



***Cal* OES**

GOVERNOR'S OFFICE  
OF EMERGENCY SERVICES

**Part 6—Enhanced  
State Plan  
Requirements**

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**CALIFORNIA  
STATE HAZARD  
MITIGATION PLAN**

**Volume 1**

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# Part 6—Enhanced State Plan Requirements





**Standard 4.2.4: The Emergency Management Program, consistent with the scope of the mitigation program does the following:**

- **Identifies ongoing mitigation opportunities and tracks repetitive loss**
- **Provides technical assistance in implementing mitigation codes and ordinances**
- **Participates in jurisdictional and multi-jurisdictional mitigation efforts**



California's status as an Enhanced Hazard Mitigation Plan state, as described in the chapters within Part 6 of this SHMP, lends itself to robust interagency coordination and aggressive risk reduction efforts. The State's capabilities include an active NFIP program and widespread community participation in the CRS program to aid in tracking repetitive loss and identifying opportunities for further minimization of the risk. The State's capabilities and efforts aimed at reducing vulnerability and building resilience are described throughout the 2023 State Hazard Mitigation Plan.

## 49. WHAT IS AN ENHANCED STATE HAZARD MITIGATION PLAN?



**E1 – 44 CFR Section 201.5(b): Does the Enhanced Plan include all elements of the Standard state mitigation plan?**

The 2023 SHMP meets all the elements of a Standard state hazard mitigation plan, per FEMA Region 9's review.

A Federal Emergency Management Agency (FEMA)-approved Enhanced state hazard mitigation plan demonstrates a state's sustained, proven commitment to hazard mitigation. An Enhanced Plan recognizes current and ongoing proactive efforts in implementing a comprehensive mitigation program. Enhanced status acknowledges the coordinated effort the state is taking to reduce losses from natural hazards, protect life and property, and create safer and more resilient communities. Approval of an Enhanced state hazard mitigation plan results in eligibility for increased funding under the Hazard Mitigation Grant Program (HMGP).

An Enhanced Plan must meet the Standard state hazard mitigation plan minimum requirements outlined in 44 CFR 201.4 and demonstrate a comprehensive and coordinated mitigation program statewide. California's Enhanced State Hazard Mitigation Plan (Enhanced Plan) showcases the integration of State hazard mitigation efforts into other State, regional, and FEMA initiatives to build resilience and protect life, property, the environment, and community lifelines. Examples of this integration with other hazard mitigation and resilience planning efforts may be found in Chapter 51.

This part of the 2023 State Hazard Mitigation Plan (SHMP or Plan) documents California's day-to-day statewide mitigation and resilience activities that meet the requirements for an Enhanced designation, including the administrative requirements and coordination efforts. Additional information regarding Enhanced State capabilities is detailed in Chapter 46. The maintenance of the State's capabilities and its ongoing planning and implementation efforts are key elements of California's commitment to hazard mitigation.

## 49.1. PURPOSE OF ENHANCED STATE HAZARD MITIGATION PLANNING

To receive Enhanced status, a state must approach hazard mitigation and resilience from a comprehensive perspective. The SHMP serves as a consolidated repository to document operational functions that are required for the State to receive an Enhanced designation. An Enhanced SHMP documents statewide mitigation and resilience activities and efforts. States with Enhanced SHMP status receive an additional 5 percent in HMGP funds following disasters. This results in a combined 20 percent of the total estimated eligible Stafford Act assistance, rather than the 15 percent provided for states with Standard hazard mitigation plans. This funding is critical to carrying out hazard mitigation efforts and fulfilling the mission to protect people, the environment, property, and community lifelines. In 2021, California had an estimated \$485 million available in HMGP funding—\$24 million more than if the State did not have an Enhanced SHMP. Since 2018, California has been awarded \$1.6 billion in HMGP and HMGP-Post Fire funding, \$409 million more than if the State did not have an Enhanced SHMP.

## 49.2. REQUIREMENTS

In addition to meeting the requirements for a Standard Plan, 44 CFR 201.5 details the additional requirements that must be met for Enhanced Plans. States with Enhanced Plans must demonstrate that the responsibility for reducing risk is shared across state agencies and departments. Risk reduction efforts must be prioritized in state actions and efforts. States must demonstrate their commitment to mitigation by establishing their own funding sources and seeking resources and funding from entities in addition to FEMA. The state must also demonstrate that the capacity and capability exist to sustain these actions through the state and to support local governments in building resilience and implementing hazard mitigation efforts.

Additionally, the state must demonstrate that planning efforts are integrated across disciplines. The hazard mitigation plan should incorporate recommendations and data from the state's comprehensive, growth management, economic development, land development, and emergency management plans. In turn, these planning documents should integrate information and principles from the state hazard mitigation plan.

The state must demonstrate the ability to effectively manage and implement mitigation activities. This includes:

- Establishing eligibility criteria for reviewing grant applications
- Determining cost effectiveness
- Complying with grant program guidelines and timeframes
- Maintaining the capability to submit complete, accurate grant applications, including [benefit-cost analyses](#) and environmental and historic preservation (EHP) reviews
- Maintaining the capability to submit complete and accurate progress and financial reports

In addition to demonstrating that grant programs can be administered effectively, the state must show efforts that adequately support local jurisdictions in carrying out hazard mitigation planning initiatives and implementing mitigation actions. This may include establishing a technical assistance program consisting of workshops, training, and job aids, or providing state resources to meet a portion of the non-federal match for federal grant programs.

These factors together form a comprehensive hazard mitigation approach. By adopting a comprehensive approach, the state demonstrates that hazard mitigation is a fundamental priority for the state. Guided by this priority, the state's agencies and departments should promote and encourage risk reduction activities, such as adopting risk-reducing building codes, establishing metrics to measure the effectiveness of mitigation actions, developing resilience-supporting legislation and policies, and making risk-informed decisions about development and growth.

### 49.3. THE ENHANCED STATE PLAN FOR CALIFORNIA

The California Governor's Office of Emergency Services (Cal OES) develops and maintains the SHMP, which describes mitigation efforts within Cal OES's purview and those of partners across the State. The Plan's development process demonstrates the comprehensive and multi-disciplinary nature of the State's hazard mitigation efforts by engaging more than 150 partners throughout California. This engagement results in active participation by State, federal, local, and non-governmental partners, which allows for more effective implementation of mitigation actions and Enhanced resilience benefits for California communities.

The SHMP demonstrates California's commitment to long-term risk reduction and increased resilience by showing the collaboration and coordination among government and non-governmental partners, as well as the State's skilled administration of federal and State mitigation programs. As hazard risks to California's people, property, and environment evolve over time, the State actively works to build its capacity, capabilities, and resources to increase resilience across the State. The following sections detail these efforts to expand beyond the minimum required hazard mitigation initiatives, and additional efforts to prioritize climate resilience and equity throughout the State's mitigation activities.

# 50. GRANT MANAGEMENT PERFORMANCE

This chapter details Cal OES's grant management process for the Hazard Mitigation Assistance (HMA) programs in accordance with the Enhanced Plan requirements. It further outlines Cal OES's process for ensuring compliance with State and federal statutes and programmatic guidance. Cal OES meets all Enhanced Plan requirements for program administration, including adherence to time frames, collaboration, environmental reviews, [benefit-cost analysis](#) (BCA), reporting, and closeouts.

## 50.1. HMA APPLICATION TIME FRAMES



**E2 – 44 CFR Section 201.5(b)(2)(iii)(A): Regarding Hazard Mitigation Assistance (HMA), is the state maintaining the capability to meet application time frames and submitting complete project applications?**  
Cal OES actively submits completed subapplications within application submission deadlines and requests time extensions as needed ahead of deadlines, as noted in Section 50.1

Application timelines for FEMA and State funding depend on when the funding is announced or becomes available. California receives [HMA](#) funding through the [HMGP](#) following a presidentially declared major disaster. Thus, the timeline for this program is consequently unpredictable and not tied to annual cycles. Other programs within the HMA portfolio, including [Building Resilient Infrastructure and Communities](#) (BRIC) and Flood Mitigation Assistance (FMA), are available annually as determined by FEMA, and funding amounts vary.

This section describes timelines for federal HMA programs. State mitigation program timelines and funding amounts are dependent on legislation. The continuation or update of these programs is dependent on further legislative action.



Cal OES develops timelines for FEMA funding opportunities based on several factors, starting with the application due dates set by the funding agency. The timeline for each funding cycle accounts for sub-application development and review. Major milestones include release of a notice of funding opportunity (NOFO), the submission of notices of interest, sub-application submission, preparation of the overall application package, and submission of the application by Cal OES—as the applicant—to FEMA.

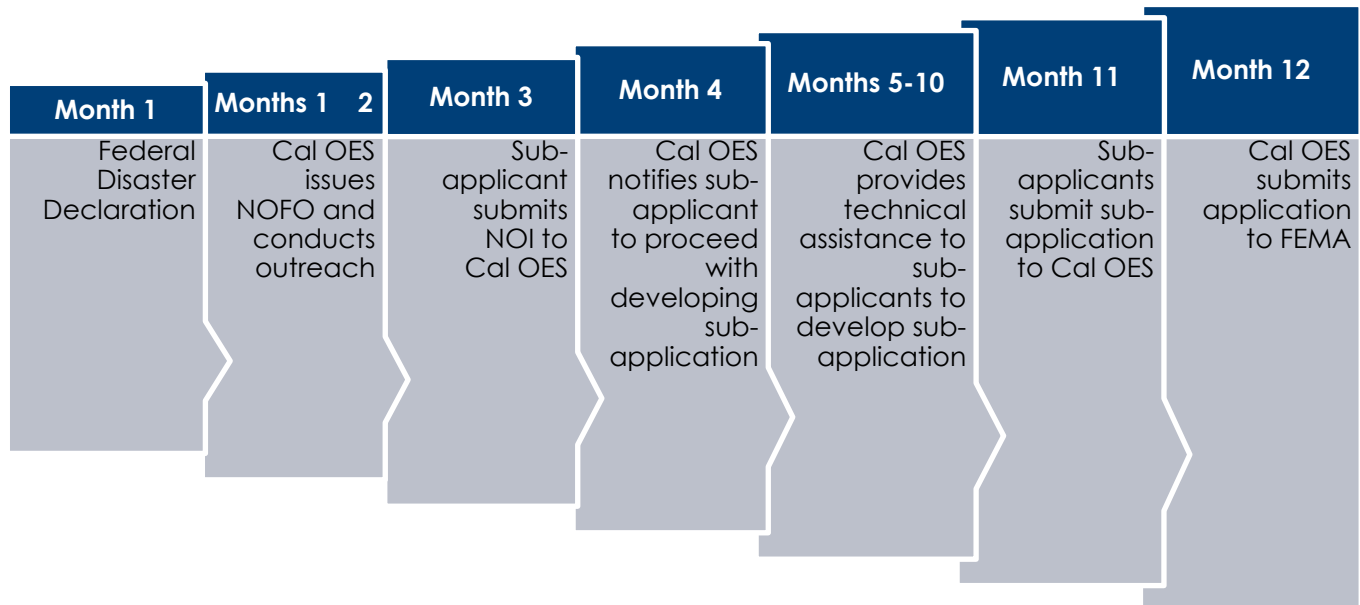
### What is a Sub-Application?

Some federal grant programs limit direct applications for funding to states, territories, and federally recognized Tribal Nations. Funds for such programs may be available to other entities, such as local governments or non-profit organizations, through a sub-application. In such cases, the sub-applicant applies to the state, territory, or Tribal Nation for a portion of the federal funding available, and the state, territory, or Tribal Nation applies for and receives the federal funds to be distributed to the sub-applicant.

#### 50.1.1. HMGP Funding

Figure 50-1 shows the general timeline for HMGP funding. The HMGP application period officially opens on the date of a Presidential Disaster Declaration. At that stage, Cal OES—as the applicant—begins to develop a NOFO to announce the State's timeline and priorities. Cal OES must submit an application to FEMA within one year of the declaration date, with the possibility of two 90-day time extensions.

Cal OES's notice of interest ([NOI](#)) submission deadline for sub-applicants is set to allow for program outreach to inform eligible jurisdictions of the NOFO and provide support for NOI submission. An approved NOI secures an eligible sub-applicant an invitation to submit a sub-application. After sub-applications are submitted, Cal OES reviews the sub-applications and works closely with sub-applicants through a robust technical assistance and request for information (RFI) process to prepare sub-applications for submission to FEMA. Cal OES then prepares the application package and submits full and complete sub-applications to FEMA by FEMA's stated deadline.

**Figure 50-1. HMGP Funding Timeline**

### 50.1.2. HMGP Post Fire Funding

The HMGP Post Fire application period opens at the start of the federal [fiscal year](#) (October 1), and the funding amount is determined by the number of [Fire Management Assistance Grants](#) (FMAGs) awarded in the State the previous fiscal year. The application must be submitted to FEMA by March 31 of the following year, with the possibility of two 90-day time extensions. Cal OES sets an NOI submission date typically two months after the end of the fiscal year, with a sub-application due date two months later. Cal OES then submits the application package to FEMA by the required deadline.

### 50.1.3. BRIC and FMA Funding

The BRIC program replaced the Pre-Disaster Mitigation program in 2020. FEMA's annual application period for both BRIC and FMA is in August with applications due in January. Just as with HMGP, Cal OES establishes a timeline to allow for outreach, technical assistance, NOI, and sub-application development. Historically, the NOI submission was six to eight weeks after FEMA's [NOFO](#), with another two to three months for sub-application support and review. Cal OES prepares and submits the application package to FEMA by the due date established in FEMA's NOFO.

### 50.1.4. New Programs

For new programs such as the Revolving Loan Fund, Legislative Pre-Disaster Mitigation, or any future programs, Cal OES follows a similar process to meet FEMA's submission deadline. The NOI submission is typically six to eight weeks after FEMA's NOFO, with another two to three months for sub-application support and review.

## 50.2. CAL OES OUTREACH AND TECHNICAL ASSISTANCE

Once a NOFO is released by FEMA or Cal OES, Cal OES publicizes the funding opportunity via several means, including the Cal OES website, email distribution, and direct outreach. Cal OES utilizes evolving technology and best practices for outreach to advance engagement processes to ensure maximum effectiveness of available communication modalities.

The State delivers technical assistance in the form of workshops, meetings, webinars, one-on-one meetings, and other means as appropriate to build capacity for State agencies, local governments, Tribal Nations, and other eligible entities to develop grant sub-applications. Topics include:

- Overview of the funding opportunity and general eligibility
- Program requirements (eligibility, feasibility, and cost-effectiveness)
- How to apply using the current tools or platforms
- Specific project eligibility
- Optimizing quantitative and qualitative scoring, for the nationally competitive programs

Cal OES strives to ensure that all sub-applicants receive sufficient technical support and resources to successfully apply for and compete for funding on the State and national stage.

## 50.3. HMA SUB-APPLICATIONS

The first stage of sub-application development is the submission of an NOI. Instructions are found on the Cal OES website. Cal OES accepts NOIs year-round to build a pipeline of projects and to provide ongoing guidance and technical assistance to potential sub-applicants. The NOI consists of a brief summary of the hazard, problem, proposed solution, and estimated cost and timeline for the project.

Interested entities complete the NOI and submit it to Cal OES via the prescribed method—currently the Engage Cal OES Portal. Cal OES reviews the NOIs before inviting entities to submit sub-applications. As deemed necessary, Cal OES will schedule a meeting with a sub-applicant at the time of NOI submission to clarify the proposed project or to aid in sub-application development. NOIs are approved or denied based on eligibility (Cal OES 2022j). Approval of NOIs is based on the eligibility of both sub-applicant and the proposed mitigation activities in accordance FEMA's HMA guidance.

Cal OES provides technical assistance to sub-applicants to support their drafting of eligible, feasible, and cost-effective proposals that align with FEMA's HMA guidance and State and local priorities. Project proposals must consist of independent and long-term mitigation solutions that will reduce risk to people, property, and the environment as their primary benefit. Additionally, Cal OES strongly encourages the submission of projects that achieve multiple benefits. Prior to submission to FEMA, Cal OES may issue a [RFI](#) to sub-applicants for clarification of project goals, feasibility, cost effectiveness, and environmental compliance. Incomplete or untimely responses to requests for information may render project proposals ineligible.

Sub-applications are submitted in Cal OES's application package via a variety of web-based platforms, depending on the HMA funding source:

- FEMA GO for BRIC and FMA
- e-Grants for Legislative Pre-Disaster Mitigation
- National Emergency Management Information System and Cal OES Engage Portal for HMGP and HMGP Post Fire

Upon submission of full and complete sub-applications, Cal OES prioritizes and selects sub-applications to submit to FEMA that align with the with the State's mitigation and resilience priorities. For each submitted sub-application, Cal OES completes and

submits a Minimum Criteria Checklist or equivalent document to FEMA. Sub-applications not selected may be retained by Cal OES for future consideration if funding becomes available.

FEMA reviews the submitted sub-applications for programmatic and [EHP](#) compliance prior to obligating funds. If FEMA identifies information that is missing or needs clarification, Cal OES collaborates with FEMA and the sub-applicant to obtain and provide necessary documentation. Within 90 days of FEMA submission or selection for further review for non-disaster programs, Cal OES provides requested information to ensure the application is completed per FEMA's requirements.

To further facilitate collaboration, Cal OES supplies FEMA with an organizational chart and a listing of Cal OES staff assigned to each sub-application and sub-award. Cal OES maintains a regularly checked email inbox for general correspondence and continuity for FEMA, other partners, sub-applicants, and sub-recipients.

## 50.4. ENVIRONMENTAL REVIEWS AND BENEFIT-COST ANALYSES



**E3 – 44 CFR Section 201.5(b)(2)(iii)(B): Regarding HMA, is the state maintaining the capability to prepare and submit accurate environmental reviews and benefit-cost analyses?**

Section 50.4 outlines Cal OES' ability to complete environmental reviews and benefit-cost analyses that align with FEMA requirements.

The [EHP](#) review and [BCA](#) are required critical components of the sub-application to ensure that projects do not have adverse environmental or cultural impacts and are cost-effective. To ensure that the State maintains capability to aid sub-applicants and effectively review the EHP and BCA components, Cal OES Hazard Mitigation Grant Specialists complete training for EHP and BCA through the Emergency Management Institute and other resources. If funding eligibility and sub-application workload exceed Cal OES's capability to provide technical assistance for BCA or EHP compliance, Cal OES may surge staff through contract mechanisms.

Cal OES requires sub-applicants to submit FEMA's EHP checklist with every sub-application. Cal OES provides one-on-one assistance, as necessary, to discuss eligibility, feasibility, and cost-effectiveness with a validated and well-documented BCA. If FEMA identifies deficiencies in EHP or BCA information, Cal OES collaborates

with FEMA and the sub-applicant to obtain necessary documentation within deadlines set by FEMA.

## 50.5. QUARTERLY REPORTING



**E4 – 44 CFR Section 201.5(b)(2)(iii)(C): Regarding HMA, is the state maintaining the capability to submit complete and accurate quarterly progress and financial reports on time?**

Section 50.5 outlines Cal OES quarterly report duties.

Cal OES monitors all sub-awards to reduce the risk of non-compliance and audit findings. Every three months, sub-applicants and Cal OES complete quarterly reporting to provide the status of programmatic and financial tasks, provide the current budget, and discuss any issues with the implementation or management of a project. Cal OES complies with Financial Management Standards described in 2 Code of Federal Regulations (CFR) 200.300 to 200.309 (Subpart D) by setting expectations for sub-recipients through webinars, sub-award kickoff meetings, and informal communications prior to and during grant award life cycles. Cal OES confirms compliance by conducting formal site visits, quarterly performance reviews, quarterly financial reviews, and detailed sub-award closeout. Cal OES continuously refines and improves these processes based on lessons learned and best-practices.

Cal OES Grant Specialists review sub-recipients' quarterly reports for accuracy, completeness, procurement compliance, and sub-award progress against the approved scope of work, schedule, and budget. All sub-award reports are compiled and conveyed to FEMA timely. The Federal Financial Report (form SF-425) is submitted on time to FEMA on a quarterly basis. Every quarter, and at closeout, Cal OES produces an accounting report for each award and submits it timely in e-Grants and FEMA GO, as required.

Additional financial monitoring may occur in instances where Cal OES provides a mechanism for non-federal entities to request advanced funds, provided the non-federal entity can manage and account for the advanced payments. Advances are limited to the minimum necessary and timed in accordance with actual, immediate cash requirements of the non-federal entity for the purpose of the award. The non-federal entity must request the advance from Cal OES, including a cost estimate and anticipated burn rate over the period.

## 50.6. PROJECT COMPLETION



**E5 – 44 CFR Section 201.5(b)(2)(iii)(D): Regarding HMA, is the state maintaining the capability to complete HMA projects within established performance periods, including financial reconciliation?**

Section 50.6 outlines project completion and closeout steps/paperwork that Cal OES works with subapplicants to complete within allowable timeframes to remain in compliance with HMA requirements.

In addition to coordinating with the sub-recipient on quarterly reports, Cal OES confirms project timelines with the sub-recipient about six months prior to the end of the sub-award period of performance. Cal OES's steps for project closeout prioritize completing and closing projects in a timely manner to remain in compliance with HMA requirements. Cal OES completes a review of actual expenditures to ensure documentation and consistency with Federal Financial Reporting forms SF-424A or SF-424C. All grant closeout activities, including financial reconciliation, are completed within 120 days from the end of the performance period as outlined in 2 CFR 200.344.

In order to ensure all FEMA requirements are met for sub-award closeout, Cal OES uses a check list including, but not limited to, the following:

- Final claim form
- Project accomplishments and results statement
- Project budget summary
- Sub-recipient management costs budget summary
- Inspection report
- Planned maintenance activities statement
- Project photographs/materials
- Final reimbursement requests

If the project requires additional time for completion, Cal OES coordinates with the subrecipient to request a period-of-performance extension. The request must explain why the project is delayed and provide a clear plan for project completion within the requested time extension.

After a thorough and layered review, a time extension or the sub-award closeout package is sent to FEMA in accordance with the HMA guidance.

# 51. INTEGRATED PLANNING



**E6 – 44 CFR Section 201.5(b)(1): Does the plan demonstrate integration (to the extent practicable) with other state and/or regional planning initiatives and FEMA mitigation programs and initiatives?**

Chapter 51 outlines all of the aspects of the plan that detail plan integration and alignment with other planning mechanisms and programs. These opportunities for alignment help ensure that California has a comprehensive statewide mitigation program.

Mitigation plan implementation is most effective when planning efforts are integrated and coordinated with other State and federal programs and initiatives. Under 44 CFR Section 201.5(b)(1), a state must detail how its hazard mitigation plan is specifically integrated into other State, regional, and FEMA initiatives. California's hazard mitigation efforts are more integrated in 2023 than any other time in its history. The integration of mitigation into other programs and progress on 2018 SHMP actions relating to collaborative planning are discussed further in Chapter 46: Capability Assessment, Part 5: Mitigation Strategy, and Appendix N: Plan Integration.

Chapter 1 presents the general legal, institutional, and policy framework that integrates mitigation practice in California. It also summarizes integration of the SHMP with other planning, emergency management, and climate adaptation efforts. Section 1.2.2 discusses coordination among agencies including sector specific coordination.

Chapters 2 and 3 examine the complex relationships involving California's disaster history, growth factors exacerbating hazards and risk, development trends, vulnerable populations, and new statewide [climate change mitigation](#) and [adaptation](#) planning initiatives.

Chapters 4 through 40 present multiple statewide, regional, and local hazard mitigation programs, strategies, and projects addressing specific natural, human-caused, and technological hazards. These chapters incorporate the data, knowledge, and findings from other planning efforts throughout the State. In addition, these



chapters include selected projects to highlight how mitigation principles have been put into action to reduce risk.

Chapter 44 discusses State mitigation goals and objectives. Mitigation actions are detailed in Chapter 47 and emphasize horizontal coordination between State agencies and the private sector, as well as vertical coordination among federal, State, and local agencies. Chapter 46 assesses the State's capabilities across multiple agencies to carry forward mitigation goals and objectives and implement mitigation actions.

The following sections address integration with other planning initiatives by providing information on multiple dimensions, including legislative, policy, State agency, and financial, and by offering examples of how these dimensions are being manifested in day-to-day action.

### SHMP Goals

Some of the discussions in this chapter refer by number to the goals established for this SHMP. The wording of these goals is provided below for quick reference.

- Goal 1—Significantly reduce risk to life, community lifelines, the environment, property, and infrastructure by planning and implementing whole-community risk reduction and resilience strategies.
- Goal 2—Build capacity and capabilities to increase disaster resilience among historically underserved populations, individuals with access and functional needs, and communities disproportionately impacted by disasters and climate change.
- Goal 3—Incorporate equity metrics, tools, and strategies into all mitigation planning, policy, funding, outreach, and implementation efforts.
- Goal 4—Apply the best available science and authoritative data to design, implement, and prioritize projects that enhance resilience to natural hazards and climate change impacts.
- Goal 5—Integrate mitigation principles into laws, regulations, policies, and guidance to support equitable outcomes to benefit the whole community.
- Goal 6—Significantly reduce barriers to timely, efficient, and effective hazard mitigation planning and action.

## 51.1. INTEGRATION WITH LEGISLATION AND POLICY

California's substantial body of work relating to hazards has grown over the past several decades. California has an extensive landscape of climate mitigation and adaptation policies that support the goals outlined in the SHMP and enhance the State's efforts to build resilience to future hazard events. California passed [Assembly Bill \(AB\) 32](#), the California Global Warming Solutions Act, in 2006. AB 32 required California to reduce greenhouse gas (GHG) emissions to 2000 levels by 2010, 1990 levels by 2020, and 80 percent of 1990 levels by 2050. The California Air Resources Board (CARB) was tasked with setting emission standards to reduce GHG emissions. This was the first program in the country to take a strong stance on climate change, demonstrating California's commitment to climate adaptation.

As one method to reduce GHG emissions, California used the revolutionary cap-and-trade program, in which GHG emissions are capped by the State and the cap decrease every year. Emitters can buy, sell, and trade their allotments. This program decreased GHG emissions and brought in revenue for the State. The funds are deposited in the Greenhouse Gas Reduction Fund. Funds are distributed to groups that advance environmental health, human health, economic health, and equity goals that are core to the SHMP. Through this program and fund, California is leading the way on climate adaptation policy and forwarding mitigation goals.

Multiple policies and regulations reduce California's reliance on fossil fuels and reduce GHG emissions. For example, an Executive Order (2022) affirmed a proposed rule by [CARB](#) to ban the sale of non-electric cars by 2035. AB 1020 (2022), named the "100% Clean Electric Grid Bill," states that California's energy consumption will be 90 percent green by 2035, and 100 percent green by 2045. Shifting to renewable sources of energy is critical for slowing climate change and mitigating the risks posed by climate change. Clean energy will contribute to creating a sustainable and resilient future.

AB 1320 (2020) tasked a collaborative of State agencies with writing the California Climate Change Assessment every 5 years. The project is led by the California Governor's Office of Planning and Research (OPR), with input from other State agencies, non-profits, and academia. The assessment will use state-of-the-art climate model predictions with California-specific data to predict local impacts of climate change. The Fifth Climate Change Assessment is being drafted and is expected to be completed in 2026. Understanding climate change and how to adapt at a fine spatial scale is important for understanding hazards in the State, so the assessment will be

used to inform SHMP updates and local hazard mitigation plans (LHMPs). It also aligns directly with Goal 4 of the SHMP, which aims to actively promote climate-focused programs, policies, projects, and initiatives.

California has passed proactive mitigation-related legislation since the 2018 SHMP. Senate Bill (SB) 1076 (2018) anticipates the possibility of electromagnetic and geomagnetic threats and hazards, one of the hazards addressed in the 2023 SHMP. AB 747 (2019) requires local jurisdictions to identify evacuation routes as part of their emergency planning. AB 3074 (2020) updates the residential wildfire defensible space requirements to establish “ember resistance zones.” AB 38 (2019) creates a pilot program to retrofit at-risk homes to proactively prepare against fires. Policies are being enacted in the executive branch as well. The Governor signed an Executive Order (2020) which set the goal of conserving at least 30 percent of the State’s land and waters by 2030 to combat issues of biodiversity and climate change. All of these policies advance the aim of the SHMP, to prepare for hazards and have tools available to combat them when they arise.

Examples of legislative and executive-level mitigation integration include State-local and public-private sector integration initiatives. Cross-sector collaborations are an important component of the SHMP and a valuable mitigation tool. One example of a State-local integration initiative is SB 52 (2021), which outlines new requirements for small water suppliers, county governments, the California Department of Water Resources (DWR) and the State Water Resources Control Board to implement more proactive drought planning to better prepare for future water shortage events or dry years. Another example is [SB 1425 \(2022\)](#), which requires every city and county to review and update its local open-space plan by January 1, 2026. These updates must include plans and an action program addressing specified issues, including climate resilience and other co-benefits of open space. SB 63 (2021) directs the Office of the State Fire Marshal (OSFM) and the California Department of Housing and Community Development (HCD) to propose building standards for high fire hazard severity zones and to consider, if appropriate, standards for moderate severity zones. The bill also directs the California Building Standards Commission (CBSC) to adopt these standards.

Cross-sector collaborations are a critical component of the SHMP, and address Goals 1, 5, and 6, which aim to promote collaborations with local, non-profit, private, and other groups and Tribal Nations.

## 51.2. INTEGRATION WITH GOVERNMENTAL GROUPS

Supporting integration of hazard mitigation efforts in California began in 1991 with [Governor's Executive Order W-9-91](#), which authorized the Cal OES Director to assign specific emergency support functions to State agencies through administrative orders. Federal, State, local, and non-governmental partners involved in the specific emergency support functions and recovery support functions have been incorporated into hazard mitigation planning, implementation, funding, and education efforts. This horizontal and vertical integration is an ongoing process in support of various 2023 SHMP Goals and Objectives. Goals 1, 4, and 5 specifically promote and encourage Plan integration across the State. These goals are further supported by objectives which call for cross-sector collaboration, data sharing, incorporation of climate change and equity considerations, and risk-informed policy and legislation.

As part of this ongoing process, California has increased State-level coordination through a modified stakeholder engagement process. For the 2018 SHMP, California utilized a State Hazard Mitigation Team consisting of horizontal and vertical stakeholder partners that met at least quarterly. For the 2023 SHMP, California adopted a Hazard and Working Group model. The Working Groups analyzed and counseled on overarching themes in the 2023 SHMP. The four Working Groups included: Goals and Objectives, Climate Impacts, Equity, and Geographic Information System (GIS) Technical Assistance. The Hazard Groups analyzed the hazard-specific content and provided recommendations for updates. These groups corresponded with the four hazard chapters in the 2018 SHMP: Seismic Hazards, Flood Hazards, Fire Hazards, and Other Hazards. Partners in these groups included stakeholders from federal, State, local, non-profit, private sector, academic, and Tribal Nations. For more information on the 2023 SHMP Planning Process, please refer to Section 1.2. For the roster of stakeholders involved in the Hazard and Working Groups, please refer to Appendix D.

### 51.2.1. Horizontal Integration

In addition to the SHMP planning process, various agency programs and actions bolster horizontal integration. Horizontal integration describes the coordinated efforts across State agencies and departments to bolster the State's hazard mitigation program. The bill also directs [CBSC](#) to adopt these standards. Coordination between State agencies on both planning and program implementation is critical to the ongoing success of California's Enhanced mitigation efforts.

California has undertaken a variety of multi-agency planning efforts since the 2018 SHMP that support the State's hazard mitigation goals. Cal OES has contributed to these efforts to ensure alignment with the SHMP. For example, in July 2022, OPR began the Fifth Climate Change Assessment, the Fourth Assessment having been completed in 2018-19. The Cal OES Hazard Mitigation Section and the Cal OES Science and Climate Advisor have consulted with OPR to determine what aspects and changes should be included in the Fifth Assessment and will continue to do so until the Assessment's approval. Cal OES and many other State agencies also contributed to [California's Extreme Heat Action Plan](#) to build resilience to extreme heat events. The Action Plan's goals include building public awareness and notification systems, strengthening community services and response, increasing resilience of the built environment, and utilizing nature-based solutions. All these goals are consistent with the SHMP's goals for building resilience. Information from the Action Plan was used in the development of the Extreme Heat chapter of this SHMP, and the common themes of public awareness and community response were used more broadly throughout the SHMP. The California Department of Transportation (Caltrans) has conducted statewide vulnerability assessments focusing on potential climate impacts and is working with Cal OES and other State partners to address identified stressors, including wildfire, flood, and seismic hazards.

Many of the project leads that developed these plans also participated in the SHMP Hazard and Working Groups during the 2023 SHMP update. Through this coordination, the State has ensured alignment between the various planning efforts. Many of the SHMP actions align with the goal of interagency collaboration and horizontal integration. For example, Action 2018-001 will support legislative efforts that formalize California's comprehensive mitigation program, and is a collaboration between Cal OES, the Delta Stewardship Council, California Department of Forestry and Fire Protection (CAL FIRE), OSFM, CARB, California Natural Resources Agency (CNRA), and OPR. Similarly, Actions 2018-010 and 2018-011 work with the California Strategic Growth Council (SGC), DWR, Cal OES, OPR, and CNRA to mitigate risks associated with climate change and maintain communication between organizations.

California has multiple agencies that are involved in mitigation planning and implementation. Cal OES hosts a monthly "State Partners" call with representatives of relevant State agencies to ensure the various planning and funding efforts are aligned. For example, through this regular coordination, Cal OES and HCD have successfully worked to leverage [Community Development Block Grant](#) (CDBG) funding to match some HMGP and Public Assistance (PA) projects for recently

impacted communities. Cal OES also coordinates regularly with OPR, which has a Cooperative Technical Partnership grant with FEMA. Through this collaboration, Cal OES and OPR have worked together to identify State funding opportunities that could be used to match federal mitigation investments in an effort to create a pipeline of shovel-ready mitigation funds. Through this partnership, Cal OES also provided feedback on the development of a new grant program operated by OPR—the Adaptation Planning Grant Program—to align eligible activities within the program so that communities would be able to use this funding to prepare to apply for FEMA HMA dollars or create LHMPs. This type of interagency coordination is critical to the successful implementation of the State's comprehensive mitigation efforts.

Further examples of horizontal coordination can be found in Section 51.3.

### 51.2.2. Vertical Integration

Vertical integration describes efforts throughout the various levels of government that allow for cross-jurisdictional coordination. For example, a federal-funded, State-administered, local-delivered grant program is a type of vertical integration. In California, vertical integration is strengthened by the fact that most agencies engaged in hazard mitigation have long-established relationships with first responders, city managers, county administrative officers, and other local government entities. One example of vertical integration is CAL FIRE's Land Use Planning Program, which assists cities and counties throughout California as they address the risk from wildfire in State Responsibility Areas and Very High Fire Hazard Severity Zones in Local Responsibility Areas. Program staff work collaboratively with local governments and CAL FIRE Units assisting in planning for new development, satisfying [California Government Code Section 65302\(g\)\(3\)](#), drafting updated safety elements of general plans, completing Subdivision Review Surveys per [Public Resources Code Section 4290.5](#), and obtaining recognition for local jurisdictions through the National Fire Protection Association's Firewise USA Program.

Ongoing agency integration efforts include implementation of task force recommendations, such as those from the California Wildfire and Forest Resiliency Task Force—which brings the best science to wildfire resilience and forest management—and the California Cybersecurity Task Force—which mitigates against online attacks. Both of these task forces support statewide partnerships comprising key State agency stakeholders, local jurisdictions, subject matter experts, private industries, and academia. Cal OES participates in these task forces to promote a hazard mitigation-informed approach to these efforts and to ensure alignment with the goals outlined in



the SHMP. Furthermore, information from these task forces is subsequently incorporated into SHMP updates where appropriate. For example, Action 2018-006 calls for enhanced collaboration for the development and sharing of data systems and GIS modeling for risk assessments. Action 2018-108 calls for a reduction in the likelihood and severity of cyber incidents.

In partnership with CAL FIRE, the Cal OES Hazard Mitigation Section oversees the California Wildfire Mitigation Program to retrofit and create defensible space around homes in equity priority communities. This partnership was established through a joint powers agreement, which was authorized by [AB 38 \(2019\)](#). The demonstration projects for this program leverage federal, State, and local funding, and are administered by Cal OES but implemented on the ground by local partner agencies or non-government organizations within the communities. The vertical integration in this program creates a standardized approach to residential retrofits across the State while allowing for customization of the program by the local implementing entity to ensure the program aligns with local goals. The retrofit and defensible space methodology applied in the California Wildfire Mitigation Program was developed collaboratively with the scientific community, including the Institute for Business and Home Safety. The institute subsequently launched the complementary Wildfire Prepared Home program, a voluntary mitigation certification backed by the insurance industry that promotes residential retrofit and construction approaches that utilize the best available science to increase survivability of structures for wildfire.

Concurrently, the Safer from Wildfire Initiative, an interagency partnership between the California Department of Insurance (CDI) and State emergency response and readiness agencies, works to protect consumers by reducing wildfire risk in their communities with an analogous mitigation approach. The Safer from Wildfire Initiative is coordinating to make wildfire insurance available and affordable for all Californians by supporting mitigation actions. Cal OES and CAL FIRE participate in this effort to ensure the initiative aligns with the retrofit approach outlined in the California Wildfire Mitigation Program. These complementary efforts that vertically integrate through levels of government and with private and non-profit partners to support wildfire resilience are emblematic of California's comprehensive approach to mitigation.

Other vertical integration efforts include the development of planning alignment resources to guide local jurisdictions as well as the California Adaptation Planning Guide. These resources are developed through collaboration of State and federal agencies. One example is the [Climate Resilience Plan Alignment Toolkit](#) which includes a [Guide Series](#) providing planning resources relating to Wildfire, Flood-After-Fire, and

Coastal Resilience for local jurisdictions. The Coastal Resilience Guide is also referred to as the “Coastal Compass” Guide. These Guides were developed through collaborative efforts led by OPR. Contributors included State and federal agencies, local jurisdictions, regional governments, and non-governmental organizations (NGOs). The Guides were intended to assist communities in aligning various local and regional plans to promote climate resiliency and meet State planning requirements, including general plan safety elements, LHMPs, disaster recovery frameworks and plans, community wildfire protection plans, Local Coastal Programs (LCPs), and climate adaptation plans.

### 51.2.3. Hybrid Integration

Hybrid integration describes efforts across governmental organizations on the same level that also intersect with cross-jurisdictional coordination; this is a combination of horizontal and vertical integration. Cal OES’s mitigation grants program review process leverages partnerships with State agencies to identify eligible mitigation projects for FEMA funding. OPR, through its FEMA Cooperative Technical Partnership Grants, partners with Cal OES to help align State climate resilience priorities with FEMA HMA funding requirements. Cal OES also partners with DWR and CAL FIRE to identify and prioritize local jurisdiction grant applications for FEMA funding. This type of collaboration and coordination supports horizontal integration by ensuring mitigation priorities and climate resilience goals are aligned across State agencies, and vertical integration by ensuring those same priorities and goals across local jurisdictions receiving funding.

For example, State mitigation grants are potentially available to help local agencies finance the preparation of inundation maps and dam safety emergency action plans (EAPs) under [SB 92 \(2017\)](#). The dam safety EAPs are required by SB 92 and are reviewed by Cal OES’s Dam Safety Planning Division. Inundation maps approved by DWR’s Division of Safety of Dams (DSOD), are integrated into these EAPs. To further this integration, Cal OES encourages jurisdictions with dams to identify the dam inundation areas in their LHMPs. Cal OES can then consider financing the identified mitigation projects through HMA grant programs. For more integration information, see Section 52.3.

State agencies also coordinate State and local review of applications for federal assistance under select programs that support resilience goals. OPR maintains a State Clearinghouse in compliance with Executive Order 12372 that functions as the “State Single Point of Contact” for coordinating these grant applications (OPR 2022b). In this



capacity, the State Clearinghouse coordinates State and local review of federal financial assistance applications, federally required State plans, direct federal development activities, and federal environmental documents. When Cal OES applies for FEMA HMA funding, Cal OES submits the standard reporting forms to the State Clearinghouse. The purpose of the process is to allow State and local participation in federal activities occurring within California.

## 51.3. INTEGRATION WITH OTHER STATE AND REGIONAL INITIATIVES

Within California, there are many State programs and initiatives that foster integration and coordination for hazard mitigation planning and implementation. These programs and initiatives are summarized below with further details discussed in Chapter 45. Cal OES used the 2023 SHMP update process as an opportunity to further promote integration by adopting the Working and Hazard Group model. Compared to the previous State Hazard Mitigation Team model, the 2023 SHMP update process engaged a higher number of partners more consistently, leading to more robust data and information relating to the State's hazards, efforts underway to mitigate those hazards, and considerations regarding equity and climate. In addition, numerous plans were reviewed and integrated into the 2023 SHMP as documented in Chapter 51. The following sections highlight integration opportunities during the planning process as well as a sampling of plans that were integrated into the Risk Assessment.

### 51.3.1. Emergency Management

Mitigation has been formally recognized in State law since 1970 through the [California Emergency Services Act](#), which noted the importance of coordinated emergency preparedness, response, recovery, and mitigation efforts. The 2017 update of the [State Emergency Plan](#) (SEP) acknowledges that understanding the potential severity and occurrence of natural hazard events is a major consideration in emergency management. Mitigation, then, is a prime tool integrated into the [SEP](#) for disaster risk reduction.

The Safeguarding California Plan, also called the [California Climate Adaptation Strategy](#), establishes guiding principles informing the State's climate adaptation goals, actions, and metrics. The 2021 Update to the California Climate Adaptation Strategy

embeds emergency management directly into the guiding principles. One of the priorities is “Bolster Public Health and Safety to Protect Against Increasing Climate Risks,” which recognizes that climate-driven events including droughts, floods, extreme heat, wildfires, and sea-level rise pose a broad range of harms to health and safety.

Actions under this priority include:

- Integrating climate risk into emergency planning and response at the State, local, and regional level, and for Tribal Nations
- Promoting special considerations for critical infrastructure and facilities during planning processes to proactively ensure safety of coastal resources against coastal hazards, including sea-level rise
- Prioritizing investments that reduce climate risk to California’s transportation system based on exposure and sensitivity analyses of climate change and natural disasters
- Increasing community-scale climate resiliency through innovative, research-supported emergency planning grants and projects, such as those that offer multiple co-benefits, are scalable at the regional level, and bring multiple funding sources or in-kind resources from private and public sector stakeholders

Mitigation is also integrated across several post-disaster recovery operations and plans to exceed the standard relationship between recovery and mitigation. These procedures are constantly evolving to integrate mitigation to the maximum extent possible. Recovery operations in California are conducted with a strong mitigation lens to promote equitable long-term resilience for communities as they rebuild. For example, Cal OES has invested substantial resources to maximize the use of the 406 [PA](#) Mitigation program after recent disaster events to ensure damaged infrastructure is rebuilt stronger. California further supports a “build back better” approach by similarly investing State funds in hardening public infrastructure damaged by a natural disaster through the [California Disaster Assistance Act](#) (CDAA). Additional examples of integration with post-disaster recovery operations and plans include the following:

- **[State Emergency Plan](#)**—The State of California Emergency Plan provides an overview of how to prepare for, mitigate, respond to, and recover from natural or human-caused emergencies in California. The SEP outlines how mitigation is integrated into other emergency management efforts within State operations.

- **Flood and Earthquake Catastrophic Plans**—These plans outline the State's response to catastrophic events. Planners involved in these efforts are integrated into the SHMP planning process to ensure the State prioritizes mitigation actions for critical facilities and other key [assets](#) to reduce losses in such an event.
- **California Earthquake Loss Reduction Plan**—The California Earthquake Loss Reduction Plan is devoted to developing a comprehensive post-earthquake economic recovery plan that will enable California to continue maintaining its economic vibrancy and leadership and provide employment and services for its residents. The plan supports California's approach to a mitigation-informed recovery process.
- **California Disaster Recovery Framework**—This framework establishes a State recovery coordination structure consistent with the federal model to facilitate the delivery of State and federal disaster assistance to impacted communities. The framework guides all disaster recoveries within the State. Crucially, it recognizes that hazard mitigation and disaster preparedness activities are keys to reducing the impact of disasters and reliance on mutual State or federal aid.
- **The Watershed and Debris Flow Task Force**—The Watershed and Debris Flow Task Force supports emergency and long-term mitigation for post-wildfire hazards. Areas impacted by wildfires are particularly prone to debris flows. Post-wildfire risk includes landslide, soil erosion, and water and soil contamination. The task force works to mitigate immediate risk of landslide and impacts on the water supply from burn scars. It also works to identify long-term mitigation activities that can be later funded under HMA programs to build long-term resiliency to post-wildfire hazards.
- **Recovery Support Teams**—Cal OES organizes Recovery Support Teams to assist impacted communities following disasters. These teams include subject matter experts from the major recovery programs, such as PA, [Individual Assistance](#) (IA), and Hazard Mitigation. These teams work closely with the communities to assist them in accessing all available funding to support their recovery. Mitigation team members assist communities in completing their LHMP, if necessary, and help to identify opportunities for hardening public infrastructure on the rebuild and pursuing HMA grants or other relevant mitigation funding for long-term risk reduction.

### 51.3.2. Economic Development

Many integrated State mitigation efforts minimize the disruption of economic activity following a disaster. One example is Outsmart Disaster, an awareness campaign from the California Office of the Small Business Advocate, focused on providing California businesses with resources to prepare for and recover from all types of disaster-related business interruptions. The campaign allows groups of businesses to request training workshops and links stakeholders to disaster management resources from Cal OES, CAL FIRE, Ready.Gov, National Safety Council, and the American Red Cross. Outsmart Disaster also provides the Resilient Business Challenge, which takes businesses through a five-step training to prepare for business interruptions and develop relevant resilience. Another example is the U.S. Chamber of Commerce Foundation's Disaster Help Desk for Business, which is available 24 hours a day for small businesses to call and get one-on-one expert assistance related to business disaster preparedness, response, and recovery.

Within Cal OES, the Office of Private Sector & Non-governmental Organization Coordination is an important link between the State and various economic development agencies. The purposes of the Cal OES Office of Private Sector & Non-governmental Organization Coordination are to design, coordinate, and implement statewide outreach programs to foster relationships with businesses, associations, companies, and universities, as well as non-profit, non-governmental, and philanthropic organizations. This Office works to maximize the inclusion and effective use of private sector, philanthropic, and [NGO](#) staff and resources in all phases of emergency management, including mitigation. After the initial response, disaster recovery becomes the focus of government resources. Private industry, working with government, can provide necessary help to Californians affected by the disaster through recovery assistance, rebuilding efforts, and volunteer services.

The Cal OES Office of Private Sector & NGO Coordination also operates the Business Operations Center, which organizes the synchronous exchange of information and resources between public and private sector organizations in mitigating against, preparing for, responding to, and recovering from disaster events. For more information about the Cal OES Office of Private Sector & NGO Coordination, visit <https://www.caloes.ca.gov/office-of-the-director/policy-administration/private-ngo-coordination/>.

The State administers the [CDBG](#) program to provide investments for community and economic development in many disadvantaged areas, and [HCD](#) has incorporated

climate considerations into this program. HCD is administering over \$70 million in federal funds from the National Disaster Resilience Competition to be invested in Tuolumne County for recovery from the 2013 Rim Fire, in partnership with other State, federal, and local partners (HCD 2022a). Cal OES is an integral partner with this initiative and meets with HCD monthly to discuss and evaluate opportunities to use these funds as a match for HMA grants. The goal of this program is to support rural economic development and environmental resilience through community, forestry and watershed health, and biomass utilization strategies.

### 51.3.3. Land Use Development

In California, general plans are required by State law for all municipalities and counties, and they must include a safety element. The safety element informs the land use element, allowing for integration for mitigation action within individual plans. All elements of a general plan, whether mandatory or optional, must be consistent with one another. California's updated 2017 General Plan Guidelines published by OPR include hazard identification requirements for general plan safety elements. In 2018, OPR updated the Wildfire Technical Advisory document pursuant to [SB 901 \(2018\)](#) and [AB 2911 \(2018\)](#). This update included "specific land use strategies to reduce fire risk to buildings, infrastructure, and communities." OPR completed these updates in consultation with CAL FIRE, the Board of Forestry and Fire Protection (BOF), and other fire and safety experts. Additionally, OPR released Environmental Justice Element guideline updates in 2020.

California uses a multi-agency review procedure in the land use development process. Various State agencies and local municipalities can be involved in hazard assessment and mitigation before development is permitted. For example, for approval of a hydraulic fracking permit, a county planning agency and the California Department of Conservation (DOC) Division of Oil, Gas, and Geothermal Resources are involved at a minimum. Depending on the permit location, the California State Water Resources Control Board may be involved in relation to aquifer protection, and the California Department of Toxic Substances Control (DTSC) and the CARB can conduct chemical hazards and air quality reviews, respectively. This multi-agency review procedure allows varied expertise and input to promote hazard reduction across disciplines.

The State has seen significant legislative efforts to integrate hazard mitigation with land use development since 2018. For example, [SB 99 \(2019\)](#) requires local jurisdictions revising their housing elements to review and update the safety element as necessary

to identify residential developments in any hazard area identified in the safety element that do not have at least two emergency evacuation routes. Another example is [SB 716 \(2021\)](#), which extends the provisions of the Habitat Restoration and Enhancement Act and the provisions of the Planning and Zoning Law from 2022 to 2027. The Habitat Restoration and Enhancement Act authorizes habitat restoration projects and has a special focus on mitigation efforts, funds, and properties. The Planning and Zoning Law allows local governments, special districts, or non-profit organizations to hold mitigation lands under an endowment overseen by that same entity, if the endowment meets specific requirements. A third example is [AB 747 \(2019\)](#). This bill requires local jurisdictions to identify evacuation routes and their capacity, safety, and viability in emergencies, and to include these routes in future LHMP updates or in the jurisdiction's safety element in another emergency operations plan. This law was updated by [AB 1409 \(2021\)](#) to also require the identification and inclusion of evacuation locations in LHMP updates.

The Safeguarding California Plan: 2018 Update includes recommendations for land use planning and community development. Safeguarding California recommends coordination of "state guidelines and policies to promote climate resilience and hazard avoidance through local government general plans, zoning ordinances, subdivision regulations, and development incentives." California further promotes "aggressive smart growth" in land use planning around the State in [A Strategy for California @ 50 Million](#), published in November 2015 by OPR. This concept prioritizes taking bold actions to reduce haphazard sprawl and promote higher density, mixed use development to accommodate the State's increasing population.

### 51.3.4. Housing and Community Development

Various mitigation efforts support housing resiliency and community development goals around the State. By reducing the number of homes that are lost or damaged in disasters, mitigation efforts support the State's initiatives to promote affordable housing while protecting residents and communities.

HCD administers the CDBG, which provides annual grants on a formula basis to states, cities, and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. HCD administers the CDBG Disaster Recovery and Mitigation programs, when allocated by Congress, after disaster events to support equitable recovery and mitigation outcomes. HCD has incorporated disaster planning into the State's administration of the CDBG program. Applications



that include strategies to address these issues receive more points in this highly competitive grant program. Cal OES works with the HCD Division of Codes and Standards to review mitigation actions related to mobile home installations. Additionally, HCD is charged with certifying local jurisdiction general plan housing elements, which are updated every five years. The update now triggers an associated review of the safety element. This change further ties the location of future housing, especially workforce and affordable units, to hazard mitigation issues. Cal OES and HCD coordinate monthly to identify opportunities for agencies to fund unmet needs from disaster impacted communities and to leverage CDBG and HMA programs to cover local cost-shares between the programs.

The California Green Building Standards Code (CALGreen) is administered by HCD and is California's first green building code (HCD 2022). It is formally codified in Title 24, Part 11, of the [California Code of Regulations](#) (CCR). The code aims to improve public health, safety, and general welfare through enhanced design and construction of buildings using concepts that reduce negative impacts, promote positive environmental benefits, and encourage sustainable construction.

Additionally, OSFM's Code Development and Analysis Division reviews all of California's regulations relating to fire and life safety for relevancy, necessity, conflict, duplication, or overlap. The Division also prepares the California State Fire Marshal's fire and life safety regulations and building standards for review and adoption by CBSC.

The National Disaster Recovery Competition is a \$1 billion federal program administered by the U.S. Department of Housing and Urban Development (HUD) that provides grants to communities to rebuild in a more resilient way following major disasters. An exceptional integration effort is underway in Tuolumne County, where \$70 million of funding under the program is supporting a three-part program: forest watershed health, biomass utilization for employment and fire risk reduction, and a Community Resilience Center for social capital development in the region. The partnership is between HCD, the county, and the U.S. Forest Service.

California has invested substantial resources toward retrofitting existing housing stock to increase survivability during hazard events. The California Earthquake Authority (CEA) implements seismic retrofits on residential structures through the Brace and Bolt, Soft-Story, and Multi-Family Mitigation Programs to reduce residential losses during earthquakes. Cal OES has supported this program extensively with HMA program funds. Cal OES and CAL FIRE are developing the California Wildfire Mitigation Program, which will fund wildfire retrofits and defensive space for residences in equity priority

communities. Finally, through the HMA programs, Cal OES has implemented residential flood elevation programs around rivers that flood frequently, particularly the Russian and Sacramento Rivers. Outside of Cal OES, the State has also invested over \$227 million in weatherization for low-income housing through the Greenhouse Gas Reduction Fund. All these home retrofit efforts support long-term housing resiliency in the face of future hazard events.

### 51.3.5. Health and Social Services

Wealth, education, housing, transportation, environmental quality, social capital, access to resources and services, experiences of violence and trauma, and other factors shape living conditions. These factors and living conditions strongly determine people's and communities' capacity for resiliency in the face of disasters and climate change. California's strong mitigation integration with the health and social services sectors enhances this capacity in these communities, bolstering the State's overall disaster resiliency.

To pursue equitable health outcomes, the State established the [Health in All Policies Task Force](#) in 2010 through a Governor's Executive Order. Health in All Policies is a collaborative approach to improving the health of all people by incorporating health, equity, and sustainability considerations into decision-making across sectors. The Task Force brings together 30 State departments, agencies, and offices and is facilitated by the California Department of Public Health (CDPH), the Strategic Growth Council, and the Public Health Institute. The Task Force creates multi-agency collaboration and initiatives to address barriers to advancing health and racial equity. Topics include State-administered grants, contracting, and procurement practices; data collection and information systems; community engagement; violence prevention; building racial equity competencies; and other critical topics. Members of the Task Force include OPR, CAL FIRE, HCD, CARB, CNRA, the California Department of Social Services (CDSS), the California Department of Food and Agriculture (CDFA), and more.

The strategic priorities of the California Health and Human Services Agency (CHHS) include building climate resilient communities where every Californian can lead a healthy life, regardless of origin or income. This priority is reflected in the departments and offices that comprise CHHS. A prime example is the CDPH Climate Change and Health Equity Section (CCHES), which works across sectors to embed health and equity into California's climate change programs and policies. CCHES ensures integration by collaborating with other agencies to leverage existing State investments



in addressing climate change by embedding health equity metrics, tools, and considerations. Examples of CCHES activities include:

- Collaborating with OPR and CNRA to author the public health content for the State Climate Adaptation Strategy
- Working with CARB and the California Environmental Protection Agency (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA) in developing the health analysis for the 2022 Update of the California Climate Change Scoping Plan, the State's roadmap for achieving carbon neutrality by 2045
- Providing consultation, input, tools, and resources to State agencies in the development of various climate grant funding programs and guidelines to elevate public health and racial and health equity priorities
- Working with the California Department of Community Services (CSD) and Development to integrate low-income home weatherization and energy-efficient services with home visitation efforts led by community health workers to advance healthy and climate-resilient housing

The goal of these activities is to ensure that climate-focused programs addressing housing, land use, transportation, jobs, and other factors related to health outcomes work collectively to reduce underlying inequities in living conditions, decrease vulnerability to the harms of climate change, and improve health equity overall.

[CCHES](#) also engages with community-based stakeholders to elevate their presence and increase their decision-making power in State climate change efforts.

Additionally, CCHES provides technical assistance and tools to State, local, and Tribal Nation health programs and departments to address the human health impacts associated with climate change. One example of these tools is the [Climate Change and Health Vulnerability Indicators for California data visualization tool](#).

Cal OES leverages mitigation funding and programs to support public health goals. For example, Cal OES has allocated substantial HMA funding to wildfire resiliency projects. In addition to reducing loss of life and property, these projects improve air quality by reducing the amount of smoke in the air after major wildfire events. The Cal OES Watershed and Debris Flow task force works to, among other things, promote water quality by reducing landslides and runoff into water sources near burned areas. Other HMA efforts to support housing resiliency through residential retrofits help maintain the State's housing stock after disasters, reducing instances of homelessness post-disaster. Cal OES has further developed programs that support mitigation projects, particularly

for equity priority communities such as the Prepare California Initiative. This initiative funnels mitigation funding toward communities that generally have higher rates of negative health outcomes due to historical marginalization and environmental degradation. By prioritizing projects that implement nature-based solutions to reduce risk, Cal OES leverages its mitigation funding to both reduce risk and increase access to nature, thereby promoting positive public health outcomes.

Health and social services mitigation strategies also assist community lifelines toward resilient recovery. The Cal OES Health and Social Services Recovery Support Function facilitates recovery programs toward creating a more equitable, resilient future for communities. The Recovery Support Function operates under the California Disaster Recovery Framework and works with State and federal partners as outlined in the framework to support resilient recovery measures for disaster-impacted communities.

The federal Health and Human Services Administration for Strategic Preparedness and Response and the Office of Disease Prevention and Health Promotion lay out a whole-of-government approach to strengthen resilience and improve well-being in communities. The federal plan for Equitable Long-Term Recovery and Resilience provides a framework based on restoring vital conditions. The plan was developed to address the deep disparities in health, well-being, and economic opportunity that were laid bare during the Coronavirus Disease 2019 (COVID-19) pandemic. An interagency workgroup developed the plan and identified opportunities for collaboration to maximize available resources across government agencies and improve resilience in communities. The plan's stated vision is "All people and places thriving, no exceptions." State hazard mitigation and climate programs and policies aim at supporting public health goals and improving community resilience through improved air quality and drinking water, align with the Thriving Natural World vital condition. California's Recovery Support Function is actively working with State and federal partners to integrate the framework into State health and social service recovery activities.

### 51.3.6. Infrastructure

Climate adaptation is central to planning and implementation efforts to promote infrastructure resiliency in California. For example, following the statewide climate vulnerability assessments by [Caltrans](#), the California State Transportation Agency (CalSTA) released the [Climate Action Plan for Transportation Infrastructure](#) in 2021. This report identified critical actions to be taken in the next few years, including updating transportation infrastructure competitive program guidelines to incentivize climate

adaptation and strategies, and exploring incentivizes for land conservation through transportation programs.

The California Utilities Emergency Association supports restoration of utility services, which allows businesses to return to operation with a minimum amount of functional downtime. The association serves as a point-of-contact for critical infrastructure utilities, Cal OES, and other governmental agencies before, during, and after disaster events. The work of the California Utilities Emergency Association is membership-supported, demonstrating non-governmental resources devoted to mitigation.

The State created the California Cyber Security Task Force to address increasing cyber threats to communications infrastructure, to facilitate information sharing and integration across departments, and to audit agencies for cyber protection. These are efforts to protect agency data and procedures across all departments statewide. In 2013, the California Cyber Security Integration Center (Cal-CSIC), housed within Cal OES, was tasked to oversee the Cyber Security Task Force. The SHMP integrates these efforts. For example, Action 2018-109 calls for protecting the critical power grid infrastructure from cyber threats through ongoing coordination with the Cal-CSIC and the statewide Cyber Security Task Force.

With dam safety, the State has built upon the federal tools to establish its own safety and integration program. DWR and Cal OES are charged with dam and flood safety. DWR emphasizes climate resilience and incorporates lessons learned from recent impacts of extreme weather on the State's water system. Responding to the 2017 Orville Dam spillway failure, DWR restructured itself to further bolster these efforts. This action complements the Cal OES Dam Safety Planning Division, which reviews dam repair and improvement projects and approves dam owners' [EAPs](#). The Cal OES program integrates dam safety with emergency management and critical infrastructure by working with local jurisdictions to incorporate EAPs into other emergency plans and elements.

Cal OES coordinates with DWR, Caltrans, and other agencies that oversee the State's critical infrastructure to ensure appropriate data sources and priorities are considered in the SHMP process. Furthermore, during the maintenance and implementation phase, Cal OES coordinates with relevant agencies to determine whether HMA or other mitigation funding can be leveraged or layered with complementary State funding to harden critical infrastructure in high-risk areas.

### 51.3.7. Natural and Cultural Resources

Evidenced by its strong environmental laws, California prioritizes the preservation and enhancement of natural and cultural resources. For example, the California Department of Fish and Wildlife (CDFW) leads planning and coordination efforts evaluating human-wildfire conflict to mitigate the effects of extreme drought, fire, and related factors on the environment and to ensure long-term biodiversity. DWR leads bi-weekly meetings with natural resource agencies and emergency management partners across the State to discuss, identify, and address drought and flood mitigation measures.

Notably, OPR began the Fifth Climate Change Assessment planning process in July 2022. This process engages partners from federal, State, and local agencies for input, and provides critical updates to the data and circumstances identified in the Fourth Climate Change Assessment, which was released in 2018-19. Cal OES is making concerted efforts to contribute to the Fifth Climate Change Assessment, with the Cal OES Science and Climate Advisor and representatives from the Cal OES Hazard Mitigation Section attending planning sessions.

California recognizes that risk reduction can be achieved through strong environmental stewardship. The State invests resources in coordination and planning to promote a healthy environment, thereby reducing risk to life and property. Numerous State agencies are dedicated to helping California prepare for sea-level rise, with the goal of making all of California, including its coastlines, inland areas, and bays and estuaries, resilient to the impacts of sea-level rise, such as flooding, erosion, and habitat degradation and loss. In 2020, [CNRA](#), CalEPA and over 15 departments and agencies, including Cal OES, developed sea-level rise principles to guide unified, effective action toward sea-level rise resilience for California's coastal communities, ecosystems, and economies (OPC 2020). In 2022, the State released the State Agency Sea-Level Rise Action Plan to guide efforts to increase resiliency to sea-level rise.

To address the increasing instances of catastrophic wildfire, the State created the California Wildfire & Forest Resilience Task Force, bringing together an unprecedented coalition of the best available resources for preventing catastrophic wildfires by creating healthier, more sustainable natural environments. The task force is a proactive effort that is already showing progress toward long-term forest health and safe, sustainable coexistence with fire. Cal OES is a key partner in this task force, bringing a strong risk reduction and long-term recovery lens to the coalition. Lessons learned from

this coalition are integrated into the SHMP process and subsequent administration of the HMA programs.

Cal OES works to identify and allocate funding under the HMA programs for nature-based solutions that bolster risk reduction. These projects, which seek to enhance the environment while providing protection from natural hazards, align with the State's goals to adapt to climate change by enhancing its Natural and Working Lands and to protect 30 percent of the State's land and water by 2030. Since the 2018 SHMP update, Cal OES has made substantial strides in building relationships with environment-oriented partners to assist in identifying nature-based projects for HMA funding. For example, Cal OES coordinates with The Nature Conservancy, the California Association of Resource Conservation Districts, and other environmental organizations during HMA program outreach. Furthermore, Cal OES leverages the expertise of State partners with environmental expertise to identify projects, including CAL FIRE, DWR, the California Coastal Conservancy, the Sierra Nevada Conservancy (SNC), the California Ocean Protection Council (OPC), [OPR](#), and others.

## 51.4. INTEGRATION WITH FINANCIAL PROGRAMS

The strength of California's mitigation approach stems from the utilization of multiple funding sources, including federal grant funding, State grant funding, and municipal/county funding. The diversity of funding sources provides stability and continuity to projects and lessens the downside of single-source funding.

California promotes funding opportunities consistently through coordination with local, Tribal Nation, regional, State, and federal agencies. The Cal OES Hazard Mitigation Assistance Branch (Cal OES HMA Branch) works with local, Tribal Nation, and State agencies and stakeholders to promote available funding opportunities to support implementation of their mitigation and adaptation projects and activities. A list of funding mechanisms available to applicants through HMA is available on the [Cal OES website](#). For projects that have not yet been implemented, potential applicants are encouraged to work with [Cal OES HMA Branch](#) staff or visit the [California Grants Portal](#) for additional funding opportunities.

State funds have bolstered support for additional mitigation programs. In 2021, the legislature appropriated funding to establish the Prepare California initiatives. A portion of these funds, known as Jumpstart, supports local mitigation capacity building and is

intended to help Californians in equity priority communities overcome barriers to accessing mitigation funding. The remaining funds, known as Match, cover the local cost share for equity priority communities with the greatest hazard risk. Combined, the legislature allocated \$100 million to Cal OES to deliver these programs.

The State further invested \$50 million in the California Wildfire Mitigation programs between 2021-2023, to be administered by Cal OES. The program is a partnership between Cal OES, FEMA, HCD, the Institute of Building and Home Safety, and academic partners. The program provides funding in equity priority communities to implement retrofits and create defensible space around homes in high-wildfire risk areas. In addition to this funding, the State legislature appropriated \$670 million in 2022 for additional wildfire efforts, such as CAL FIRE's Wildfire Prevention Grants Program, forest health, business, and workforce development, the [California Forest Improvement Program](#) (CFIP), the Forest Legacy Program, Urban and Community Forestry Grant Programs, and Forest Health Research Grant Programs.

Special funds and the State General Fund provide support for various other legislatively mandated programs. For example, [CEA](#) is a self-sufficient program that offers residential earthquake insurance and is funded through insurance policy premiums. In 2022, \$250 million was approved by the legislature for CEA's Multi-Family Soft Story Retrofit Program. If appropriated in the State's fiscal year (FY) 2023 budget, the program will provide funding to seismically retrofit multi-family dwellings in equity priority communities prone to earthquake risk. In addition to these programs, CEA has developed a supplemental grant for income-eligible homeowners in ZIP codes where the [Earthquake Brace + Bolt program](#) (EBB) is available.

Some of California's mitigation efforts are also self-sustaining. For example, the continuous upgrading of seismic hazard maps by the California Geological Survey (CGS) is funded by a levy on local building permit fees that replenishes the program's funding on an annual basis.

Another example of financial integration for mitigation planning was passage of [AB 2140 \(2007\)](#), mentioned previously. This bill provides incentives for LHMP preparation by authorizing cities and counties to adopt LHMPs as part of their required general plan safety element updates. The bill authorizes the California legislature to provide to such cities and counties a State share of costs exceeding 75 percent of total State-eligible post-disaster costs under the [CDAA](#). It also requires Cal OES to give future priority to local jurisdictions without an LHMP to prepare and adopt one.



California's financial integration efforts also include identifying investments to bolster the State's climate mitigation and adaptation activities. California's Climate Change Assessments support cutting-edge climate science that includes climate impact projections at scales relevant to State, regional, and local decision-making, supporting the integration of the best available science into policy and investment decisions. As of December 2022, OPR is developing an update to the Planning and Investment for a Resilient California Guidebook. This update will provide revised data, resources, and best practices to inform climate-resilient investment decisions. Cal OES and its partners are working to incorporate efforts to reduce climate risks through hazard mitigation activities where climate science provides critical support, including but not limited to reducing wildfire hazard, enabling climate-resilient rehabilitation, and improving flood protection.

The State has made robust investments in climate mitigation efforts across several programs. The CARB-operated [Cap-and-Trade](#) provides financial support to numerous other State agencies and organizations to reduce [GHG](#) emissions and promote economic, environmental, and public health improvements. As of September 2022, \$21 billion was appropriated by the legislature for [FY 2022 – 2023](#). Programs funded by Cap-and-Trade include the [Greenhouse Gas Reduction Fund](#), which supports the objectives of the [California Global Warming Solutions Act of 2006](#). Investments from the Greenhouse Gas Reduction Fund support programs such as the Water-Energy Efficiency Program run by [DWR](#), and the Affordable Housing and Sustainable Communities Program run by the [SGC](#), which prioritizes projects through Climate Adaptation and Community Resiliency scoring. Other programs funded through the Greenhouse Gas Reduction Fund that align with hazard mitigation efforts include the Urban Greening Program, which received \$156 million in FY 2022 – 2023 appropriations, and the Regional Forest and Fire Capacity Programs at CNRA, which received \$20 million in FY 2022 – 2023 appropriations. Funded programs span across disciplines and hazards to include Fire Prevention Grants, Forest Health, Urban and Community Forestry Programs at CAL FIRE; Wetlands and Watershed Restoration program at [CDFW](#); the Climate Ready Program at the California Coastal Conservancy; and the Transformative Climate Communities program at SGC. A full list of programs funded by the Cap-and-Trade program as well as a history of fund allocations by year since the program's establishment is available on the [CARB website](#).

Another example is the financial integration mandated by AB 1550 (2016) which requires a minimum of 25 percent of GHG reduction funding to be allocated to projects located within and benefiting individuals living in disadvantaged communities

and provides additional funding to benefit low-income households. Investments from the Greenhouse Gas Reduction Fund support programs such as the DWR Water-Energy Efficiency Program and the SGC's Affordable Housing and Sustainable Communities Program, which prioritizes projects through Climate Adaptation and Community Resiliency scoring. Additional programs funded through the Greenhouse Gas Reduction Fund that align with hazard mitigation efforts include the Urban Greening Program, which received \$156 million in FY 2022 – 2023 appropriations, and the Regional Forest and Fire Capacity Programs at CNRA, which received \$20 million in FY 2022 – 2023 appropriations.

Funded programs span across disciplines and hazards to include Fire Prevention Grants, Forest Health, Urban and Community Forestry Programs at CAL FIRE; Wetlands and Watershed Restoration program at CDFW; the Climate Ready Program at the California Coastal Conservancy; and the Transformative Climate Communities program at SGC. Another example is the financial integration mandated by [AB 1550 \(2016\)](#), which requires a minimum of 25 percent of greenhouse gas reduction funding to be allocated to projects located within and benefiting individuals living in disadvantaged communities and provides additional funding to benefit low-income households.

Within the last two years, Cal OES, SGC, and the U.S. Environmental Protection Agency (EPA) have become members and presenting partners of the [California Financing Coordinating Committee \(CFCC\)](#). CFCC organizes funding fairs that highlight federal, State, and regional granting agencies. These fairs occur at least four times each year and serve over 100 people per fair. Immediately after the presentation portion at these fairs, grant seekers have the opportunity to ask clarifying and substantive questions. Also, within the last two years, Cal OES, SGC, and the EPA have presented at the [Integrated Regional Water Management Roundtable of Regions](#) meetings, discussing information on upcoming grants.

## 51.5. INTEGRATION OF FEMA MITIGATION INITIATIVES

Several federal programs provide essential resources that foster integration and coordination among agencies directly responsible for hazard mitigation efforts and with other entities throughout the State. These programs include the HMGP, [FMA](#), [BRIC](#), 406 PA Mitigation, National Flood Insurance Program (NFIP), Community Rating System



(CRS), Risk Mapping, Assessment, and Planning (Risk MAP), [CDBG](#) Disaster Recovery, CDBG Mitigation, and other grant programs.

### 51.5.1. Hazard Mitigation Assistance

California is responsible for administering FEMA's HMA programs, which include HMGP, HMGP Post Fire, FMA, legacy Pre-Disaster Mitigation, and BRIC. HMGP is available to develop hazard mitigation plans and rebuild in a way that mitigates future disaster losses. HMGP is available after a presidentially declared disaster. FMA funds projects that reduce or eliminate the risk of repetitive flood damage to buildings. Pre-Disaster Mitigation funds programs that plan for and implement sustainable cost-effective measures designed to reduce the risk from future hazards. BRIC, similar to HMGP, supports recipients as they undertake hazard mitigation projects.

These programs are administered through the Cal OES HMA Branch and are utilized to fund non-disaster and post-disaster mitigation activities that minimize or eliminate risk to natural hazards. HMA funding is available for eligible mitigation activities that implement independent solutions to mitigate risks long-term or permanently. The programs provide funding to support 75 to 100 percent of the total cost of the project, with any remaining funding provided by a non-federal source.

The non-disaster programs below are available on an annual basis. From 2017-2022, California submitted 128 applications for \$1.3 billion in requested Federal Share amounts in non-disaster HMA program grant funding, comprising:

- 33 Pre-Disaster Mitigation (replaced by BRIC in 2020) projects totaling \$35.3 million
- 71 BRIC projects totaling \$1.2 billion
- 24 FMA projects totaling \$98.0 million

When a federal disaster is declared by the President, HMGP funds become available to support mitigation planning and project efforts to mitigate the effects of future disasters. The Governor may request that HMGP projects are targeted to areas impacted by the disaster, but the funding is typically available statewide. The amount of HMGP funding is based upon the estimated total federal assistance provided to the State under certain Stafford Act programs. HMGP Post Fire funding—a subset of the more general HMGP—is based on a national aggregate calculation of [Fire Management Assistance Grant](#) (FMAG) designations in the proceeding 10 years. Funding from HMGP Post Fire is utilized to propel wildfire mitigation activities such as

creating defensible space, supporting ignition-resistant construction, reducing hazardous fuels, implementing erosion control, and reducing flash floods. In 2021, post-disaster funding provided through HMGP totaled \$485 million for traditional HMGP, and an additional \$7.8 million was made available through the HMGP Post Fire grant program.

The funding from FEMA HMA programs administered by Cal OES provides California the opportunity to leverage both pre- and post-disaster assistance programs to support resilient planning, mitigation, and reconstruction that consider and anticipate future climate conditions. As part of this effort, California continues to work to align BRIC and FMA funding opportunities for projects that maximize whole-community climate readiness and resilience. For additional information on the prioritization methodology Cal OES employs to align projects to specific funding opportunities, see Section 53.1.1.

Each non-disaster funding cycle and HMGP disaster cycle has characteristics that influence the State's specific mitigation priority determination. Priority determination also considers the nature of the disaster. Specific post-disaster priorities are determined as part of initial program guidance to potential applicants. Information to be considered in establishing priority categories may include the evaluation of natural hazards in the disaster area, state-of-the-art knowledge and practices relative to hazard reduction, existing State mandates or legislation, existing State or local programs, and long-term mitigation goals and objectives at the State, local, and community level. Also, an important consideration for prioritization of grant funding are those communities with high levels of growth and development, as well as those with [repetitive loss](#) (RL) issues.

Cal OES works with eligible sub-applicants, which includes State agencies, local jurisdictions, and in some instances special districts and private non-profits, to identify and scope projects that align with local and State mitigation goals and objectives. The HMA grant programs serve as one of the primary vehicles to implement the State and local mitigation strategies.

### 51.5.2. Fire Management Assistance Grant Program

The [FMAG](#) program was authorized by the Disaster Mitigation Act of 2000 (DMA) and is available to states, local, and Tribal Nation governments for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands where the fire threat could become a major disaster. The FMAG Program provides a

75 percent federal cost share with the local jurisdiction responsible for the remaining 25 percent. Mitigation of wildfires is an important part of this grant program, as funds can be provided based on where a potential threat exists.

The Fire Management Assistance declaration process is initiated when a state submits a request for assistance to the FEMA Regional Director at the time a “threat of major disaster” exists. The entire process is accomplished on an expedited basis, and a FEMA decision is rendered in a matter of hours. Before a grant can be awarded, a state must demonstrate that total eligible costs for the declared fire meet or exceed either the individual fire cost threshold, which applies to single fires, or the cumulative fire cost threshold, which recognizes numerous smaller fires burning throughout a state. The funds are used primarily for fire suppression services (response) but also for essential assistance (emergency protective measures). Cal OES Recovery staff provide information on cost-effective Section 406 hazard mitigation measures.

### 51.5.3. Hazard Mitigation Grant Program Post Fire Grant Program

The HMGP Post Fire grant program was established by the federal Disaster Recovery Reform Act, enacted in October 2018. The resulting changes to the Stafford Act allow FEMA to provide HMGP assistance for hazard mitigation measures that substantially reduce the risk of future damage, hardship, loss, or suffering in any area affected by a major fire, or any area affected by a fire for which assistance was provided under [FMAG](#). These changes mean that the availability of this assistance is not contingent on a Presidential Disaster Declaration.

California has received over \$38 million in additional funding through the HMGP Post Fire program under declarations FM-5189, FM-5278, FM-5293, FM-5380, and FM-5419. The breakdown for this funding is detailed in Table 51-1.

**Table 51-1.** Funding Through the HMGP Post Fire Program

FM Number	Federal Fiscal Year	Amount
<a href="#">FM-5189</a>	FFY-2018	\$18,133,664
<b>FM-5278</b>	FFY-2019	\$1,817,727
<b>FM-5293</b>	FFY-2020	\$4,722,610
<b>FM-5380</b>	FFY-2021	\$7,787,780
<b>FM-5419</b>	FFY-2022	\$6,292,416
<b>Total</b>		<b>\$38,754,197</b>

Funding is first made available to the county or counties that received an FMAG declaration. Projects may be outside of the area as long as the risk reduction activity

benefits the declared county or counties. If funding cannot be used in the affected area, then it may be made available statewide regardless of whether it benefits a declared county. Cal OES leverages the HMGP Post Fire funds for immediate post-fire mitigation needs, such as erosion control or reforestation, as well as for long-term risk reduction activities such as home hardening and hazardous fuels reduction. By prioritizing communities that were impacted by major fires that year, Cal OES seeks to reduce the risk of secondary impacts in the post-wildfire period and prevent additional fires in the same area in future years.

#### 51.5.4. Section 406 Public Assistance Mitigation

FEMA's PA grant program provides federal assistance to government organizations and certain private non-profit organizations following a Presidential Disaster Declaration so that communities can quickly respond to and recover from major disasters or emergencies. The PA program is administered through a coordinated effort between FEMA, the state or Tribal Nation receiving the funding, and the applicants on behalf of the jurisdiction. PA supports local communities with opportunities to strengthen infrastructure that has been proven to fail under disaster conditions. Cal OES leverages the program to assist impacted communities in hardening damaged public infrastructure during the recovery process to promote long-term resiliency and reduce impacts from future disasters.

The program provides assistance to supplement federal disaster grants for debris removal, life-saving emergency protective measures, and the repair, replacement, or restoration of disaster-damaged publicly owned facilities and the facilities of certain private non-profit organizations. The PA program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process. Mitigation activities may be completed and funded through Section 406 of the Stafford Act. Section 406 PA Mitigation is defined as incorporating cost-effective betterments into a permanent work project to harden or protect disaster damaged facilities from repetitive damage in future similar disaster events. The non-federal cost share of this assistance is provided by state funds.

In recent years, starting with DR-4558 and including DR-4569, DR-4610, and DR-4619, Cal OES overcame the barriers inherent in the PA process and succeeded in increasing the number of projects that incorporate Section 406 Mitigation. More than 55 percent of all Category C through G projects in these disasters included mitigation components, up from the previous rates of approximately 5 percent to 10 percent. While the dollar amount of Section 406 mitigation actions as a percentage of the total

PA project costs are low, at about 2 percent, Cal OES PA will continue to offer increased levels of protection when rebuilding damaged infrastructure.

Challenges of implementing the PA program since 2013 include the need for more FEMA PA support and enhanced training of FEMA staff to ensure staff promote and effectively support PA hazard mitigation. To address this, Cal OES is working with FEMA Region 9 for expanded support of the PA program. PA is a priority for the State and working with FEMA to ensure that adequate support exists to further the program and efforts to reduce risk is a high priority. Cal OES PA staff are using outreach to teach communities about PA and to share Cal OES's PA program information with incoming State and FEMA staff when a Joint Field Office is established.

The Section 406 mitigation program is a beneficial source that can boost California's resiliency to disaster effects. It would benefit the State and FEMA Region 9 to dedicate more mitigation experts to ensure that PA funds are used to increase the protection of infrastructure or facilities that have already been found to be faulty in disaster conditions. This will help to bolster resilience within local communities. This additional dedication would align with the State's mitigation strategy to assist local and Tribal Nation governments in implementing robust and successful hazard mitigation efforts.

In addition to those listed above, the PA program administers several additional programs, including the following:

- **Federal Highway Administration Emergency Relief Program**—This program gives aid for the repair or reconstruction of federal-aid highways and roads on federal lands that have suffered serious damage as a result of natural disasters or catastrophic failures from an external cause. This grant is a subset of the FEMA PA grant program and offers funding for mitigation efforts.
- **Natural Resources Conservation Service Emergency Watershed Protection Program**—This program offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods, fires, windstorms, and other natural disasters that impair a watershed. It does not require a disaster declaration by federal or state government officials for program assistance to begin. This grant is a subset of the FEMA PA grant program and offers funding for mitigation efforts.
- **U.S. Department of Housing and Urban Development Disaster Housing Assistance Program**—This program provides short-term, emergency rental assistance for families and individuals displaced by a natural disaster.

### 51.5.5. FEMA Hazard Mitigation Planning

Cal OES's Hazard Mitigation Planning Division coordinates with the FEMA Region 9 Mitigation Division to co-administer the State's local hazard mitigation program. This program administration consists of providing hazard mitigation technical assistance and training to local jurisdictions and Tribal Nations. Cal OES and FEMA Region 9 also work together to conduct and expedite joint reviews of some LHMPs, in order to ensure reviews are completed within the 45-day LHMP review timeframe (a shared Cal OES-FEMA goal), or in a timely manner when HMA funding is pending. For more information about the LHMP Program, see Chapter 41.

For Tribal Nation plans, Cal OES coordinates closely with the FEMA Region 9 planner who leads the Tribal Nation mitigation plan reviews. Cal OES provides plan reviews and trainings for Tribal Nations if requested, but historically has not reviewed Tribal Nation hazard mitigation plans.

### 51.5.6. Threat and Hazard Identification and Risk Assessment

The State of California Threat and Hazard Identification and Risk Assessment (THIRA) is a three-step risk assessment process that helps communities understand their risks and what they need to do to address those risks. The 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.

The Cal OES Hazard Mitigation Planning Division contributes to the State's THIRA every three years, and to the accompanying Stakeholder Preparedness Review annually. This process includes coordinating with other Cal OES divisions to align responses and accurately capture the State's capability to prepare for, respond to, recover from, and mitigate various disaster scenarios. Since 2018, Cal OES has made concerted efforts to ensure that hazard mitigation is better integrated into the [THIRA](#) than in previous cycles.

### 51.5.7. Emergency Management Performance Grant Program

The purpose of the [Emergency Management Performance Grant \(EMPG\) Program](#) is to provide federal funds to states to assist State, local, and Tribal Nation governments in preparing for all hazards. In California, the EMPG Program continues to be



leveraged by State, local, and Tribal Nation emergency management agencies to acquire the resources necessary to ensure a well-organized and rapid response to disasters. In addition to supporting local capabilities, the EMPG Program supports California's [Standardized Emergency Management System \(SEMS\)](#) activities. This system unifies all elements of California's emergency management community into a single integrated system and standardizes key elements. This system and the Incident Command System, which provides guidance for how to organize assets to respond to an incident and processes to manage the response through its successive stages, are the cornerstone for the National Incident Management System (NIMS). NIMS guides all levels of government, NGOs and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents.

In California, eligible subaward subrecipients are local and State agencies and federally recognized Tribal Nations. Funds provided under the EMPG Program must be used to support activities that effectively contribute to capabilities to prevent, prepare for, mitigate against, respond to, and recover from natural or human-caused emergencies and disasters. In support of the Department of Homeland Security Notice of Funding Opportunity that is issued by FEMA when funds are available, California issues the "California Supplement to the Federal Notice of Funding Opportunity," otherwise known as the State Guidance.

The State Guidance is the authority document for California's EMPG Program, providing State, local, and Tribal Nation governments with guidance and forms to apply for, perform, and close out an EMPG subaward, as well as other subaward-related information and requirements.

### 51.5.8. National Flood Insurance Program

The NFIP, established in 1968 by the National Flood Insurance Act, is a federal program which local jurisdictions may voluntarily participate. It is intended to provide affordable flood insurance to residents and encourage floodplain management.

The goals of the NFIP include:

- Decreasing the risk of flood losses
- Reducing the costs and consequences of flooding
- Reducing the demand for Federal assistance
- Preserving and restoring the natural beneficial floodplain functions



Communities participating in the NFIP, and their residents and businesses, are eligible for federally backed flood insurance coverage, certain federal grants and loans, and disaster assistance. To receive these benefits, communities must adopt and enforce floodplain management regulations. Within California, there is a 99 percent participation rate among communities, with only five communities out of 533 not currently participating in the NFIP as of April 1, 2022.

The State's NFIP is administered by DWR. DWR is charged with statewide flood forecasting, flood operations, and other key flood emergency response and management activities to help reduce flood risk, including FloodSafe California, the [Central Valley Flood Protection Plan](#) (CVFPP), and the Statewide Flood Management Plan (DWR 2022i). FloodSafe California includes implementation plans, strategic plans, five-year resource plans, and integrated water management products. Some new flood risk reduction programs were established, and some existing programs were enhanced. The CVFPP and Statewide Flood Management Plan are both strategic blueprints to improve flood risk management. These efforts are all in the aim of flood mitigation.

DWR, on behalf of FEMA, conducts Community Assistance Visits and Community Assistance Contacts to each NFIP community to provide individual technical assistance. A Community Assistance Visits consists of a tour of the floodplain, an inspection of community permit files, and meetings with local appointed and elected officials. FEMA and DWR workshops also assist community officials to learn how to comply with NFIP requirements. DWR provides statewide NFIP workshops that are designed to interpret and explain the NFIP regulations and to give an overview of the need for community-based floodplain management. Workshops are scheduled by DWR but may also be requested and provided on-demand.

Workshop topics include the following:

- FEMA Elevation Certificates
- Floodplain Management and Duties of the Local Administrator (Basic Course)
- Floodplain Management Review Course
- Obtaining and Developing [Base Flood](#) Elevations in Zone A Areas (Advanced Course)
- Substantial Improvement/Substantial Damage

In addition to these in-person visits and trainings, DWR provides assistance through outreach and education, such as the [National Flood Insurance Program in California Quick Guide](#), to provide guidance and assistance to communities for floodplain management (DWR 2022i). DWR developed the [Flood Emergency Response Information Exchange](#) to make flood information available in real-time through an online GIS platform. DWR published the California Building Code Coordinated Floodplain Management Model Ordinances to help communities adopt local regulations that are in compliance with the [California Building Standards Code](#) for buildings and structures in the Special Flood Hazard Area (SFHA).

### 51.5.9. Risk MAP

FEMA's Risk MAP program develops and publishes data to support long-term hazard mitigation and community resilience. According to FEMA, all Risk MAP projects begin with a project planning and discovery step to define the location and scope of future projects. The discovery process is particularly relevant to hazard mitigation planning in that federal and state agency representatives meet with emergency response officials, floodplain management staff, public works staff, planning officials, and other appropriate stakeholders to determine what natural hazard information already exists, identify what natural hazard information is still needed to make mitigation decisions, and identify which areas and resources could be most vulnerable during a natural hazard event. The meeting provides information regarding risk and hazards impacting the community and provides an overview of available resources to support community risk reduction.

This information is assembled into a report with maps that are presented to and discussed with communities at the discovery meetings. The discovery process is also an opportunity to assess community capability and plan for needed technical assistance and training based on that capability. The information from the discovery meetings is made publicly available with the goal of supporting community resilience, building partnerships, and supporting long-term hazard mitigation planning.

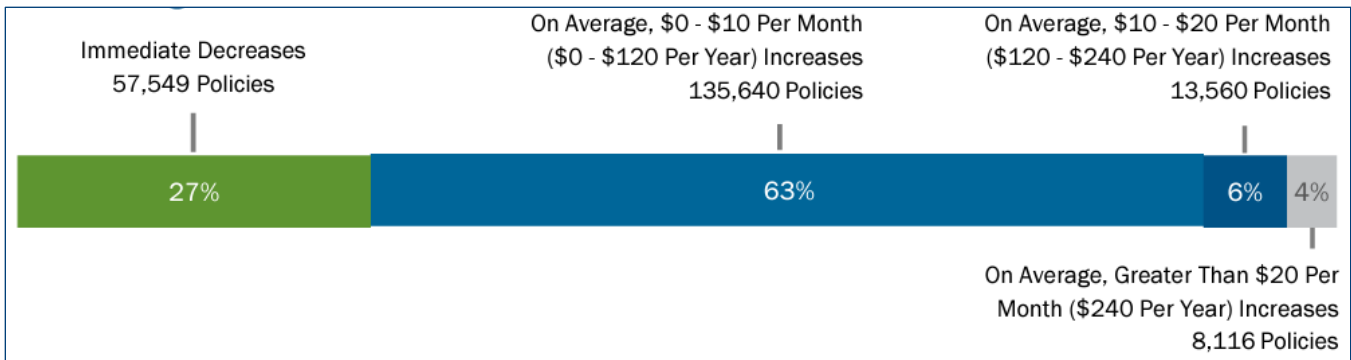
In California, discovery meetings have been hosted for various communities by FEMA Region 9, the National Oceanic and Atmospheric Administration (NOAA), the U.S. Geological Survey (USGS), University of Southern California Sea Grant, California Coastal Commission, California Coastal Conservancy, and The Nature Conservancy, in collaboration with Cal OES, DWR, Caltrans, and other State agencies.

51.5.10. Risk Rating 2.0

In 2021, policyholders in the NFIP began to see a transition to a new rating program known as Risk Rating 2.0. The goal of Risk Rating 2.0 is to pivot to a program in which flood insurance premiums are based on the insurable structure’s flood risk (FEMA 2022f). This transition does not impact the requirement to have flood insurance, which is still based on the flood zone when a federally backed mortgage is involved, but it does incorporate individual property characteristics to determine flood insurance premium rates. Characteristics such as proximity to water, rebuild cost, and flood hazard type are all now considered in each individual structure rating.

Between October 1, 2021, and October 1, 2022, policyholders in the State of California began experiencing the impacts of Risk Rating 2.0. Figure 51-1 shows estimates developed by FEMA of potential rate increases in the program’s first year. At the time FEMA produced the estimation, 73 percent of all NFIP policyholders in the State of California would experience an annual increase in premiums. (FEMA; Floods.org; Floodsciencecenter.org 2022)

**Figure 51-1.** Estimated California NFIP Policy Premium Changes in First Year of Risk Rating 2.0



Source: (FEMA 2021f)

51.5.11. Community Rating System

The [CRS](#) is a voluntary federal program. California’s floodplain management law allows local governments to adopt and exceed floodplain management regulations to reduce and seek premium discounts, as outlined in [44 CFR](#). By permitting the enforcement of higher regulatory standards, California communities are provided the opportunity to participate in the CRS, which provides insurance premium discounts of

up to 45 percent based on the community's enforcement of higher regulatory standards.

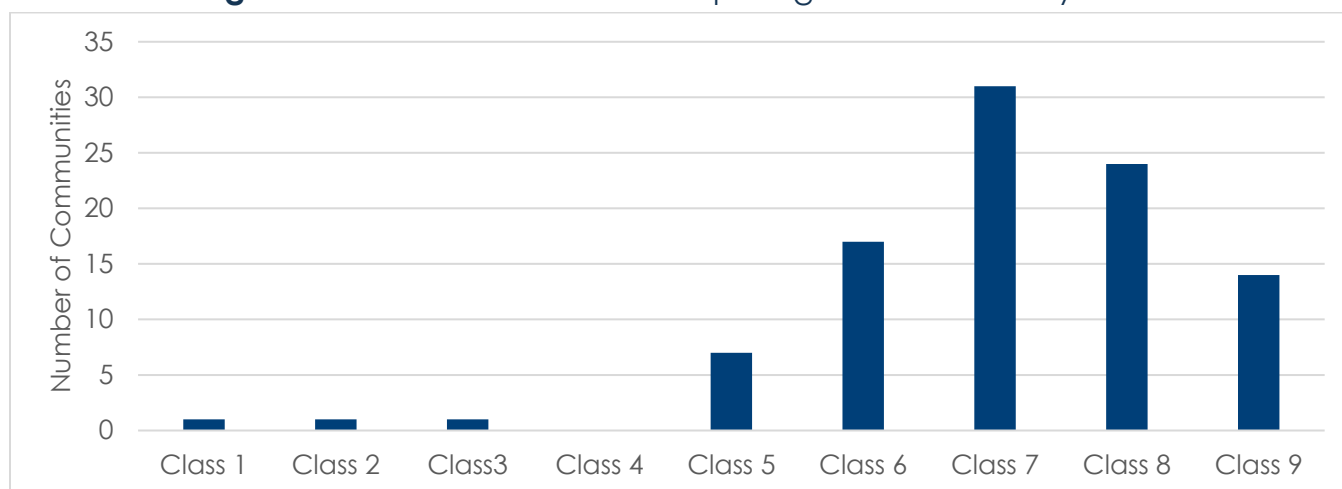
Implemented in 1990, the CRS is a voluntary incentive program under the NFIP that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced risk. For participation in the program, communities must apply, annually recertify after entry is granted, and participate in full verification assessments every three or five years.

The goals of the CRS support those of the NFIP and the advancement of community resilience:

- Reduce flood damage to insurable property
- Strengthen and support the insurance aspects of the NFIP
- Encourage a comprehensive approach to floodplain management

As of April 2022, there were 1,520 communities nationwide participating in the CRS, including 96 in California. Most of the participating California communities are in the Central Valley or along the coast where the highest concentrations of active NFIP policies can be found. The concentration of coverage in the Central Valley is likely due to the concerns of riverine flooding, which can be widespread. The 96 participating communities in California allow for discounted premiums for 130,843 policies, translating to \$13.3 million saved on the total premiums of \$104 million paid in annually by the residents of the State according to [www.crsviz.com](http://www.crsviz.com).

Figure 51-2 summarizes the distribution of communities by CRS class rating. The CRS program uses a Class rating system to determine flood insurance premium reductions for policy holders. Participating communities are rated from 1 to 9, with Class 1 communities receiving the largest discount. Each class achieves a 5 percent discount to applicable NFIP policies in the community; however, minus rated, [severe repetitive loss](#) (SRL), or structures with violations may not receive the discount. A Class 9 community receives a 5 percent discount. Each CRS class improvement produces a 5 percent greater discount on the flood insurance policy premiums, with a Class 1 community receiving a 45 percent discount.

**Figure 51-2.** California CRS Participating Communities by Class

Source: (FEMA 2022c)

CRS participation and interest in California is supported by two user groups. These groups are formed to represent municipal, county, regional, and State networks that collaborate to meet local flood mitigation goals and support each other in qualifying for CRS credit. Participation in these groups is open to both current CRS communities and interested communities. The two groups are the North Central CRS Users Group of California and the Santa Clara County California CRS Users Group. While these groups do not earn credit in the program themselves, they do provide a platform for learning and an opportunity to discuss changes, obstacles, and successes.

In addition, DWR developed a CRS strategy to support community participation and to aid communities with increasing their CRS classification. The strategy has four main elements and a series of projects associated with them (DWR 2022a):

- **Encourage Participation:** State staff promote the CRS and help communities join the program. DWR explains the benefits of the CRS to elected officials and other local decision makers so they will encourage their staff to devote the resources needed to join the CRS or improve their classification.
- **Facilitate Credits:** DWR and other State agencies help communities receive credit for State programs.
- **Improve Local Programs:** Training, templates, models, and examples help communities improve their floodplain management activities and receive CRS credit for them.
- **Track Progress:** DWR can see where improvements are made, make adjustments, and measure the worth of its efforts.

### 51.5.12. Cooperating Technical Partner

Various entities in California have accessed funding through FEMA's Cooperative Technical Partnership to support flood risk reduction. Cal OES has developed strong partnerships with several of the Cooperative Technical Partnership recipients. For example, Cal OES coordinates closely with The Nature Conservancy in its work to develop tools and resources to support communities in accessing funding for nature-based projects. Cal OES provides feedback on these tools and engages with The Nature Conservancy to assist in program outreach and education on nature-based solutions. Cal OES also works closely with OPR to establish a pipeline of projects that incorporate nature-based solutions for FEMA funding and to align State funding programs and timelines to be available to match the FEMA dollars. These collaborations assist communities in accessing the HMA programs and increasing their resiliency through nature-based approaches.

### 51.5.13. National Dam Safety Program

California has partly based its Dam Safety Program on the National Dam Safety Program. The State has taken the federal tools as a base for its own program and then expanded on them. As part of this program, [DSOD](#) has categorized State-regulated, jurisdictional dams based on FEMA's hazard classifications. For California's dam program, DSOD split FEMA's "high" classification into two classifications: high and extremely high. California's Government Code Section [8589.5](#) even references FEMA's guidelines for dam EAP development, as dam owners are required to develop their EAPs based on the federal guidelines.

As required by the FEMA guidelines, California also mandates that dam owners must execute an EAP notification exercise, as well as update the EAPs and inundation maps on a prescribed schedule. In conjunction with DSOD, Cal OES will work with local public safety agencies to help them incorporate the EAPs into local hazard planning efforts.

### 51.5.14. California Disaster Assistance Act

The CDAA authorizes the Director of Cal OES to administer a disaster assistance program that provides financial assistance from the State for costs incurred by local governments as a result of a disaster event. Funding for the repair, restoration, or replacement of public real property damaged or destroyed by a disaster is made available when the Director concurs with a local emergency proclamation requesting

State disaster assistance. The program also provides for the reimbursement of local government costs associated with certain emergency activities undertaken in response to a State of Emergency proclaimed by the Governor. In addition, the program may provide matching fund assistance for cost sharing required under federal PA programs in response to a Presidential Major Disaster or Emergency Declaration. When the Director determines there are mitigation measures that are cost-effective and that substantially reduce the risk of future damage, hardship, loss, or suffering in an area where a State of Emergency has been proclaimed by the Governor, the Director may authorize the implementation or replacement of mitigation measures under the CDAA. This program fills the gap when the damage in an area is not sufficient to trigger a Presidential Disaster Declaration and open a PA funding opportunity. The Act is a key element of California's commitment to assisting communities in recovering from disasters and building long-term resilience.





# 52. DEMONSTRATING COMMITMENT



## **E7 – 44 CFR Section 201.3(c), 201.5(b)(4), and 201.6(d): Does the state demonstrate commitment to a comprehensive mitigation program?**

Chapter 52 explicitly outlines how California is committed to implementing a comprehensive statewide mitigation program that includes state-level collaboration, local program support, and implementation of building codes.

Under FEMA guidance for Enhanced Plans, a state must detail how its plan reflects a commitment to a comprehensive mitigation program. California's commitment to a comprehensive mitigation program is expressed through the sum of its integrated mitigation efforts to address various hazards that are implemented at the State, regional, and local levels. The State's comprehensive program is reflected in SHMP goals which collectively prioritize reducing risk to life, property, community lifelines, and the environment; building capacity and capabilities; integrating equity; using the best available data and science; and integrating mitigation principles into laws, regulations, and policies.

California's commitment to a comprehensive hazard mitigation program is further demonstrated by its annual validation meetings with FEMA Region 9. Since 2020, the State has participated in three annual validation meetings: August 13, 2020; August 5, 2021; and August 12, 2022. Each of these meetings resulted in findings by FEMA Region 9 that California has sufficient planning coverage to enable a high number of jurisdictions to apply for hazard mitigation funding, that California is coordinating across sectors to deliver its hazard mitigation program, and that the State has sufficient staffing and capabilities to implement its hazard mitigation program successfully.

Additional efforts that demonstrate California's commitment to a comprehensive and integrated mitigation program are described in detail in Chapter 51.

## 52.1. STATEWIDE MITIGATION AND RESILIENCE ACTIVITIES

The strength of California's mitigation program is the diversity of efforts by various agencies throughout the State. These critical efforts are individual with seismic and wildfire home hardening upgrades, jurisdictional with incorporating climate and equity into planning and implementation efforts, and overarching with cybersecurity and natural hazard mitigation efforts impacting regions and the State as a whole. The 2023 SHMP builds on the 2018 SHMP update's content, broadening discussion on equity and climate change considerations. The State's efforts around and commitment to addressing climate change were significant themes of the Governor's State of the State address in 2019, 2021, and 2022. Equity and justice were overarching themes in 2019, 2020, and 2022, and was a major focus of the State of the State address in 2021.

Chapter 45 describes California's statewide hazard mitigation program, including legislative initiatives, mitigation task forces/technical advisory groups, and executive actions that promote hazard mitigation. Following are some examples that demonstrate further California's commitment to hazard mitigation.

The California Fire Safe Council (CFSC) is an active mitigation council in the State that acts as a federal grant clearinghouse providing subgrant funding to local fire safe councils for wildfire mitigation activities.

As of July 2022, the CEA [EBB](#) program has provided over 7,628 grants to homeowners for seismic retrofit in specific areas of the State. An additional 5,291 households are in the process of acquiring retrofit funding, and 4,619 homeowners are on the waitlist for the grant program. Initial funding for the EBB program was provided through CEA's Loss Mitigation Fund. In addition to legislatively allocated funding, the EBB program seeks funding from HMGP when available. To date, over 17,000 single-family residences have been seismically retrofit through the California Residential Mitigation Program's EBB Initiative (EBB 2022).

The State also mandates that local jurisdictions include safety elements as part of their general plans; this requirement is unique to California. Multiple State-mandated planning regulations stipulate the incorporation of climate resilience in LHMPs by reference in general plan safety elements. SB 379 (2015) requires safety elements to include a climate change vulnerability assessment, measures to address vulnerabilities,

and a comprehensive hazard mitigation and emergency response strategy. This requirement may be met by updating the LHMP, climate adaptation plan, or other similar plan and incorporating it into the safety element by reference. [AB 2140](#) (2007) authorizes financial incentives for cities and counties to integrate LHMPs with mandated general plan safety elements. SB 1035 (2018) requires regular subsequent safety element reviews and, if necessary, updates to identify new information relating to flood and fire hazards, climate adaptation, and resiliency strategies after initial revisions.

Executive Order B-30-15 integrates directives on climate change mitigation and adaptation, thus providing a powerful framework for action. This order requires all State agencies to take current and future climate impacts into account in all planning and investment. It directs the preparation of implementation plans to ensure coordinated progress on the objectives of the Safeguarding California Plan and emphasized the State's commitment to protecting vulnerable populations and making flexible, adaptive, and natural infrastructure solutions a top priority. To implement this direction, OPR prepared the Planning and Investing for a Resilient California Guide. Additionally, OPR is preparing an update to the Executive Order B-30-15 guidance pursuant to Executive Order N-19-19.

## 52.2. STATE-LEVEL PLANNING INITIATIVES AND COLLABORATION

The SHMP is an important supporting document to the California SEP. The 2022 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 interlinked. Section 7 of the SEP identifies mitigation as one of the four emergency management functions and references the role of the SHMP in describing and mitigating hazards, risks, and vulnerabilities, thereby reducing disaster losses.

"Protecting Californians from Extreme Heat: A State Action Plan to Build Community Resilience," released in April 2022, is an example of mitigation and recovery linkages in various California single-hazard mitigation and climate adaptation plans. The Plan has two action tracks specifically focused on mitigation and resiliency efforts. These are Action Track C: Increase Resilience of Our Built Environment, and Action Track D: Utilize

Nature-Based Solutions. These two tracks identify goals relating to updating building codes and regulations, using the best available science to inform actions, investments in resiliency-building infrastructure, promoting nature-based solutions, and enhancing the ability of the State's natural resources to withstand increasing temperatures.

In an effort to advance interagency cooperation and learning about mitigation, strategic working groups have been formed by Cal OES Hazard Mitigation and engaged at various times over the last 15 years. These groups include the following:

- 2018 SHMP Goal and Objectives Strategic Working Group
- Social Vulnerability Model Update Strategic Working Group
- GIS Technical Assistance Working Committee
- Cross-Sector Communications and Knowledge Sharing Strategic Working Group
- Mitigation Progress Indicators and Monitoring Strategic Working Group
- Land Use Mitigation Strategic Working Group

For the 2023 SHMP update, this strategic working group model became the official format for collecting input and facilitating relationship-building between partner agencies. The 2023 SHMP update utilized four Hazard Groups and four Working Groups, each consisting of various federal, State, local, Tribal Nation, and non-governmental partners. Additional information on these Hazard and Working Groups can be found in Appendix D.

## 52.3. ASSISTANCE WITH LOCAL PLANNING AND MITIGATION ACTIVITIES

Cal OES staff continues to maintain positive working relationships with local government constituents through informal contact, such as phone and e-mail communications, as well as attendance at regional meetings, and letters providing continued technical assistance support and information as needed. In addition to technical assistance, all levels of government participate in funding disaster mitigation measures. This multi-level participation is part of California's comprehensive mitigation approach.

At the State level, billions of dollars have been spent on earthquake, flood, and wildfire mitigation measures. Most recently, the State legislature approved \$100 million for the Prepare California Jumpstart and Match programs to bolster equity priority communities that encounter barriers accessing federal mitigation funding. State voters have approved billions of dollars in mitigation investments, including the notable approval of a State bond act in 2014, authorizing over \$11 billion to fund water supply infrastructure, reliability, and mitigation efforts.

California's local governments are also creative and innovative in their mitigation financing approaches. At the county and city levels, hundreds of millions of dollars have been spent on retrofitting buildings and supporting flood control. At these local levels, special bonding, sales tax districts, and tax rebate programs have been established to fund earthquake, flood, and wildfire mitigation. Most of these efforts require local voters to approve the finance mechanism, usually in the form of additional fees and taxes. Thus, Californians do use their "pocketbook" to mitigate hazards.

With regard to technical assistance, Cal OES Local Mitigation Planning Unit (LMP Unit) hosts LHMP development workshops and presentations that are well attended by city, county, special district, and Tribal Nation representatives, as well as NGO representatives. The workshops and presentations are provided to help local governments develop their LHMPs and to identify local mitigation opportunities. The 2023 SHMP planning process ensures that the content is robust and actionable for local jurisdictions that use the SHMP as a resource in their own planning efforts.

With this, the Cal OES LMP Unit and the Cal OES State Mitigation Planning Unit (SMP Unit) held a joint County Emergency Managers' Webinar and follow-up listening sessions with local jurisdictions to collect firsthand suggestions of what information, presentation, and guidance would be useful to include in the 2023 SHMP to support local mitigation planning efforts. For more information about Cal OES's LHMP Technical Assistance and Training Program, see Chapter 5, Section 5.1.

The Cal OES website includes links to a recorded session of G-318: Local Hazard Mitigation Planning, delivered jointly by Cal OES and FEMA in July 2020. Additionally, Cal OES has placed links to county LHMPs and FEMA local mitigation planning resources on the Cal OES Hazard Mitigation Division web page to support local jurisdictions' LHMP development and update efforts. Other resources for local mitigation planning on the Cal OES website include the "MyPlan" and "MyHazards"

Internet Mapping Tools, which provide users with practical GIS-based information at the local level to begin a risk assessment.

Commitment to support local mitigation planning is further represented by the ongoing educational program operated by the California Specialized Training Institute in San Luis Obispo (Cal OES 2022e). As an outreach operation of Cal OES, the institute has been providing training in mitigation planning to local agencies since long before the [DMA](#) was passed by Congress in 2000. Its focus is on facilitating and providing the best possible solutions in training, exercises, and education with an eye on building capabilities, using an all-hazards, total resource approach.

Various other State agencies also provide workshops with mitigation content. These agencies include OPR, which performs the crucial role of coordinating regional and local adaptation efforts with State initiatives to coordinate California's comprehensive strategy to adapt to climate change. Other agencies providing workshops addressing mitigation include CNRA, which coordinates Safeguarding California and FEMA coastal mapping workshops; the California Seismic Safety Commission (SSC); DWR and California Silver Jackets; Caltrans; CAL FIRE Land Use Planning and Firewise Community programs; the American Planning Association; and the California Utilities Emergency Association, which provides workshops for its members and associate members.

Updates to the California Adaptation Planning Guide provide additional support for local hazard mitigation planning. The Planning Guide includes an interactive web application to provide users with the best available climate-relevant data and tools. Additionally, future updates of the guide may include a process for surveying its users with the goal of incorporating feedback into future updates and refinements. The 2022 California Climate Adaptation Strategy includes a lengthy discussion on steps for climate adaptation and emergency management integration.

Significant investments in hazard risk mapping have been made by major State agencies responsible for mitigation of California's primary hazards. For example, the CGS implements the Seismic Hazards Mapping Act program that identifies ground shaking, liquefaction, landslides, probabilistic earthquake maps ([www.quake.ca.gov](http://www.quake.ca.gov)), and other earthquake-related hazards. DWR has developed 200-year flood maps that will significantly increase flood hazard information, and CAL FIRE continues to update data sets on wildland urban interface (WUI), High Fire Hazard Severity Zones, and other wildfire hazards.



DWR also maintains Levee Flood Protection Zone (LFPZ) maps. These maps are limited to areas directly protected by [State Plan of Flood Control](#) (SPFC) levees and consider the maximum area likely to be inundated based on a series of levee failures when river channels are completely full. Though there is no specific frequency associated with these maps, they are useful in identifying areas that could be flooded under the worst-case scenarios. In practice, these maps tend to cover an area greater than FEMA's levee protected 100-year floodplains, known as the SFHA Shaded [Zone X](#). Annual flood risk notifications are mailed to around 300,000 property owners for these mapped areas, reminding them to purchase flood insurance, prepare an evacuation route, and have a list of valuables to take with them in the event of a levee failure. These maps are periodically updated based on input from cities and counties.

Many of the State's hazards mapping tools along with many other GIS tools are accessible on the State of California Geoportal website (CDT 2020). In addition, OPR has also released the General Plan Guidelines Data Mapping Tool, which can be used for hazard mitigation planning (OPR 2022d). All these efforts combine to provide critical science-based information to benefit State and local agency users in creating and implementing effective and comprehensive mitigation plans and projects. For additional information on support for local hazard mitigation planning refer to Chapter 43.

### 52.3.1. Helping Local Governments Update Expiring Plans

Under Enhanced State Mitigation Planning Requirement E7-c, states must demonstrate a commitment to mitigation planning by helping local governments prepare and adopt updated plans before current plans expire. FEMA has established a target that 75 percent of local governments that have previously submitted a mitigation plan should have plans that remain current or are in the process of being updated. Based on the most currently available information (as of December 2022), this target is met for California's communities.

## 52.4. BUILDING CODES

California has led the nation in requiring local governments to adopt current versions of nationally applicable model building codes, enhanced by State laws specifically requiring local governments to address natural hazards. This applies not only for design and construction of State-sponsored mitigation projects, but also for all private

construction. In 2005, CBSC approved OSFM's emergency regulations amending the California Building Code, to add Chapter 7A Materials and Construction Methods for Exterior Wildfire Exposure. These codes are updated regularly. California and local jurisdictions have adopted the 2016 California Building Code and Fire Code, with the 2015 [International Building Code](#) and the International Fire Code as the base documents. These codes include provisions for ignition-resistant construction standards in the WUI.

The adoption of building codes for the WUI is a key component of the State's wildfire resilience approach. Research shows that homes that were constructed after the 2008 adoption of the new building codes were 40 percent less likely to be destroyed in a wildfire (National Bureau of Economic Research 2021). California further supports bringing older homes up to a standard equivalent to the Chapter 7A codes through the California Wildfire Mitigation Program.

Another example affecting local development is the linking of DWR floodplain management programs to city and county statutory general plan processes. State law requires local commitments to comprehensive mitigation action through State-mandated general plan safety elements with which local development actions must be consistent. AB 162 (2007) modified the State's planning law to require inclusion of floodplain mapping in several elements of mandatory local general plans. DWR has completed a user guide for local governments to implement that law. Local governments in the Central Valley must amend their general plans and zoning to be consistent with the CVFPP adopted in 2012.

A more recent example affecting local regulation of flood risk has been the preparation of a new model building code ordinance. In coordination with CBSC, DWR updated the California Building Code to require new structures built within FEMA-identified SFHAs to be elevated an additional foot above the base flood elevation, which is currently the projected 100-year flood event water surface level. Upon completion of a new FEMA Flood Insurance Study, communities participating in the NFIP are required to adopt the resulting Flood Insurance Rate Maps (FIRMs) and updates to the California Building Code. The model ordinances were designed to assist communities easily incorporate these changes to the California Building Code to mitigating future flood damages by exceeding the NFIP standards.

In 2010, CBSC adopted the nation's first mandatory green building code, known as the CALGreen Code, which became effective in January 2011. This code outlines standards for newly constructed buildings and covers all residential, commercial,

hospital, and school buildings. The CALGreen Code was updated in FY 2016 – 2017. The code requires builders to install plumbing that cuts water usage by up to 20 percent, to divert 65 percent of construction waste from landfills to recycling, and to use low-pollutant paints, carpeting, and flooring. Under this code, the inspection of energy systems is mandated to ensure efficiency. For non-residential buildings, the code requires installation of different water meters for indoor and outdoor water usage. Local jurisdictions may adopt ordinances with more stringent green building codes. The CALGreen Code is adopted by State and local government as part of the CCR (Title 24, Part 11).

Through [SSC](#), the State has sponsored comprehensive, multi-year efforts to mitigate risks posed to existing buildings identified as necessary for post-disaster response and recovery operations. For example, after the December 23, 2003, San Simeon Earthquake, SSC assessed the need for accelerated local mitigation of [unreinforced masonry](#) (URM) buildings, stimulating the legislature to pass new occupant disclosure requirements for URM buildings not yet retrofitted.

California recognizes that building codes are a key component of resilient communities. California's Building Code for the Wildland Urban Interface is one of the most stringent in the country, and the State's regulation in the floodplain has led to a reduction in RL and SRL properties. Cal OES has sought to fund Building Code Enforcement through the HMA programs for local jurisdictions. California's strong building code has also been critical in securing funding under the BRIC program, which considers building code in its technical scoring criteria.



# 53. EFFECTIVE USE OF EXISTING MITIGATION PROGRAMS



## **E8 – 44 CFR Section 201.5(a), and 201.5(b)(3): Is the state effectively using existing mitigation programs to achieve mitigation goals?**

As outlined in Chapter 53, California leverages its full use of federal funding opportunities available. These grants complement state and local matching programs to ensure California communities can take advantage of all opportunities presented.

The Enhanced Plan must demonstrate that the State effectively uses existing mitigation programs to achieve its mitigation goals. The State must document that it has fully and effectively made use of FEMA and other funding already at its disposal, such as taking full advantage of FEMA programs to fund mitigation actions and using other FEMA and non-FEMA funding to support mitigation. California's commitment to mitigation has resulted in a wide array of available non-federal resources to support a statewide comprehensive approach to reducing risk and building resilience.

## 53.1. EXISTING FEDERAL PROGRAMS

Federal programs dedicated to providing financial assistance and resources to propel mitigation and resilience activities range across agencies. California makes full and effective use of programs available through FEMA, [HUD](#), the U.S. Army Corps of Engineers (USACE), and the U.S. Forest Service. Below is a non-exhaustive list of programs utilized in California.

### 53.1.1. Hazard Mitigation Assistance

Since 2018, there have been numerous HMGP and HMGP Post Fire declarations in the State with many events still ongoing. Cal OES has consistently maximized full use of

these opportunities. In this time, Cal OES has submitted 530 sub-applications for more than \$1.05 billion. To be able to address withdrawals or denials, Cal OES submits waitlists for each grant.

Since the 2018 SHMP, Cal OES has completed over 2000 mitigation projects funded through HMA programs for a total investment of over \$1.6 billion in federal dollars. Within this timeframe projects have been completed and closed under HMGP, FMA, and legacy programs such as Pre-Disaster Mitigation, Legislative Pre-Disaster Mitigation, and Severe Repetitive Loss. The distribution of completed projects by funding program is provided in Table 53-1; there are no completed projects under the BRIC program as of this 2023 SHMP update.

**Table 53-1.** Distribution of Completed Projects by Funding Program, 2018 – October 2022

<b>FEMA Grant Program</b>	<b>Total Funding Obligated</b>	<b>Number of Projects</b>
<b>Hazard Mitigation Grant Program</b>	\$1,508,572,186.37	1691
<b>Pre-Disaster Mitigation</b>	\$114,651,908.98	241
<b>Flood Mitigation Assistance</b>	\$16,926,935.70	56
<b>Legislative Pre-Disaster Mitigation</b>	\$13,731,511.95	31
<b>Severe Repetitive Loss</b>	\$8,415,985.02	5
<b>Total</b>	<b>\$1,662,298,528.02</b>	<b>2024</b>

Source: (FEMA 2023e)

Table 53-2 provides the funding totals for HMGP and HMGP Post Fire disasters since 2018 as of October 2022. These figures demonstrate the continued opportunity to maximize the usage of federal dollars to implement mitigation throughout the State. Declarations that have not been provided a lock-in amount of funding are not included.

Many of these disasters have active pending projects being reviewed for approval by FEMA. The total available is the available amount the State is able to apply for. The obligated amount is the total the State and its subrecipients have been awarded and the pending projects represent projects waiting approval and the corresponding amount of funding for those projects is shown in the Federal Share Pending column.

**Table 53-2.** Funding for HMGP and HMGP Post Fire Disasters, 2018 – October 2022

<b>Declaration</b>	<b>Total Available (HMGP Locked in Ceiling)</b>	<b>Total Obligated</b>	<b>Projects Pending</b>	<b>Federal Share Pending</b>
<b>DR-4353</b>	\$56,578,663.00	\$28,136,819.05	6	\$15,782,576.71
<b>DR-4382</b>	\$40,492,823.00	\$14,825,276.16	27	\$57,508,209.52
<b>FM-5278</b>	\$1,817,728.00	\$540,775.90	4	\$2,250,020.50
<b>DR-4407</b>	\$318,145,901.00	\$111,676,269.65	54	\$195,938,070.42
<b>DR-4422</b>	\$66,707.00	\$8,628.00	0	—
<b>DR-4423</b>	\$315,711.00	\$40,833.00	1	\$272,808.00
<b>DR-4425</b>	\$1,304,439.00	\$206,208.00	1	\$971,745.00
<b>DR-4431</b>	\$7,730,527.00	\$2,310,216.40	11	\$35,056,573.25
<b>DR-4434</b>	\$7,895,795.00	\$4,947,792.08	11	\$35,811,658.61
<b>FM-5293</b>	\$16,371,706.00	\$1,354,253.16	14	\$26,186,096.00
<b>DR-4482</b>	\$403,653,220.00	\$1,581,174.54	22	\$204,582,050.78
<b>DR-4558</b>	\$130,525,642.00	\$20,642,212.32	38	\$107,789,940.82
<b>DR-4569</b>	\$81,842,177.00	\$4,113,586.74	32	\$167,960,875.36
<b>FM-5380</b>	\$7,787,780.00	\$472,744.07	10	\$7,989,292.00
<b>DR-4610</b>	\$46,492,511.00	\$369,785.26	0	—
<b>DR-4619</b>	\$35,293,281.00	\$225,989.39	0	—
<b>FM-5419</b>	\$6,292,416.00	—	0	—

Source: (FEMA 2023e)

Cal OES will continue to fully utilize all available sources of hazard mitigation funding, including all programs available from FEMA. Cal OES will apply for all available HMGP funding after Major Disaster Declarations and HMGP Post Fire grants resulting from FMAG declarations at the close of each federal fiscal year, up to the available HMGP funding ceiling. For each HMGP disaster grant submission, Cal OES will submit a waitlist of sub-applications, exceeding the ceiling, in case any sub-applications submitted to FEMA are withdrawn.

For non-disaster grants programs, such as BRIC and FMA, Cal OES will fully utilize the State maximum allocations available for Capability and Capacity Building activities and submit viable sub-applications for the nationally competitive portions of the BRIC and FMA programs. Since 2018, Cal OES has submitted 128 sub-applications totaling more than \$1.3 billion under the non-disaster grant programs.



### 53.1.2. Public Assistance

Since 2018, California has made full and effective use of available PA funding. Between 2018 to 2022, 34 percent of permanent work completed under the PA program contained projects incorporating mitigation measures under the Section 406 Mitigation funding (see Table 53-3). California will continue to promote the inclusion of 406 Mitigation measures when PA funding is available.

**Table 53-3.** PA and Section 406 Projects for Recent Disaster Declarations

Declaration Number, Date	PA Category C-G Projects		Section 406 Mitigation Projects			
	Number of Projects	Net Cost	Number of Projects	% of PA Total Number	Cost	% of PA Total Cost
<b>4353DR-CA, 1/3/2018</b>	111	\$432,850,634.74	11	9.91%	\$334,316.00	0.08%
<b>4382DR-CA, 8/5/2018</b>	43	\$371,357,291.21	8	18.60%	\$397,139.03	0.11%
<b>4407DR-CA, 11/12/2018</b>	173	\$2,244,673,631.69	23	13.29%	\$5,994,278.46	0.27%
<b>4431DR-CA, 5/1/2019</b>	155	\$53,705,041.85	34	21.94%	\$2,217,042.41	4.13%
<b>4434DR-CA, 5/18/2019</b>	143	\$61,990,125.29	72	50.35%	\$2,216,404.50	3.58%
<b>4558DR-CA, 8/22/2020</b>	224	\$633,440,956.32	133	59.38%	\$1,800,070.16	0.28%
<b>4569DR-CA, 10/16/2020</b>	43	\$246,783,473.07	17	39.53%	\$114,095.81	0.05%
<b>4610DR-CA, 8/24/2021</b>	35	\$322,378,710.93	7	20.00%	\$182,556.66	0.06%
<b>4619DR-CA, 9/12/2021</b>	43	\$156,817,871.95	25	58.14%	\$337,414.99	0.22%
<b>Total</b>	<b>970</b>	<b>\$4,523,997,737.05</b>	<b>330</b>	<b>34.02%</b>	<b>\$4,523,997,737</b>	<b>0.30%</b>

### 53.1.3. Cooperating Technical Partners

Various entities in California have made use of the Cooperative Technical Partnership (CTP) program. In 2022, seven entities had active CTPs with FEMA:

- **CGS**—Tsunami mapping, bay, and harbor risk assessments, mitigation action reports
- **OPR**—Tools and resources for plan integration, flood after fire planning, and State-level partnership development

- **DWR**—Flood hazard mapping for FIRM updates in Butte County and Tehama County, future climate flood modeling in Merced; teacher training program on floodplain management
- **Sacramento County**—Flood hazard mapping for FIRM updates
- **Western Shasta Resource Conservation District**—Floodplain mapping for mitigation projects alternatives assessment
- **Placer County**—Flood hazard mapping for FIRM updates
- **The Nature Conservancy, California Chapter**—Tools and resources for nature-based flood mitigation project development

These partnerships support long-term flood resilience around the State, and Cal OES has been engaged with several of the recipients to ensure their efforts are incorporated into planning and funding decisions.

#### 53.1.4. National Earthquake Hazards Reduction Program

Other programs available to Cal OES include the National Earthquake Hazards Reduction Program (NEHRP). In 2021 and 2022, Cal OES sub-awarded NEHRP funds to the Disaster Resistant Business Toolkit Work Group to increase earthquake resilience by increasing earthquake mitigation at food distribution facilities within the Charitable Food Assistance System. In FY 2021, non-structural risk assessments were conducted at 12 large Regional Food Banks located in high-risk seismic areas in California, and structural risk assessments were done at three of the Food Bank facilities. Additional structural risk assessments are funded in FY 2022. These risk assessments will be used to support the development of Notice of Intent for future HMGP funding. The work group will create the Scope of Work and conduct the BCA required for the HMGP application for structural and non-structural seismic retrofit activities. The goal is to implement the mitigation recommendations identified during the risk assessments with the assistance of HMGP funding so that these facilities will be able to support their communities by providing essential services following a large earthquake.

The Disaster Resistant Business Toolkit Work Group will also receive NEHRP funds to conduct webinars for small and medium-sized business with a focus on Spanish-speaking business owners. During the webinars participants will receive access to free resources to facilitate continuity planning and mitigation information to increase the likelihood that, if implementing these mitigation steps, businesses can reopen sooner

following a large earthquake. This will reduce economic losses for businesses and their communities.

The University of Southern California, Southern California Earthquake Center will receive a NEHRP sub-grant award from Cal OES to support The Great California ShakeOut Drill and to fund Earthquake Country Alliance activities, including the Mini Awards Program. This Program solicits applications for projects from local partners including non-profit organizations to implement non-structural mitigation. This funding also supports the California Secure Your Space Campaign. Earthquake Country Alliance members work with partners to educate the public and coordinate non-structural mitigation projects, including bookshelf straps, television straps, wall hangers, and putty to secure small fragile items, to increase earthquake resilience throughout California.

### **53.1.5. Rehabilitation of High Hazard Potential Dams Grant Program**

FEMA's Rehabilitation of High Hazard Potential Dams (HHPD) Grant Program makes federal funds available to eligible states for pass through to non-federal governmental organizations or non-profit organizations for the rehabilitation of dams that fail to meet minimum State dam safety standards and pose unacceptable risk to life and property. For the purposes of the HHPD Program, rehabilitation means the repair, replacement, reconstruction, or removal of a dam that is carried out to meet applicable State dam safety and security standards. The grant provides funding for technical, planning, design, and construction assistance. California has been awarded the following amounts since 2019 when the grant program started:

- \$260,484 in 2019
- \$267,244 in 2020
- \$921,442 in 2021
- \$1.0 million in 2022

The National Dam Safety Program State Assistance Grant Awards provide assistance to encourage the establishment and maintenance of effective State programs intended to ensure dam safety, to protect human life and property, and to improve State dam safety programs. The program funds the following types of activities: dam safety training for State personnel, increase in the number of dam inspections, increase in the submittal and testing of EAPs, more timely review and issuance of

permits, improved coordination with State emergency preparedness officials, identification of dams to be repaired or removed, and conduct dam safety awareness workshops and creation of dam safety videos and other outreach materials. California was awarded the following amounts since 2018:

- \$130,134 in 2018
- \$134,180 in 2019
- \$121,041 in 2020
- \$114,985 in 2021
- \$220,586 in 2022

### 53.1.6. U.S. Department of Housing and Urban Development Programs

HCD administers the [Community Development Block Grant Mitigation \(CDBG-MIT\) program](#). CDBG-MIT is provided at the federal level by the U.S. Department of Housing and Urban Development. Since 2017, HCD has received \$177.6 million in CDBG-MIT funds to award to California's communities. Only the funds made available in 2017 have been awarded so far, totaling \$83 million. In 2018, HUD made \$61 million available for California, which has yet to be awarded. In 2020, HUD rolled CDBG-MIT into the [CDBG Disaster Recovery \(DR\) program](#). Under this program, California received \$30 million in 2020 and is estimated to have received \$3.6 million in 2021. California did not receive CDBG allocations in either 2019 or 2022. The full list of CDBG programs is available on the [HCD website](#).

### 53.1.7. U.S. Army Corps of Engineers Programs

DWR oversees federal dollars received from USACE. These funds are allocated to flood protection, basin construction, ecosystem restoration, and other floodplain management projects. Since 2018, California has received over \$2.7 billion in funds, which have been allocated across 14 projects statewide. In that same time, California has expended over \$675 million of those funds on those projects. Examples of these projects include the Natomas Basin construction, the Sacramento Riverbank Protection Project, the Hamilton City Flood Damage Reduction and Ecosystem Restoration Project, and the Folsom Dam Raise. Additional information on these and other projects is available on the USACE [Sacramento District Website](#).

## 53.2. EXISTING STATE PROGRAMS

The State of California invests in hazard mitigation and climate adaptation through various State grant programs across a variety of partner agencies. Below is a non-exhaustive list of these programs.

### 53.2.1. Prepare California Initiative

The Prepare California initiative seeks to build capacity and support mitigation actions in equity priority communities at the greatest risk for hazard impacts. The Initiative was funded under the 2021-22 State Budget at \$100 million. The funding was allocated to two new grant programs: Prepare California JumpStart and Prepare California Match. Cal OES identified communities for funding by prioritizing California census tracts according to their estimated hazard exposures and equity priority using the best available data.

Prepare California JumpStart allocated \$15 million to help jumpstart eligible communities in their development and implementation of resilience planning and activities. The program primarily provides support to augment resiliency staff at the local level to develop local initiatives that directly and primarily benefit eligible equity priority and communities with high-risk hazard. Resiliency staff funded under this initiative focus on mitigation planning and implementation, community education on mitigation, recovery planning, and future mitigation project scoping. This program is meant to fill gaps in staffing capacity and expertise at the local level to ensure that under-resourced communities can effectively and meaningfully convene stakeholders to produce effective mitigation and climate adaptation plans and ultimately compete effectively for federal and State mitigation funds.

Prepare California Match allocated \$85 million in State funding to cover the required non-federal cost share for eligible communities and projects applying for FEMA's HMGP, BRIC, and FMA programs. This program was intended to ensure that lack of local financial resources does not continue to prevent communities from undertaking critical mitigation activities. Along with covering the non-federal match to participate in the HMA programs, Cal OES provided enhanced technical assistance to qualified communities to develop projects and activities that directly and primarily benefit eligible equity priority and communities with high-risk hazards and reduce risk to loss of life and property from natural disasters.

### 53.2.2. CAL FIRE Programs

CAL FIRE administers a number of State-level grant programs, including the Forest Health Grant Program, the Wildfire Prevention Grant Program, the Urban and Community Forestry Grant Program, the [CFIP](#), and the Wildfire Resilience Block Grants program.

The [Forest Health Grant Program](#) awards funding to landscape-scaled land management programs that restore forest health and bolster disaster resilience on forest lands, protect the State's upper watersheds, promote long-term storage of carbon in forest trees and soil, minimize the loss of forest carbon from unnaturally high-severity wildfires, and further the goals of various State climate and land management plans. The program has made available \$155 million in [FY](#) 2020-21, \$159 million in FY 2021-22, and \$120 million in FY 2022-23, for a total of \$434 million.

The [Wildfire Prevention Grants Program](#) provides funding for wildfire prevention projects and activities in and near fire-threatened communities that focus on increasing the protection of people, structures, and communities. Funded activities include hazardous fuels reduction, wildfire prevention planning, and wildfire prevention education, with an emphasis on improving public health and safety while reducing GHG emissions. Applications submitted for this program are evaluated against the project development roadmap laid out in California's [Strategic Fire Plan](#). A total of \$369 million has been made available since 2020, with \$137 million in FY 2020-21, \$117 million in FY 2021-22, and \$115 million in FY 2022-23.

The [Urban and Community Forestry Grant Program](#) aims to optimize the benefits of trees and related vegetation in urban areas. The grants are designed to help communities to create or implement projects with a focus on reducing GHG emissions, increasing climate resilience, and providing optimal co-benefits, with a particular focus on disadvantaged communities. Most of the grants from this program will be directed to populations meeting the [CARB criteria](#) for being located within [AB 1550-designated](#) disadvantaged communities. The program has made \$204 million available since 2020: \$7 million in FY 2020-21, \$30 million in FY 2021-22, and \$167 million in FY 2022-23. There are seven grant types under the program:

- Urban Forest Expansion and Improvement
- School Greening/Green Schoolyards
- Urban Forestry Education and Workforce Development

- Urban Forest Management Activities
- Urban Wood and Biomass Utilization
- Urban Forestry Regional or Statewide Impact
- Regional or Statewide Education and Outreach

The CFIP was established by the California Forest Improvement Act of 1978. It is the State's primary assistance program for nonindustrial private forest owners. [CFIP](#) provides eligible landowners with technical and financial assistance for planning, reforestation, and resource management investments to improve the health and resilience of California's forestland. As funding is available, the program provides funding to create forest management plans, implement reforestation and restoration projects, reduce fuel hazards, and conduct forest thinning. CFIP is a cost-share program that reimburses landowners between 75 percent and 90 percent of allowable activity costs. CFIP has made \$51 million available since 2021: \$40 million in [FY 2021-22](#) and \$11 million in FY 2022-23.

CAL FIRE created the [Wildfire Resilience Block Grants](#) program in 2020 to fund technical and financial assistance for smaller, private forestland owners. The purpose of the grant is to allow prospective grantees the ability to assist nonindustrial forest landowners. The grantee serves as the supervising entity, providing outreach or assistance to conduct forest restoration or management activities. The program is dependent on special funds and has provided \$22.2 million in funding since 2020: \$2.2 million in FY 2020-21 and \$20 million in FY 2021-22. Funds for FY 2022-23 are to be determined.

Cal OES has partnered with CAL FIRE to develop a State home hardening initiative to retrofit, harden, and create defensible space for homes at high risk to wildfires, focusing on equity priority communities and providing financial assistance for low- and moderate-income households. Governor Gavin Newsom signed AB 38 in 2019 authorizing Cal OES and CAL FIRE to enter into a joint powers agreement to oversee the development and implementation of the Program. Known as the [Home Hardening Program](#), this effort encourages cost-effective wildfire resilience measures to create fire-resistant homes, businesses, public buildings, and public spaces. Mitigation measures such as home hardening, vegetation management, defensible space, and other fuel modification activities provide neighborhood or community-wide benefits against wildfire. Cal OES has developed the program to align with federal funding requirements to match State investments in the program. In the 2021-2022 budget,



California allocated \$20.9 million for the pilot phase of the program, with an additional \$25 million to follow in the 2022-23 and 2023-24 State budgets.

### 53.2.3. Governor's Office of Planning and Research Programs

In addition to using funding effectively, California is committed to leveraging funds to advance equity within the State's mitigation practices. OPR administers the [Adaptation Planning Grant Program](#), which was created to prioritize equitable planning outcomes while supporting integrated social and physical infrastructure to achieve community resilience. This program provides funding to help address local, regional, and Tribal Nation planning needs; provides resources to identify climate resilience priorities; and supports the development of a pipeline of climate-resilient infrastructure projects statewide. The program leverages \$25 million for these projects, distributed in three rounds over three fiscal years. The first round of funding, totaling \$6.6 million, was made available in January 2023. Information on public engagement efforts to develop this grant program is available on OPR's [website](#).

### 53.2.4. Strategic Growth Council Programs

The California Strategic Growth Council administers the [Transformative Climate Communities Program](#), which empowers communities most impacted by pollution to choose their own goals, strategies, and projects to reduce GHG emissions and local air pollution. Transformative Climate Communities uses a place-based strategy for reducing GHG emissions to catalyze collective impact through a combination of community-driven climate projects in single neighborhoods throughout the State. Projects must reduce GHG emissions significantly over time, leverage additional funding sources, and provide health, environmental, and economic benefits to the communities receiving funding. Since 2018, SCG has awarded over \$230 million in grant funding for planning and implementation projects to 26 communities statewide. As of January 2023, the program has awarded four rounds of funding and is preparing the application for a fifth round. The program is administered in collaboration with [DOC](#) and is funded by the California Climate Investments cap-and-trade program. Additional information and resources on the Transformative Climate Communities Program are available on the SGC [website](#).

### 53.2.5. Greenhouse Gas Reduction Fund

Through the Greenhouse Gas Reduction Fund, California has appropriated \$19.6 billion toward the State's climate goals and implemented \$11.4 billion in projects as of August 2022. These investments support programs and projects that reduce GHG emissions in the State and deliver major economic, environmental, and public health benefits for Californians, including meaningful benefits to the most disadvantaged communities. The fund supports programs and projects within the following three priority areas: transportation and sustainable communities, clean energy and energy efficiency, and natural resource and waste diversion. The fund received continuous appropriations and annual appropriations through the Legislature's yearly budget deliberations.

The following is a summary of appropriations from this fund (see Appendix Q for details):

- \$18.3 billion appropriated prior to FY 2022-23
- \$1.6 billion appropriated for use in FY 2022-23
- 23 agencies receiving funds
- 81 programs or sub-programs supported

### 53.2.6. Other State Programs

In addition to the programs listed above, California continuously makes other investments to support the State's mitigation focused activities, such as partnership building, increasing disaster recovery capacity, wildfire prevention and resilience, critical infrastructure protection, habitat protection, environmental justice advocacy, and providing funding to leverage additional resources. Appendix Q lists these appropriations for the most recent five fiscal years. The following is a summary of amounts invested in specific categories:

- **Emergency Management**—\$3.5 billion (2018 – 2023)
- **Climate Change**—\$14.3 billion (2019 – 2023)
- **Natural Resources**—\$159.6 million (2020 – 2021)
- **Climate Change and Natural Resources (combined)**—\$4.4 billion (2018 – 2019)
- **Environmental Protection**—\$2.6 billion (2018 – 2023)
- **Sustainable Agricultural**—\$40 million (2021 – 2022)

- **Resilience retrofits for the University of California (UC) and California State University (CSU)**—\$250 million (2022 – 2023)

## 53.3. EXISTING NON-GOVERNMENTAL PROGRAMS

In addition to government-sponsored funding programs, California makes full and effective use of non-governmental funding to bolster mitigation and enhance resiliency. Below is a non-exhaustive list of these programs in California.

### 53.3.1. California's Fire Safe Council Programs

CFSC is a non-profit organization that provides grant funding, technical assistance, and support to [local Fire Safe Councils](#) and other community wildfire preparedness groups throughout the State. Under their Fire Safe Concept, CFSC provides funding to community-based organizations to implement hazardous fuel reduction projects on landscapes, organize residents to develop community fire planning for homes, and educate and mobilize people to create fire prevention workshops and educational products. Since 2004, [CFSC](#) has awarded 1,163 projects totaling over \$118.4 million in grant funding. Since 2018 alone, CFSC has awarded 203 projects totaling \$22.9 million in grant funding for 123 communities. These funds resulted in 174 wildfire community protection plans, 291 educational products, 42 community and technical workshops, over 2,300 educational programs, and over 66,400 acres treated to minimize wildfire risk. Partners who provide this funding include Cal OES, CAL FIRE, CGS, California Volunteers (CalVolunteers), the U.S. Forest Service, the U.S. Bureau of Land Management, Pacific Gas & Electric (PG&E), Southern California Edison (SCE), Fire Adapted Communities Learning Network, State Farm, and Farmers Insurance. More information on CFSC's available programs and successes is detailed on the [CFSC website](#).

### 53.3.2. League of California's Community Foundation Programs

The League of California Community Foundations is a coalition organization composed of 32 community foundations across California. This organization develops and implements local, statewide, and national initiatives by providing grants and scholarships. This funding helps advance work in the areas of health, human services, education, youth development, environmental sustainability, economic development, arts, culture, leadership development, and disaster resilience. The League maintains a

dedicated Disaster Relief, Recovery, and Resilience Fund, leveraging community foundations and their relationships to get resources where they are needed most in a crisis and to adapt quickly to communities' changing needs. The fund focuses on preparing for and minimizing damage from catastrophic events, investing in hazard mitigation for communities, and supporting coordinated disaster planning with both the public and private sectors.

Since 2020, the League of California Community Foundations has awarded 36 grants totaling \$2.0 million through 18 community foundations statewide. Roughly 32 percent of these grants have focused on resilience specifically. The Disaster Relief, Recovery, and Resilience Fund is supported by the California Endowment, the Chan Zuckerberg Initiative, Schwab Charitable, JPMorgan Chase, PhilaFound.org, CrankStart, the American Hellenic Educational Progressive Association, the Shinnyo-en Foundation, and the Anonymous Foundation. Additional information about the fund and the League's work is available on the [website](#).

### 53.3.3. California Earthquake Authority Programs

CEA is one of the world's largest providers of residential earthquake insurance, with more than 1 million California households holding policies. CEA is backed by 25 participating insurance companies and a claim-paying capacity of about \$19 billion. In addition to providing insurance, CEA is active in advancing California's overall mitigation and resiliency through its [EBB program](#). This program provides funding of up to \$3,000 to retrofit homes built prior to 1980 to bolster resistance to earthquakes. Properly retrofitted qualifying homes are eligible to receive a premium discount through CEA of up to 25 percent. As of July 2022, the EBB program has provided over 7,628 grants to homeowners for seismic retrofit in specific areas of the State. An additional 5,291 households are in the process of acquiring retrofit funding, and 4,619 homeowners are on the waitlist for the grant program. Initial funding for the EBB program was provided through CEA's Loss Mitigation Fund. In addition to legislatively allocated funding, the EBB program seeks funding from HMGP when available. To date, over 17,000 single-family residences have been seismically retrofitted through the California Residential Mitigation Program's EBB Initiative. As of January 2023, the EBB program is closed. Additional information on the program is available on the [CEA website](#).

# 54. IMPLEMENTATION CAPABILITY



**E9 – 44 CFR Section 201.5(b)(2)(i), 201.5(b)(2)(ii), and 201.5(b)(2)(iv): Does the Enhanced Plan document capability to implement mitigation actions?**  
Chapter 54 outlines the ways that California has built capacity to manage a statewide program.

Maintaining capabilities to effectively implement the mitigation program is critical. Cal OES is designated by the Governor as the State administrative agency responsible for the implementation of FEMA funding. In addition to FEMA funding, Cal OES is also responsible for administering federal programs made available through the Department of Homeland Security ([DHS](#)), the Bureau of Justice Assistance, the Violence Against Women Grant Office, the Department of Health and Human Services (HHS), the National Institute of Justice (NIJ), and other federal funding agencies.

In addition, Cal OES must document the system and strategy by which the State assesses implemented mitigation actions including a record of the effectiveness of each mitigation action. The State must describe how effectiveness of each completed mitigation action is assessed and what agency or agencies are involved in the assessment and indicate the time frame for carrying out this assessment. The State must also describe how it tracks potential losses avoided for each action taken.

## 54.1. MITIGATION STAFFING

The Cal OES Hazard Mitigation Section is composed of full-time professional staff dedicated to the review, approval, processing, monitoring, and financial management of federal grants. In addition to permanent staff, Cal OES has the ability for surge capacity to onboard limited-term staff to supplement efforts during disasters and times of crisis.

There are three Divisions within the Hazard Mitigation Section:

- The Hazard Mitigation Grants Division is organized into three units and is responsible for administering hazard mitigation activities and projects through State and federal grant programs, including HMGP, BRIC, FMA, and State-led special initiatives.
- The Hazard Mitigation Planning Division is composed of two units: the [SMP Unit](#) and the [LMP Unit](#). The SMP Unit develops, maintains, and implements the SHMP; the LMP Unit supports the development of and the State's approval of LHMPs. The Hazard Mitigation Planning Division Units work to identify the State's and locals' risk to hazards, current mitigation capabilities, and potential mitigation strategies.
- The Hazard Mitigation Quality Assurance Division consists of two units: the Mitigation Administration Unit and the Mitigation Assessment Unit. The Mitigation Administration Unit is responsible for supporting the Hazard Mitigation Section's grant administration efforts and data analytics support. The Mitigation Assessment Unit is responsible for supporting loss avoidance analysis, BCA, and promotion of Section 406 mitigation under the PA program.

## 54.2. MITIGATION MEASURE RANKING



### **S15 – 44 CFR 201.4(c)(4)(iii): Does the plan describe the criteria for prioritizing funding?**

Section 54.2 describes the State's criteria for prioritizing funding.

Cal OES identifies and prioritizes mitigation projects for funding in alignment with the goals outlined in the SHMP. Cal OES works to identify projects that meet FEMA's eligibility requirements and have the greatest probability of effectively mitigating hazards in the highest risk areas while providing environmental, social, and economic co-benefits. Cal OES seeks projects that align with local and regional planning efforts and the long-term goals of both the sub-applicant and State, funding communities with high levels of growth and development or those expected to see significant increases in risk from climate change.

Cal OES uses a system to evaluate and rank proposed mitigation actions that satisfies evolving State and FEMA priorities while meeting FEMA's strict eligibility criteria. For pre-disaster programs, such as FMA and BRIC, Cal OES releases the priorities for each

funding opportunity with the [NOFO](#). Projects that incorporate nature-based solutions and meet the qualitative criteria of BRIC are selected for submission under the BRIC program.

For post-disaster programs, such as HMGP and HMGP Post Fire, a Hazard Mitigation Operational Strategy is developed and outlines how Cal OES and FEMA will operate in the Joint Field Office, or JFO, to address the priorities identified for the disaster. Funding priorities align with the State mitigation goals and may shift depending on the type of disaster, other ongoing complementary State mitigation efforts, changing guidance, or other factors. For post-disaster funding, counties that are declared for the event are prioritized for funding. Cal OES always seeks to prioritize the highest impact projects and incorporates the principals of social justice, equity, and inclusion to strengthen investments and funding decisions.

If multiple HMA funding opportunities are available, Cal OES advises communities on which programs to apply for, based on how the project proposal maximizes the quantitative and qualitative scoring criteria for the funding opportunity. For example, Cal OES advises projects that maximize the competitive criteria under the BRIC program to apply to compete nationally for funding. Conversely, projects that meet fewer of the BRIC criteria would be advised to apply to HMGP, where they are competing on a State level rather than national level.

Cal OES evaluates the geographic distribution of funding through the State and assesses how much funding a sub-applicant has received during past grant opportunities. New sub-applicants and those who have received minimal funding during previous grant opportunities are prioritized for funding.

Although the details of priorities may be refined from year-to-year, Cal OES generally considers how the project advances resiliency, impacts equity priority populations, presents a strong implementation plan, considers future conditions, and provides a plan for community engagement and outreach. Cal OES also seeks to ensure a fair geographical distribution of funding, while prioritizing recently impacted communities and communities that have received less funding from the HMA programs in the past. The overarching principles described in the sections below guide the prioritization and ranking of projects.



### **54.2.1. Protecting Lives and Property at Risk From Imminent Hazards Created or Exacerbated by Disasters**

Mitigating risk in high-hazard areas of the State is a priority both pre- and post-disaster. Priority is given to projects that will mitigate imminent hazards, are highly cost-effective, and incorporate critical efforts to help communities recover from the disaster. The State also promotes and gives priority to those projects and activities that would not cause adverse environmental impacts, ensuring that California is in compliance with all relevant State and federal environmental and historical preservation laws. California utilizes and promotes green infrastructure methods to support its overall mission of using natural infrastructure to manage stormwater and water supplies while delivering environmental, social, and economic benefits for communities. These priorities together all lead toward better protection of lives and property. Establishing these priorities provides guidance for local and Tribal Nation governments to build in flexibility for identifying critical mitigation needs that may arise from a disaster when there is no time to update a local and Tribal Nation plan.

### **54.2.2. Protecting Vulnerable Critical Facilities and Infrastructure**

Another important priority for federal funding is to help with protecting critical facilities and infrastructure. Though the State and many communities have ongoing capital improvement programs, there remains an overwhelming need to retrofit, replace, protect, or relocate facilities and infrastructure important to the State's communities that are at risk from hazards.

### **54.2.3. Reducing Repetitive Losses**

Mitigation areas with repetitive losses are high priorities for hazard mitigation funding and resiliency efforts. Repetitive losses are a drain on community, State, and national disaster management resources and are cost-effective to mitigate. The current national and State priority is the reduction of repetitive flood losses because these translate into a loss to the NFIP. California has numerous areas of repetitive flood loss. Through the CRS, building codes, education, and resiliency programs, California works to reduce these losses. Additionally, many areas of the State experience repetitive losses from other hazards which are also mitigated through education, and various funding opportunities.

#### **54.2.4. Supporting the Development and Adoption of Local Multi-Hazard Mitigation Planning**

The HMA programs administered by Cal OES, require approved projects to be consistent with local- and State-developed hazard mitigation plans and comprise a cost-effective long-term mitigation program. Each HMA program makes a portion of funding available for hazard mitigation planning efforts. Encouraging communities to develop and implement LHMPs is a high priority for California. LHMPs are necessary to ensure that local communities are made aware of the hazards and vulnerabilities within their jurisdictions, develop strategies to reduce those vulnerabilities, and applicable federal financial assistance for hazard mitigation.

#### **54.2.5. Addressing Climate Impacts**

For HMA funding, the State is working with FEMA to set priorities for projects that address climate impacts or adaptation efforts. This effort includes the Climate Resilient Mitigation Activities identified by FEMA as eligible for HMA funding. Climate change will change the hazards impacting California and are likely to increase vulnerability due to changes in location, magnitude, and frequency of hazards. Cal OES prioritizes projects that consider future conditions in the design of the project, including changes in population, land use, and the location, intensity, and frequency of hazard events.

#### **54.2.6. Protecting Vulnerable Populations**

The HMA sub-application process gives priority to funding of mitigation projects in disadvantaged communities. Disadvantaged communities within California are identified by the Centers for Disease Control and Prevention (CDC)'s Social Vulnerability Index (SVI), CalEPA's CalEnviroScreen tool, or the best available data for the purpose. Often vulnerable populations experience disaster impacts first and more severely. Ensuring measures are prioritized to improve the protection of these communities is a priority for Cal OES.

#### **54.2.7. Areas Experiencing Increases in Risk**

Cal OES prioritizes sub-applicants that are experiencing increases in risk because of development pressure or impacts of climate change. Because California is a strong growth management state, local governments are equipped with significant capabilities to manage growth as it impacts hazard areas through the safety elements

of their general plans. However, these tools alone do not always alleviate outside pressures for development. Local governments may lack the capacity or capabilities to enforce their growth management standards. Cal OES views these situations as great opportunities to prioritize and leverage programs such as the Capacity and Capability Building component of the BRIC program.

Cal OES will also give a funding priority to sub-applicants that are experiencing an increase in risk due to climate change. This is monitored via LHMPs when they are submitted to Cal OES for review. Additionally, these impacts are monitored when sub-applicants are asked to identify whether they are experiencing increased risk due to climate change.

### 54.2.8. Providing Protection to High Hazard Potential Dams



#### **HHPD7: Did Element S15 (prioritizing funding) describe the criteria for prioritizing funding for high hazard potential dams?**

Section 54.2.8 outlines how dams eligible for HHPD funding are prioritized.

FEMA's HHPD grant program provides technical, planning, design, and construction assistance for eligible rehabilitation activities that reduce dam risk and increase community preparedness. Cal OES will coordinate with DSOD to track and monitor opportunities to leverage this funding source to mitigate identified deficiencies on State-owned and -regulated high hazard potential dams. Cal OES will also promote the HHPD program and its requirements in its training and outreach for local mitigation planning in the State.

Upon receiving sub-applications, Cal OES ranks them in accordance with the stated priorities for that funding opportunity and then conducts eligibility and completeness reviews in priority order. Cal OES undertakes enhanced technical assistance to ensure that projects meet FEMA criteria. After sub-applications are thoroughly reviewed, they are scored within each priority based on a variety of factors, which may include the community's natural hazard risk, impact of the project on community resiliency and equity priority communities, incorporation of future conditions and climate change impacts into the project, and the quality of the implementation plan. Projects are proposed for funding based on both their priority and score.

### **Limitations to HHPD Funding**

The greatest limitation to maximizing HHPD funding in California is meeting the Planning Requirements for HHPD funding eligibility. This SHMP can provide a State-level perspective of HHPD program capacity in California, but it does not have the full resolution that can be provided by local level planning. The SHMP can provide HHPD compliance for State-owned dams but not for privately owned dams. For privately owned dams to be eligible for funding under the HHPD program, the HHPD Planning Requirements need to be addressed by LHMPs, or HHPD-specific plans developed by the dam owners themselves. At the time of this SHMP update, only three LHMPs have been reviewed and approved by FEMA Region 9 for HHPD compliance.

The HHPD Planning Requirements have been added to the FEMA Plan Review Tool for LHMPs based on FEMA guidance that becomes effective on April 19, 2023. The HHPD elements are considered to be optional. It is hoped that increased awareness of the HHPD program benefits and requirements, combined with the availability of better data on risk, will spur more interest in HHPD planning as part of local hazard mitigation planning efforts in the State. Cal OES staff will promote and provide technical assistance to those local governments with an interest in HHPD program compliance through the programs and capabilities identified in this chapter.

## **54.3. EFFECTIVENESS OF MITIGATION ACTIONS**

Cal OES will evaluate the effectiveness of mitigation activities when completed projects are tested by natural hazard events using the following mitigation assessment process:

- Level I Assessment: GIS mapping initiated during or immediately after a hazard event to determine if any completed mitigation projects are in the vicinity of the impacted area
- Level II Assessment: Initiated when projects are identified in the vicinity of the hazard event
- Level III Assessment: Loss Avoidance Study is conducted to estimate the dollar value of damages that would have occurred as a result of the hazard event if the site or structure had remained in the pre-mitigation state

The Level II Assessment includes contacting the sub-applicant, reviewing the project Scope of Work, and evaluating the need for outside subject matter experts to assist in the assessment. Cal OES will communicate with the subrecipient entity or facility owner to discuss specifics of the event and resulting impacts. Cal OES will examine the project Scope of Work to determine what measures, events, conditions, or hazard intensity levels the specific mitigation action was designed to withstand or protect against. This trigger event analysis will determine if the recent hazard event would have likely caused damage to the mitigation site or structure in the pre-mitigation state. If determined that damage would have likely occurred in the pre-mitigation state, a Level III Assessment is conducted.

During the Level III Assessment, Cal OES may involve applicable outside agencies such as CAL FIRE, DWR, or the USGS, to provide critical expertise. These dollar value estimates are compared to the actual cost of damages that occurred to determine the savings resulting from the mitigation investment.

Timeliness of the assessment activities is critical to reduce the loss of information needed to perform the analysis. To improve the efficiency and effectiveness of future analysis Cal OES collects, in the sub-application, a description of specific hazard event conditions that currently will result in property damage or loss of life to establish a baseline for future analysis. After completion of the mitigation activity, the presence of these conditions will serve as the trigger to conduct loss avoidance analysis. Cal OES proactively reviews previously completed projects, in advance of actual hazard events, to develop a database of trigger events to aid future loss avoidance analysis. Loss Avoidance Studies will be utilized to shape priorities for selecting mitigation activities and inform mitigation strategy. Cal OES will investigate opportunities to capture non-monetized benefits to vulnerable communities that result from successful mitigation investment.