



Cal OES

GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

Appendix J. Status of Actions from Previous Plan

Updated December 15, 2023



CALIFORNIA STATE HAZARD MITIGATION PLAN

Volume 2

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2023

Appendix J. Status of Actions from Previous Plan



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J. STATUS OF ACTIONS FROM PREVIOUS PLAN

Each action in the 2018 State Hazard Mitigation Plan (SHMP) was reviewed and reconciled with comments to show what activities, if any, were taken on those actions during the past five years. Table J-1 provides a detailed summary of actions, comments, and status indicators for all 114 actions.

Table J-1. Status of Actions from the 2018 State Plan

Action Item from Previous Plan	Status
<p>Action 2018-001 – Support Legislative Efforts that Formalize California's Comprehensive Mitigation Program: Mitigation Legislation and Implementation.</p> <p><i>Comment: State agencies have been designing both technical and financial assistance programs to allow local agencies to update and align their various flood safety planning activities. For example, the California Department of Water Resources (DWR)'s floodplain management and protection and risk awareness (FMPRA) program provided up to \$5 million for flood risk reduction planning activities statewide. Furthermore, the Governor's Office of Planning and Research (OPR), the California Governor's Office of Emergency Services (Cal OES) and DWR continue to work on planning alignment activities which will encourage local agencies to use information in one plan in another effort.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-002 – Strengthen Inter-agency Coordination Actions Including State, Regional, and Local Linkages: Establish Inter-agency Advisory Groups, Task Forces, and Work Groups to ensure vertical and horizontal integration and coordination of mitigation planning and implementation.</p> <p><i>Comment: The State Mitigation Planning Unit (SMP Unit) has adopted a new working and hazard group format for the 2023 SHMP Update. The goal is for these groups to stand during the implementation phase of the 2023 SHMP and provide input in between updates. These groups are horizontal by including partners across State agencies, and vertical by including partners from the federal government, local jurisdictions, academic institutions, nonprofit organizations, and the private sector. On the Grants side, Cal OES has entered into a Joint Powers Authority with the California Department of Forestry and Fire Protection (CAL FIRE) to establish and implement the California Wildfire Mitigation Program to implement wildfire retrofits and defensible space on the residences of socially vulnerable homeowners. This JPA will establish methodology to harden homes based on the best available science, in coordination with partner agencies and organizations, including the Institute for Building and Home Safety and Housing and California Department of Housing and Community Development (HCD). Cal OES participates in a monthly working group Office of Planning Research, the Federal Emergency Management Agency (FEMA), and The Nature Conservancy to advance the use of nature-based solutions under FEMA programs through OPR's and TNC's Cooperative Technical Partnerships with FEMA. CAL FIRE has created and leads the Wildfire Resiliency Task Force and the Wildfire Mitigation Advisory Committee to bring together State, local, Tribal, and academic stakeholders to coordinate around wildfire resiliency. Cal OES has multiple members participating in both groups. California has established the Safer from Wildfire interagency partnership between the California Department of Insurance, Cal OES, CAL FIRE, the California Public Utilities Commission (CPUC), and OPR to protect lives, homes, and businesses by reducing wildfire risk and increasing access to wildfire insurance. The Integrated Climate Action and Resilience Program (ICARP) drives California's response to climate impacts by facilitating greater coordination across local, regional, and State levels. ICARP's Technical Advisory Council (TAC) convenes experts across sectors quarterly to develop strategies that increase California's climate resilience, as well as "work group" meetings to address more topical or specific priorities in more depth. In addition, ICARP hosts interagency working groups at the agency deputy level and program manager level to promote alignment across the State's climate adaptation and hazard mitigation resources and facilitate the development of Administration-wide climate initiatives. These institutionalized structures provide continuity in the State's resilience efforts and have the ability to adapt to meet emerging needs.</i></p>	<p>Ongoing Capability</p>

Action Item from Previous Plan	Status
<p>Action 2018-003 – Broaden Public and Private Sector Mitigation Linkages</p> <p><i>Comment: The Delta Investment Strategy is a collaborative effort between State agencies, local reclamation districts, delta landowners, businesses, and other stakeholders. Ongoing: The Great California ShakeOut is an annual event involving public and private sector organizations, as well as local, regional, State, and federal agencies. Over 10 million individuals participated in the earthquake awareness and preparedness drill in 2017. Ongoing: FireSafe Councils are community-based organizations that collaborate with the California Fire Alliance (CFA) and CAL FIRE to identify local fire prevention projects. Funding for implementation is accomplished through federal agency grants. The State Water Efficiency and Enhancement Program (SWEET) was initiated in response to the 2012-2016 statewide drought and the Executive Order accelerating the State's goal to reduce greenhouse gas (GHG) emissions. SWEET provides matching grant funds to agricultural operations. It provides a unique opportunity for government and the private enterprise to jointly reduce agricultural water and energy usage. Ongoing: The California Solar Initiative is a partnership between the California Public Utilities Commission (CPUC), private utilities, and the general public. Its goal is to provide financial incentives to residential property owners, including low income, to install solar systems to reduce greenhouse gas emissions. The California Cybersecurity Task Force is a statewide partnership comprised of key stakeholders, subject matter experts, and cybersecurity professionals from California's public sector, private industry, academia, and law enforcement. Its primary mission is to reduce the likelihood and severity of cyber incidents that could cause damage to the State's economy, infrastructure, and computer networks.</i></p>	In Progress
<p>Action 2018-004 – Assist Local Governments in Implementing Land Use Guidance and Best Practices for Reducing Vulnerability Within High Hazard Zones.</p> <p><i>Comment: Numerous cities and counties in California have integrated their local hazard mitigation plans (LHMPs) with their general plan safety elements as outlined in SB 2140. In 2022, OPR published a Wildland Urban Interface (WUI) Planning Guide to highlight how local agencies across California can leverage plans, regulations, and additional tools to reduce risk in wildfire-prone areas. The guide features nine best practice case studies that offer opportunities for learning and solutions that may be suitable for adoption in other communities. This resource is available on the State's Adaptation Clearinghouse. Additionally, OPR has conducted outreach and technical assistance to local governments regarding SB 379 implementation, and tracks SB 379 implementation through its ResilientCA Adaptation Planning Map.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-005 – Incorporate Climate Change into Local, Regional, and Statewide Hazard Profiles, Risk Assessments, and Mitigation Plans.</p> <p><i>Comment: A. SB 379 and SB 1035 require jurisdictions to update their safety element to address climate vulnerability and adaptation, and to update fire, flooding, and climate adaptation portions of the safety element every eight years upon the next housing element update.</i></p> <p><i>B. SB 1241 requires that jurisdictions in the State Responsibility Area and the Very High Fire Hazard Severity Zone address specific wildfire requirements in their safety elements.</i></p> <p><i>C. AB 747 and SB 99 added specific evacuation route requirements to the safety element.</i></p> <p><i>D. The Climate Adaptation Planning Grants Program is currently developing a program that will directly fund climate adaptation planning projects across California. The program plans to launch applications in the winter 2022.</i></p> <p><i>E. The ResilientCA Adaptation Planning Map (RAP-Map) on the Adaptation Clearinghouse inventories city and county progress toward integration of climate vulnerability and adaptation into local plans and is updated annually or as capacity allows.</i></p> <p><i>F. The 2020 Adaptation Planning Guide provides a step-by-step process to support local climate adaptation planning and is updated by Cal OES every three years, in coordination with OPR.</i></p> <p><i>G. The Climate Resilience Plan Alignment Toolkit published by OPR in the fall of 2022 supports the integration of climate resilience into local planning documents.</i></p> <p><i>H. OPR developed the Planning and Investing for a Resilient California guidebook to support integration of climate risk into State policy, decision making, and investments in response to EO B-30-15. OPR will update the guidebook in 2023-2024 to incorporate new information, best practices, and revised guidance on using the best available climate change science and data.</i></p> <p><i>I. OPR's General Plan Guidelines, last updated in 2017, have guidance on how to integrate climate resilience into general plan goals, policies, and programs. The safety element, environmental justice, and climate change sections of the guidelines (Chapters 4 & 8) in particular outline climate resilience considerations.</i></p> <p><i>J. In 2022, OPR published Wildfire Planning Technical Advisory in response to Senate Bills (SB) 901 and 2911 and Wildland Urban Interface Planning Guide.</i></p> <p><i>Note: OPR does not have regulatory authority over local planning, and thus cannot directly require incorporation of climate change into plans.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-006 – Enhance Collaboration on the Development and Sharing of Data Systems and Geographic Information System (GIS) Modeling.</p> <p><i>Comment: This action item is an ongoing capability focused on streamlining the data collection and management process for the SHMP's Risk Assessment analysis. Additionally, this action item is working to develop an ArcGIS Online Hub site that will facilitate the sharing of relevant information to State and local partners. Some of the Risk Assessment data will be made available to local agency staff through the hub site. The hub site will provide local agency staff with a common source of information that they can use while developing their own local hazard mitigation plans. Specific tasks completed to support this action time include:</i></p> <ul style="list-style-type: none"> <i>Compiled GIS datasets that can be used to indefinitely hazard locations.</i> <i>Combined demographic and residential parcel information to create a demographic profile of the population based on their home location.</i> <i>Merged residential parcels and the Social Vulnerability Index (SVI) data to identify the home locations of vulnerable populations.</i> <i>Identified buildable lands (currently vacant but buildable areas) from the statewide parcel dataset.</i> <i>Estimated the replacement cost of State-owned or -leased properties by combining information from the California Department of General Services (DGS)'s building dataset, the California Structure Inventory, and statewide parcel dataset. Currently, the combined Cal OES and Tetra Tech GIS team is working to complete the Risk Assessment analysis. We have created an ArcGIS Online share group to store and manage the relevant datasets. Once the first draft of the SHMP is complete, we will update the online hub site so the datasets can be accessible by the SHMP team using the share group. We will also create web mapping applications so that relevant data from each of the SHMP's chapters can be viewed online through the hub site.</i> 	Ongoing Capability
<p>Action 2018-007 – Support and Coordinate Monitoring of Progress on State Goals and Objectives: Set systematic near- and long-term mitigation targets and priorities.</p> <p><i>Comment: The California Energy Commission tracks progress California is making in meeting its clean energy goals. Examples of indicators tracked include: energy efficiency, statewide energy demand, zero-emission vehicles, and reliance on coal, renewable energy, and once-through cooling. Mitigation targets were established within State legislation: SB 32 passed in 2016 establishes a target for greenhouse gas emission reductions; and the Sustainable Groundwater Management Act of 2014 establishes a target date for completion of required local plans.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-008 – Expand Mitigation Project Loss Avoidance Tracking through the State Mitigation Assessment Review Team (SMART) System: Conduct post-disaster onsite review and documentation of loss avoidance of mitigation projects using SMART.</p> <p><i>Comment: Cal OES conducts loss avoidance analysis when natural hazard events test completed mitigation projects. Analysis led to full loss avoidance studies conducted on the 2019 Russian River Flood in Sonoma County and the 2020 SCU Lightning Complex Fire impacting the Lick Observatory in Santa Clara County. For 2023, Cal OES suggests modifying this action item to read: “Develop a database containing a description of the specific natural hazard event for which each project was designed to mitigate. These detailed “trigger events” describe the situation that will test the completed projects and include specific metrics.” To this end, Cal OES has begun collecting trigger event descriptions in the new Hazard Mitigation Grant Program (HMGP) sub-application in the Engage Cal OES (Salesforce) platform.</i></p>	Ongoing Capability
<p>Action 2018-009 – California Global Warming Solutions Act (AB 32): Reduce greenhouse gas emissions to 40% below 1990 levels by 2030.</p> <p><i>Comment: The California Air Resources Board (CARB) is developing the proposed 2002 Scoping Plan with is scheduled for a vote and approval by CARB Board Members by the end of 2022. SB 32, passed in 2016 updates the previous GHG emission standards established in 2008 under AB 32. In addition to accelerating GHG reductions, it requires the California Air Resources Board (CARB) to adopt rules and regulations in an open public process to achieve the most technically feasible and cost-effective GHG reductions. In 2017, CARB released an update to the 2008 Scoping Plan, building on key programs to reduce GHG emissions in the energy-producing, transportation, agriculture and forestry sectors.</i></p>	In Progress

Action Item from Previous Plan	Status
<p>Action 2018-010 – Interagency Coordination: Coordinate the activities of State agencies to improve air and water quality; protect natural resources and agricultural lands; increase the availability of affordable housing; improve infrastructure systems; promote public health; and assist State and local entities in the planning of sustainable communities and meeting AB 32 goals.</p> <p>Provide technical support and feedback on climate change issues to be addressed in the 2009 CA Water Plan Update.</p> <p>Review and develop policy and operational recommendations associated with the effects of climate change on fire preparedness and response planning.</p> <p>Provide guidance for agencies to incorporate and integrate climate change into all planning and investment decisions. Ensure the State's ability to adapt to climate change impacts on ocean and coastal resources.</p> <p>Facilitate coordination among State, regional and local agency efforts to adapt to the impacts of climate change.</p> <p>Provide a venue for cross- sector collaboration and information sharing on development of the Safeguarding California plan.</p> <p><i>Comment: This action is supported by OPR.</i></p> <p>A. SB 1241 (Kehoe 2012) requires wildfire updates to general plans, mandatory findings for subdivision approvals in SRA's and CHFHSZs, and California Environmental Quality Act (CEQA) checklist updates for wildfire safety. OPR's updated Fire Hazard Planning Technical Advisory, includes example general plan policies related to climate change and wildfire preparedness and response planning. This document will be updated not less than once every eight years.</p> <p>B. ICARP supports interagency coordination and capacity-building with respect to climate resilience through its public-facing Technical Advisory Council and interagency working groups at the agency deputy and program manager levels. These forums consider climate resilience across all sectors, supporting the State's all-of-government approach to climate action. They additionally institutionalize coordination and adapt to address emerging issues. The ICARP team, through these formal venues, and also through ad-hoc efforts, coordinates with other agencies on key initiatives or plan updates. The 2021 update to the California Climate Adaptation Strategy and the development of its first annual implementation report relied heavily on these interagency structures.</p> <p>C. ICARP developed the Planning and Investing for a Resilient California Guidebook in response to EO B-30-15. The Guidebook provides best practices to State agencies for considering climate risk in planning and investment decisions. ICARP plans to update this guidance within the next year.</p> <p>D. In 2021, OPR initiated the Conservation and Housing Educational Series in coordination with several other State agencies (HCD, California Department of Conservation [DOC], CARB). The goal of the series is to break down silos between conservation and housing programs, planning, and policy such that efforts in both arenas better support cross-sectoral needs and on-the-ground outcomes in service of State planning priorities; it is an internal, State agency-focused effort. With one year of monthly meetings completed, the steering committee is assessing future direction, which may involve developing a working group format to address identified challenges.</p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-011 – California Adaptation Strategy: Communicate current and needed actions State government should take to build climate change resiliency.</p> <p><i>Comment: In early 2022, California released the 2021 update to the California Climate Adaptation Strategy. California is required by statute (AB 1482) (Gordon 2015) to issue a statewide strategy to adapt to the impacts of climate change every three years. Previous iterations of this Strategy have been referred to as "Safeguarding California." Previous updates were released in 2014 and 2018. The 2021 strategy builds on successful elements of previous strategies and reflects recent efforts to double down on protecting communities, our economy, and nature from the impacts of climate change. This update:</i></p> <p><i>A. Organizes the State's climate adaptation efforts around six outcome-based priorities for building resilience and increases our ability to measure progress. The Strategy shows how the State's existing, planned, and resourced climate adaptation efforts fit together to deliver on our six outcome-based priorities. These priorities reflect and reinforce regional climate resilience priorities, as they were explored and finalized through robust regional engagement with and in consultation with California Native American Tribal Nations. The Strategy also specifies timeframes and metrics to drive progress and enable accountability.</i></p> <p><i>B. Seeks to break down siloes and unify collective climate adaptation efforts across all sectors and regions. Shifting to an outcome-based approach sets strategic direction and reflects our efforts to drive coordinated and integrated approach to building climate resilience. This approach recognizes how climate adaptation is implemented on the ground and reflects our commitment to integrating climate resilience into the work of all State agencies.</i></p> <p><i>C. Makes it easier for Californians to understand and contribute to California's climate resilience agenda. The final Strategy is available as an interactive website that serves as a hub for State climate resilience action. This website will be updated to reflect progress and make adjustments and will allow for Californians to easily access information on our efforts.</i></p>	Ongoing Capability
<p>Action 2018-012 – California Building Resilience Against Climate Change Effects Project (CalBRACE): Enhance the California Department of Public Health's (CDPH) capability to plan for and reduce health risks associated with climate change.</p> <p><i>Comment: The Climate Change and Health Equity Program continues to work with various stakeholders to address health inequities on an ongoing basis. The CalBRACE project provides resources and technical assistance for State and local public health departments to build climate adaptation capacity and enhance resilience at the local and regional levels. CalBRACE is funded by the U.S. Centers for Disease Control and Prevention (CDC). This The Climate Change and Health Equity Program (CCHEP) works with local, State, and national partners to assure climate change mitigation and adaptation activities do not exacerbate health inequalities.</i></p>	In Progress

Action Item from Previous Plan	Status
<p>Action 2018-013 – Climate Change Assessment: Produce periodic scientific assessments on the potential impacts of climate change in California.</p> <p><i>Comment: The First Climate Change Assessment was released in 2006, focusing on potential impacts on key State resources. The Second Assessment, released in 2009, focused on economic impacts. The Third Assessment, released in 2012, made significant progress in projecting climate change impacts. The Fourth Assessment was the first inter-agency effort to implement the Climate Change Research Plan, published in 2015. The development of the Fifth California Climate Change Assessment is underway. Climate Change and Emergency Management in California is part of the Fourth Assessment. It includes a Critical Facilities Vulnerability Assessment (CFVA), and a component addressing transportation adaptation.</i></p>	Ongoing Capability
<p>Action 2018-014 – Local Planning for Climate Change: Incorporate climate change adaptation and greenhouse gas emission reductions into local planning processes.</p> <p><i>Comment: A. SB 379 and SB 1035 require jurisdictions to update their safety element to address climate vulnerability and adaptation, and to update fire, flooding, and climate adaptation portions of the safety element every eight years upon the next housing element update.</i></p> <p><i>B. SB 1241 requires that jurisdictions in the State Responsibility Area and the Very High Fire Hazard Severity Zone address specific wildfire requirements in their safety elements.</i></p> <p><i>C. AB 747 and SB 99 added specific evacuation route requirements to the safety element.</i></p> <p><i>D. The Climate Adaptation Planning Grants Program is currently developing a program that will directly fund climate adaptation planning projects across California. The program plans to launch applications winter 2022.</i></p> <p><i>E. The ResilientCA Adaptation Planning Map (RAP-Map) on the Adaptation Clearinghouse inventories city and county progress toward integration of climate vulnerability and adaptation into local plans and is updated annually or as capacity allows.</i></p> <p><i>F. The 2020 Adaptation Planning Guide provides a step-by-step process to support local climate adaptation planning and is updated by Cal OES every three years, in coordination with OPR.</i></p> <p><i>G. The Climate Resilience Plan Alignment Toolkit published by OPR in the fall of 2022 supports the integration of climate resilience into local planning documents.</i></p> <p><i>H. OPR developed the Planning and Investing for a Resilient California guidebook to support integration of climate risk into State policy, decision making, and investments in response to EO B-30-15. OPR will update the guidebook in 2023-2024 to incorporate new information, best practices, and revised guidance on using the best available climate change science and data.</i></p> <p><i>I. OPR's General Plan Guidelines, last updated in 2017, have guidance on how to integrate climate resilience into general plan goals, policies, and programs. The safety element, environmental justice, and climate change sections of the guidelines (Chapters 4 & 8) in particular outline climate resilience considerations.</i></p> <p><i>J. In 2022, OPR published Wildfire Planning Technical Advisory in response to senate bills 901 and 2911 and Wildland Urban Interface Planning Guide.</i></p> <p><i>Note: OPR does not have regulatory authority over local planning, and thus cannot directly require incorporation of climate change into plans.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-015 – Web Based Climate Change Tools: Provide a centralize source of climate change information and resources.</p> <p><i>Comment: SB 246 (2015) directed OPR to coordinate and maintain the State Adaptation Clearinghouse. The web-based clearinghouse provides State, regional, and local planners access to the most current planning and technical assistance resources. The Resilient CA Adaptation Planning Map (RAP-Map) inventories local government climate risk, adaptation, and resiliency planning efforts across the State and tracks progress towards statewide adaptation planning goals. The online Adaptation Planning Guide (2020) provides guidance to local governments on local adaptation and resiliency planning and is integrated into the Adaptation Clearinghouse to enhance the usability of the guidance and related resources in the database. The online, interactive Climate Resilience Plan Alignment Toolkit on the Adaptation Clearinghouse provides guidance, best practices, and resources for local governments to align local planning and develop custom roadmaps for plan updates.</i></p>	<p>Ongoing Capability</p>

Action Item from Previous Plan	Status
<p>Action 2018-016 – California Earthquake Loss Reduction Plan: Update the California Earthquake Loss Reduction Plan as required by the California Earthquake Hazards Reduction Act of 1986.</p> <p><i>Comment: In June 2016, CSSC, in partnership with the Pacific Earthquake Engineering Center (PEER), issued a report discussing findings and priority recommendations organized by focus areas of the California Earthquake Loss Reduction Plan. The following recommendations are either ongoing or have not indicted progress as of September 2022: Priority Recommendation 1.1: Identify the locations of complex and integrated fault zones in the State, like the West Napa fault zone, and prioritize these for evaluation and mapping and potential designation as Alquist-Priolo Earthquake Fault Zones. Priority Recommendation 1.2: Evaluate the aggregate effects of current amendments and exemptions under the Alquist-Priolo Earthquake Fault Zone Act and accompanying regulations, and study ways to better regulate and fund geologic investigations and structural mitigation in Alquist-Priolo Earthquake Fault Zones. Priority Recommendation 2.1: Ensure that all State-required gas safety plans address the mitigation of system risks to seismic hazards. Priority Recommendation 2.2: Convene a State task force that includes local water and wastewater providers as well as fire departments across the State to identify vulnerabilities, mitigation options, and financial mechanisms to enhance the seismic resilience of local water and wastewater systems, particularly in areas vulnerable to widespread ground failure and that lack alternative water supplies for firefighting. Priority Recommendation 3.1: Work with FEMA, the California Building Officials, and other professional engineering and architectural organizations to: ensure that curricula for training and certification of safety assessors are effective and more widely implemented, particularly for local government personnel; improve protocols for deploying and compensating safety assessors; expand the use of Building Occupancy Resumption Programs; and grant safety assessment authority to the Division of the State Architect for public K-14 schools and State-owned buildings. Priority Recommendation 3.2: Work with the California Building Officials and professional engineering and architectural organizations, including the American Institute of Architects California Chapter and Structural Engineers Association of California, to develop guidance for local jurisdictions on effective coordination and management of post-earthquake safety assessment processes. Priority Recommendation 3.3: Develop guidance and training for local fire departments and building owners and operators on alternative procedures to safely turn off damaged sprinkler systems following earthquakes. Priority Recommendation 3.4: Evaluate and enhance, as needed, training and inspection materials for school districts and staff to seismically secure non-structural systems, equipment, contents, and furnishings in public and private schools. Priority Recommendation 4.1: Establish a State task force to consider the risks posed to the State by the large proportion of uninsured residents and businesses in high-seismic hazard areas, and identify options for improving the take-up, affordability, and terms of earthquake insurance coverage for California residents and businesses, as well as alternative earthquake recovery funding sources for both residents and businesses. Priority Recommendation 4.2: Evaluate and enhance, as needed, penalties and other consumer protections against post-disaster scamming by contractors and cost inflation. Priority Recommendation 5.1: Strengthen seismic performance standards and contingency planning for all State and local correctional facilities. Priority Recommendation 5.2: Review and revise, as needed, State regulations guiding the transfer and housing of inmates in county jails during times of emergency.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-017 – Earthquake Zones of Required Investigation: Ensure efficient, accurate, and reliable completion of the statewide Seismic Hazard Mapping Program.</p> <p><i>Comment: Since 2018, the California Geological Survey (CGS) has released nine official Seismic Hazard Zone maps (liquefaction and earthquake-induced landslides) and five new and revised Alquist Priolo Earthquake Fault Zone maps. Additional maps are planned for release in 2023 and beyond. CGS continues to map basic liquefaction zones throughout California, with a focus on populated (high risk) areas. Over the next decade, as CGS completes mapping in the high-risk regions, additional mapping work will be conducted in disadvantaged and socially vulnerable communities. The mapping is resource and data intensive and will likely take over a decade to complete given current resources available.</i></p>	Ongoing Capability
<p>Action 2018-018 – EQ Zapp: California Earthquake Hazards Zone Application: Create an easily accessible online mapping tool that includes mapped earthquake fault zones, seismic hazard zones, and areas susceptible to ground failure.</p> <p><i>Comment: In 2018, CGS released EQZapp that includes Earthquake Fault Zones, Landslide Zones, and Liquefaction Zones: https://maps.conservation.ca.gov/cgs/EQZApp/. Funded by CGS internal funding.</i></p>	Completed
<p>Action 2018-019 – Uniform California Earthquake Rupture Forecast (UCERF): Revise California earthquake probabilities; Prepare updated shaking hazard map of California.</p> <p><i>Comment: Working with the U.S. Geological Survey (USGS), CGS provides support for updates to UCERF and the U.S. Geological Survey National Seismic Hazard Model (NSHM). The next NSHM update is scheduled for release in 2023.</i></p>	In Progress
<p>Action 2018-020 – HAZUS Earthquake Loss Estimates: Update statewide annualized losses.</p> <p><i>Comment: The previous work and existing annualized losses are still appropriate for use going forward. There are currently no plans to update the existing annualized losses referenced in the 2018 SHMP.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-021 – California Earthquake Early Warning System (CEEWS) See Napa Earthquake Case Study: Rapidly detect the occurrence of an earthquake, estimate the level of ground shaking, and issue a warning before significant ground shaking begins.</p> <p><i>Comment: California's State-wide EEW Program began in 2013 with SB 135 (Chapter 342, Statutes of 2013), which requires the California Governor's Office of Emergency Services (Cal OES) to implement a comprehensive EEW system in California in collaboration with other stakeholders. Since that time, Cal OES has built numerous partnerships, including with the California Institute of Technology (Caltech), the California Geological Survey (CGS), the University of California (UC), the United States Geological Survey, and the Alfred E. Alquist Seismic Safety Commission (SSC). Cal OES has worked with these and other partners to build out a network of seismic stations, which is now 100% funded and nearly 80% completed; researched and built multiple pathways to distribute EEW alerts, including the MyShake alerting app that has been downloaded over 1.9 million times; and conducted outreach and education campaigns to recruit system users and train them in how to react to an EEW alert. The future for the program includes the continued promotion of earthquake preparedness, maintenance and innovation of EEW system operations, and creating a safer California by implementing and integrating the CEEWS statewide in key industries and critical sectors to enhance and strengthen community resiliency through the adoption of automated actions and responses.</i></p>	Ongoing Capability
<p>Action 2018-022 – Delta Liquefaction Hazard: Map liquefaction hazard of native geologic materials in the Sacramento-San Joaquin Delta region.</p> <p><i>Comment: Completed for Contra Costa County. In 2021, CGS completed Seismic Hazard Zone maps (including liquefaction) for Contra Costa County, funded by CGS Seismic Hazards Mapping Act funding. Areas of the Delta outside of Contra Costa County will be evaluated at a future, to be determined, date. Note: DWR may be working on this effort for other parts of the delta.</i></p>	Completed
<p>Action 2018-023 – LIDAR Fault Mapping: Examine the utility of high- resolution LIDAR topographic data for mapping active faults.</p> <p><i>Comment: Lidar is being used extensively in the mapping of active faults in California. A map of fault ruptures from the 2019 Ridgecrest earthquake sequence will be released in 2023. CGS anticipates lidar will be utilized for nearly all planned fault mapping.</i></p>	In Progress
<p>Action 2018-024 – Remote Sensing Fault Mapping: Examine the utility of airborne hyper-spectral remote-sensing imagery for mapping active faults.</p> <p><i>Comment: Completed in 2018. CGS evaluated the use of hyperspectral imagery in updating the Earthquake Fault Zone Map of the Mescal Creek area along the San Andreas fault. Funded using internal CGS funds.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-025 – California Vital Infrastructure Vulnerability Assessment: Develop and test a methodology for assessing the vulnerability of State-owned building stock to seismic and other hazards and determine minimum retrofit measures to protect occupants from harm and facilitate recovery.</p> <p><i>Comment: The Cal VIVA Project had three phases, the last of which was wrapped up in 2013. This tool was shared with State agencies for their own use in assessing their vital infrastructure. Due to the sensitivity of the information being collected, it was agreed upon that each agency would store this information for their own use, so there is not a centralized database for this information. This project was a phased project that was funded by both federal National Earthquake Hazards Reduction Program (NEHRP) and HMGP funds and was completed and closed out in 2013 with a final report. There has been no additional follow up on the project and the tool at this point is very out of date and not in sync with current technologies and available information.</i></p>	Completed
<p>Action 2018-026 – State Building Retrofits: Identify and retrofit seismically deficient State-owned buildings.</p> <p><i>Comment: Due to current lead agency staff changeovers and the lack of an alternate agency willing to lead the initiative, this action has been removed.</i></p>	Discontinued
<p>Action 2018-027 – California State University (CSU) Retrofits: Reduce unacceptable seismic risk of existing buildings and manage current construction programs to limit future seismic risk.</p> <p><i>Comment: The California State University System continues its vigorous program to reduce seismic risk to acceptable levels.</i></p>	Ongoing Capability
<p>Action 2018-028 – UC Retrofits: Conduct seismic review to identify and set priorities for hazard mitigation.</p> <p><i>Comment: Due to current lead agency staff changeovers and the lack of an alternate agency willing to lead the initiative, this action has been removed.</i></p>	Discontinued
<p>Action 2018-029 – Seismic Evaluation of Single-Family Dwellings: Develop comprehensive guidelines for evaluating and seismically retrofitting single-family dwellings.</p> <p><i>Comment: The first edition of the California Building Code (CBC) to establish standards for the retrofit of single-family dwellings with cripple walls less than 4 feet was adopted in 2010. Research is underway to establish standards for additional types of residential construction which may trigger revisions to further CBC updates. In 2012, FEMA produced P-50, Simplified Seismic Assessment of Detached Single-Family Wood Frame Dwellings, and P-50-1 Seismic Retrofit Guidelines. Since 2015, over 250 seismic inspection professionals have completed the training. In 2016, the California Earthquake Authority (CEA) developed a web-based application based on P-50. Ongoing; In 2019, FEMA produced P-1100, Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings. CEA is working closely with FEMA and the International Code Council (ICC) to adopt the guidelines as industry standards, paving the way for adoption into California's building code. Additionally, by creating a uniform seismic-retrofit-design method for homeowners, contractors, and engineers, the new guidelines will help CEA and others (1) establish and expand incentive programs to encourage seismic retrofits, such as that of the California Residential Mitigation Program, and (2) enhance CEA's ability to develop and provide suitable mitigation discounts for CEA-insured homeowners.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-030 – California Earthquake Authority (CEA) Grants: Provide financial support to homeowners to retrofit single-family residences.</p> <p><i>Comment: The Earthquake Brace + Bolt (EBB) Program was initiated in 2013. The EBB Program provides up to \$3,000 per residential unit for seismic residential retrofitting. Since 2013, the program has issued grants to 17,313 homeowners. Beginning in 2022, the addition of supplemental grants provide income-eligible homeowners with additional funding for seismic retrofits over and above the \$3,000 grant. Funding has been collectively provided through the CEA Loss Mitigation Fund, the State of California and through FEMA HMGP grants. Please carryover Action to 2023 plan update.</i></p>	In Progress
<p>Action 2018-031 – Non-Ductile Concrete Buildings: Implement retrofit programs for non-ductile concrete buildings subject to severe damage or collapse in an earthquake. Voluntary program to canvass cities and counties throughout the State to determine how many pre- 1976 non-ductile concrete buildings may exist within each jurisdiction.</p> <p><i>Comment: As of November 2022, 12,433 soft-story buildings have been identified. 95 percent have submitted plans within the two-year compliance date, 83 percent have permits issued within the three and a half-year compliance date, and 67 percent have obtained certificates of compliance within the seven-year compliance date.</i></p>	Ongoing Capability
<p>Action 2018-032 – Unreinforced Masonry (URM) Buildings: Reduce the risk of life loss, injury, and collapse of unreinforced masonry buildings at the local level.</p> <p><i>Comment: In 1979, a law encouraged local governments to enact URM retrofit ordinances that allowed less strength and stiffness than for new construction (19160–65 H&S Code). The law also provided a 15-year grace period to prevent local governments from requiring additional retrofits within that timeframe (19166 H&S Code). A more comprehensive URM Law in 1986 required local governments in regions of high seismicity (old Zone 4) to inventory URM buildings, to establish a risk reduction program that, at minimum, notified owners, and to report information on retrofit progress to the State's Seismic Safety Commission. Reporting continued until 2006 when budget cuts eliminated the program. Local government was responsible to establish a risk reduction program and to report information on retrofit progress to SSC. The last report was in 2006.</i></p>	Discontinued
<p>Action 2018-033 – Mobile Homes: Adopt regulations to improve the structural and lateral stability of manufactured housing.</p> <p><i>Comment: Regulations became effective in April 2013 that apply the current California Residential Code structural standards to any alteration of a manufactured home built after 1958. The Manufactured Housing regulations can be found in California Code of Regulations, Title 25, Division I, Chapter 3, Subchapter 2, commencing with section 4000. These regulations establish minimum design and construction standards for all multifamily manufactured homes and mobile homes built before June 15, 1976, and commercial modular and special purpose commercial modulars to be sold, rented, or leased throughout the State. These regulations are preemptive over any local requirements. Manufactured homes constructed on or after June 15, 1967, are subject to federal laws and regulations. Alteration of existing manufactured homes bearing or required to bear a U.S. Department of Housing and Urban Development (HUD) label; multifamily manufactured homes, and mobile homes built on or before June 15, 1976; commercial modulars and special purpose commercial modulars bearing or required to bear a department insignia are subject exclusively to Department regulation, plan review, and inspection throughout the State regardless of their location.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-034 – Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS): construction, inspection, maintenance, and repair of marine oil terminals piers, wharves, and other waterfront facilities.</p> <p><i>Comment: MOTEMS was updated in 2016. The MOTEMS Audit Manual was developed to assist marine oil terminal operators to comply with the revised standards.</i></p>	Completed
<p>Action 2018-035 – Highway Bridge Retrofits: Evaluate and seismically retrofit State highway bridges and overpasses to prevent collapse in major earthquakes.</p> <p><i>Comment: By 2022, 2,194 State bridges previously determined to need seismic retrofitting have been retrofitted for an estimated cost of \$2.54 billion. The Division of Engineering Services, Offices of Earthquake Engineering Analysis and Research and Geotechnical Services, continually conduct periodic rescreening of State bridges to assess the structures for seismic vulnerabilities using the most current seismic criteria.</i></p>	Completed
<p>Action 2018-036 – The Great California ShakeOut Earthquake Drill and Public Readiness Initiative: Conduct statewide emergency preparedness. Mitigation and response activities to include multiple levels of government, the private sector, and the public.</p> <p><i>Comment: The Great California ShakeOut is an on-going activity that occurs annually on the 3rd Thursday of October. This annual exercise is an opportunity to raise awareness of California's earthquake hazard and educate the public on protective actions, that when implemented, can reduce the potential for death and injuries during an earthquake. Federal, State, and local governments partner with schools, businesses, NPOs, neighborhoods, families, and individuals to encourage participation in the annual ShakeOut exercise, which has expanded throughout the world. In addition, the aforementioned partners work in ongoing collaboration to conduct outreach and education regarding mitigation measures that can be taken in advance of an earthquake to reduce risk.</i></p>	Ongoing Capability
<p>Action 2018-037 – Landslide Inventory Maps: Continue to map earthquake induced landslides through the Seismic Hazards Mapping Program.</p> <p><i>Comment: CGS continues to prepare basic landslide inventories and seismically induced landslide hazard zones throughout California, with a focus on populated (high risk) areas. Over the next decade as CGS completes mapping in the high-risk regions, additional mapping work will be conducted in disadvantaged and socially vulnerable communities. The mapping is resource and data intensive and will likely take over a decade to complete given current resources available.</i></p>	Ongoing Capability
<p>Action 2018-038 – Post-Fire Runoff & Debris Flows: Develop regional modeling to assess potential effects of post-fire runoff. Develop an early warning system for post-fire flash floods and debris flows.</p> <p><i>Comment: The Department of Water Resources issued a report entitled the Assessment of Post-Fire Runoff Hazards for Pre-Fire Mitigation Planning – Southern California. Regional modeling of burn areas around the State is being conducted by State and federal agencies. USGS and the National Oceanic and Atmospheric Administration (NOAA) have developed a demonstration early warning system for recently burned areas in Southern California.</i></p>	In Progress

Action Item from Previous Plan	Status
<p>Action 2018-039 – Volcano Hazard Vulnerability Assessment</p> <p><i>Comment: In 2018, the U.S. Geological Survey, in cooperation with the California Governor's Office of Emergency Services and the California Geological Survey, published "California's Exposure to Volcanic Hazards (Scientific Investigations Report 2018-5159)". The report provides a broad perspective on the State's exposure to volcanic hazards by integrating volcanic hazard information with geospatial data on at-risk populations, infrastructure, and resources. This information is intended to prompt site- and sector-specific vulnerability analyses and preparation of hazard mitigation and response plans.</i></p>	Ongoing Capability
<p>Action 2018-040 – Flood Control System Deficiencies in Central Valley: Produce a Descriptive Document to inventory the facilities and operations associated with State and Federal flood control works, and a Flood Control System Status Report to assess the status of that inventory.</p> <p><i>Comment: Underway, updated every five years</i></p>	In Progress
<p>Action 2018-041 – Flood Risk Mapping: Adopt a schedule for mapping flood risk areas in the Central Valley and prepare/approve levee flood protection zone (LFPZ) maps. Provide yearly notices to owners of property in a levee flood protection zone.</p> <p><i>Comment: DWR continually makes updates to the levee flood protection zone maps based on local input and improved data/tools. DWR continues to send out approximately 300,000 letters to property owners based on these maps. The letters promote flood risk awareness by encouraging property owners to purchase flood insurance and develop a plan on where to evacuate to in case of a flood.</i></p>	Ongoing Capability
<p>Action 2018-042 – Land Use Planning and Management: Control future development in floodplains and flood-prone areas, in conformance with the Central Valley Flood Protection Plan (CVFPP).</p> <p><i>Comment: Local agencies are required to provide the Central Valley Flood Protection Board (CVFPB) a 200-year level of protection finding in order to proceed on new development. Sutter Butte Flood Control Agency provided a finding in this cycle marking the completion of their Feather River Flood Risk Reduction Project. There are other urban agencies such as Sacramento that have not yet provided a 200-year level of protection finding to the State.</i></p>	Ongoing Capability
<p>Action 2018-043 – Flood Legislation Planning Assistance: Provide planning assistance to local governments in implementing the five flood legislation bills passed in 2007.</p> <p><i>Comment: Two documents were prepared in 2007 to assist local governments in complying with legislated requirements: California Flood Legislation Summary and California Flood Legislation Companion Reference. The third document, Local Land Use Planning: Handbook for Communities Implementing Flood Legislation – October 2010 describes legislation requirements affecting city and county local planning responsibilities.</i></p>	Completed
<p>Action 2018-044 – Flood Management: FloodSAFE California, launched in 2006 is a multi-faceted program to improve public safety through integrated flood management.</p> <p><i>Comment: The FloodSAFE Strategic Plan: Public Draft was released in May 2008. It contains twelve Foundational Objectives with target dates for completion extending to 2025.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-045 – California's Flood Future: Assess statewide exposure to flood risk, identify, and address the barriers to improved flood management.</p> <p><i>Comment: California's Flood Future: Recommendations for Managing the State's Flood Risk was developed by DWR in partnership with the U.S. Army Corps of Engineers (USACE) as a companion plan to the 2013 California Water Plan Update. The document concludes with seven recommendations for State and federal assistance to reduce the risk and consequences of flooding. DWR is developing a companion report Investing in California's Flood Future: An Outcome-Driven Approach to Flood Management, to guide future capital flood management and risk reduction projects.</i></p>	In Progress
<p>Action 2018-046 – Flood Management System Planning and Programs: Improve flood management across the State.</p> <p><i>Comment: California's Flood Management System includes five integrated program areas: Flood Management Planning; Floodplain Risk Management; Flood Risk Reduction Projects; Flood System Operations and Maintenance; and Flood Emergency Response.</i></p>	Ongoing Capability
<p>Action 2018-047 – Central Valley Flood Protection Plan (CVFPP): Update and implement recommendations and planning requirements outlined in the CVFPP.</p> <p><i>Comment: The CVFPP is California's strategic blueprint to improve flood risk management in the Central Valley. The first plan was adopted in 2012. The updates to the plan are adopted every five years. The 2022 update is on cycle and will be adopted in October 2022.</i></p>	Ongoing Capability
<p>Action 2018-048 – California Water Plans: Ensure reliable water supplies and foundational actions for sustainable water use in California.</p> <p><i>Comment: The 2023 update of the California Water Plan will identify specific outcomes and metrics to track performance, prioritize near-term State actions and investments, recommend financing methods having more stable revenues, and inform water deliberations and decisions as they unfold.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-049 – National Flood Insurance (NFIP) Compliance: Work with local floodplain managers to promote participation in and ensure compliance with the NFIP to update community's Flood Insurance Rate Map (FIRM).</p> <p><i>Comment: This action will be the responsibility of DWR in the 2023 plan. As of October 2022, 99 percent (528) CA communities currently participate in the NFIP. DWR worked with the California Building Commission and FEMA and developed California Building Code-Coordinated Floodplain Management Model Ordinances to help California communities adopt local regulations that are written to work with the flood provisions of the California Building Standards Code (CCR Title 24) for buildings and structures in Special Flood Hazard Areas (SFHAs). DWR coordinates with FEMA and conducts Community Assistance Visits (CAV) and Community Assistance Contacts (CAC). A CAV consists of reviewing floodplain management ordinances, a tour of the floodplain, reviewing permit processes, reviewing as-builts and elevation certificates to ensure compliance with the NFIP, and meetings with the local appointed and elected officials. DWR works with communities to help bring their program into compliance with NFIP and CA requirements. DWR also provides NFIP training and NFIP technical assistance on the flood zones and the base flood elevation determinations, mapping, elevation certificates, flood insurance, the Community Rating System (CRS), CA Building Standards, and the California Floodplain Management Model Ordinance. DWR provides floodplain management information and updates through newsletters and emails to our CA Floodplain Management Administrators. DWR attends ASFPM and Flood Mitigation Assistance (FMA) conferences annually and provides NFIP trainings and presents NFIP and floodplain management related information.</i></p>	Ongoing Capability
<p>Action 2018-050 – Sea-Level Rise Guidance: Provide guidance on factors to consider in projecting sea-level rise, potential impacts, and adaptation strategies.</p> <p><i>Comment: In 2023, the Ocean Protection Council (OPC) will release the new update to Updated Sea-Level Rise Technical Guidance. The document synthesizes statewide sea-level rise science and projections, as well as applicable adaptation strategies for managers and practitioners. In 2018, the OPC released the Sea-Level Rise Adaptation Guidance, based on the 2017 Rising Seas in California Update on Sea-Level Rise Science. This new update will include the most up-to-date total water level projections, flood days, and applicable adaptation guidance and strategies for practitioners and managers. This update occurs every five years and is already fully funded. The 2018 Coastal Plan Alignment Compass, hosted on the State Adaptation Clearinghouse, provides guidance and resources on integrating various local planning initiatives to mitigate sea-level rise and coastal flooding. The Coastal Compass will be updated in 2023. OPR Climate Services staff support implementation of the State Sea-Level Rise Action Plan, coordinated by the Ocean Protection Council, and support updates to OPC and Coastal Commission guidance documents on sea-level rise.</i></p>	In Progress

Action Item from Previous Plan	Status
<p>Action 2018-051 – State Agency Adaptation Planning: Assess vulnerability of State assets to sea-level rise, changing weather patterns, extreme weather events, and develop adaptation strategies to address potential impacts.</p> <p><i>Comment: In 2019 the Climate Change Branch completed 12 District statewide vulnerability Assessments (Assessments). The Assessments included mapping of 6 major climate stressors: sea-level rise, storm surge, coastal bluff erosion, and changes in temperature and precipitation. To advance adaptation and resiliency efforts, the Climate Change Branch developed District Climate change Adaptation reports based on the Vulnerability Assessments. The Climate Change Branch has been in close coordination with all 12 Districts to prioritize adaptation projects in coordination with asset management and project delivery. Currently an update to the 2019 vulnerability assessments is in progress. The California Department of Transportation (Caltrans) has moved the Office of Vegetation and Wildfire Management into the new sub-division of Emergency Operations and Vegetation Management which with the Major Damage and Restoration Branch under the Office of Emergency Management will work with the Office of Air Quality and Climate Change to build a more resilient transportation system to address the State's environmental and technological hazards.</i></p>	Ongoing Capability
<p>Action 2018-052 – San Francisco Bay Conservation and Development District (BCDC) Climate Change Planning Program: Provide scientific information and planning resources to Bay Area local jurisdictions.</p> <p><i>Comment: BCDC launched ART Portfolio, a place to find planning guidance, tools, and information that have been developed, tested, and refined by the Adapting to Rising Tides Program to address the specific challenges of climate change. BCDC continues to partner with local, State, and federal agencies to develop and disseminate sea-level rise information and planning tools.</i></p>	Ongoing Capability
<p>Action 2018-053 – Local Climate Adaptation Planning: Support sea-level rise adaptation planning by local jurisdictions.</p> <p><i>Comment: In October 2016, the Department of Water Resources (DWR) published a document entitled National Flood Insurance Program in California Quick Guide Coastal Appendix: Planning for Sea-Level Rise. The document supports floodplain managers in addressing potential sea-level rise impacts for their communities. The Local Coastal Program (LCP)/Local Assistance Grant Program provides funds to support local governments in completing or updating their Local Coastal Programs. The program has awarded 45 grants since its inception in FY 2013/14. The Coastal Flood Risk Reduction Program awarded 5 grants totaling \$23.9 million in July of 2021.</i></p>	Completed
<p>Action 2018-054 – Reducing Tsunami Hazards and Risks: Support and provide matching funds for development of improved technologies and methodology to assess tsunami risk.</p> <p><i>Comment: Working with partners such as Cal OES, CGS continues to support the development of improved models and products for tsunami mitigation. Products include Tsunami Hazard Area maps for evacuation planning and maritime tsunami response plans. In progress are Tsunami Hazard Zone and Tsunami Hazard Engineering Subzone maps. These maps, as well as guidance documents for implementing requirements of the Seismic Hazards Mapping Act (SHMA), will be released once the SHMA regulations are adopted by the California State Mining and Geology Board (SMGB) (anticipated 2023). Funded by FEMA, Cal OES, and CGS.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-055 – Understanding Tsunami Probability: Improve the understanding of tsunami hazards in California through coordinated research.</p> <p><i>Comment: The State Tsunami Program has completed a set of PTHA maps representing risk levels from 100-year to 3000-year average return periods (ARP). Analyses using these probabilistically based products allow for a more common platform for comparison to other seismic and flood probabilistic analyses. CGS continues to support the development of models for distant and locally generated tsunamis, funded through FEMA.</i></p>	Ongoing Capability
<p>Action 2018-056 – Tsunami Mitigation and Preparedness Planning: Develop loss estimation models to compute potential impacts from tsunamis. Provide site-specific harbor and pier improvements, engineering recommendations, and cost-benefit assessments. Develop planning and technical assistance resources to support tsunami evacuation planning.</p> <p><i>Comment: The California Tsunami Program, a partnership of the Cal OES Tsunami Program and the California Geological Survey Tsunami Program, is developing loss estimation models to compute potential impacts from tsunamis. This information along with the harbor and pier improvement reports are resources for local partners (counties, cities, and harbor districts) for response and mitigation planning. These projects are on-going and updated as modeling and technology capabilities improve, and as we receive requests from our local partners for this information as they update their local plans.</i></p>	Ongoing Capability
<p>Action 2018-057 – Tsunami Building Codes: Address tsunami loads and develop design standards for critical and essential facilities.</p> <p><i>Comment: The American Society of Civil Engineers (ASCE) Subcommittee 7-16 on Tsunami Loads and Effects has completed analysis and design standards and Tsunami Design Zones that have been adopted by the California Building Code (CBC); an update of the standards and Zones have been completed by the California Geological Survey for ASCE 7-22 and will be likely adopted into the CBC with the year. These standards apply to essential and critical facilities/structures and address structural response to tsunami wave loading, tsunami wave-loading forces for design purposes, non-structural element response to wave loading, and dynamic effects of tsunami wave travel throughout a built environment. These tsunami design load standards have been adopted during the building code cycle (2019) and will be applied to critical and essential buildings (Risk Category 4 and 3). They may also apply to some other high-occupancy structures (Risk Category 2).</i></p>	Completed
<p>Action 2018-058 – Levee Evaluation and Repair: Evaluate and upgrade aging and deteriorating levees along the Sacramento and San Joaquin River Valleys and Delta. Funding is provided through Propositions 84 and 1E.</p> <p><i>Comment: To date, nearly 250 levee repair sites have been identified with repairs to more than 100 critical sites completed. DWRs Levee Evaluation Program includes the Urban Levee Geotechnical Evaluations (ULE) Project and the Non-Urban Levee Evaluations (NULE) Project. The Urban/Non-Urban Levee Evaluations Cost Analysis Tool helps flood managers develop accurate estimates for levee repair.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-059 – Delta Levees Program: Provide funding to local agencies in the Sacramento- San Joaquin for levee maintenance and improvement and for habitat mitigation and enhancement.</p> <p><i>Comment: The Delta Levees Program addresses approximately 1100 miles of levees and supports the efforts with local agencies in the Delta.</i></p>	Ongoing Capability
<p>Action 2018-060 – Local Levee Assistance: Provide funding to local agencies outside the Sacramento-San Joaquin Delta.</p> <p><i>Comment: DWR established this program to assist local agencies with flood risks throughout the State.</i></p>	Completed
<p>Action 2018-061 – Cascading Hazards Evaluation: Review and evaluate earthquakes and high water as hazards to Delta levees.</p> <p><i>Comment: In July 2016 the Delta Independent Science Board convened a workshop. The potential for liquefaction due to earthquakes and potentially higher water levels due to climate change were identified as primary issues.</i></p>	Completed
<p>Action 2018-062 – California DWR's Division of Safety of Dams (DSOD) ensures dam safety by:</p> <ul style="list-style-type: none"> Reviewing and approving dam enlargements, repairs, alterations, and removals to ensure that the dam appurtenant structures are designed to meet minimum requirements. Performing independent analyses to understand dam and appurtenant structures performance. Overseeing construction to ensure work is being done in accordance with the approved plans and specifications. Inspecting dams that are significant hazard or higher every year and low hazard dams every two years to ensure they are safe, performing as intended, and not developing issues. Reviewing and approving inundation maps for dams and their appurtenances that are incorporated into Emergency Action Plans (EAPs). Periodically reviewing the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California. <p><i>Comment: DWR's Division of Safety of Dams oversees the regulation of approximately 1240 jurisdictional dams that include (as of September 2022); 265 Extremely High-Hazard dams, 460 High-Hazard dams, 144 Significant Hazard dams, and 370 Low Hazard dams. DSOD continually updates the condition assessments of all jurisdictional dams which includes 1125 dams with a condition assessment rating of satisfactory, 87 dams with a rating of Fair, 24 dams with a rating as Poor, and one dam with a rating of Unsatisfactory. Hazard Classification and condition assessment definitions are on DSOD's website at: https://water.ca.gov/damsafety/. DSOD has implemented reservoir restrictions on approximately 75 dams.</i></p>	Ongoing Capability
<p>Action 2018-063 – EAPs: Create EAPs based on updated inundation maps for dams having high or extremely high hazard ratings.</p> <p><i>Comment: 847 dams are required to submit EAPs to Cal OES. As of September 22, 2022, 713 EAPs have been submitted to Cal OES with an approved Inundation Map. 301 EAPs have been approved.</i></p>	In Progress

Action Item from Previous Plan	Status
<p>Action 2018-064 – Legislation for Local Wildfire Hazard Planning: Incorporate wildfire hazards into development and land use planning as stated in California Government Code 65302.g.3 66474.02. and CEQA.</p> <p><i>Comment: SB 1241, passed in 2012 requires wildfire updates to general plans, mandatory findings for subdivision approvals in SRA's and VHFHSZs, and CEQA checklist updates for wildfire safety. In response to Senate Bill 901 (2018) and Assembly Bill 2911 (2018), OPR updated its Fire Hazard Planning Technical Advisory to include "specific land-use strategies that reduce fire risk to buildings, infrastructure, and communities". The update also helps communities conduct outreach and engagement activities to promote more robust and collaborative wildfire solutions, conduct comprehensive wildfire hazard and risk assessments, align and integrate these assessments across a variety of plans, and develop general plan policies and programs that reduce risk for existing and future communities. OPR released a Public Draft of the updated Technical Advisory in November 2020. The final version, released in August 2022, includes revisions in response to stakeholder feedback along with other minor edits. OPR will continue to update this document no less than once every eight years.</i></p>	Ongoing Capability
<p>Action 2018-065 – Fire Hazard Severity Zones: Map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors to define the application of various mitigation strategies to reduce risk in accordance with Public Resource Code 4203 (a) and Government Code 51178.</p> <p><i>Comment: CAL FIRE is currently in the review and adoption process for State Responsibility Areas (SRA) to be completed in early 2023. CAL FIRE will transmit recommendations to Local Jurisdictions for local adoption in early in 2023</i></p>	In Progress
<p>Action 2018-066 – Strategic Fire Plan for California: The Strategic Fire Plan forms the basis for assessing California's complex and dynamic natural and man-made environment and identifies a variety of actions to minimize the negative effects of wildland fire. The California Strategic Fire Plan for California has a vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, State, federal, Tribal, and private partnerships.</p> <p><i>Comment: The 2018 Strategic Fire Plan for California was approved by the Board of Forestry and Fire Protection in August of 2018. It contains seven goals that may be implemented within any timeframe based on available funding.</i></p>	Completed
<p>Action 2018-067 – Forest and Range Assessment: Identify and evaluate wildland fire hazards and the associated values and assets at risk. Facilitate the sharing of all analyses and data collections across all ownerships for consistency in type and kind.</p> <p><i>Comment: Forest and Range Assessment Report was completed on 2017/2018. An update to the report is currently being developed and expected to be completed by December of 2023. The report meets both a State and Federal Mandate to assess status and trend of forest resources.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-068 – FireSafe Councils: Increase awareness, knowledge, and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space, fire prevention and fire safe building standards.</p> <p><i>Comment: Since 2021 CAL FIRE has partnered with the California Fire Safe Council (CFSC) by providing direct award funding for two important endeavors, defensible space and county coordinators. CFSC uses the money to provide defensible space work around individual homes. They also fund a single position in counties across the State to ensure communication across stakeholders to ensure funding opportunities are not missed and work is being conducted in a strategic manor. In California the Firewise USA Program has grown and currently leads the nation with over 550 active Firewise communities as of 2022. The next closest state is Oregon with just over 250 active communities. The growth of communities is due to two main reasons; homeowners taking an active role to protect their families, homes, and communities from wildfire, while also seeking insurance premium discounts from their insurance carriers, if offered. The growth trend is expected to continue upward as the intensity and frequency of wildfires continue throughout the State along with homeowners seeking to insure their homes which is generally their largest financial asset.</i></p>	Ongoing Capability
<p>Action 2018-069 – Post-Fire Assessment: Address post-fire responsibilities for natural resource recovery including watershed protection, reforestation, and ecosystem restoration.</p> <p><i>Comment: The Recovery Support Functions (RSFs) were established by Cal OES late 2018/early 2019. This mitigation action ties to a goal outlined in the Strategic Fire Plan that was undertaken by the Board of Forestry and Fire Protection in 2016. Related progress from Governor's Executive Order S-07-08 (2008) supporting post-fire assessment services via State emergency assessment teams in coordination with the federal BAER teams include: the 2018 Strategic Fire Plan update; the establishment of the California Wildfire and Forest Resilience Task Force and the Wildfire and Forest Resilience Action Plan; the California Silver Jackets After Wildfire: A Guide for California Communities; the Flood After Fire California Toolkit: A Resource for Technical Specialists to Assess Flood and Debris Flow Risk After a Wildfire; and ongoing work by the Office of Planning and Research including the Fire Hazard Planning Technical Advisory and the WUI Planning Guidance.</i></p>	Ongoing Capability
<p>Action 2018-070 – Community Wildfire Protection Plans (CWPP): Identify hazardous fuel reduction treatment priorities, recommend measures to reduce structural ignitability and address issues such as wildfire response, hazard mitigation, community preparedness and structure protection.</p> <p><i>Comment: CWPPs are produced in collaboration with public fire agencies and affected non-governmental interests (especially local community residents).</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-071 – Initiatives and Technology: Mitigating the spread of invasive pests.</p> <p><i>Comment: The California Firewood Task Force has focused on promoting the Buy It Where You Burn It campaign since 2011 to increase public awareness about invasive tree pests being transported via long distance firewood movement. “Buy It Where You Burn It – Don’t Move Firewood” outreach efforts partnering with several county, State, and federal agencies. Additionally, the Invasive Species Council of California and related California Invasive Species Advisory Committee continues to educate the public about invasive species and their impacts to our agriculture, natural resources, and unique biodiversity. Finally, our “Don’t Pack a Pest” outreach effort is targeting the international traveler urging them to declare their agricultural items, “Don’t Pack a Pest when traveling or mailing packages”.</i></p>	Ongoing Capability
<p>Action 2018-072 – Air Quality/Pollution Monitoring: CalEnviroScreen</p> <p><i>Comment: The Office of Environmental Health Hazards Assessment (OEHHA) developed and maintains the CalEnviroScreen mapping tool to help identify California communities disproportionately impacted by sources of pollution. The California Environmental Health Tracking Program, along with academic partners, initiated a community-based effort to place air monitoring equipment to identify pollution “hot spots”</i></p>	Ongoing Capability
<p>Action 2018-073 – Air Pollution Planning: Incorporate Environmental Justice into General Plans</p> <p><i>Comment: Government Code 65302(h) requires, as of 2018, all jurisdictions with a disadvantaged community to include an Environmental Justice element in their next General Plan update or update of two elements concurrently. In 2020, OPR published a General Plan Guidelines Technical Advisory on the Environmental Justice element.</i></p>	Ongoing Capability
<p>Action 2018-074 – Marine Invasive Species Act: Reduce the introduction of invasive species transported through vessel ballast water.</p> <p><i>Comment: Vessels arriving in California ports are required to submit a Ballast Water Management Report. Additionally, regulations to manage biofouling were implemented in 2017.</i></p>	Ongoing Capability
<p>Action 2018-075 – State Water Efficiency and Enhancement Program (SWEEP): Reduce agricultural water usage through installation of more efficient irrigation practices.</p> <p><i>Comment: SWEEP, a competitive grant program, was initiated in 2014. The California Department of Food and Agriculture (CDFA) has selected 1,130 projects to be awarded, covering over 168,000 acres. \$123 million has been awarded to date (2022), with more than \$70 million in matching funds contributed by awardees.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-076 – Water Supply: Improve potable water supply to areas dependent on well water.</p> <p><i>Comment: A partnership of State and local agencies, working to help homeowners affected by California's multi-year drought, finished connecting 755 homes to a safe, reliable, permanent water supply. All households participating in the East Porterville Water Supply Project have now been connected to the City of Porterville's municipal water system. Hundreds of residential wells in the small, unincorporated community of East Porterville in Tulare County became dry or contaminated during California's recent five-year drought. Homes without access to safe potable water received deliveries of tanked water and bottled water. In response to the 2012-2016 drought, East Porterville, a socially vulnerable community, was connected to a permanent source of potable water, eliminating its reliance on groundwater supplies in future droughts.</i></p>	Completed
<p>Action 2018-077 – Groundwater Management Plan: Strengthen local control and management of groundwater basins.</p> <p><i>Comment: The Sustainable Groundwater Management Act was passed into law in September 2014. It requires local jurisdictions with medium and high priority basins to develop Groundwater Sustainability Plans within 20 years.</i></p>	Ongoing Capability
<p>Action 2018-078 – Local Storm Water Management: Capture storm water and redirect it for ground water recharge which will offset increased groundwater use during drought years.</p> <p><i>Comment: Los Angeles County is in the process of updating the county's stormwater infrastructure in order to capture an additional 33 billion gallons of storm water flowing out to the ocean and redirect it for groundwater recharge. The program's goal is to improve and optimize the county's existing flood protection and water conservation systems through a capital improvement program for new infrastructure. Due to changes in staffing, specific project update details are unknown. This is an ongoing project and should be included in the plan update.</i></p>	Ongoing Capability
<p>Action 2018-079 – California Drought Contingency Plan: Minimize drought impacts by improving agency coordination and enhancing monitoring and early warning capabilities.</p> <p><i>Comment: The Drought Contingency Plan was updated in 2021. It builds on strategies and actions contained in the 2016 Plan.</i></p>	Ongoing Capability
<p>Action 2018-080 – California Water Plan: Develop a comprehensive approach to addressing drought hazard mitigation over the long-term to serve as the State's blueprint for integrated water management and sustainability.</p> <p><i>Comment: The California Water Plan is updated every five years and work is in progress for the 2023 update.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-081 – Safe Drinking Water Plan for California: Assess the overall quality of the State’s drinking water, identify problems, and recommend improvements.</p> <p><i>Comment: The Safe Drinking Water Plan for California was updated in 2020. Throughout the 2020 Plan there is an emphasis on equity and the human right to water, sustainability, emergency preparedness and actions that water systems and the State Water Resources Control Board (State Water Board) can take to help provide safe drinking water. Central to these themes is the reality that safe, clean, and affordable water is essential for healthy communities.</i></p>	Ongoing Capability
<p>Action 2018-082 – Existing Buildings Energy Efficiency Action Plan: Double the energy efficiency savings of existing buildings by 2030.</p> <p><i>Comment: The California Energy Commission (CEC) adopted the first version of the Existing Buildings Energy Efficiency Plan in 2015, and the first update in 2016, in response to SB 350. Additional activity can be found at https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency.</i></p>	Ongoing Capability
<p>Action 2018-083 – Regional Energy-Savings Efforts: Implement effective energy saving programs on a regional basis.</p> <p><i>Comment: The Bay Area Regional Energy Network (BAYREN), covers nine counties in the San Francisco Bay Area representing 20 percent of the State population. BAYREN provides planning, technical, and financial assistance funded through the Public Utilities Commission.</i></p>	In Progress
<p>Action 2018-084 – Solar and Energy Storage for Resiliency: Integrate solar and energy storage into response planning. Secure solar energy as a viable energy backup tool for use in the event of an emergency.</p> <p><i>Comment: San Francisco’s Solar Resilient initiative goal is to create a roadmap for using solar energy as a viable tool for energy security in the event of an emergency. The objective is to integrate solar energy and energy storage into the City’s Emergency Response Plans. There has been some work done in the neighborhoods related to solar energy for use during an emergency but due to staff turnover and then to the C19 response we do not have good coordination as to what programs are useful to incorporate into City emergency response plans. We would like to keep “San Francisco’s Solar Resilient initiative goal is to create a roadmap for securing solar energy as a viable energy backup tool for use in the event of an emergency” (slightly reworded) but until we know what that roadmap is we prefer not to indicate that the objective is to integrate this into the emergency plans. That would be a natural occurrence if we do develop this initiative. The initiative itself must come first and is likely based on having available funding.</i></p>	No Progress

Action Item from Previous Plan	Status
<p>Action 2018-085 – California Solar Initiative: Reduce the cost of solar generating equipment to reduce use of fossil fuels for power generation.</p> <p><i>Comment: CSI program closed. By the end of 2021, approximately 11,106 MW of customer-sited solar projects had been installed at over 1.26 million locations within the service territories of the State's three major investor-owned utilities (IOU). This total, which is almost five times the CSI program goal, includes 30.6 MW of capacity under the SASH program and 57.2 MW of capacity under the MASH program. The market for solar generating equipment in California grew at a rapid pace from the beginning of the CSI program and has continued to grow since the program and all of its sub-program elements closed in 2021.</i></p>	Discontinued
<p>Action 2018-086 – Clean Energy: Progress Tracking. The California Energy Commission's tracking progress reports provide a comprehensive assessment of California's progress toward a global clean energy future. The reports cover a range of sectors, providing information, metrics, and resources.</p> <p><i>Comment: The California Energy Commission tracks progress California is making in meeting its clean energy goals. Examples of indicators tracked include: energy efficiency, statewide energy demand, zero-emission vehicles, reliance on coal, renewable energy, and once-through cooling. Additional information can be found at https://www.energy.ca.gov/data-reports/tracking-progress.</i></p>	Ongoing Capability
<p>Action 2018-087 – CALEAP: California Local Energy Assurance Planning. CALEAP was funded through 2013. The Emergency Action Plan (EAP) was completed in 2014.</p> <p><i>Comment: Energy assurance planning has been incorporated into other California Energy Commission initiatives, such as EPIC.</i></p>	Completed
<p>Action 2018-088 – Clean Energy Jobs Act: Improve energy efficiency in K-12 schools.</p> <p><i>Comment: Proposition 39 was approved by California voters in November 2012. From December 2013 through December 2016, a total of 869 projects using \$282 million in Proposition 39 funds had been completed or were under construction. Funding for this program is no longer available as the program has ended; projects are in the construction and reporting phase. Interested parties are encouraged to SUBSCRIBE to the list serve to receive information on future programs as they may become available. Additional information at https://www.energy.ca.gov/programs-and-topics/programs/california-clean-energy-jobs-act-proposition-39-k-12-program</i></p>	Ongoing Capability
<p>Action 2018-089 – Mosquito Borne Diseases: Surveillance and control of mosquito borne diseases.</p> <p><i>Comment: The California Mosquito-Borne Virus Surveillance and Response Plan was update in June 2022. Published the 2017 annual update of the California Mosquito-Borne Virus Surveillance and Response Plan to enhance the State's capability to track and control a number of mosquito-borne diseases.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-090 – Extreme Heat Vulnerability: Identify areas of the State most vulnerable to climate impacts.</p> <p><i>Comment: The California Heat Assessment Tool (CHAT) was funded by the California Natural Resources Agency as part of the State's Fourth Climate Change Assessment. Four Twenty Seven, Inc. in partnership with Argos Analytics, Habitat Seven, and the Public Health Institute (PHI) developed this tool for local and State health practitioners to better understand dimensions of heat vulnerability driven by climate changes and where action can be taken to mitigate the public health impacts of extreme heat in the future. CHAT allows users to explore and understand how extreme heat will impact specific communities across the State. This tool was built for planners, policymakers, public health practitioners and community members who are committed to mitigating the public health impacts of heat in their communities.</i></p>	Ongoing Capability
<p>Action 2018-091 – Extreme Heat Vulnerability: Identify vulnerable populations.</p> <p><i>Comment: The Climate Change and Health Equity Program continue to engage stakeholders and will be providing updates during the grant period. The CalBRACE extreme heat indicator describes certain populations that may have greater difficulty preparing for extreme heat.</i></p>	In Progress
<p>Action 2018-092 – Planning for Extreme Heat Emergencies: Prepare at the local and State level to respond to extreme heat emergencies.</p> <p><i>Comment: The Extreme Temperature Response Plan 2022 was published to the Cal OES website in May 2022 by Planning & Preparedness Branch. The plan describes the hazard and risk the State of California faces regarding extreme heat and cold/freeze, lists assumptions regarding impacts and response, describes State agency/department roles and responsibilities, and outlines actions to be taken by State agencies/departments during three defined phases of extreme temperature ranging from seasonal preparedness to imminent with severe impacts expected. In response to the 2022 September Heat Wave Event, information was added on the California Independent System Operator (CAISO) Energy Emergency Alerts and updates included from the Office of Access and Functional Needs (OAFN) regarding terminology and accessible transportation considerations, and the updated version of the plan was published to the Cal OES website for local and State partners to use during the heat event.</i></p>	Completed
<p>Action 2018-093 – Climate Change and Extreme Heat: Reduce health risks associated with increased temperatures due to climate change.</p> <p><i>Comment: Released in 2017, the Heat Committee of the Climate Action Team's Public Health Work Group developed "Preparing for Extreme Heat in California: Guidance and Recommendations".</i></p>	Completed
<p>Action 2018-094 – Heat Research: Quantify the extent and severity of an urban heat island in California.</p> <p><i>Comment: This project being undertaken jointly by the Governor's Office of Planning & Research and Cal EPA is to develop a method to quantify the average temperature increase in California communities due to the Urban Heat Island Effect.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-095 – Tree Mortality Assessment: Reduce the risk to the public and infrastructure by identifying and removing dead and dying trees.</p> <p><i>Comment: The Governor established the interagency Tree Mortality Task Force in October 2015 to address public safety hazards associated with the State's epidemic tree mortality. The Task Force Action Plan identified 10 high-hazard zones where tree mortality coincides with critical infrastructure. Caltrans is working with landowners to perform tree removal work.</i></p>	Completed
<p>Action 2018-096 – Tree Mortality Grant Program: Remove dead and dying trees that pose a threat to public safety and reduce wildfire threat.</p> <p><i>Comment: CAL FIRE awarded over \$15 million for 2016 and 2017 under the State Responsibility Area Fire Prevention Program and the Tree Mortality Grant Program.</i></p>	Completed

Action Item from Previous Plan	Status
<p>Action 2018-097 – Refinery Safety: Improve public and worker safety through enhanced oversight of refineries and strengthen emergency preparedness.</p> <p><i>Comment: The California Accidental Release Prevention (CalARP) Program 4 regulations, specifically for regulating refineries, were adopted and became effective on October 1, 2017, after extensive pre-regulatory input including refinery representatives, labor unions, refinery leadership, non-governmental organizations, academics, federal, State, local agencies, and the public. The Program 4 requirements expanded prevention program requirements for enhanced safety. Refineries are now required to submit investigation reports, including root cause analysis after any major incident. Major incident is defined as an event within or affecting a process that causes a fire, explosion or release of a highly hazardous material, and has the potential to result in death or serious physical harm, or results in an officially declared public shelter-in-place, or evacuation order. Program 4 also requires annual process safety performance indicators to be submitted. In the last five years, the following work has been done to improve public and worker safety through enhanced oversight of refineries and to strengthen emergency preparedness:</i></p> <p><i>Completed: Implementation of the Program 4 regulations. The Local Certified Unified Program Agencies (CUPAs) have been implementing the Program 4 regulations through inspection and facility oversight. Refinery Risk Management Plans (RMPs) have been updated to meet new, enhanced safety requirements (as Program 4 requires).</i></p> <p><i>Completed: The State authority and oversight for the entire CalARP program, including refinery oversight in Program 4, was transferred from the California Office of Emergency Services (Cal OES) to the California Environmental Protection Agency (CalEPA) in July 2021. This transfer of State authority and oversight better aligns the regulatory process and enhances the State's ability to ensure compliance with the laws and regulations.</i></p> <p><i>Completed and Ongoing Capability: CalEPA facilitates the Interagency Refinery Task Force (IRTF) which includes membership from 10 State agencies, the US. Environmental Protection Agency (EPA), and local agencies from areas of the State that contain refineries. IRTF works collaboratively to achieve the highest possible level of safety for refinery workers and local communities and prepare for and effectively respond to emergencies if they occur. IRTF meets at least twice a year to discuss refinery inspection, compliance, and enforcement and other issues pertinent to refinery safety. In 2022, IRTF met four times (two times more than required) and included presentations on the process to convert refineries from petroleum to renewable fuels and safer alternatives for processes utilized (including alternatives to Hydrofluoric Alkylation processes).</i></p> <p><i>Completed: Report on the Conversion of Petroleum Refineries to Renewable Fuels: CalEPA and IRTF have researched and completed a report on the conversion of petroleum refineries to renewable fuels. This report analyzed the current process of conversion and made suggestions on how to improve the process, while keeping with stringent environmental, public, and worker safety requirements. The report created more transparency for the public and more collaborative oversight by local, State, and federal agencies.</i></p> <p><i>In Progress: Members of IRTF, including State and local agencies, have developed a CalARP Guidance document (including Program 4 – Refineries) to aid local agencies and the regulated communities in achieving compliance. The document has been completed and is currently under review. It has been slated to finalized and sent out by early 2023. Primary Contact: John Elkins – Program Manager for Emergency Response, Refinery Safety, CalARP, & HMBP John.elkins@calepa.ca.gov Secondary Contact: Jason Boetzer – Assistant Secretary for Local Program Coordination and Emergency Management Jason.boetzer@calepa.ca.gov</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-098 – Oil Spill Planning: Prevent and mitigate the effects of oil spills impacting both land and water environments.</p> <p><i>Comment: The most recent version of the State Oil Spill Contingency Plan was released in 2017. The 2015-2020 Strategic Plan requires the State Lands Commission (SLC) develop regulatory requirements to identify systemic risks at marine oil terminals. The California Department of Fish and Wildlife (CDFW) continuously enforces industry oil spill contingency planning and drills/exercises requirements, and updates staff qualifications for incident command systems (ICS) positions. CDFW has also undertakes various oil spill prevention activities, including vessel risk assessment, boardings, and participation in Harbor Safety Committees (designed to plan for the safe navigation and operation of tank ships, tank barges and other vessels within California's five major harbors). CDFW also pursues various oil spill prevention activities.</i></p>	Ongoing Capability
<p>Action 2018-099 – Gas Pipeline Safety: Improve gas pipeline safety practices.</p> <p><i>Pacific Gas & Electric Company (PG&E) continues to utilize its control center. It continues to submit an annual Gas Safety Plan.</i></p>	Completed
<p>Action 2018-100 – Rail Safety: Examine rail safety concerns related to the transport of crude oil.</p> <p><i>Comment: The CPUC's Rail Safety Division (RSD) has 43 Federal Railroad Administration (FRA) certified full-time inspectors. Of these, eight are Hazmat certified inspectors. Their work involves inspection of crude oil unit trains and all commodities entering, being transported through or out of California. They inspect incoming containers at the major ports, in conjunction with the U.S. Coast Guard and FRA, and inspect all hazmat shipping facilities, and random rail cars in trains and rail yards throughout California. RSD has a Crude Oil Reconnaissance Team (CORT) that started in 2014. CORT inspects all crude oil unit trains coming into and departing from California. These inspectors are spread throughout the State. Inspectors not on this team contact CORT members when they see new trains coming into the State during their other routine inspections and accident investigations. This coordinated effort keeps CPUC apprised of all crude oil and LPG unit trains being transported by rail through the State. Annual Railroad Safety Reports to the California State Legislature and monthly activities for all three branches of RSD are online for public review on the CPUC website.</i></p>	Ongoing Capability
<p>Action 2018-101 – State Regulation of Well Stimulation: Regulate well stimulation procedures and identify/limit impacts.</p> <p><i>Comment: An Executive Order was issued by Governor Newsom on April 23, 2021, to phase out well stimulation regulation by January 1, 2024. The action halts issuance of fracking permits.</i></p>	Discontinued

Action Item from Previous Plan	Status
<p>Action 2018-102 – Homeland Security Strategy: Reduce the impact of human-made disaster events through a coordinated effort of capacity-building for State and local agencies.</p> <p><i>Comment: The Homeland Security Grant Program (HSGP) is an ongoing capability comprised of three sub-programs [State Homeland Security Program (SHSP), Urban Area Security Initiative (UASI), and Operation Stonegarden (OPSG) and is intended to support investments that improve the ability of jurisdictions nationwide in the prevention, protection, mitigation, response, and recovery from acts of terrorism. Each sub-program has a particular jurisdictional focus, with SHSP providing a general focus throughout the State, and UASI concentrating on select major metropolitan urban areas throughout the nation. Both the SHSP and UASI programs require that at least 25 percent of grant funding is used for law enforcement terrorism prevention activities for grant years 2016-2021. Operation Stonegarden supports enhanced cooperation and coordination among Customs and Border Protection, United States Border Patrol, and Federal, State, local, Tribal and territorial law enforcement agencies. OPSG's emphasis surrounds activities to secure the United States' borders along routes of ingress from international borders to include travel corridors in states bordering Mexico and Canada, and states with internal water borders. California has aligned its homeland security investment justifications to one or more of the goals and objectives in the 2021-2024 California State Homeland Security Strategy (Strategy). The goals and objectives contained within the Strategy provide a guide for prioritizing and developing statewide homeland security capabilities over a four-year period of performance. The alignment of Strategy goals/objectives with the homeland security grant program investment justifications ensures the State can track and link investments to Strategy goals and objectives efficiently and effectively throughout the planning and investment process. Major program activities include:</i></p> <p>SHSP/UASI</p> <p>Cybersecurity</p> <p>Infrastructure Security Enhancements</p> <p>Vulnerability Reduction</p> <p>Interoperable Communications</p> <p>Personal Protective Equipment for First Responders</p> <p>Maintenance and Sustainment of CBRNE (Chemical, Biological, Nuclear, Radiological, Explosive) Capabilities</p> <p>Intelligence Analysis/Information Sharing at Fusion Centers</p> <p>Critical Training Needs to Fill Gaps in Core Capabilities</p> <p>Exercises to Test Core Capabilities</p> <p>Law Enforcement Terrorism Prevention Strategies (including ILO and TLO Programs)</p> <p>Operational Readiness Pertaining to Mass Casualty Incidents</p> <p>Enhancing Community Preparedness</p> <p>Combatting Domestic Violence Extremism</p> <p>OPSG</p> <p>The majority of funding covers Operational Overtime shifts that are worked by various Law Enforcement Agencies (LEAs) in support of border security activities</p> <p>Purchase of equipment in support of border security activities, such as marked patrol vehicles, covert patrol vehicles, global positioning (GPS) tracking systems, night-vision optics, forward-looking infrared (FLIR) systems, and License Plate Readers (LPRs).</p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-103 – Homeland Security Grant Programs: Prioritize and allocate federal funding resources to support California's Homeland Security Strategy.</p> <p><i>Comment: The Homeland Security Grant Program (HSGP) is an ongoing capability comprised of three sub-programs [State Homeland Security Program (SHSP), Urban Area Security Initiative (UASI), and Operation Stonegarden (OPSG) and is intended to support investments that improve the ability of jurisdictions nationwide in the prevention, protection, mitigation, response, and recovery from acts of terrorism. Each sub-program has a particular jurisdictional focus, with SHSP providing a general focus throughout the State, and UASI concentrating on select major metropolitan urban areas throughout the nation. Both the SHSP and UASI programs require that at least 25 percent of grant funding is used for law enforcement terrorism prevention activities for grant years 2016-2021. Operation Stonegarden supports enhanced cooperation and coordination among Customs and Border Protection, United States Border Patrol, and Federal, State, local, Tribal and territorial law enforcement agencies. OPSG's emphasis surrounds activities to secure the United States' borders along routes of ingress from international borders to include travel corridors in states bordering Mexico and Canada, and states with internal water borders. California has aligned its homeland security investment justifications to one or more of the goals and objectives in the 2021-2024 California State Homeland Security Strategy (Strategy). The goals and objectives contained within the Strategy provide a guide for prioritizing and developing statewide homeland security capabilities over a four-year period of performance. The alignment of Strategy goals/objectives with the homeland security grant program investment justifications ensures the State can track and link investments to Strategy goals and objectives efficiently and effectively throughout the planning and investment process. Major program activities include:</i></p> <p>SHSP/UASI Cybersecurity Infrastructure Security Enhancements Vulnerability Reduction Interoperable Communications Personal Protective Equipment for First Responders Maintenance and Sustainment of CBRNE (Chemical, Biological, Nuclear, Radiological, Explosive) Capabilities Intelligence Analysis/Information Sharing at Fusion Centers Critical Training Needs to Fill Gaps in Core Capabilities Exercises to Test Core Capabilities Law Enforcement Terrorism Prevention Strategies (including ILO and TLO Programs) Operational Readiness Pertaining to Mass Casualty Incidents Enhancing Community Preparedness Combatting Domestic Violence Extremism OPSG The majority of funding covers Operational Overtime shifts that are worked by various Law Enforcement Agencies (LEAs) in support of border security activities Purchase of equipment in support of border security activities, such as marked patrol vehicles, covert patrol vehicles, GPS tracking systems, night-vision optics, forward-looking infrared (FLIR) systems, and License Plate Readers (LPRs).</p>	<p>Ongoing Capability</p>

Action Item from Previous Plan	Status
<p>Action 2018-104 – Cyber Security Policy: Adopt a Program Management Framework (PMF) that protects highest value assets through a management and risk-based approach.</p> <p><i>Comment: PMF-Minimum Security Standards was completed in December 2019 and the Cal-Secure Multi-Year Strategy was completed in October 2021</i></p>	Completed
<p>Action 2018-105 – Annual Vulnerability Assessments: Coordinate 35 vulnerability assessments each calendar year.</p> <p><i>Comment: AB 670, passed in 2015 requires the California Department of Technology (CDT) to coordinate independent security assessments of State agencies every two years. Assessments have been conducted on schedule each year. This action is ongoing due to the AB 670 statute.</i></p>	Ongoing Capability
<p>Action 2018-106 – Security Audit Program: Measure the effectiveness of security policies and guidelines.</p> <p><i>Comment: In 2016, the program was piloted in six State entities. The pilot program was completed in 2017, and the permanently expanded audit program was established in 2018 to do 52 audits each year.</i></p>	Ongoing Capability
<p>Action 2018-107 – State Emergency Plan (SEP): Establish cross-agency collaboration to address cyber security threats.</p> <p><i>Comment: The A-ESF 18 Cyber Security Annex was completed and approved in March 2020. The annex identifies Cal OES as the lead agency ("Coordinating Agency" is the new terminology) with the California Department of Technology, California Highway Patrol, California Military Department, and the California Department of Justice acting as primary agencies. The annex provides the purpose, mission, and goals of the cybersecurity emergency function and details how Cal OES communicates and coordinates with the primary agencies involved with the cybersecurity mission during all phases of emergency management. The annex also explains how the CA-ESF 18 stakeholders coordinate with SOC and other CA-ESFs during a cybersecurity incident. The annex details the organizational structure of the California Cybersecurity Integration Center (Cal-CSIC) within Cal OES which oversees the management of cybersecurity incidents.</i></p>	Completed
<p>Action 2018-108 – Cyber Security Integration Center (CISC) & Task Force: Reduce the likelihood and severity of cyber incidents that could damage the economy, critical infrastructure, or public and private sector computer networks, through State agency coordination.</p> <p><i>Comment: To facilitate information sharing and development of expert advice, the Cyber Security Task Force is open to and includes cybersecurity professionals from local, State, and federal agencies, Tribal governments, utilities and other service providers, academic institutions, and non-governmental organizations. Specific subcommittees of the Task Force have been called on to present information on specific topics and reports of their activities and findings at quarterly meetings. Certain subcommittees have provided specific advice regarding proposals in pending legislation to inform Cal OES opinion, fiscal analysis, and response to bill proposals. Section 8586.5 of the Government Code requires the Cal-CSIC to develop a statewide cybersecurity strategy, informed by recommendations from the California Task Force on Cybersecurity. The Cal-CSIC has organized and overseen the Task Force since 2013.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-109 – Protecting Critical Power Grid Infrastructure: Protect power grid integration from cyber threats.</p> <p><i>Comment: Ongoing coordination with Cal-CSIC and statewide cyber security task force.</i></p>	Ongoing Capability
<p>Action 2018-110 – Planning and Technical Assistance: Identify and communicate with local governments to promote local hazard evaluation and mitigation planning and to assist in developing LHMPs. Increase the number of LHMPs in the State through enhanced planning and technical assistance.</p> <p><i>Comment: Local Planning staff regularly communicate with local jurisdictions (cities, counties, and special districts) on LHMP development, maintenance, and implementation. This includes, but is not limited to, regular outreach to jurisdictions with plans that have and have not been funded through mitigation grants; jurisdictions who have LHMPs expiring within 36 months are contacted regarding plan expiration and any available mitigation grant opportunities. Continued contact with these jurisdictions also occurs at 24 months, 12 months, six months and as an expiration approaches if the Local Planning staff have not been notified of plan status; Plan status, technical assistance and outreach efforts are communicated to FEMA Region IX Community Planning staff each Monday through an agreed upon report. A technical assistance and outreach log is available if needed; In addition, local planning staff routinely contact those jurisdictions on FEMA Region IX's weekly planning report that have a designation of "Approved Pending Adoption" in an effort to ensure the local plans get adopted and a final approval letter is received from FEMA so that jurisdictions can not only maintain eligibility for mitigation grant opportunities, but can also adopt the local plan into the Safety Element of their General Plan to be considered for eligibility of additional cost share funding under the California Disaster Assistance Act (CDAA) for Public Assistance (PA) funding.</i></p>	Ongoing Capability
<p>Action 2018-111 – Planning and Technical Assistance: Provide technical assistance, guidance, resources, and tools to local governments for all aspects of local hazard mitigation planning</p> <p><i>Comment: Technical assistance is provided and recorded in a log that is provided to FEMA on Monday of each week; technical assistance can be grouped into various categories including, but not limited to pre local plan preparation, assistance during the preparation of the plan, plan submittal assistance, plan integration assistance with climate change, land use planning, flood/CRS planning and coastal planning; plan implementation assistance, land use planning assistance, and General Plan Safety Element adoption under AB 2140 guidance. In addition, local planning staff provide technical assistance as it relates to maintaining mitigation grant eligibility and the availability of other grants to assist in the implementation of the action outlined in the plan. Local Planning staff have created specific trainings depending on the needs of the jurisdiction, as well as providing joint training with FEMA Region IX Local counterparts under G 318 and other trainings on specific areas as needed. Staff continue to provide guidance utilizing the FEMA Region IX plan review tool, FEMA Local Planning Handbook, FEMA Mitigation Ideas Book, the Office of Planning and Research Wildfire Technical Assistance Guide, Climate Adaptation materials on ResilientCA.org and other hazard-specific plan integration guides. All materials are contained on the Cal OES Local Mitigation Planning website.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-112 – Planning and Technical Assistance: Establish consistent definitions for common concepts, such as critical facilities, loss estimates, risk assessment, and hazard types.</p> <p><i>Comment: Local mitigation planning relies on the definitions of critical facilities, risk assessments and hazard types that are outlined by FEMA in the Local Mitigation Planning Guidance and the regulations set forth by the Disaster Mitigation Act of 2000 (DMA 2000) in Title 44 of the Code of Federal Regulations (CFR). The publications that support the required elements in the FEMA Mitigation Plan Review Guide, the FEMA Local Mitigation Planning Handbook, and the FEMA Mitigation Ideas book also define each term as it relates to the requirements for jurisdictions to follow when preparing their LHMP. These concepts are further defined in the curriculum in the G 318 Local Mitigation Planning course and G 393 Hazard Mitigation course which are taught in California by Cal OES Local Mitigation Planners/FEMA Region IX Community Planners and experienced instructors from Cal OES California Specialized Training Institute (CSTI) program. Suggest here that Recovery Planning's Community Capability and Capacity Building Unit, as well as the Technical/Engineering section within Public Assistance be consulted on this item as well since they work on loss estimation modeling and identification of critical facilities to ensure definitions are consistent with the mission of the SHMP and accurately reflect California's definitions of these concepts beyond what is defined by FEMA.</i></p>	Ongoing Capability
<p>Action 2018-113 – Integration of Local and State Mitigation Efforts: Encourage local jurisdictions to take advantage of the financial benefits of AB 2140 by either creating integrated LHMP Safety Elements or by adopting their LHMP as an annex to their Safety Element (SE).</p> <p><i>Comment: The Local Mitigation Planning Unit (LMP Unit) has procedures in place to regularly do outreach to jurisdictions on the benefits of adopting the LHMP into the Safety Element of the General Plan. Outreach begins to jurisdictions when they begin plan preparation and has now been included as part of the scope of work for Mitigation Planning Grants. Both Mitigation local planning staff and Mitigation grants staff encourage and educate cities and counties on the benefits of this adoption. In addition to educating jurisdictions before and during the preparation of the LHMP, Local Planning also has developed a regular procedure where as soon as FEMA issues an "Approved Pending Adoption" via email, local planning sends an email notifying cities and counties that they should also adopt their plan into the General Plan Safety Element and provide documents on the benefits and sample adoption language. Local planning also tracks the cities and counties who have adopted and does a regular outreach to those who have not adopted. All pertinent information on AB 2140 is also included on the Local Mitigation Planning section of the Cal OES website. It is important to note that AB 2140 only applies to cities and counties and not to special district plans since special districts do not have General Plans. In addition to the efforts above, the Office of Planning and Research regularly does outreach during their General Plan update training on the benefits of AB 2140 adoption and provides guidance on their website at OPR.ca.gov, furthermore, the CAL FIRE Land Use Planning Program encourages AB 2140 adoption and has included information in their Wildfire Technical Advisory document that can be found on OPRs website as well.</i></p>	Ongoing Capability

Action Item from Previous Plan	Status
<p>Action 2018-114 – Integration of Local and State Mitigation Efforts: Prepare resource materials to assist local governments in achieving consistency with other hazard mitigation and land use plans, and to comply with State legislative requirements.</p> <p><i>Comment: In consultation with the Office of Planning and Research, CAL FIRE Land Use Planning, the Coastal Commission, DWR and other planning partners, a series of plan integration guides have been developed and are available on OPR's website at OPR.ca.gov. Included are Fire Hazard Planning Technical Advisory, Flood After Fire Plan Alignment, Wildland Urban Interface Planning Guide, California Adaptation Planning Guide, Cal Adapt, Coastal Resilience California and Coastal Plan Alignment Compass. Local Planning works in coordination with all State Planning partners to maximize available information for use by jurisdictions in an effort to ensure consistency among required planning documents including, but not limited to, LHMPs, Community Wildfire Protection Plans, Flood Management Plans, CRS Plans, Emergency Operation Plans, Emergency Action Plans and Threat and Hazard Identification and Risk Assessments (THIRAs).</i></p>	Ongoing Capability