated social vulnerability model, please refer to [Appendix N](#).

## **Additional Strategic Working Groups under Development**

Additional strategic working groups were initially proposed to support the development and implementation of the SHMP and will be convened as time and resources allow. While the SHMP Planning Team will provide initial startup support for these strategic working groups, the long-term vision is that they could be self-sustaining and chaired by participating agencies.

### *Mitigation Integration Strategic Working Group*

This strategic working group is proposed by Cal OES to provide a forum for integrating efforts among state, local, regional, and tribal jurisdictions to support implementation of hazard mitigation programs. Potential topics that this working group may cover include local mitigation planning efforts and LHMP linkages to the SHMP; integrating hazard mitigation more closely with Threat and Hazard Identification and Risk Assessment (THIRA), the Emergency Management Accreditation Program (EMAP), and Cal OES catastrophic planning efforts; sharing information about the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) grant programs; and working to link mitigation strategies more closely with recovery actions.

This strategic working group will also support climate information sharing among all levels of government. Working with existing collaborative groups already sharing climate information throughout the state (such as the Safeguarding Climate Action Team [SafeCAT] and the Integrated Climate Adaptation and Resiliency Program Technical Advisory Committee [ICARP TAC]) would be an effective way to track climate adaptation efforts that can specifically feed into future SHMP updates and facilitate LHMP and SHMP integration. Deliverables from this group could also support related updates for the California Adaptation Planning Guide (APG).

### *Drought Information Strategic Working Group*

The initial intent of this strategic working group is to share mitigation activity progress and lessons learned from California's prolonged drought event.

### *Seismic and Geologic Hazard Integration Strategic Working Group*

The intent of this strategic working group is to provide opportunities for information sharing and cross-referencing of mitigation actions underway or planned by agencies and other stakeholder groups concerned with seismic and geologic hazards.

## **Strategic Working Groups before 2013**

Three strategic working groups met between 2009 and 2011: Cross-Sector Communications and Knowledge-Sharing Strategic Working Group, Mitigation Progress Indicators and Monitoring Strategic Working Group, and Land Use Mitigation Strategic Working Group. The result of each of these groups was a set of valuable recommendations to the SHMT that are still applicable. While some recommendations have been implemented, the remaining recommendations are being reviewed for utilization in furthering the state's comprehensive mitigation strategy.

Complete meeting notes from the strategic working groups, including discussion of the recommendations for action, are included in Appendix K of the 2013 SHMP.

## **Cal OES Coordination with FEMA**

### *Overview*

In addition to the SHMT and its strategic working groups, state-federal coordination is facilitated through various ad hoc consultation processes, including catastrophic event preparedness planning, as well as federal-state coordination related to emerging and continuing hazard mitigation issues involving climate change, tsunamis, dam and levee failure, flood hazards, drought and subsidence, tree mortality, and extensive fires in wildland-urban interface (WUI) areas.

Cal OES and FEMA regional mitigation staff communicate regularly, on an informal basis, regarding the state's mitigation program.

### FEMA Mitigation Program Consultation

FEMA's 2015 State Mitigation Plan Review Guide, effective March 2016, summarizes FEMA's responsibility for providing technical assistance through review and consultation with the state's hazard mitigation program. The Review Guide also provides detailed guidance on how FEMA interprets the various requirements of the 44 Code of Federal Regulations (CFR) for all standard and enhanced state mitigation plan reviews. Prior to adoption of the 2015 Review Guide, FEMA modified the update and review requirements for state plans to occur on a five-year update cycle, rather than the previous three-year update cycle.

As part of this change, the 2015 FEMA Review Guide adds the responsibility that FEMA conduct annual consultations with states. The purpose of this consultation is to help institute active, ongoing coordination and communication between FEMA and the state to support the state's mitigation programs. The consultation also provides an opportunity for FEMA and the state to discuss the status of the state's mitigation program for both planning and grant elements. The state's first annual consultation with FEMA was held in September 2017 and resulted in an Action Plan developed by the state, working in coordination with FEMA staff, to help address any areas of improvement identified during the consultation process.

### **Sector Coordination**

Successful implementation of mitigation planning efforts requires integration between different sectors to ensure a whole-community approach. The FEMA State Mitigation Plan Review Guide identifies seven sectors that are essential to connecting mitigation planning and preparedness efforts. As previously mentioned, various agencies from each of these sectors are part of the SHMT and play key roles in the SHMP update process by providing feedback and information on mitigation progress. Below are brief examples of some of the agencies involved in the SHMP process by sector.

#### Emergency Management

- California Department of Water Resources (DWR) – In addition to providing detailed updates on flood hazards, DWR has been instrumental in reviewing and approving dam inundation maps in response to Senate Bill 92, passed in 2017. DWR has also provided updates to the 2018 SHMP regarding dam mitigation measures related to the Oroville Dam and Spillway.
- California Department of General Services (DGS) Office of Risk and Insurance Management – DGS Emergency Management staff worked closely with the SHMP Planning Team to update information regarding state-owned and leased structures and potential vulnerability to those structures.

#### Economic Development

- Past and New SHMT Members – During an assessment of stakeholder sectors as the 2018 SHMP update project was beginning, it was determined that participation from the economic development sector needed to be stronger. Corrective action was taken by the SHMP Planning Team to search out previous SHMT members from the economic development sector and re-engage with them. Additionally, the SHMP Planning Team worked with current SHMT members to identify new business development sector stakeholders to approach for input and participation on the SHMT, and also reached out to known stakeholders in the economic development sector to recruit them to the SHMT.
- Cal OES Office of Private Sector and Non-Governmental Organization (NGO) Coordination – The SHMP Planning Team consulted with the Chief of this office for guidance on how to further integrate economic development, private, and public sector agencies into the SHMP update process. These efforts resulted in SHMP-related information being shared with stakeholders that work with this Cal OES office, including distribution of the 2018 SHMP Public Review Draft documents.

- Governor’s Office of Business and Economic Development (GO-Biz) – The SHMP Planning Team reached out to GO-Biz staff to introduce them to the 2018 SHMP update and invite them to join the SHMT.
- Department of Finance – The SHMP Planning Team reached out to Department of Finance staff to introduce them to the 2018 SHMP update and invite them to join the SHMT.

### Land Use and Development

- Governor’s Office of Planning and Research (OPR) – OPR was instrumental in supporting the Goals and Objectives Strategic Working Group and also plays an active role in the SHMT, providing guidance and information on such topics as legislation, climate adaptation, land use planning linkage to hazard mitigation, and general plan integration with LHMPs. During the 2018 SHMP update process OPR was closely engaged with Cal OES and the SHMT. This enhanced engagement was due, in part, to the 2017 General Plan Guidelines update, which includes a strong linkage to hazard mitigation. The strengthening of the planning/hazard mitigation linkage is a result of various new mitigation-related legislative requirements and Executive Order B-30-15 (more discussion of which can be found in [Section 4.3.6.1](#)). These initiatives have resulted in stronger participation by OPR in development and coordination of the SHMP and stronger linkage of hazard mitigation with other state efforts.
- CAL FIRE – CAL FIRE land use planners have been working with Cal OES, FEMA, and OPR staff to support integrating updated land use planning and fire hazard information into LHMP and general plan development. Updated CAL FIRE land use planning information is also being incorporated into the state’s LHMP technical assistance and training efforts.

### Housing

- California Department of Housing and Community Development (HCD) – HCD provided input to the 2018 Safeguarding California update (an important climate adaptation planning initiative that integrates with the SHMP), and also provided progress updates for mobile/manufactured home mitigation from the HCD Mobile Home Parks Program for the 2018 SHMP update.
- Earthquake Engineering Research Institute (EERI) – In 2015, EERI worked with Cal OES and FEMA to create an informational guide on methods for seismic retrofit of mobile homes. This flyer was translated into Spanish in 2016.

### Health and Social Services

- California Department of Public Health (CDPH) – The California Building Resilience Against Climate Effects (CalBRACE) project, based in the Office of Health Equity (OHE), seeks to enhance local and state agencies' efforts to plan for and help reduce health risks from climate change. CDPH OHE has been actively involved in the SHMT and in strategic working groups, providing feedback on updates to the SHMP goals and objectives and input and perspective for updates to the social vulnerability model and various progress updates on the CalBRACE program.

### Infrastructure

- California Department of Transportation (Caltrans) and California Public Utilities Commission (CPUC) – Both Caltrans and CPUC are active members of the SHMT, attending team meetings and providing feedback on progress updates for infrastructure hazard mitigation.
- State Water Resources Control Board (SWRCB) – SWRCB is an active member, attending team meetings and providing SHMP feedback, particularly addressing the resilience of the drinking water infrastructure.

### Natural and Cultural Resources

- California Natural Resources Agency (CNRA) – CNRA provided information and direction related to the 2018 Safeguarding California update and remains an active member on the SHMT.
- California Coastal Commission (CCC) – CCC provided detailed input to the 2018 effort to update the SHMP goals and objectives and also contributed comments to the update of the social vulnerability model.
- California Board of Forestry (BoF) – BoF provided extensive updates and comments to the wildfire hazard and insect pest risk assessment sections as well as feedback to the new tree mortality hazard section risk assessment.

## 2.2.3 OUTREACH TO STAKEHOLDERS

### Stakeholder Outreach Plan to Track Progress

Following approval of the Enhanced SHMP in September 2013, the SHMP Planning Team began internal discussions on maintaining the plan and tracking implementation. Out of these discussions, a Progress Tracking Outreach Plan was developed in 2016. The Progress Tracking Outreach Plan defined outreach goals and linkage to FEMA’s Mitigation Plan Review Guide elements and outlined outreach tasks to be undertaken by the SHMP Planning Team.

The Progress Tracking Outreach Plan was intended to guide outreach efforts in the period between plan updates and provide a lead-in to startup of the 2018 SHMP update effort, which kicked off in 2016.

Progress Tracking Outreach Plan goals are as follows:

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

The outreach plan defines the SHMP Planning Team’s initial intent for outreach efforts. While some portions of some tasks were undertaken, task progress was slowed due to limited staff availability. Progress continues on these tasks as the 2018 SHMP update and implementation process moves forward. Following approval of the 2018 SHMP, the outreach plan tasks will be re-evaluated and updated to continue momentum on outreach.

A copy of the Progress Tracking Outreach Plan is included in [Appendix D](#).

### Plan Socialization: Sharing the Plan

The SHMP Planning Team looked at both the successes and lessons learned from the 2013 SHMP update. Part of the need identified was to increase socialization efforts to share this plan with agencies and staff to help them understand how they can use it as a resource for many purposes. For the 2018 SHMP update, the SHMP Planning Team has made a special effort to use as many tools as possible to publicize and encourage discussion of the plan drafts.

### 2018 SHMP Public Review Draft Outreach

For example, as a result of the public outreach strategy developed for the 2018 SHMP Public Review Draft release, the draft reached a much broader audience through use of social media and expanded coordination with stakeholders to distribute to their contacts (as outlined in [Section 2.2.1, 2018 Plan Update Process](#)). Along with distributing the Public Review Draft to roughly 800 SHMT members, these increased outreach efforts are estimated to have reached tens of thousands of California citizens to make them aware of the SHMP and to request their review and feedback.

Additionally, the SHMP Public Review Draft was distributed to contacts nationwide, including other state hazard mitigation contacts.

In the spring of 2018, in coordination with the Public Review Draft release, Cal OES Mitigation and Dam Safety Program staff and staff from other state agencies presented information about the 2018 SHMP update to a variety of stakeholders at several workshops and meetings around the state over a two-month period, as shown in Table 2.C. The presentations highlighted the SHMP update process, the importance of the SHMP in guiding mitigation efforts, how local jurisdictions can use the SHMP to support to local hazard mitigation and climate adaptation/resilience planning, and details on how to provide feedback during the Public Review Draft period. Fact sheets about the 2018 SHMP were also distributed at many of these meetings. While the Public Review Draft comment period was 30 days, efforts to socialize the draft began occurring before the documents were even released to the public.

**Table 2.C: SHMP Public Review Draft Outreach Workshop Presentations**

<b>Presentation Date</b>	<b>Agency Facilitating Meeting</b>	<b>Meeting Details</b>
March 14, 2018	California Governor’s Office of Emergency Services (Cal OES)	Mutual Aid Regional Advisory Committee (MARAC)/Mutual Aid Regional Information Exchange Meeting (MARIX) (Rohnert Park)
April 2, 2018	Governor’s Office of Planning and Research (OPR)	Integrated Climate Adaptation and Resiliency Program Technical Advisory Committee (ICARP TAC) Quarterly Meeting (Bay Area)
April 4, 2018	OPR	Senate Bill 1000 Workshop (Oakland)
April 4, 2018	Cal OES	MARAC Meeting (Red Bluff)
April 11, 2018	Cal OES	MARAC Meeting (Woodland)
April 12, 2018	Cal OES	Hazard Mitigation Grant Program (HMGP) Workshop (Sacramento)
April 16, 2018	OPR	Climate adaptation and resilience webinar (nationwide)
April 24, 2018	Central Coast Climate Collaborative	Central Coast Region Building Resilience Workshop (San Luis Obispo)
April 25, 2018	Cal OES	MARAC Meeting (Clovis)
April 26, 2018	Cal OES	MARAC Meeting (Rancho Cucamonga)

### **Cal OES Hazard Mitigation Web Pages**

#### *Mitigation and Dam Safety Branch Web Page*

This webpage provides a link to the following Divisions under the Mitigation and Dam Safety Branch:

- Dam Safety Planning
- Hazard Mitigation Planning
- Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA)

Also included on the Mitigation and Dam Safety webpage is a GIS application of direct use to individual citizens and property owners. This online Internet Mapping Tool (IMT), known as MyHazards and created jointly by Cal OES and the California Natural Resources Agency (CNRA), provides homeowners, property owners, and residents with natural hazards data, both regulatory (e.g., areas having legal requirements related to real estate transfers such as flood, fault, liquefaction, and landslide zones) and informational, in one location on the web in response to a simple query involving user input of a location or address. For each location and hazard type, hazard mitigation strategies are displayed based on their applicability for that level of hazard. Links are included providing explanations of how to complete property-related mitigation actions. See: <http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation>.

### *Hazard Mitigation Planning Web Page*

Links under the Hazard Mitigation Planning webpage include:

- State Hazard Mitigation Plan
- California Climate Adaptation
- Local Hazard Mitigation Planning
- Documents, Publications, and Videos
- Success Stories

The Hazard Mitigation Planning Division web page serves as a location for local and state hazard mitigation information and resources. The web page is an important tool for communicating with stakeholders and the public and is maintained on an ongoing basis by Cal OES Hazard Mitigation Planning Division staff to ensure that up-to-date mitigation resources are available on the webpage. The webpage provides downloadable portable document file (PDF) copies of the 2018 SHMP either as an entire document or by chapter.

The webpage also provides an easy way for stakeholders and the public to participate in the 2018 SHMP revision process. Downloadable SHMP comment and hazard mitigation progress reporting forms are available on the web page, allowing individuals to update Cal OES staff directly on a wide range of mitigation topics in addition to giving specific comments on the 2018 SHMP. See: <http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/hazard-mitigation-planning>.

### *Hazard Mitigation Grant Program (HMGP) Web Page*

While not under the Mitigation and Dam Safety Branch, Cal OES' Hazard Mitigation Grant Program (HMGP) provides many grant subapplicant resources and information on NOIs at the following webpage: See: <http://www.caloes.ca.gov/cal-oes-divisions/recovery/disaster-mitigation-technical-support/404-hazard-mitigation-grant-program>.

### *Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) Web Page*

Located on this website are funding opportunity notices, links to Notice of Interest (NOI) instructions, and links for NOI submittals for PDM and FMA grants. The website provides fact sheets, instructions, application documents, and post obligation documents. See: <http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/pre-disaster-flood-mitigation>.

### *Dam Safety Planning Web Page*

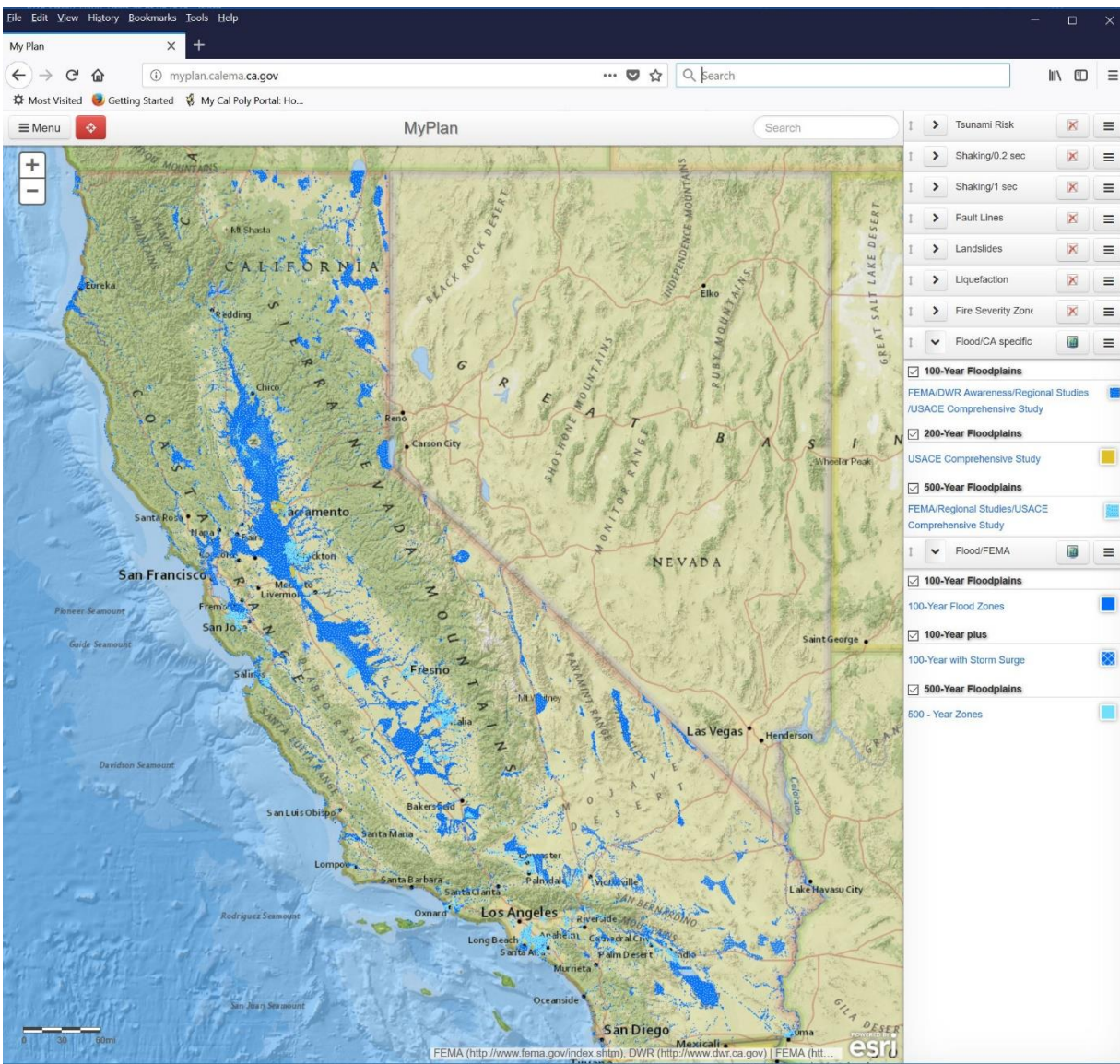
On June 27, 2017, Governor Brown signed Senate Bill 92, which set forth new requirements focused on dam safety. As part of this legislation, dam owners must now submit inundation maps to DWR. After the maps are approved, the dam owner must submit an emergency action plan to Cal OES. DWR's Division of Safety of Dams (DSOD) is responsible for the review and approval of inundation maps while the California Governor's Office of Emergency Services (Cal OES) is responsible for overseeing the review, approval, and ongoing activities associated with Emergency Action Plans under California Government Code Section 8589.5. See: <http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/dam-emergency-action-planning>.

MyPlan Internet Mapping Tool

In 2011, Cal OES initiated MyPlan, an Internet Mapping Tool (IMT) that provides a single online location for Geographic Information Systems (GIS) natural hazards mapping that was previously available from multiple separate locations. The purpose of MyPlan is to make natural hazards risk information and assessments more accessible for hazard mitigation planning and action by local communities and citizens. MyPlan democratizes access to hazards information by making this information openly available, allowing users to determine what information they want to view in the maps.

During implementation of the 2010 SHMP, significant steps were taken to expand on previous progress toward enhanced GIS development. MyPlan is one such step. It builds on previously established enhancements to disaster history tracking, GIS modeling showing a sub-county multi-hazard risk assessment, and upgraded mitigation grant project tracking and location geocoding.

**Map 2.A: MyPlan Example Mapping Screen**



Key purposes of the MyPlan project are to 1) create a single IMT to give cities, counties, special districts, and state agencies efficient access to existing online GIS hazards datasets acquired from various sites sponsored by multiple

federal and state agencies; and 2) support preparation of higher-quality Local Hazard Mitigation Plans (LHMPs) prepared under the Disaster Mitigation Act of 2000 (DMA 2000), safety elements mandated by California general plan law, Local Coastal Programs (LCPs) prepared under the California Coastal Act, and publicly or privately sponsored hazard mitigation projects.

MyPlan is primarily targeted to users who need to create hazard maps for publication in local planning documents. Output includes high-resolution screenshots of user-created maps. MyPlan provides the ability to create GIS-based, hazard mitigation-related maps without using dedicated GIS software. Users are able to turn on and off base and hazard layers to create a custom map of their local area showing various hazards over a standard base map, adding selected base layers as desired. Map 2.A shows an example of a map generated by MyPlan.

Senate Bill 92 (2017) provided new legislative requirements for owners of state jurisdictional dams, except for those classified as low hazard by the DWR, to develop and submit inundation maps for their dam(s) and critical appurtenant structures to DWR's Division of Safety of Dams for approval. Upon approval of the inundation maps, a dam owner is required to submit emergency action plans based upon the approved map(s) to Cal OES for approval by specific deadlines. Corresponding dam inundation area layers will be created and added to MyPlan, which will allow local planners to better plan for a dam failure incident within their jurisdiction.

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## 2.3 INTEGRATION AND COORDINATION WITH OTHER PLANNING EFFORTS

This SHMP integrates and enhances all state mitigation planning efforts within a statewide comprehensive framework. Various state agencies have been delegated mitigation planning responsibilities through state law or by executive order.

### 2.3.1 HAZARD-SPECIFIC MITIGATION PLANS – PRIMARY HAZARDS

As a consequence of its experience with disasters, California has initiated a variety of ongoing hazard mitigation efforts for many years. Due to the frequency, intensity, and variety of natural disasters that occur in California and the corresponding statutory responses, mitigation efforts have tended to focus in a piecemeal fashion on mitigation of specific types of hazards. For example, after the 1971 Sylmar Earthquake, a wide variety of legislation was passed focusing on earthquake hazard mitigation. This single-focus legislation has expanded greatly since that time.

The state has previously undertaken significant mitigation planning efforts for California’s three primary hazards (earthquakes, floods, and wildfires) to comply with the provisions of the Stafford Act. As an outcome of past efforts, California has a number of hazard-specific mitigation plans in place. These plans include information on state and local risk that helped to form the foundation for the risk assessment in this SHMP. To the extent they are coordinated over time with each other and various other state and local plans dealing with hazard mitigation, they form an excellent foundation for comprehensive mitigation planning.

#### California Earthquake Loss Reduction Plan

The California Seismic Safety Commission (CSSC) prepared the 2007-2011 California Earthquake Loss Reduction Plan to fulfill the requirements of the California Earthquake Hazards Reduction Act of 1986 (Government Code Section 8870, et seq.). The California Earthquake Loss Reduction Plan is periodically updated on a separate cycle. For more information, visit: <http://ssc.ca.gov/legislation/mitigation.html>.

#### California Fire Plan

The 2010 Strategic Fire Plan for California is the most recent version of the California Fire Plan, initially adopted in 1996. It differs from preceding versions in its brevity; it is comprised essentially of a core vision statement, with accompanying sets of goals and objectives comprising a broad statement of the state’s priorities for fire protection and wildfire hazard mitigation services. Jointly developed by the California Board of Forestry and Fire Protection and CAL FIRE, the plan was prepared by a broad group of volunteers who served on the Fire Plan Steering Committee. Following comment from various levels of government, the business community, non-profit organizations, and the public, the plan was adopted in 2010.

For more information, visit: [http://cdfdata.fire.ca.gov/fire\\_er/fpp\\_planning\\_cafireplan](http://cdfdata.fire.ca.gov/fire_er/fpp_planning_cafireplan).

#### State Flood Hazard Mitigation Plan.

The State Flood Hazard Mitigation Plan was developed through a multi-agency collaborative effort that involved all levels of government, the private sector, and other stakeholders. The plan identifies high flood hazard areas and outlines mitigation strategies to address flood risk. FEMA initially approved the plan in 1996 on the condition that the state complete community profiles and state agency capability assessments. These two additional sections were approved by FEMA in 1997. Elements of the plan were updated through the FloodSAFE California initiative and other initiated Delta area levee retrofit programs. The Department of Water Resources manages California’s Flood Management Programs, which are discussed in [Section 7.1.5.2](#).

### 2.3.2 RELATED MITIGATION PLANNING EFFORTS

The following cooperative efforts served as models for the development of this SHMP. Cal OES and the SHMT reviewed and incorporated elements from numerous plans and documents in the development of the SHMP, including:

- California Fire Alliance outreach and coordination efforts
- OPR General Plan Guidelines
- OPR technical advice publications
- Sacramento-San Joaquin River Basins Comprehensive Study
- California Floodplain Management Task Force
- Hazardous materials plans
- Integrated Watershed Planning Principles
- Drought Task Force Reports
- State of California Homeland Security Strategy
- Delta Risk Management Study (DRMS) report
- California Climate Change Adaptation Strategy (Safeguarding California)
- California Tsunami Hazard Mitigation and Preparedness Program Action Plan
- State Emergency Plan
- Various climate-related publications and guidance (including state sea-level rise guidance updates, Fourth Climate Change Assessment efforts, climate-vulnerable community resources, and regional climate collaborative efforts and resources)

### 2.3.3 GENERAL PLAN GUIDELINES

A general plan is the local jurisdiction’s long-term blueprint and vision for the community’s future growth. The State of California General Plan Guidelines produced by the Governor’s Office of Planning and Research (OPR) provide direction to local jurisdictions in the preparation of their local general plans while meeting larger state goals.

In August 2017, OPR issued an update to the 2003 General Plan Guidelines. In addition to updating content included in the 2003 version, the 2017 General Plan Guidelines include new sections on healthy communities, equitable and resilient communities, economic development, and climate change, as well as upgrades to the requirements for the general plan safety element. New tools, such as the “General Plan Guidelines Data Mapping Tool” now provided on OPR’s website, provide access to data sets and base maps that can be used to prepare maps for hazard mitigation planning. OPR maintains a database on the status of city and county general plans and posts the information. The 2017 General Plan Guidelines help to strengthen mitigation actions by jurisdiction and support the goals of the 2018 SHMP.

Guidance for preparing a general plan is composed of two types of directives. The first directive is to complete the seven required general plan elements (land use, circulation, housing, conservation, open space, noise, and safety). The requirement for consistency between the elements results in integration of policies. This requirement is important for mitigation planning as the safety element findings and policies will influence other elements. The second directive is to include content on climate change and environmental justice within the general plan.

The safety element is the general plan element most closely linked to hazard mitigation. The goal of the safety element is to reduce the potential short- and long-term risk of death, injuries, property damage, and economic and social dislocation resulting from earthquakes, landslides, fires, floods, droughts, climate change, and other hazards. The safety element must identify hazards and hazard abatement provisions and mitigation efforts to guide local decisions related to zoning, subdivisions, and entitlement permits. A jurisdiction’s safety element should contain general hazard and risk reduction strategies that complement those of the jurisdiction’s Local Hazard Mitigation Plan (LHMP). Ideally, a jurisdiction’s LHMP should be incorporated into its safety element in accordance with provisions of Assembly Bill 2140 (2006) (Government Code Section 65302.6).

As noted above, a jurisdiction’s general plan elements are required to be consistent such that the jurisdiction must ensure that policies set forth in one element are integrated and aligned with those in other elements. This consistency model applies to hazard mitigation planning as well. While the safety element may be the primary element with the strongest link to hazard mitigation, hazard mitigation planning should be fully integrated into all elements of the general plan and support safety element policies.

### 2.3.4 LOCAL HAZARD MITIGATION PLANNING

Local hazard mitigation planning and the SHMP are closely linked. LHMPs help to inform the SHMP by providing an assessment of the mitigation policies, programs, and capabilities of local jurisdictions, and the SHMP provides an important contextual overview to support local hazard mitigation planning. For detailed information regarding local hazard mitigation planning integration with the SHMP, see [Chapter 5: California Local Hazard Mitigation Planning](#).

### 2.3.5 SHMP INTEGRATION WITH EMERGENCY MANAGEMENT

The update process recognized that 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 that include:

- Minimizing deaths, injuries, and other negative disaster impacts on the public
- Reducing disaster losses to property, facilities, and infrastructure
- Minimizing negative impacts on the environment and economic condition of the state
- Assuring greater continuity of government operations, including continued delivery of services
- Creating conditions by which recovery can happen more quickly and be less costly
- Educating municipal and county governments regarding hazard mitigation options
- Enabling residents and businesses to recover more quickly, reducing the potential that they will leave the affected area and that the community's essential character will be permanently altered
- Raising civic awareness of the hazards and risks to increase preparedness
- Increasing the state's overall adaptive capability and resilience to disasters

The 2018 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 3: California's Mitigation Framework: Goals, Objectives, Strategies, and Priorities](#), and in the evaluation of hazards and mitigation progress in [Chapters 6 through 9](#) and the description of California's comprehensive mitigation program management in [Chapter 10](#).

#### Related Emergency Management Plans

The 2018 SHMP serves as a basis for developing and informing a variety of related operational emergency plans by providing a comprehensive assessment of vulnerabilities and risk from natural and human-caused hazards. The following is a partial list of examples of related current Cal OES plans and guidance documents referencing mitigation:

- Bay Area Earthquake Plan (2016)
- California Catastrophic Incident Base Plan: Concept of Operations (in collaboration with FEMA and U.S. Department of Homeland Security) (2008)
- California State Emergency Plan (2017)
- Cascadia Subduction Zone – Earthquake and Tsunami Response Plan (2013)
- Electric Power Disruption Toolkit (2012)
- Northern California Catastrophic Flood Response Plan (2018)
- Oroville Dam Failure Response Plan (pending approval in 2018)
- Safeguarding California: Implementation Action Plans Emergency Management Sector Plan (2016)
- Safeguarding California: 2018 Update (2018)
- Southern California Catastrophic Earthquake Response Plan (2010, update under development)

Various resources are available on the Cal OES website: [www.caloes.ca.gov](http://www.caloes.ca.gov).

The comprehensive hazard mitigation planning process captured in the 2018 SHMP provided an opportunity to integrate hazard mitigation into these other ongoing Cal OES and statewide planning documents and other state planning efforts, including OPR's 2017 update to the General Plan Guidelines.

### **Accreditation by the Emergency Management Accreditation Program**

The 2018 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.

In 2012, and again in 2017, California's emergency management program was granted full accreditation by the Emergency Management Accreditation Program (EMAP) and formal notification was sent from EMAP to the Governor. 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: <https://www.emap.org/>.

### **2.3.6 STATE OF CALIFORNIA EMERGENCY PLAN**

As previously mentioned in [Section 2.1, Cal OES SHMP Coordination Role](#), the foundation for state agency coordination of hazard mitigation is Governor's Executive Order W-9-91. The State Emergency Plan (SEP) was developed to implement Executive Order W-9-91 and describes how response to natural or human-caused emergencies occurs in California.

California Government Code Section 8569 requires the Governor to coordinate the SEP and any programs necessary to mitigate the effects of an emergency. Executive Order W-9-91 requires the Director of Cal OES to prepare the SEP and submit to the Governor's office for approval. Cal OES is responsible for a broad set of responsibilities addressing all aspects of emergency management, including hazard mitigation and homeland security concerns.

Cal OES has two directorates, one that handles emergency planning, preparedness, and prevention and another that addresses response and recovery. The Response Division, within the Response and Recovery Directorate, includes law enforcement, homeland security, and the State Threat Assessment Center. The Planning, Preparedness, and Prevention Directorate is responsible for updating the SEP and working with stakeholders to coordinate the California emergency support function (CA-ESF) activities.

Cal OES coordinates activities of all state agencies during the preparedness and implementation of the SEP and for response and recovery activities. Administrative orders are agreements between Cal OES and other state agencies or departments that detail activities for each department related to mitigation, preparedness, response, and recovery activities. Periodic updates to administrative orders are coordinated by Cal OES staff. Standard hazard mitigation provisions in the standing administrative order included the following:

- Identify, document, and, when practical, implement those activities that potentially could reduce or lessen the impact of an emergency
- Establish hazard mitigation as an integral element in operations and program delivery, as appropriate
- During a presidential declaration of a major disaster, participate in the hazard mitigation planning process

### **State of California Emergency Plan Linkage with the SHMP**

The SHMP is an important supporting document to the SEP. The SEP 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 linked. Section 8 of the SEP identifies mitigation programs as one of the four emergency management phases and Section 8.1 references the role of the SHMP in describing and mitigating hazards, risks, and vulnerabilities, thereby reducing disaster losses. The SEP describes the hazards, risks, and

vulnerabilities giving rise to emergencies in California. However, it formally acknowledges the SHMP as the overriding comprehensive hazard analysis document that it relies upon for detailed hazard, risk, and vulnerability analysis, and other hazard mitigation-related information and programs.

Further, 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. 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.

### Key State of California Emergency Plan Provisions

Essential elements of the SEP include:

- A description of what response and recovery activities 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 establishes the CA-ESFs as a key component of California's system for all-hazards emergency management. Cal OES initiated the development of the CA-ESFs in cooperation with California's emergency management community including federal, state, tribal, and local governments, public/private partners, and other stakeholders to ensure effective collaboration during all phases of emergency management. The development of the CA-ESFs involves organization of the participating stakeholders and gradual development of emergency function components. (For a complete list of CA-ESFs, see *Section 1.7* of [Annex 1](#).)

The CA-ESFs develop functional annexes that follow an established format to describe discipline-specific goals, objectives, operational concepts, capabilities, organizational structures, and related policies and procedures. The functional annexes are developed separately from the basic plan and make reference to existing agency and department plans and procedures. Subsequent supporting plans and procedures that are developed in support of the SEP, such as mutual aid plans, the SHMP, other hazard-specific plans, catastrophic plans, and related procedures, are incorporated by reference and maintained separate from the SEP.

An updated SEP was released in October 2017. To download the SEP from the Cal OES web page, visit: <http://www.caloes.ca.gov/cal-oes-divisions/planning-preparedness/state-of-california-emergency-plan-emergency-support-functions>.

### 2.3.7 MITIGATION EFFORTS AND DISASTER RECOVERY

As discussed in the SEP, the relationship of mitigation and recovery is often evidenced by mitigation activities that are integrated into post-disaster recovery efforts. Pre-disaster mitigation efforts are also significant to post-disaster recovery efforts. Since effective mitigation reduces vulnerability and increases loss avoidance, well-planned mitigation measures have the potential to influence the severity of a disaster and the required efforts to recover from a disaster. Further, the required recovery efforts of agencies, jurisdictions, and the private sector can be influenced and lessened as a result of effective mitigation.

Especially important to the recovery process are volunteers and volunteer organizations. These organizations often fill important gaps in recovery services provided by federal, state, and local response and recovery agencies. California Voluntary Organizations Active in Disaster (VOADs) help to facilitate essential coordination, collaboration,

and communication among private sector organizations during disaster events. The California State VOAD is comprised of two regional VOADs as well as many local VOADs. California’s NorCal and SoCal VOADs each strive to include all non-profit organizations, government agencies, and for-profit companies that provide or coordinate disaster-related services in its service area. VOADs enable their members to share information and coordinate the deployment of resources to improve outcomes for people affected by disasters. Effective mitigation can help to ease the burden on agencies, jurisdictions, and VOADs during disaster events.

### 2.3.8 THE NATIONAL PREPAREDNESS SYSTEM

A national initiative to integrate various prior and ongoing emergency management statutory and administrative directions from Congress and the President is embodied in Presidential Policy Directive 8: National Preparedness (PPD-8) which was released in March 2011. Its goal is to strengthen the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the nation. PPD-8 defines five mission areas—Prevention, Protection, Mitigation, Response, and Recovery—enhancing national preparedness. The National Preparedness System is an amalgamation of various guidance, programs, processes, and systems for the whole community to build fundamental capabilities that help achieve the PPD-8 goal of a “secure and resilient Nation.” The five frameworks included in the National Preparedness System are the National Prevention Framework, the National Protection Framework, the National Mitigation Framework, the National Response Framework, and the National Disaster Recovery Framework.

#### National Mitigation Framework

The National Mitigation Framework builds on the National Preparedness Goal. The National Mitigation Framework sets the strategy and doctrine for building, sustaining, and delivering the core capabilities for mitigation identified in the National Preparedness Goal. This framework considers the full spectrum of threats and hazards, including those that are natural, technological/accidental, and adversarial/human-caused.

The mission areas for the National Mitigation Framework are consistent with those of Threat and Hazard Identification and Risk Assessment (THIRA): prevention, protection, mitigation, response, and recovery. The framework provides the following definitions of the mission areas:

- **Prevention:** The capabilities necessary to avoid, prevent, or stop a threatened or actual act of terrorism. As defined by PPD-8, the term “prevention” refers to preventing imminent threats.
- **Protection:** The capabilities necessary to secure the homeland against acts of terrorism and man-made or natural disasters.
- **Mitigation:** The capabilities necessary to reduce loss of life and property by lessening the impact of disasters.
- **Response:** The capabilities necessary to save lives, protect property and the environment, and meet basic human needs after an incident has occurred.
- **Recovery:** The capabilities necessary to assist communities affected by an incident to recover effectively.

This framework establishes a common platform and forum for coordinating and addressing how the nation manages risk through mitigation capabilities. It describes mitigation roles across the whole community.

The National Mitigation Framework is available on FEMA’s website: <https://www.fema.gov/national-mitigation-framework>.

#### Threat and Hazard Identification and Risk Assessment (THIRA)

The THIRA follows a four-step process, as described in Comprehensive Preparedness Guide (CPG) 201, Second Edition, available on FEMA’s website. The State of California THIRA relies on the mitigation analysis contained in the SHMP to complete THIRA Step 1: Identify the Threats and Hazards of Concern and Step 2: Give the Threats and Hazards Context. FEMA requires the State of California to submit its assessment annually through the Unified Reporting Tool (URT).

## 2.4 INTEGRATION WITH CLIMATE ADAPTATION EFFORTS

Addressing hazards requires viewing hazard mitigation solutions as long-term practices with the goal of reducing harm from hazards. These hazard mitigation actions are constantly evolving and are enhanced by the participation of all levels of government, non-profit organizations, and the public.

Climate adaptation actions as defined by the Intergovernmental Panel on Climate Change (IPCC) are adjustments in natural or human systems that respond to climatic conditions and moderate harm. Both hazard mitigation and climate adaptation actions ultimately move toward the same goal of long-term risk reduction. Integration of hazard mitigation and climate adaptation planning is particularly applicable to those natural hazards influenced by climate change, such as coastal flooding and sea-level rise, extreme heat, wildfire, and drought.

Climate considerations linked to hazard mitigation are also further discussed in [Chapter 4: Profiling California’s Setting, Section 4.3](#) and in the climate and weather-related hazard risk assessments in [Section 9.1](#).

### 2.4.1 CLIMATE CHANGE AND EMERGENCY MANAGEMENT

There is growing global recognition that experts in emergency management and experts in climate science and climate adaptation benefit from collaborative efforts to share approaches, information, goals, viewpoints, and insights.<sup>23</sup> In California, this collaborative work has begun, and the integration of climate impacts into emergency management efforts builds upon strengths and competencies in California’s emergency management agencies and departments. The 2007 SHMP was the first SHMP to address climate change, and the topic has been expanded upon in subsequent updates.

Hazard mitigation in the context of a changing climate can take many different forms, including but not limited to:

- Construction of green infrastructure and other protective structures to address sea-level rise
- Managed shoreline retreat
- Enhanced flood warning instrumentation
- Climate risk communication and education<sup>24</sup>
- Forest fire risk reduction through the removal of certain forest vegetation (or “fuels”)
- Defensible space clearance around homes and structures to reduce wildfire risk
- Study and management of pest populations and habitat, particularly in forested regions
- Building codes that require use of fire-resistant building materials in areas prone to wildfire risk
- Promotion of sound land use practices
- Urban forestry, urban greening, and cool pavements and roofs to mitigate the urban heat island effect
- Planned heat alerts and networks of neighborhood cooling centers to alleviate heat-related health impacts during extreme heat events
- Use of state-of-the-art materials in new infrastructure to optimize resilience in light of expected climate impacts
- Improving soil health to reduce erosion and flood risk and build resilience

Attention to the timing and spatial dimensions of hazard mitigation efforts is critical in the era of climate change. The following sections detail a variety of state efforts that serve to further the integration of disaster management and climate adaptation.

### 2.4.2 EMERGENCY MANAGEMENT STEPS IN SAFEGUARDING CALIFORNIA PLAN: 2018 UPDATE

As California’s overarching climate adaptation strategy document, the Safeguarding California Plan: 2018 Update identifies emergency management as a key sector-specific policy area due to potential climate change influences on

<sup>23</sup> See e.g. IPCC, 2012: Summary for Policymakers. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 1-19.

<sup>24</sup> Climate risk communication and education can help shape choices that reduce climate risks by reducing exposure and vulnerability.

hazards. Climate change is anticipated to increase and exacerbate hazards, including extreme heat events, sea-level rise, tsunamis, and flooding associated with atmospheric rivers, as well as slower onset changes like rising temperatures, which have additional impacts. The plan emphasizes the linkage of climate change associated risks with hazard mitigation planning and the need for ongoing efforts to incorporate climate change considerations in local hazard mitigation planning and resiliency strategies. The Safeguarding California Plan: 2018 Update makes four specific emergency management sector recommendations that link climate considerations to mitigation. Cal OES is a member of the state's Climate Action Team (CAT), which works to coordinate efforts to implement emissions reduction programs and the state's adaptation strategy. The approach and actions in the Safeguarding California documents are described in [Section 4.3.6.4](#).

### **2.4.3 ADAPTATION PLANNING GUIDE UPDATE AND SENATE BILL 246 CLIMATE CHANGE ADAPTATION**

In 2012, Cal OES and the California Natural Resources Agency (CNRA) worked with other stakeholders, with technical support by Cal Poly San Luis Obispo, to develop and release the California Adaptation Planning Guide (APG) to aid local jurisdictions in addressing projected climate change impacts. The APG provides guidance on local climate vulnerability assessment, strategy development, and prioritization. The strategies that emerge from use of the APG can be integrated into a variety of planning documents, including LHMPs.

In 2015, Governor Brown signed Senate Bill 246, which established the Integrated Climate Adaptation and Resiliency Program (ICARP) and required review and update of the APG within a year of each update of the Safeguarding California Plan. This action assures that the state and associated guidance like the APG will continue to reflect the most recent science and projections regarding climate impacts.

The ICARP is designed to develop a cohesive and coordinated response to the impacts of climate change across the state. The program has two components:

- A centralized source of information that provides the resources necessary to assist decision-makers at the state, regional, and local levels when planning for and implementing climate adaptation efforts in California. The clearinghouse is an evolving resource that OPR is updating as new resources and information become available. OPR is collaborating with state agency partners, local and regional governments, and communities across the state to provide relevant and timely resources that advance climate adaptation and resiliency efforts throughout the state.
- The Technical Advisory Council, which brings together local governments, practitioners, scientists, and community leaders to help coordinate activities that better prepare California for the impacts of a changing climate. (Technical Advisory Council members bring expertise in the intersection of climate change and the sector-based areas outlined in Senate Bill 246 [2015] Public Resources Code Section 71358(b).)

### **2.4.4 GENERAL PLAN GUIDELINES SUPPORTING CLIMATE ADAPTATION**

Responding to the threat of climate change, the state has enacted legislation, regulations, and executive orders that put California on the course to achieve robust greenhouse gas reductions while addressing the impacts of a changing climate. General plan updates are now required to address climate adaptation, and statute calls for the use of feasible methods to avoid or minimize climate change impacts associated with new uses of land.

The 2017 General Plan Guidelines update was the first since 2003 and integrates climate adaptation and hazards management through not only the safety element, but throughout the remaining elements of the mandated local government general plan. California communities need to respond to climate change both through policies that promote adaptation and resilience and by significantly reducing greenhouse gas emissions. To this end, the 2017 General Plan Guidelines climate change chapter summarizes how a general plan or climate action plan can be consistent with California Environmental Quality Act (CEQA) Guidelines Section 15183.5(b) (Plans for the Reduction of Greenhouse Gas Emissions). This chapter can also be used to update older plans so they comply with the criteria in Section 15183.5(b) and associated CEQA streamlining opportunities.

The General Plan Guidelines include two general plan preparation directives, the first of which is preparation of seven required general plan elements. The second directive requires the inclusion of content on climate change and environmental justice within the general plan. This information can take the form of a stand-alone element or can be integrated into other general plan elements. Each jurisdiction may determine which form is most appropriate to local needs.

The recent introduction of climate risk to the discussion in the safety element (see discussion of Senate Bill 379 below) adds a focus on longer-term preparation and adaptation by each community to address a changing climate, which also supports and links to other hazard mitigation efforts by the state. The General Plan Guidelines provide a description of the requirements for climate change adaptation that must be addressed in the safety element.

### **2.4.5 SENATE BILL 379 (2015) – LAND USE: GENERAL PLAN SAFETY ELEMENT**

Senate Bill 379 (2015) establishes a state-mandated climate adaptation requirement for the safety element of general plans and further strengthens the safety element’s hazard mitigation content by requiring that climate adaptation and resiliency strategies applicable to the jurisdiction be addressed in its next required general plan element update.

This legislation requires that local jurisdictions review and update their general plan safety elements to address climate change. As part of the required update, goals, objectives, and a vulnerability assessment identifying risks resulting from climate change impacts must be prepared. Preparation of climate change-related vulnerability assessments is a key step toward identifying specific mitigation efforts necessary for each jurisdiction to implement in order to address potential impacts from climate change. The legislation requirements are triggered by revision of a community’s LHMP (on or after January 2017) or, in the absence of an LHMP, the general plan safety element must be revised by January 2022.

The required safety element in a general plan includes assessment and measures focused on pre-disaster mitigation actions, which are a primary component of LHMP content. Inclusion of climate change concerns in a general plan safety element is a critical step toward integration of climate change into mitigating community risk to hazards exacerbated by climate change.

### **2.4.6 REGIONAL CLIMATE ADAPTATION COLLABORATIVES**

Regional collaboration efforts that support and align with state mitigation and adaptation goals continue to emerge across the state. Working at the regional scale enables local agencies to work together in designing and implementing projects that appropriately respond to landscape-level climate risks and impacts. Regional climate collaboratives also provide a critical platform for knowledge exchange and collaboration to achieve shared goals in a resource-constrained environment.

#### **Alliance of Regional Collaboratives for Climate Adaptation (ARCCA)**

The Alliance of Regional Collaboratives for Climate Adaptation (ARCCA), a coalition program of the Local Government Commission, is a network of leading regional collaboratives across California working to build resilience to climate change impacts in their own regions, as well as to support state efforts to advance adaptation research, policymaking, planning, funding, implementation, and monitoring and evaluation efforts. Collectively, ARCCA regional members encompass over 85 percent of the state’s population. ARCCA’s purpose is to support members’ collective and individual climate adaptation efforts by sharing information on best practices and strategies and facilitating collaborative campaigns and projects.

ARCCA’s efforts support stronger coordination and integration across sectors, jurisdictions, and all levels of government. Linkages to state mitigation actions are strengthened by ARCCA’s relationships with state agencies, including the Governor’s Office of Planning and Research (OPR) and the California Natural Resource Agency (CNRA). These collaborations are crucial for linking actions across biophysical areas where coordinated adaptation efforts

are necessary to be effective and to create partnerships that allow for better funding opportunities and efficient use of resources.

ARCCA's core activities are 1) increasing understanding of climate change risks and adaptation approaches, strategies, and best practices by conducting Learning Session webinars for adaptation practitioners, convening informational workshops, and developing educational materials to advance the state's discourse on adaptation policies and practices; 2) facilitating knowledge exchange and coordination across regions and with the state by convening member network meetings to discuss replicable and scalable adaptation strategies, partnering with key state agencies to ensure regional concerns are reflected in state guidance and programs, working with regional collaboratives to seek regional alignment with State goals and approaches, and conducting joint outreach campaigns with regional collaboratives to amplify ARCCA's voice and impact; and 3) advocating for a regional approach to adaptation that appropriately addresses landscape-level climate change impacts and maximizes impact with limited resources by supporting existing regional collaboratives across the state, providing guidance and technical assistance to emerging regional collaboratives, and engaging at a national level to encourage regional collaboration for climate change.

Local governments are mobilizing to create collaborative partnerships that address climate change at a local scale. ARCCA was developed in 2012 to help prepare California's urban centers for the potential impacts of climate change including extreme events such as flooding, heat waves, and sea-level rise. The Los Angeles Regional Collaborative for Climate Adaptation and Sustainability (LARC) and the San Diego Regional Climate Collaborative (SDRCC) are examples of localized efforts to create opportunities to share resources and leverage funding to implement climate adaptation planning. Current ARCCA membership includes the Capital Region Climate Readiness Collaborative (CRCRC), the Central Coast Climate Collaborative (4C), the LARC, the SDRCC, the Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP), and the North Coast Resource Partnership (NCRP).

These regional collaboratives provide local jurisdictions opportunities for partnering on analysis, implementation, and, in some cases, resources and can also provide collaborative support in identifying policies and coordinating on implementation of this policies. For more information on regional collaboratives, visit the ARCCA website: <http://arccacalifornia.org>.

### Examples of Regional Collaborative Efforts

The Los Angeles Regional Collaborative for Climate Adaptation and Sustainability (LARC) is comprised of local and regional decision-makers in the Los Angeles County region that seeks to bolster efforts addressing climate mitigation and adaptation. One of the first steps taken by the collaborative was development of a county-wide climate action plan titled "*A Greater L.A.: Climate Action Framework*."<sup>25</sup> The plan details a multi-year process to integrate regional and local efforts to ensure a resilient and vibrant future for the region. The LARC serves to connect the various jurisdictions and entities in its region to each other and assure they can learn from, support, and collaborate on the many efforts occurring in the region. For more information about the LARC, visit <http://www.laregionalcollaborative.com/>.

The Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP) was formed in 2014 by the Sierra Business Council. It is a public/private, cross-sector partnership in the Sierra Nevada. Sierra CAMP's primary objectives are to educate and engage Sierra stakeholders on climate policy, convene Sierra stakeholders to discuss and vet policy issues, develop and strengthen connections with urban downstream users of Sierra ecosystem services to build a stronger collective voice for investment in Sierra resources, and catalyze on-the-ground climate demonstration projects in the region. Sierra CAMP connects partners throughout the large region by hosting webinars, publishing reports, convening meetings within the region and with urban partners, and supporting member climate initiatives. For more information about Sierra CAMP, visit <http://www.sbcsierracamp.org/>.

<sup>25</sup> Los Angeles Regional Collaborative for Climate Action and Sustainability. *A Greater L.A.: Climate Action Framework*. 2016. Retrieved on December 3, 2017 from <http://climateaction.la>.

The Capital Region Climate Readiness Collaborative (CRCRC) encompasses the greater six-county Sacramento region and has a broad regional membership base representing the public sector, private sector, non-profit organizations, community-based organizations, and academic institutions. The CRCRC has demonstrated success in helping members secure grant funding for adaptation efforts, facilitating coordination and knowledge exchange between members, and convening Quarterly Adaptation Exchanges to highlight new, regionally relevant research, tools, and strategies. The CRCRC also works to engage a variety of sectors and stakeholder groups including elected officials, small businesses, community-based organizations, public health advocates, and more. Following the near-disaster at Oroville Dam, the CRCRC developed a white paper on green infrastructure solutions in partnership with Sierra CAMP. Additionally, the CRCRC will be working across its six-county region to develop a regional heat pollution reduction plan to identify opportunities to mitigate the urban heat island effect in the transportation sector with funding from Caltrans' Senate Bill 1 Adaptation Planning Grant program. For more information about CRCRC, visit <http://climatereadiness.info/>.

The San Diego Regional Climate Collaborative (SDRCC) is a network for public agencies that serves the San Diego region to share expertise, leverage resources, and advance comprehensive solutions to facilitate climate change planning. Through funding from the National Oceanic and Atmospheric Administration (NOAA), the SDRCC launched the Resilient Coastlines Project for Greater San Diego to support local jurisdictions with planning for coastal flooding and extreme coastal storms. Additionally, the SDRCC is working to develop partnerships between stormwater managers, watershed managers, land use planners, and public works professionals to advance climate-smart stormwater projects as a resilience and community improvement strategy. The collaborative regularly hosts network meetings to facilitate knowledge exchange and collaboration, as well as trainings to build capacity and expertise of public agency staff. For more information about the SDRCC, visit <https://www.sdclimatecollaborative.org/>.

The North Coast Resource Partnership (NCRP), which has been in existence since 2004, is an innovative, stakeholder-driven collaboration among local government, Tribes, watershed groups, and interested partners in the North Coast region. The region comprises seven counties, tribal lands, major watersheds, and a planning area of 19,390 square miles – representing 12 percent of California's landscape. The NCRP integrates long-term planning and high-quality project implementation in an adaptive management framework, fostering coordination and communication among the region's diverse interests. The NCRP manages the North Coast Integrated Water Management Plan and has provided grants to over 100 implementation projects. For more information about the NCRP, visit: <http://www.northcoastresourcepartnership.org/>.

The Central Coast Climate Collaborative (4C), which emerged with support from ARCCA (in the form of ongoing guidance and technical assistance) fosters a network of local and regional community leaders throughout six Central Coast counties to address climate change mitigation and adaptation. The collaborative involved representatives from local and regional government, business and agriculture, academia, and diverse community groups to share information and best practices, leverage efforts and resources, and identify critical issues and needs. In 2017 and 2018, 4C received a technical assistance grant from FEMA and the U.S Environmental Protection Agency (EPA) and helped to co-develop a robust framework to guide local and regional agencies in engaging stakeholders, identifying hazards and assets, developing strategies, taking action, and evaluating progress. This workbook was co-developed by FEMA, the EPA, OPR, the Metropolitan Transportation Commission/Association of Bay Area Governments, the City of Mount Shasta, 4C, and BluePoint Planning. For more information about 4C, visit: <http://www.centralcoastclimate.org/>.

ARCCA is also working with stakeholders in the San Francisco Bay Area to support the formation of a new local government-focused collaborative and will be launching a process to form a collaborative in the Inland Empire in mid- to late-2018.

In 2009, Sonoma County, nine cities, and multiple agencies formed the Regional Climate Protection Authority (RCPA). RCPA coordinates climate protection, resilience, and hazard mitigation efforts across the region and led development of the regional climate action plan, Climate Action 2020 and Beyond. For more information about RCPA, visit: <http://rcpa.ca.gov/>.

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## 2.5 SHMP REVIEW, EVALUATION, AND IMPLEMENTATION

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

### 2.5.1 CAL OES SHMP MONITORING AND EVALUATION RESPONSIBILITIES

Cal OES’s Hazard Mitigation Planning Division (within the Planning, Preparedness, and Prevention Directorate) monitors implementation of hazard mitigation and progress made toward SHMP goals and objectives, including FEMA approval of Local Hazard Mitigation Plans (LHMPs), advances in hazards knowledge among other state agencies, changes in federal and state legislation, and performance of mitigation projects during hazard events. Other Cal OES Directorates and SHMT stakeholders are responsible for providing updates to the Cal OES Hazard Mitigation Planning Division on mitigation progress that has occurred on natural and/or man-made hazards throughout the state so that it can be captured in the SHMP.

Cal OES also administers the Hazard Mitigation Grant Program (HMGP) and, the Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) programs, through two separate divisions. Additionally, Cal OES shares information on mitigation actions and tracks specific events such as new federally declared disasters.

The primary responsibilities of Cal OES in tracking the implementation of the SHMP are to:

1. Provide ample opportunity for stakeholder involvement in the progress monitoring of the SHMP
2. Work with stakeholders and FEMA annually to ensure that the SHMP continues to meet the required elements of the FEMA State Mitigation Plan Review Guide
3. Coordinate the continued development of the SHMP, including collaboration with the State Hazard Mitigation Team (SHMT), strategic working groups, and other stakeholders
4. Provide outreach and technical assistance, and educate local jurisdictions regarding the SHMP and the development and implementation of local plans
5. Administer FEMA hazard mitigation grant programs, including HMGP, PDM, and FMA

### 2.5.2 SHMP IMPLEMENTATION AND MAINTENANCE PLAN

#### Method for Keeping the Plan Current

The SHMP Planning Team has developed a draft SHMP Implementation and Maintenance Plan (IMP) to support and document the state’s ongoing mitigation efforts. The draft IMP presents a list of the tracking and maintenance actions that should be undertaken by the SHMP Planning Team (and to a lesser degree by the SHMT) in each of the five years between SHMP approval by FEMA and the subsequent update.

While the Cal OES Hazard Mitigation Planning Division has the primary responsibility to update and maintain the SHMP, these efforts are not possible without the collaborative partnership with numerous stakeholders from local, regional, tribal, state, and federal government agencies; public and private sector organizations; and the residents of California.

Like the SHMP itself, the IMP is also considered a “living document” that will be revised and refined over time to increase its effectiveness in guiding SHMP implementation and maintenance tracking efforts. The SHMP Planning Team continues to further develop tasks set forth in the initial draft IMP document. Lessons learned from the 2018 SHMP update will be reviewed following approval of the 2018 SHMP and incorporated into the IMP.

The IMP is structured to first present an overview five-year implementation schedule. The overview schedule is then followed by detailed discussions of annual tasks that will occur as part of the implementation and maintenance process for each year. Some tasks, such as tracking new climate change policies and supporting adaptation efforts,

are considered “ongoing” and are anticipated to occur each year. Other tasks, such as GIS TAWC meetings to address updates to MyPlan or MyHazards, may only occur in some years.

### **System for Monitoring Implementation**

Activities that support monitoring the SHMP include, but are not limited to, the submittal of periodic reports by agencies involved in implementing projects or actions; and site visits, phone calls, emails, and meetings conducted by Cal OES or other state agencies.

During the development process of the IMP, it was determined that the task of monitoring SHMP implementation can be strengthened. The IMP lays out the maintenance and tracking tasks that should be done on an annual basis for each of the five years between the SHMP update approvals.

### **Planning Team Priorities**

The SHMP Planning Team is developing a list of priority actions to undertake one year, two years, three years, and four years following the 2018 SHMP approval. Priorities for the 2018-to-2023 period include improving documentation and processes for updating data included in the SHMP in order to make the update process for future SHMPs more efficient.

## **2.5.3 AGENCIES AND STAKEHOLDERS RESPONSIBLE FOR IMPLEMENTATION**

As part of the SHMP, the SHMP Planning Team continually uses and updates a State Agency Responsibility Matrix that identifies all relevant state agencies, the agencies’ functions, and relevant legislation that contributes to each agency’s responsibilities. This matrix can be used as a tool to assess agencies’ capacity to support implementation of SHMP goals and objectives. The matrix also links actions to the strategies, goals, and objectives of the SHMP.

The majority of the state agencies listed in the matrix are also participating members of the SHMT, which is an important venue for communication and integration of mitigation actions. The matrix serves as a guide for comprehensive ongoing maintenance of the SHMT roster. The State Agency Responsibility Matrix is included in [Appendix B](#) of the 2018 SHMP.

## **2.5.4 REVIEWING PROGRESS ON ACHIEVING MITIGATION GOALS**

### **Agency Progress Tracking**

Because California is a large and complex state, much of mitigation progress tracking on specific hazards is done by individual operating state agencies and departments as they track their major plans and successes. An example of a state agency tracking progress is CAL FIRE’s Land Use Planning Program which maintains a list of all local jurisdictions that have complied with the requirements of Senate Bill 1241 (2012), which addresses local hazard mitigation planning in State Responsibility Areas and Very High Fire Hazard Severity Zones. For more information about the CAL FIRE program, see [Chapter 3, Section 3.9](#), and [Chapter 8, Section 8.1.5.1](#).

### **Strategy Progress Updates and Hazard Mitigation Progress Summaries**

During each SHMP five-year update, the SHMP Planning Team, with input from the SHMT, reviews the SHMP strategies and updates the summary of progress for each strategy included in [Chapter 3: California’s Mitigation Framework](#). The 2018 SHMP update also includes a series of text boxes summarizing specific project implementation progress since adoption of the 2013 SHMP, as well as highlighting best practices. During the SHMP update process each progress summary is reviewed for updates and new hazard mitigation progress summaries are added. This update process provides an opportunity to evaluate progress. (For a list of progress summaries and best practices highlight features, see the indexes following the *Table of Contents*.)

### **Updates to Multi-Agency Mitigation Action Matrix**

During each SHMP update, the SHMP Planning Team systemically reviews the ongoing and new hazard mitigation progress summaries and updates a Multi-Agency Mitigation Action Matrix that lists specific agency programs and their linkage to SHMP goals, objectives, and strategies. This matrix serves as a tracking tool, organizing specific activities under mitigation action categories. See [Appendix C](#).

### **Proposed Annual Tracking under Five-Year SHMP Approval Cycle 2018-2023**

Annually, in the first quarter of the fiscal year (July-September), the SHMP Planning Team will hold a meeting of the SHMT to conduct a goals review that considers whether each goal is being addressed. The review will consider whether progress is being made, and if not, which goals and objectives may need further review and possible revision, or whether additional goals should be added. While large revisions to goals will be made annually, the objectives may be assessed and updated annually. Out of these general comments from the overall SHMT, the Goals and Objectives Strategic Working Group will revise or adjust the SHMP objectives.