

Summary Report

2021 ALFRED E. ALQUIST SEISMIC SAFETY COMMISSION

Mission: Support the People of California to Reduce Life and Economic Losses from earthquake related disasters.



Alfred E. Alquist Seismic Safety Commission (SSC)

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Executive Summary

The following annual report provides a brief overview of the projects of the Alfred E. Alquist Seismic Safety Commission (SSC) in 2021. Once the projects are completed, all reports or studies produced are posted on the SSC “publications” webpage at http://ssc.gov/forms_pubs/

The SSC is among the seismic safety resources for the State of California dedicated to reducing earthquake risk for the people of California since 1975. The SSC investigates earthquakes, reports on earthquake-related issues, and evaluates and recommends to the Governor and Legislature policies needed to reduce earthquake risks. Although the SSC has no regulatory authority over earthquake policy, the SSC strives to ensure a coordinated framework for establishing earthquake safety policies and programs in California.

Sincerely,
Richard J. McCarthy
SSC Executive Director

SSC Vision

Achieve resiliency by providing state, local government and the public with state-of-the-art disaster tools that will reduce losses and expedite recovery.

2021 SSC Staff

Richard J. McCarthy-Executive Director
Salina Valencia Director of Legislation & Communications
Tanya Black Administrative Processes Manager
Michael Orille Project Analyst
Jia Wang-Connelly, Senior Structural Engineer



2021 SSC Commissioners

Name	Area of Expertise
Honorable Ken Cooley	California State Assembly
Mark Ghilarducci	California Office of Emergency Services
Mia Marvelli	California Building Standards Commission
Ida Clair	California State Architect
Michael Gardner	Local Government
Dr. Kit Miyamoto	Structural Engineer
Dr. Jorge Meneses	Geotechnical Engineer
Honorable David Rabbitt	Local Government
Honorable Cindy Silva	Local Government
Timothy Strack	Fire Protection
Andrew Tran	Insurance
Fuad Sweiss	Mechanical Engineer
Ivan Wong	Seismologist

Authority & Statue

The SSC was established in 1975 to advise the Governor, Legislature, state and local agencies, and the public about strategies to reduce earthquake risk (Government Code §8870, et seq.).

The SSC is a department within the Office of Emergency Services (CalOES). With a coordinated effort with CalOES, SSC offers a broad perspective of the overall seismic risk to the state, sets consistent policies and goals without regard to political agendas and makes independent findings and recommendations without agency bias or repercussions.

The SSC investigates earthquake-related issues and evaluates and recommends to the Governor and Legislature policies and programs needed to reduce earthquake risk.

To ensure a coordinated framework for establishing earthquake safety policies and programs in California, the SSC uses the expertise of its members, experienced in earthquake-related fields, to review, evaluate, and translate scientific information and make recommendations to guide and influence earthquake safety policies.

The SSC assists in the state's mitigation efforts through publication and promotion of the California Earthquake Loss Reduction Plan. The SSC responds after earthquakes to gather information and recommends policy changes based on lessons learned.

The SSC does not have regulatory authority over any specific programs or agencies, but it is empowered with quasi-judicial and investigative powers to examine and conduct studies on seismic safety policies and programs across lines of governments and the private sector.

The SSC is composed of 15 Commissioners: 10 appointed by the Governor, with expertise in earthquake or disaster-related fields; 1 legislative member from each of the California State Senate and the California State Assembly; and 3 Commissioners representing the Governor's Office of Emergency Services, the Division of State Architect, and the Building Standards Commission. The SSC is supported by 6.0 staff members.

Financial Summary

The following provides background information on the SSC's various funding sources.

Insurance Fund

California Insurance Code (CIC) section 12975.9 established the Seismic Safety Account as a special account within the Insurance Fund to, upon appropriation by the Legislature, fund the Office of Emergency Services - Alfred E. Alquist Seismic Safety Commission (SSC) and the California Department of Insurance (CDI). The Seismic Safety assessment is imposed on each person who owns real property, commercial or residential, that is covered by a property insurance policy. CDI calculates the assessment annually every August 1 for all commercial and residential earned property exposures reported during the previous calendar year. Pursuant to CIC section 12975.9(b), the annual assessment shall be based upon the number of earned property exposures from both commercial and residential insurance policies, the amount required for the support of the SSC, the actual collection and administrative costs of CDI, and the maintenance of an adequate reserve, but shall not exceed fifteen cents (\$0.15) per earned property exposure.

General Fund

As part of the state's broader preparedness efforts, the SSC was transferred to Cal OES through the Governor's Budget. The Budget Act of 2020-21 allocated General Fund funding to the SSC to support the transfer. The transfer has increased the coordination efforts between SSC and Cal OES, along with other components of the state's multi-hazard strategy, earthquake preparedness, and broader distribution of seismic safety policies and recommendations.

Gift Agreement, California Research and Assistance Fund

In August of 2007, the SSC was awarded a one-time allocation of funds, in the form of a Gift Agreement, from the California Research and Assistance Fund (CRAF). The CRAF funds the SSC research and education projects. As outlined in the CRAF Gift Agreement, the SSC is entitled to collect up to 10 percent overhead expenses for contracts awarded through the fund. Recipients of these funds develop products for the SSC and have an overhead limit of 25 percent. This fund is currently active.

Contract with the California Public Utilities Commission (CPUC)

Upon request, the SSC also receives reimbursement from the California Public Utilities Commission (CPUC). Pursuant to Assembly Bill No. 361, approved by the Governor, and under the California Emergency Services Act, the CPUC created an independent disaster council for the purposes of planning activities related to initial and subsequent



assessments of the Diablo Canyon nuclear power plant site. These assessments include the investigation and interpretation of environmental factors such as seismic safety. The Independent Peer Review Panel (IPRP) comprises the following: SSC Energy Commission, the California Geological Survey of the Department of Conservation, the California Coastal Commission, the Office of Emergency Services, and the County of San Luis Obispo.

SSC Operating Budget Fiscal Year 2020/2021

Seismic Safety Assessment Revenue	1,314,000
General Fund	351,000
California Public Utilities Commission	15,000
California Research and Assistance Fund	700,000

Projects

ALERTWildfire Camera Network

ALERTWildfire is a consortium of three universities, the University of Nevada, Reno, University of California San Diego, and the University of Oregon, which is providing access to state-of-the-art Pan-Tilt-Zoom fire cameras and associated tools to help firefighters and first responders: (1) discover/locate/confirm fire ignition, (2) quickly scale fire resources appropriately, (3) monitor fire behavior through containment, (4) during firestorms, better facilitate evacuations through enhanced situational awareness, and (5) ensure contained fires are monitored appropriately through their demise.

The SSC has supported the efforts of ALERTWildfire network since the inception of the development of the cameras. Dr. Neal Driscoll from University California San Diego has presented updates to the SSC for over four years, including descriptions of the statewide expansion of the network.

Approximately 900 cameras have been deployed across the state and can be accessed by the public.

Review of Project Delays for the San Francisco Public Utilities Water System Improvement Program

Pursuant to Water Code Section 73502. Assembly Bill 1823 Regional water systems enacted the Wholesale Regional Water System Security and Reliability Act, which required the County and City of San Francisco Public Utilities Commission (SFPUC) to adopt a specified program of capital improvement projects designed to restore and improve the Bay Area regional water system that delivers water from the Hetch Hetchy Reservoir in Yosemite. Within 90 days of receiving a notice of project deletions or delays for the program, the SSC and the State Department of Public Health are to submit to the Joint Legislative Audit Committee written comments about the significance of the changes with respect to public health and safety.

SSC's annual review of the SFPUC Water System Improvement Program Annual Report for the Fiscal Year 2019-20 revealed as of September 1, 2021, overall completion of the program's construction of this \$4.8 billion project is at 99% which includes SSC's portion of project review. Several ongoing construction projects are now the focus of the program, as well as the administrative closeout of recently completed projects. The construction of the Calaveras Dam replacement project is complete and represents a major milestone in the overall project.



A review by the SSC was not required this year because the SFPUC U did not report a major delay or modifications to the project that would adversely impact seismic safety. The Seismic Level of Service Goals for the program have been met.

The project is scheduled to be completed in May 2023.

Independent Peer Review Panel for Diablo Canyon Nuclear Power Plant

The SSC and many other state organizations assisted the California Energy Commission in the development of a report in response to AB 1632 (Blakeslee) in 2008. The legislation directed PG&E to use advanced three-dimensional seismic surveying and other methods to try to reduce the uncertainty regarding the plant’s seismic hazards. In 2011, the California Public Utilities Commission (CPUC) created an Independent Peer Review Panel (IPRP) consisting of the CPUC, the SSC, the California Geological Survey, the California Energy Commission, the California Coastal Commission, and a representative from the County of San Luis Obispo. The IPRP has been reviewing and meeting as warranted with personnel from PG&E and various interveners since 2011.

The CPUC has extended the operations of the IPRP until August 2025. The anticipated that the IPRP had one meeting in 2021.

This project is still in progress.

HayWired: How a Magnitude 7.0 Scenario on the Hayward Fault Impacts the Bay Area

The US Geological Service (USGS) and Joint Venture Silicon Valley partnered with the SSC to research and strategize and enhance the resilience of Bay Area communities to climate change and natural hazards. The USGS, in collaboration with its partners and stakeholders, transforms hazard information into risk products that are useful at various levels of government and the private sector.

The USGS led a scenario, called HayWired, in the San Francisco Bay area of California. The HayWired scenario is a hypothetical but-realistic earthquake sequence initiating with a rupture of the Hayward fault. The earthquake is a magnitude 7.0 with an epicenter in Oakland, California. HayWired is a reference to the Hayward fault and speaks to the potential chaos caused by impacts to the wired and wireless world. More generally “wired” represents interconnectedness at many levels: interdependencies of lifeline, social connectivity through technology, and the ripple effects of damages and disruption encompassing the digital economy. The HayWired theme is particularly relevant for the Bay area, known for its leadership in digital communications and technology.

The HayWired scenario addresses risks of climate change and natural hazards, benefiting communities, businesses, governmental agencies and the general public in the Bay area.

The HayWired project study Volume I and Volume II were released in 2018 and Volume III was completed and released in 2021

AB 100: Annual reporting requirement of the Seismic Safety Commission (SSC)
Assembly Bill 100 (Committee on Budget), enacted as Chapter 20 of the Statutes of 2020 transferred the SSC to Cal OES, and established an annual reporting requirement of the SSC. The Legislature finds that numerous agencies at various levels of government have substantial responsibilities in the fields of earthquake preparedness and seismic safety. To provide a consistent policy framework to track and monitor those activities and to identify key activities and responsibilities related to seismic safety the SSC is requiring entities participate in the annual reporting requirement. The purpose of this reporting to illustrate how the State has developed multiple seismic safety risk reduction and recovery programs. Improved descriptions of what entities have been doing to reduce seismic risk will lead to a better understanding and improved cooperation between State departments, local governments, universities, and private industry.

In 2021, the SSC received reports from the California Geological Survey and the California Department of Health Care Access and Information, formerly known as the Office of Statewide Health Planning and Development.

This project is still in progress.