Seismic Safety Commission Meeting Materials

January 19, 2023

January 19, 2023

In Person Location

10370 Peter A. McCuen Blvd.
Mather, CA 95655
Building E: Santa Catalina Room

****UPDATE: COVID tests are not required to enter Building E. Attendees that would like to test will need to take a COVID-19 Rapid test before the meeting time at 10:30am. These are self-tests and are administered in the lobby of Building D.

The following attachments are the directions from Cal OES Headquarters to Building E: Santa Catalina Room.

Attachment 1:

MapQuest Directions from HQ to Building E

Attachment 2:

Overhead view of Building D & E

3650 Schreiver Ave
to 10370 Peter A McCuen Blvd

2 min

0.6 miles

IRS reimbursement:

$0.33

Head northeast on Schriever Ave. Go for 0.3 mi.

Then 0.35 miles

Turn right onto Peter A McCuen Blvd. Go for 0.1 mi.

Then 0.13 miles

Turn left. Go for 62 ft.

Then 0.01 miles

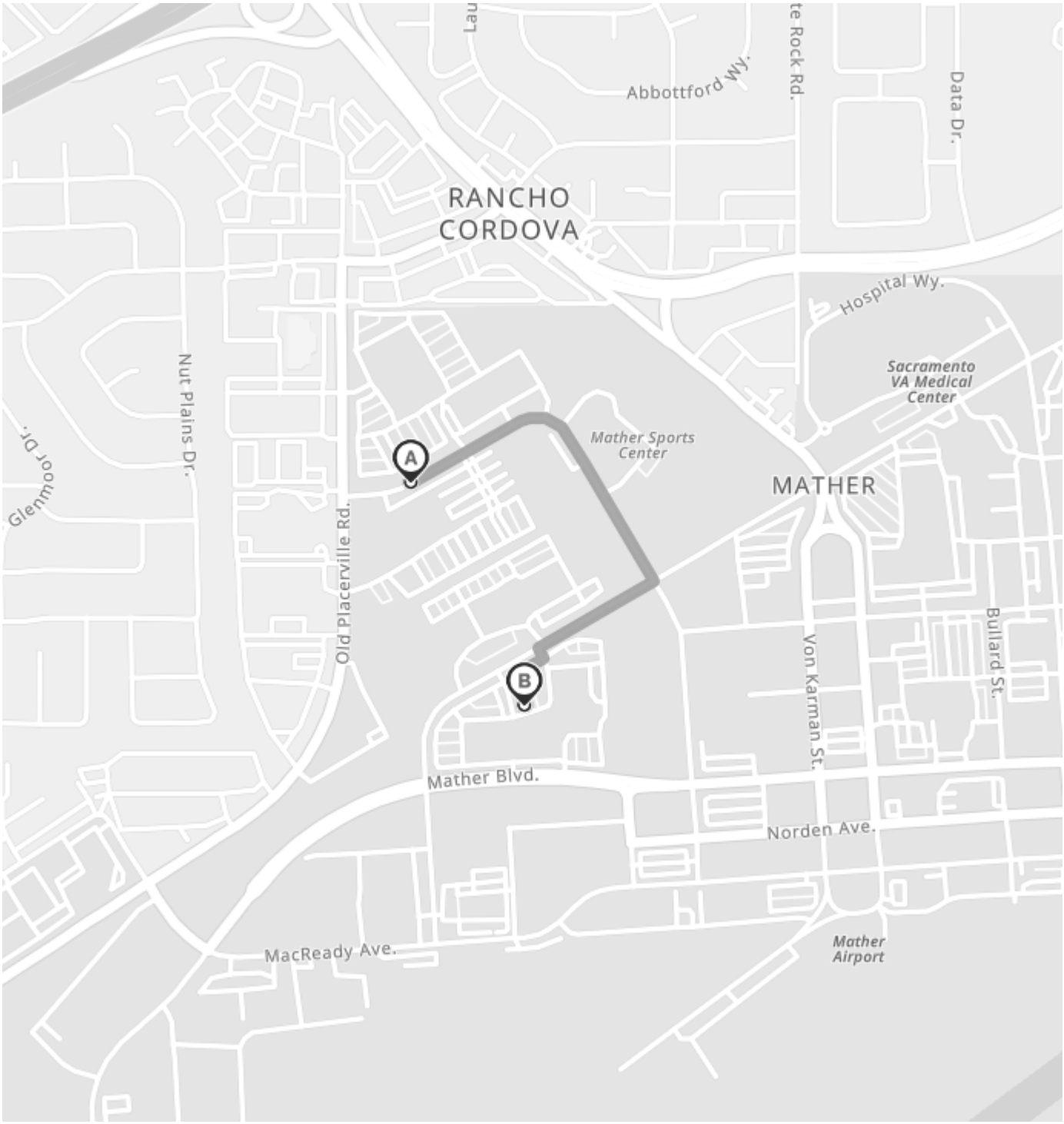
Turn right. Go for 171 ft.

Then 0.03 miles

Turn left. Go for 174 ft.

Then 0.03 miles

10370 Peter A McCuen Blvd
Mather, CA 95655-4108


Abbottford Wy.
te Rock Rd.
Data Dr.
RANCHO
CORDOVA
Hospital Wy.
Sacramento
VA Medical
Center
Mather Sports
Center
MATHER
Nut Plains Dr.
Glenmoor Dr.
Old Placerville Rd.
A
B
Von Karman St.
Bullard St.
Mather Blvd.
Norden Ave.
MacReady Ave.
Mather
Airport


Peter A McCuen Blvd
Peter A McCuen Blvd
Peter A McCuen Blvd
Peter A McCuen Blvd
Peter A McCuen Blvd
Club Français de Sacramento...
Cal OES - Building D
Cal OES - Building E
Layers
Google
Mather Blvd
Imagery ©2022 CNES / Airbus, Maxar Technologies, U.S. Geological Survey, Map data ©2022

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

January 19, 2023
10:30am – 1:30pm

In Person Location:

10370 Peter A. McCuen Blvd.
Mather, CA 95655
Building E: Santa Catalina Room

Virtual Information:

Join Zoom Meeting
https://us02web.zoom.us/j/83527528364?pwd=dHNTcjQxTGp4V0hnaVhOazV0aVBRUT09

Meeting ID: 835 2752 8364
Passcode: 9t=j!D+H
One tap mobile
+16694449171,83527528364#, *57833069# US
+16699006833,83527528364#, *57833069# US (San Jose)

Dial by your location
+1 669 444 9171 US
+1 669 900 6833 US (San Jose)
+1 253 205 0468 US
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 719 359 4580 US
+1 507 473 4847 US
+1 564 217 2000 US
+1 646 931 3860 US
+1 689 278 1000 US
+1 929 436 2866 US (New York)
+1 301 715 8592 US (Washington DC)
+1 305 224 1968 US
+1 309 205 3325 US

+1 312 626 6799 US (Chicago)
+1 360 209 5623 US
+1 386 347 5053 US
877 853 5247 US Toll-free
888 788 0099 US Toll-free
Meeting ID: 835 2752 8364
Passcode: 57833069

Meeting Agenda:

AGENDA	TIME	ACTION
1. Call to Order and Roll Call	10:30am	Roll Call
2. Approval of Seismic Safety Commission September 15, 2022 & November 4, 2021, Meeting Minutes	10:35am	Discussion & Action
3. Chair Remarks	10:40am	Discussion
4. Humboldt County Earthquakes Update - *Annde Ewertsen, Executive Director, SSC* - *Commissioner Garnes, SSC & Mayor of Rio Dell* - *Planning, Preparedness, and Prevention, Cal OES*	10:45am	Discussion
5. AB 100 Reporting – California Department of Water Resources - *Taylor Kanaan, Security and Emergency Management Program, Department of Water Resources*	11:30am	Discussion
6. Updates from FEMA Western Integration Group - *Anne Rosinski, Earthquake Program Manager, FEMA Region IX*	12:00pm	Discussion
7. Seismic Safety Commission Reports 2022 - *Salina Valencia, Director of Legislation & Communications, SSC* - *Tanya Black, Administrative Processes Manager, SSC*	12:20pm	Discussion & Action
8. Chair and Vice Chair Election Policy Update - *Annde Ewertsen, Executive Director, SSC*	12:30pm	Discussion
9. Miscellaneous Announcements	1:10pm	Discussion
10. Public Comment	1:20pm	Discussion
11. Adjourn	1:30pm	Adjourn

SIGN-UP & TIME LIMITS: If you wish to speak on an item, please fill out a "Request to Speak" form and give it to a staff person before the public hearing. The forms are available online with the current month's agenda here: https://ssc.ca.gov/. Submit any requests to speak to InfoSSC@caloes.ca.gov.Time limits are indicated on the speaker sign-up forms and in case of questions or disputes the Chairman will determine the time limits for each speaker at the beginning of the public hearing.

SUGGESTIONS FOR SUBMISSION OF WRITTEN MATERIALS. It is requested that written materials be submitted to the Commission staff prior to the meeting. If this is not possible it is requested that at least 30 copies be submitted to the Commission. This material will be distributed to the Commission members. Applicants are responsible for presenting their projects at the public hearing. NO FAXES will be accepted at the meeting site. You may be able to make prior arrangements with staff by sending an email to InfoSSC@caloes.ca.gov but you will be responsible for paying the hotel or meeting site for its receipt.

ACCESS TO HEARING: Meeting facilities are accessible to persons with disabilities. If you require special assistance, please contact any staff member at the phone or email address below, prior to the meeting. An interpreter for the deaf will also be made available upon request to the staff at least five days prior to the meeting.

FOR MORE INFORMATION: For more information about this meeting, please contact **Tanya Black** at **916-224-8819** or via email at Tanya.Black@CalOES.ca.gov.

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

In-Person and Zoom Meeting
September 15, 2022

I. Call to Order

The meeting was called to order by Chair Silva, at 10:30 a.m. Tanya Black, Administrative Processes Manager, conducted the roll call.

Present:

Cindy Silva, Chair
Fuad Sweiss, Vice-Chair
Ida Clair
Representative Diane Gould for Ida Clair
Representative Nestor Lopez for Ken Cooley
Alegria De La Cruz
Debra Garnes (Arrived at 10:54am)
Representative Lori Nezhura for Mark Ghilarducci
Joone Kim-Lopez
Mia Marvelli
Kevin McGowan
Representative Astghik Hakobyan for Anthony Portantino
David Rabbitt (Departed at 11:15am)

Absent:

Ken Cooley
Dr. H. Kit Miyamoto
Vincent Wells

II. Approval of Seismic Safety Commission July 7th, 2022, Meeting Minutes Discussion:

The Seismic Safety Commission (SSC) discussed the meeting minutes of July 7, 2022. Motion to approve by Commissioner De La Cruz, seconded by Commissioner Rabbitt. Motion passed.

Commissioner Clair abstained.

III. Chair Remarks

Chair Silva began by mentioning the recent earthquake near Santa Rosa at a magnitude 4.4 that occurred on September 13, 2022. Chairwoman Silva stated that Representative Nezhura is the Deputy Director of the Planning, Preparedness, and Prevention Division of Cal OES.

IV. AB 100 Project – California Earthquake Authority "Helping to Mitigate California's Seismic Risk"
Speaker – *Janiele Maffei, S.E., Chief Mitigation Officer, California Earthquake Authority*

Salina Valencia, Acting Executive Director introduced Janiele Maffei, Chief Mitigation Officer for the California Earthquake Authority (CEA) Ms. Maffei stated that she is presenting to the SSC as part of the statue requirements of AB 100. This legislation required SSC to work with specific state departments and various public entities to submit an annual report to the Governor and the Legislature on findings, progress, and recommendations towards higher levels of seismic safety and issues.

Ms. Maffei mentioned that the CEA is a not-for profit provider of residential earthquake insurance that is publicly managed but privately financed. The governing board consists of Governor Gavin Newsom, Insurance Commissioner Ricardo Lara, and State Treasurer Fiona Ma. The non-voting members are Assembly Speaker Anthony Rendon and Senate Rules Chair Toni Atkins. The mission of the CEA is to educate, mitigate, and insure its 1,137,713 policyholders.

CEA has various mitigation programs like Code Development, Earthquake Brace + Bolt (EBB), Earthquake Soft-Story (ESS), Multi-Family Soft-Story (MFSS), Hazard Reduction Discount (HRD) and Earthquake Response and Claim Handling (EDA). The Code Development program is co-directed by the CEA and Federal

Emergency Management Agency (FEMA). It was published in 2018. The project is currently going through the American National Standards Institute (ANSI)-approved consensus process for development into a model code – ICC 1300. ICC-1300 is a standard intended to provide a methodology for identification, evaluation and retrofit of specific known vulnerabilities for one- and two-family wood light-frame residential buildings up to two stories in height located in Seismic Design Categories B through E. The top four seismic vulnerabilities in wood-framed single-family dwellings consist of crawlspace wall, living-space-over garage, hillside house and chimney of dwellings as shown above.

The Earthquake Brace + Bolt (EBB) program is established and managed by the California Residential Mitigation Program (CRMP). CRMP is a joint powers authority created by CEA and the Governor's Office of Emergency Services (Cal OES). The EBB pilot program opened in 2013 to carry out mitigation programs to assist California homeowners who wish to seismically retrofit their houses. The goal is to provide grants and other types of assistance and incentives. The program currently provides up to $3,000 for a code-compliant retrofit of crawlspace.

Funding for this retrofit program comes from two different sources, the CRMP or FEMA. The program was awarded $80 million from FEMA HMGP to CRMP for an additional 21,000 retrofits.

Ms. Maffei noted that the registration will be open for the EEB program and was going live on October18, 2022, and there will be15,000 available grants which will include supplemental grants to 521 program ZIP Codes. Registration for the EEB program can be accessed through their Earthquake Brace + Bolt program website. She stated the next program is the ESS which is managed by the California Residential Mitigation Program (CRMP) that will provide a grant for a code-compliant retrofit of wood-frame, single-family dwellings with living-space-over garages. The registration for this program will start in early 2023.

Ms. Maffei stated that the MFSS program will have potential funding in 2023 that will consist of a FEMA BRIC Grant for $20 million and an allocation from SB 189 of $250 million. The program looks to add steel frames to multi-family soft-story structures with "Tuck-Under Parking".

In addition to these programs, CEA offers a hazard reduction discount on certain older homes, if that home has been properly retrofitted.

The CEA also has available earthquake response and claim handling that was started after the 1994 Northridge earthquake. The Earthquake Damage Assessment and Repair Guidelines (EDA) was published and created by the Consortium of Universities for Research in Earthquake Engineering (CUREE). These guidelines have been updated, completed, and published in 2020. The guidelines are available for claim adjusters, contractors, Structural engineers/Architects, and geotechnical engineers.

Ms. Maffei thanked the SSC for the time to present and asked if there were any questions.

Discussion:

Chair Silva thanked Mrs. Maffei for her presentation and asked if the programs are for all residents in California or if they are only for some geographic areas.

Ms. Maffei stated the programs began in four ZIP Codes to prevent a waiting list due to funding. Money is placed in areas with the highest risk and vulnerability. CEA has grown every year and now covers over 500 ZIP Codes. She also stated that Alameda and San Francisco are currently in the pilot program for the Multi-Family Soft-Story.

V. Update on the Recovery Status of the City of Ridgecrest Earthquake Sequence of July 2019

Speaker – *Eric A. Bruen, Mayor, City of Ridgecrest*

Ms. Valencia stated that the Ridgecrest earthquake sequence struck Ridgecrest and Trona on July 4th and July 5th in 2019. The earthquake with a magnitude of 6.4 struck on the 4th, and a 7.1 on July 5th. The great majority of nearly $4 billion losses occurred at China Lake Naval Air Weapons Station, the region's largest employer.

On July 8th, 2019, the SSC deployed a team to view the damage in Ridgecrest and Trona who participated in the California Earthquake Clearinghouse.

On September 11, 2019, the SSC held a hearing in Ridgecrest City Hall. During the hearing, Commissioners asked presenters questions that focused on their experience during the earthquake and what lessons learned could be passed on to local governments who will ultimately face damaging earthquakes in the future. The SSC appointed then Chair Michael Gardner, Vice-Chair Mia Marvelli, and Commissioner Jim Hackett as an ad hoc committee to refine lessons learned and the report *The Ridgecrest Earthquake Sequence of 2019: Lessons Learned* was produced.

The SSC's emergency response plan called for efforts to review and assess adequacy of federal, state, and local laws, regulations, policies, and practices after an earthquake and to generate policy recommendations. The SSC produced similar reports in the aftermath of past damaging earthquakes, including the 2014 South Napa Earthquake, the 2010 El Mayor-Cucapah Earthquake, and the 2003 San Simeon earthquake.

Ms. Valencia introduced Eric Bruen, Mayor of Ridgecrest, to give an update on the progress of the city of Ridgecrest and Trona.

Mr. Bruen thanked the SSC and stated that it is his second year as mayor and was not the mayor at the time of the 2019 earthquake.

Mr. Bruen stated that the Ridgecrest earthquake swarm had more than 34+ earthquakes within the 30-day time span, there was only one loss of life. There were two major quakes and a significant number of aftershocks and post shocks.

The long-term effects on Ridgecrest and its citizens include a heatwave that recently occurred.

Mr. Bruen commended the SSC for continuing to work on ShakeAlert and stated how these earthquakes had a psychological effect on the community.

Mr. Bruen also stated facilities that were well past their age of usefulness and were built long before California developed codes to help protect citizenship through earthquakes were summarily destroyed which ignited the need for modernization and for making properties code worthy.

Mr. Bruen stated that Ridgecrest today is on an incredible upswing due to the amount of damage that China Lake Naval Station received. Primarily due to that facility being built in the mid-40s and having a certain lack of upgrade during the 60s, 70s, 80s, and 90s, we have seen a surge in construction and opportunity within our community.

Mr. Bruen stated that since this earthquake sequence happened nine months before COVID-19, 80% of the local workforce had already shifted into a remote work environment because of the damage to the base.

Ridgecrest has continued to be able to monitor and advise. Mr. Bruen stated he believes the PTSD aspects of the community have slowly started to wear off. The fact that these earthquakes hit in a remote area, the biggest concern in the months following was what happens if this happens in the major metropolitan. Mr. Bruen stated that the number one concern of local councils, agencies, and response teams was if this earthquake had occurred within a 100-mile radius in a different direction, it is believed there would have been an equal impact based on size in terms of our property damage, potentially. Mobile home damage and a lot of brick damage was present that cannot be sustained if there are no code changes.

Mr. Bruen stated that they don't think they would have had the same level of response or support because of an urban area hit and that's something that a lot of businesses start to take into effect. This includes creating more alternative energy consumption, solar energy, retrofitting of properties, and more awareness of the need for disaster action plans.

Both earthquakes occurred when we were not in a normal operating day pattern. So, July 4th at 10am, the bulk of businesses were closed, and people were at home. On July 5th, the earthquake occurred at 7pm, which meant most people had returned home.

One area that is of equal concern is how does this impact during a normal operating period, i.e., two o'clock in the afternoon or 11am in the morning. Time has been spent looking at that in terms of emergency response.

Mr. Bruen stated that he would love to hear questions about Ridgecrest.

Discussion:

Commissioner De La Cruz stated that she appreciates Mayor Bruen's focus on population that is not typically thought about with earthquakes, which is mobile homeowners. She learned in Sonoma County the importance of multilingual emergency information going out to address populations that may not speak English or may not be connected to technology or alert systems.

Commissioner De La Cruz asked what Ridgecrest has seen in terms of outreach to communities that typically are not connected to some of these alert systems or this information, whether that has increased, and what has worked.

Mr. Bruen stated that it is probably not as much a massive change and it's probably because they are a smaller rural community with a strong mixed demographic. In the Latino sectors, resources have been added within the NIXIE resource which is a community response text message and alert system that allows people to make the choice between languages that they would receive the text in.

Emergency response plans and CERT teams have bilingual staff on them, including police departments and fire departments.

He continued to state work has been done to provide resources and no dramatic changes have been made yet.

Chair Silva thanked Mayor Eric Bruen for the update today and the work being done.

VI. Update on OutSmart Disaster
Speaker – *Gurbax Sahota, President & Chief Executive Officer, California Association for Local Economic Development*

Ms. Valencia stated that the OutSmart Disaster Campaign is a statewide campaign housed within the California Office of Small Business Advocate. The campaign is designed to communicate risk, provide resources, and call to action from business and organizations across California with a goal of collectively becoming more prepared to reduce damages and speed up business recovery in the wake of the disaster. In 2017 and 2018, the SSC

provided the initial funding for this campaign in the amount of $100,000. The campaign was centered around the HayWired Scenario. The SSC hired the Honey Agency, which is a branding firm, to develop a consumer-friendly platform and campaign to inform targeted audience on proactive earthquake preparedness, loss mitigation, and how to recover rapidly from earthquakes.

Building awareness about the HayWired Scenario and the findings that are published in the various reports, the Honey Agency created a recognizable and unique brand for the scenario. The deliverables included creating a toolkit of materials, a website, brochures, flyers, social media graphics, media press kit, and badges for projects, partners, and participating businesses. This was phase one of the project campaign.

Phase two was the statewide public engagement campaign and the development of the resilient Business Challenge, which was a call to action. After the Honey Agency completed its contractual scope of work, the campaign was then handed over to the California Academy for economic development.

Ms. Valencia introduced Gurbax Sahota, the President, and Chief Executive Office with the California Association for Local Economic Development. Ms. Sahota stated the investment made by the SSC has made a difference and grown in terms of the amount of funding and outreach for the campaign.

The California Association for Local Economic Development (CALED) is one of the largest economic development associations in the country and the largest in California. CALED has over 800 members, many of them being cities and counties including Sonoma, Los Angeles, and Rio Dell, and covers the entirety of the state.

CALED's focus is to figure out how to support local economic development. When looking at the economic disruptions of other events seen across the state, there's certainly a need to provide support to have sustainable economies and make sure that economic opportunities are available to residents.

Ms. Sahota stated that CALED partnered with Business, Consumer Services and Housing Agency to administer the OutSmart Disaster Campaign, and recently through an MOU moved the partnership from the Business, Consumer Services and Housing Agency to the Office of The Small Business Advocate where it's currently housed.

Ms. Sahota stated when CALED started down this path with OutSmart, the Federal Government had come to CALED immediately following the Tubbs Fire and asked for a tool to help businesses or communities, cities, and counties, prepare their businesses for these types of disasters or economic disruptions. CALED had an interest in this work but did not have the expertise.

The Federal USDA Rural Development Department asked CALED to put together a California infrastructure financing guidebook. It was seen that rural communities weren't prepared for disaster or to have a methodology for reviewing their projects, whether they were infrastructure-based projects or economic development projects.

Th Ms. Sahota shared with the SSC this guidebook which was specific to the Tubbs fire and lessons learned.

Additionally, the US Economic Development Administration reached out to CALED during COVID shutdowns and asked CALED to prepare a guide for local governments to help them with economic disruptions. Planning for resiliency, planning for recovery, talking about response and the role of local government.

CALED's original intent with the campaign was to work through cities, counties, and local nonprofits that help businesses and walk the businesses through the challenge.

It was found that as the shutdowns began, people were not necessarily interested in meeting in person and the top issue of the day wasn't planning for resiliency, it was how do we stay alive, especially those small businesses. The challenges that exist today, the five core components are really based not just off the work that SSC has done, but they have enhancements from federal resources such as FEMA as well as Cal OES. So as one is going through each part of the challenge, it'll have resources that help you map out your supply chain deferring to the folks that we know do this work.

Additionally, Ms. Sahota gave a brief update on the metrics of the campaign including successes and challenges it has faced over the years.

Discussion:

Commissioner Garnes thanked Mrs. Sahota for the presentation and the work done and expressed her appreciation for resiliency, preparedness, and outreach.

Commissioner Kim-Lopez thanks Mrs. Sahota for the presentation and asked if the data is available to be able to show where the engagement throughout California is coming from just to see if it is spread out or concentrated in a different area.

Mrs. Sahota stated she can share maps with Ms. Valencia to share with the SSC based on the last report, engagement was in the lower Central Valley and the Los Angeles area.

Chair Silva asked if the data on traction and interest against the hazard zones is being correlated.

Mrs. Sahota stated that they overlaid the posts that went out with where it resonated, and it is something that can be shared but she doesn't know if the correlation is going to be as tight because the only two hazards that have had specific posts would be earthquakes and wildfires.

Commissioner De la Cruz asked which partners on the ground were able to get the message out and if there has been data collected that was desegregated by race and ethnicity of the business owners to help people navigate the recovery funding opportunities.

Mrs. Sahota stated that is it difficult to do outreach through nonprofits and she doesn't know if there was just an issue with technical assistance providers working with small businesses or if there is another issue. CALED's partners are local governments so when the traction was not seen happening with nonprofits, CALED started reaching out to another network.

Mrs. Sahota stated that Sonoma County has helped, and CALED is looking to do more in Spanish to reach Hispanic business owners.

Data by race is not a metric that has been tracked but is something for consideration that can be shared with OSBA as feedback from the SSC. Mrs. Sahota stated that she believes OSBA is going to be looking at technical

assistance providers that are nonprofits because those are the ones that fund through the Technical Assistance Program.

CALED's outreach will almost always be through local governments or economic development corporations.

Mrs. Sahota discussed the Infrastructure Financing Guidebook on Disaster Preparedness from an infrastructure perspective and talked about the psychological impact to the team, city, and county staff which is not normally mentioned when discussing preparedness, resiliency response, or recovery.

Chair Silva asked if CALED is working through local Chambers of Commerce or if they have good access to the business community.

Mrs. Sahota explained that the original outreach of the campaign funded a couple of chambers but didn't see the traction that was hoped for. A function of the metric of success could be completing the challenge. Mrs. Sahota stated that she expects to see outreach to the chambers with OSBA.

VII. CLOSED SESSION PURSUANT TO GOVERNMENT CODE § 11126(a)(1)

At this time the Commissioners recessed into closed session to discuss the hiring of the new Executive Director.

During closed session, SSC heard the recommendation of the Executive Director and affirmed by a unanimous vote. It would be announced publicly once the candidate accepts the offer.

IV. Miscellaneous Announcements

Ms. Valencia gave a brief update on the assessment fund. The SSC is funded through the insurance fund, is the primary funding source, and is derived from the annual assessments on insured, commercial, and residential property exposure from the previous year. Since fiscal year 2014-15, the assessment has been at 15 cents. The California Department of Insurance (CDI) is the entity that sets the assessment, and it is their recommendation that for this fiscal year 2022-2023, the assessment will be lowered to 13 cents with no negative programming impact to the SSC.

V. Public Comment

No requests for public comment.

IX. Adjourn

The meeting was adjourned at 12:39pm by Chair Silva.

AL FRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

Microsoft Teams Meeting
November 4, 2021

I. Call to Order

The meeting was called to order by Dr. H. Kit Miyamoto, Chairperson at 9:00 am. Salina Valencia, Legislative & Communications Director, conducted the roll call.

Present:

Dr. H. Kit Miyamoto, Chair
Cindy Silva, Vice Chair
Representative Diane Gould for Ida Clair
Representative Nestor Lopez for Ken Cooley
Representative Lori Nezhura for Mark Ghilarducci
Mia Marvelli
Jorge Meneses
Timothy Strack
Fuad Sweiss
Ivan Wong
Alegría De La Cruz
Joone Kim-Lopez
David Rabbitt (departed at 10:42 am)
Andrew Tran
Debra Garnes
Vincent Wells

Absent:

Ken Cooley
Ida Clair
Mark Ghilarducci

II. Approval of Seismic Safety Commission September 9th, 2021, Meeting Minutes

Discussion:
The Seismic Safety Commission (SSC) discussed September 9, 2021, meeting minutes. Motion to approve by Commissioner Sweiss, seconded by Commissioner Kim-Lopez. Motion passed unanimously.

III. Chairman's Remarks

Chairman Miyamoto had been living in Haiti since August 14th due to a 7.2 earthquake, working with United Nations Office for Project Services (UNOPS) and other agencies for damage assessment and recovery. Chairman Miyamoto stated that Haiti and California have a lot of differences and similarities, but the importance of preparedness is critical. Tedious work done by the SSC accumulates and makes a huge impact.

IV. Update on Haiti Earthquake

Speaker – *Kit Miyamoto, Chairman, Seismic Safety Commission*

Chairman Miyamoto gave an update on the August 14th Earthquake stating it was magnitude 7.2 and is estimated to have 10,000 victims, 130K damaged, or collapsed buildings and houses.

Chairman Miyamoto showed a map that shows the ground acceleration or intensity of the event. Where the acceleration is highest will most likely contain the most damage. Chairman Miyamoto showed the Jet Propulsion Laboratory (JPL) Damage Proxy map, stating a satellite flew over a given area every 6 to 9 hours and captures the before and after pictures and measures the movement of the objects and dots display areas of the structural systems with the most damage.

Chairman Miyamoto stated Haitian construction is different from California except for unreinforced buildings. In Haiti, concrete buildings built prior to the 2010 Earthquake collapse easier than recent buildings. Removing dangerous elements as fast as possible is critical, but at the same time, buildings being taken down can be difficult to replace due to funds. Repairing and strengthening buildings is important for a quick recovery.

Due to a lack of media exposure on the recent earthquake, low funding is received externally. The ATC-20 protocol is combined with repair assessment for engineers to determine and repair the state of the buildings. A social communicator is assigned to inform owners of building damage and steps needed to be done.

The organization consists of about 500 people right now divided along the affected area. An assessment of a house usually takes about 15 to 20 minutes. Buildings are tagged with paint labels and a QR code to download a report of the damage assessment and repair. About 1,300 buildings have already been assessed and only a quarter have been deemed red tag. The JPL damage assessment map captures movement of a structure but has a low resolution and does not provide house by house assessment by engineers. There are still about 92,000 buildings left to be evaluated.

Discussion:

Commissioner Sweiss asked if the map that shows earthquake faults on the island show the same faults with the previous earthquake?

Chairman Miyamoto expressed it is exactly same fault line from 2010. It crosses from the Jamaica ocean through Haiti to the Dominican Republic. The 2010 earthquake was a blind thrust fault and did not hit the fault line. This recent earthquake hit the fault line so there is concern of the fragileness of the fault.

Commissioner Sweiss followed up with an additional question asking what are the possibilities of future earthquakes and what can be done to eliminate the cycle?

Chairman Miyamoto stated seismology is important for the upcoming earthquake. The fault line in the northern part of Haiti that has not been touched for over 100 years and is due to be ruptured. Preventing the cycle comes down to training and knowledge. There is a permit process so training of professionals and other people can help.

Commissioner Tran asked if there is a difference of learning experience now versus the previous event and how that translates to California? And how that affects engineering and assessment? Does the state have a proper measure in place to make it better?

Chairman Miyamoto stated damage assessment under Cal OES is a robust system. Thousands of engineers are certified and ready to go, so as far as damage assessment concern, California is top notch and Chairman Miyamoto believes things can be figured out fast. More connection with JPL/NASA would be helpful, the QR code practice could be useful, and private funding coming in as fast as possible is critical.

Commissioner Rabbitt thanked Chairman Miyamoto for his work and being on the ground. He asked did fatalities and injuries within the confined masonry construction type occurred from walls collapsing. Stating the focus is to fix the structures is ideal, but what do you see going forward for the next seismic event?

Chairman Miyamoto stated in Haiti, there are wood elements supporting roof structures so if the walls fall off, the building doesn't fall all the way. Their reconstruction technique is to put the wood behind the wall inside of it, so when the walls fall it doesn't not harm the people sleeping inside. Doing this at the very weak spots of buildings would be very cost effective and reduces risk significantly.

Commissioner De La Cruz asked are there any populations that are struggling to be served in the same way because of structural or institutional equities? Are there differences regarding Haiti? What are the structures in place to ensure equity in this recovery?

Chairman Miyamoto stated the lower the income level, the higher the suffering is because it's not very sound structurally. It is estimated about 500 dollars per house for construction which is probably like the yearly income for those in the Southern part of Haiti. There's no public assistance at this point so the limited money that is available is used to give information about what happened and what needs to be done. There are some private funds but not a huge degree.

Commissioner Kim-Lopez asked based on experience in Haiti and other parts you've responded, what do you see in terms of their water and wastewater systems? The kinds of impacts, especially those underground.

Chairman Miyamoto acknowledged the importance of the water and wastewater systems. A major town in Haiti had a pretty good water system but it is destroyed. There are funds coming through and it is addressed. Expectation of losing power or water in California or other countries is about a week or two, including communication.

Chairman Miyamoto directed that agenda item V. Executive Director Hiring Process be taken up at the end of the meeting.

V. Executive Director Hiring Process

Speaker – Lisa Mangat, Chief Deputy Director of Policy and Administration, California Governor's Office of Emergency Services

Ms. Mangat stated the SSC is conducting a new appointment of an Executive Director, as well acknowledging the upcoming retirement of SSC Executive Director Richard McCarthy.

Ms. Mangat gave an overview of the roles and responsibilities of the Executive Director and the process in hiring an Executive Director within civil services.

Ms. Mangat stated two Commissioners will be selected to participate on developing the documents that will be used for the recruitment process. She stated once the hiring process and duty statement are approved a robust recruitment will be launched.

Discussion:

Chairman Miyamoto stated that Director McCarthy is retiring on December 31st so the timing would be peculiar. Recruitment wouldn't start until early next year.

Ms. Mangat mentioned during the transition period they would identify a person to act as Interim Executive Director. Alex Pal, Chief Legal Counsel, Cal OES spoke to how this process would happen.

Commissioner Sweiss inquired if Executive Director McCarthy could stay on during the interim as a contractor capacity.

Ms. Mangat acknowledge Commissioner Sweiss' comment.

Commissioner Silva asked for a timeline of the hiring.

Ms. Mangat reiterated the thorough process of hiring for civil service and acknowledge this process may take a lengthy time to complete.

Chairman Miyamoto appointed Commissioner Silva and Commissioner Tran as the selection Committee.

VI. Transition Report for Seismic Safety Commission

Speaker – *Richard McCarthy, Executive Director, SSC*

Executive Director, Richard McCarthy gave an update on studies in which the SSC funded. This included the Fire Following Earthquake and water supply and AlertWildfire, which is a consortium of The University of Nevada, Reno, University California, San Diego, and the University of Oregon which provides fire camera and tools to help firefighters and first responders

The San Francisco Public Utilities Water System Improvement Project which is a 4.5 billion dollar retrofit of the water system that goes from Hetch Hetchy down the valley and up the peninsula. There are 28 customers that draw from that system. It crosses several faults. That project is 99 percent complete, there's a statutory requirement if something changes there needs to be a review. Everything we've reviewed has been completed. It's great news that it has been retrofitted.

Executive Director McCarthy sat in on the State Public Utilities Commission (CPUC) panel for Diablo Canyon. That panel is going to change. The CPUC committee was originally chaired by California Geological Survey (CGS). The SSC has done reviews and studies on impacts of fault on earthquake shaking. However, Pacific Gas & Electric (PG&E) is not going seek relicensing for the plan.

AB100 was a requirement that the SSC set up a website to allow public state agencies to put material on the site that describes what they do, the products they produce, and the budget. On the website now are CGS and the Office of Statewide Health & Development (OSHD). This is a desirable location for a lot of departments to place their information. There is a request from Southern California Earthquake Center and the Earthquake Country Alliance to put their information on the website as well.

Should there be an event in California, SSC will set up and hold hearings for four to five weeks after the event upon invitation of the local government. Testimony from locals and based on that do a report on lessons learned and have

recommendations in your document. The SSC has previously done reports on earthquakes such as the Ridgecrest and Napa quakes.

The SSC is recognized internationally, and the staff get inquiries from other countries. The SSC is a nonvoting member on the advisory board of the Global Earthquake Model (GEM) and has access to mitigation policies and scenarios happening worldwide. Executive Director McCarthy encourages the SSC to stay engaged with GEM.

When the Governor issued an alert on COVID, the staff was prepared for shutdown. Executive Director McCarthy commented on the efficiency of the staff working from home.

Executive Director McCarthy has been working with Cal OES on his transition. The budget is in good shape then stated it's been an honor to serve as the Director and appreciates all the work the staff over the years.

Executive Director McCarthy thanked Governor Newsom for supporting the SSC and thanked the staff.

Discussion:

Chairman Miyamoto respected Executive Director McCarthy's consistency in the SSC and how other agencies view the SSC is thanks to Mr. McCarthy.

The SSC discussed their appreciation for Executive Director McCarthy's professionalism, consistency, and work over the years.

VII. Update on ShakeTable Building Test and Commercial Property Owner's Guide to Earthquake Safety Protocols

Speaker – *Jia Wang-Connelly, Senior Structural Engineer, SSC*

Executive Director McCarthy introduced Jia Wang-Connelly to present current projects in addition to Commissioner Silva on the Commercial Property Owner's Guide. Mrs. Wang-Connelly came from OSHPD, with a lot of experience in construction, understands the state process, and is a great researcher. Mrs. Wang-Connelly stated that it is a statutory requirement to adopt and update the Commercial Property Owner's Guide to Earthquake Safety. The current edition is 2006 so it's long overdue.

SSC will reformat it so that the information flows better and model the style for the Homeowner's guide. We will update information, contacts, provide links for resources, and provide information on earthquake insurance. We are in the process of solicitating inputs from the commercial property owners and thinking of developing a checklist to commercial property inspectors to help potential buyers identify structural components of imposing seismic risk. We will also provide information on how much it costs to retrofit and the cost benefit.

Staff submitted a contract and is waiting to go through the approval process. Staff will be meeting with Vice-Chair Silva next week and will have more clarifications.

Vice-Chair Silva mentioned it will be content rich but not overly descriptive how-to. The Homeowner's Guide and the Commercial Property Owner's Guide will be two volumes of the same set.

Mrs. Wang-Connelly stated that the UCSD ShakeTable test of 6-Story Cold-Formed-Steel Framed Buildings was a very successful project and the staff is authorized to move forward to 10-story. The 10-story is not allowed by code yet and there is a lot to be learned.

This structural system is more sustainable and noncombustible. According to the last test, it is performing very well and is very easy to put up and put down. The tests will be repeated until a failure is detected. This can lead to solving problems like housing shortage and shortening recovery time. The test is to start construction by September next year.

Discussion:

Chairman Miyamoto mentioned this is ground-breaking phenomenon for California. Right now, when engineering buildings we have one option, wood. However, the shortage is tremendous, and the fire hazard is real. Having this option has a huge impact and we should be proud to be a part of it.

Commissioner Rabbitt thinks it's great to have a proven construction type that can get the densities and housing we're looking for.

Chairman Miyamoto explained there is a drastic change in cost of structure and now that there's research happening, there's option.

Executive Director McCarthy commented one of the most significant pieces is after the structure is damaged, they're going to repair it, retrofit it, and then test it again.

VII. Miscellaneous Announcements

Tanya Black, Administrative Processes Manager, explained that SSC is waiting to meet with the internal Cal OES budget team on our approved budget for this next year. Until we do that, we will hold off to give a real look of funding sources which is the general fund received from the state and the property assessments from California Department of Insurance.

The two major things we have for this next year are the Shake Table and the contract for the Commercial Property Owner's Guide.

The tentative schedule for next year was provided and the dates were included in the material sent.

The date for the December meeting will be the 9th at 9 AM.

VIII. Public Comment

Commissioner Sweiss asks to update the website with the new Commissioners and new information.

IX. Adjourn

The meeting was adjourned at 10:45 am by Kit Miyamoto, Chairman.

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

Memorandum

To: Seismic Safety Commissioners

From: Annde Ewertsen, SSC Executive Director

Date: January 19, 2023

Subject: Humboldt County Earthquakes Update

Recommendation:

Staff recommends the Commissioners listen to the updates regarding the recent Humboldt County Earthquakes. Commissioner Garnes, Mayor of Rio Dell and Yvette LaDuke from Planning, Preparedness, and Prevention at Cal OES, will provide an update and account of recent events.

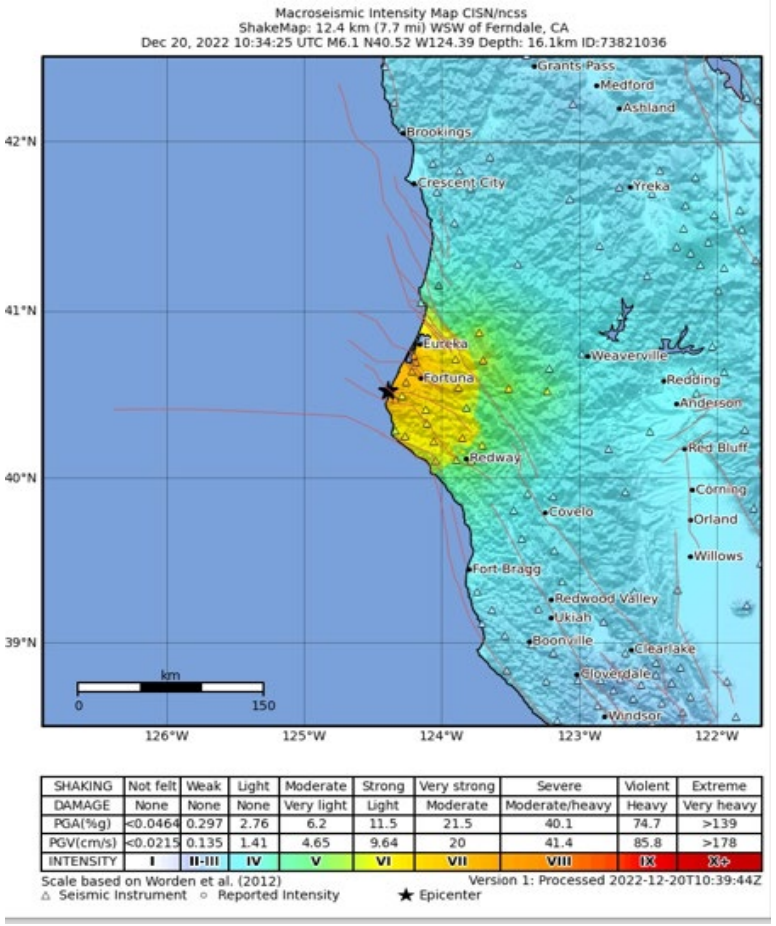
Background:

On December 20, 2022, a M6.4 earthquake struck offshore near Ferndale, California, and a M5.4 aftershock struck in Rio Dell on January 1, 2023, causing damage to lifelines and structures in Humboldt County. State Operations Center (SOC) and California Earthquake Clearinghouse were activated in response.

There were two fatalities because of medical emergencies, wide-spread building damages, road and bridge closures, power, and water outages. SSC staff will continue to monitor the situation and support our partners within Cal OES and the Earthquake Clearinghouse. We will provide updates to the commission in the upcoming meeting.

Seismic Safety Commission Meeting

Ferndale (Humboldt County) Earthquake Briefing



Cal OES Seismic Hazards Branch (SHB)

Thursday, January 19, 2023

Ferndale Earthquake

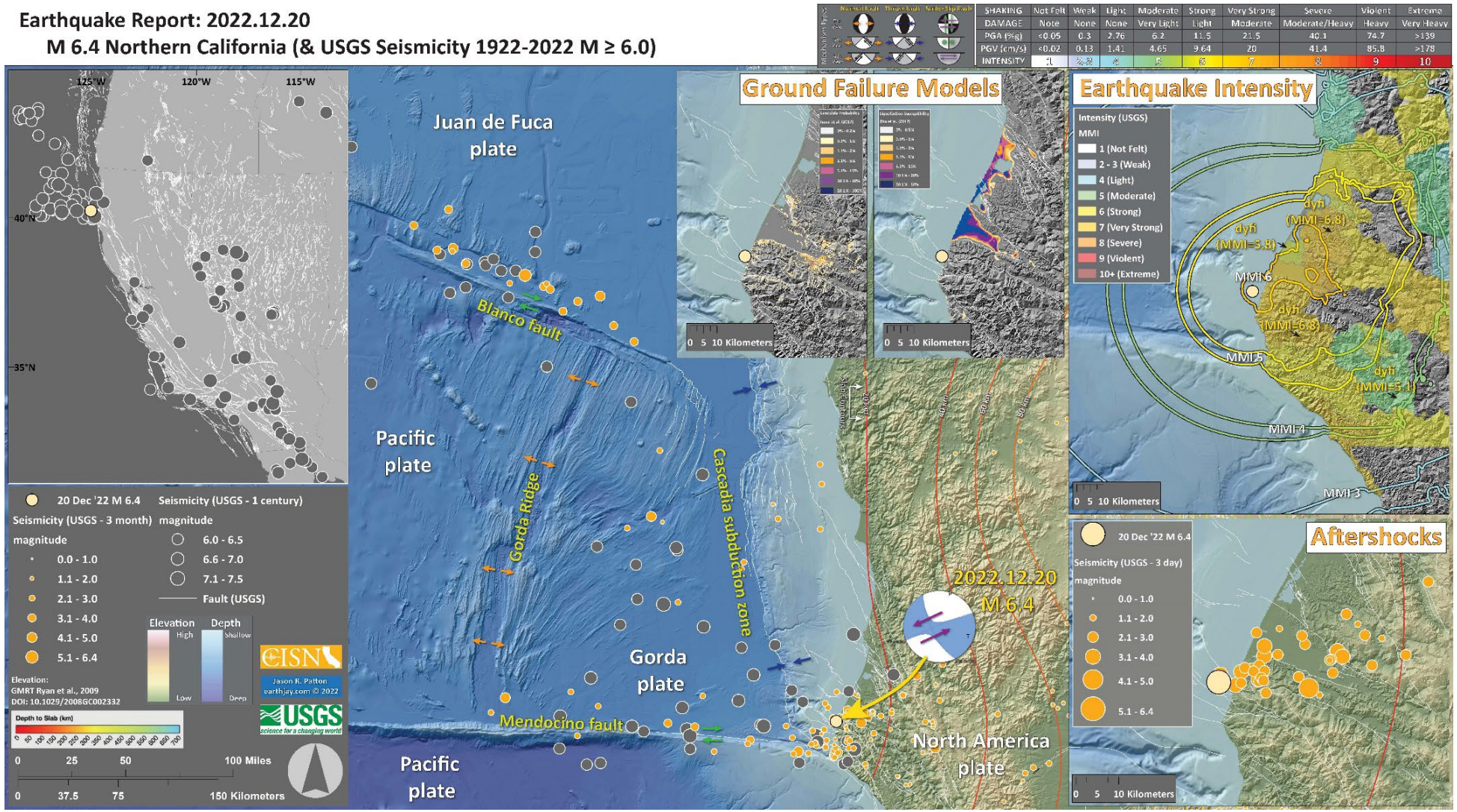
- M6.4 Earthquake - December 20, 2022 at 0234 PST
- 15km (9 miles) WSW of Ferndale
- Occurred in a portion of the Gorda Plate that has sub-ducted under the west edge of the North American Plate.
- The National Tsunami Warning Center issued an information statement:
  - No Tsunami Danger for the California Coastline

- Total Aftershocks since the M6.4 Earthquake on December 20, 2022:
  - 287 per the SHB Final Report (01/13/23)
- Largest Aftershocks:
  - M5.4 – 15km SE of Rio Dell (01/01/23)
  - M4.9 – 7km WNW of Rio Dell (12/20/22)
  - M4.4 – 6km WSW of Ferndale (12/20/22)

Photo Credit: Chris Larsen, Owner, Northcoast Audio Shop

California Geological Survey (CGS)

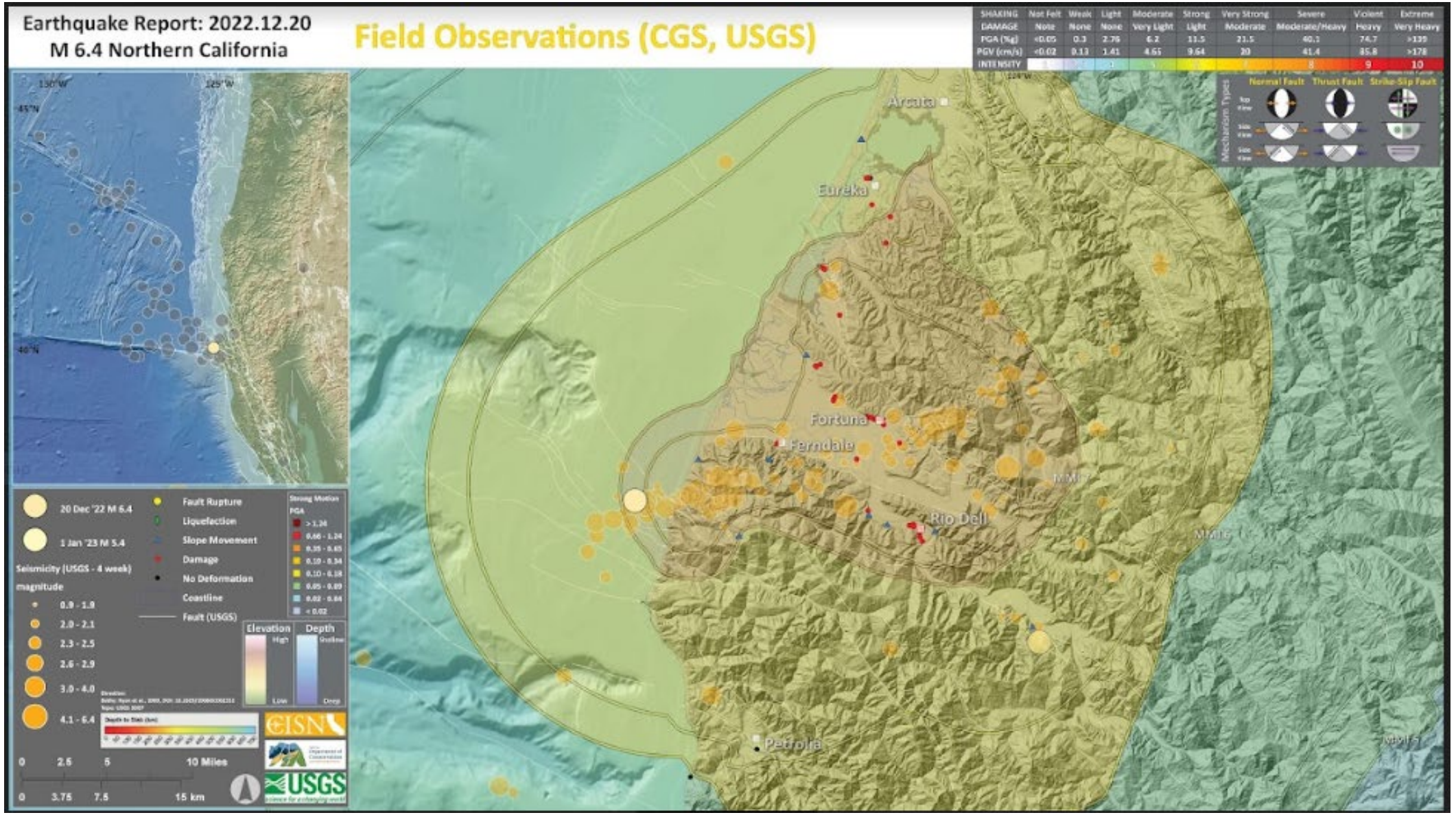
Ferndale EQ (Humboldt County) Poster



Poster Created by:
Jay Patton, CGS

https://learningfromearthquakes.org/2022-12-20-ferndale-ca/index.php?option=com_content&view=article&id=48

CGS & USGS Field Observations

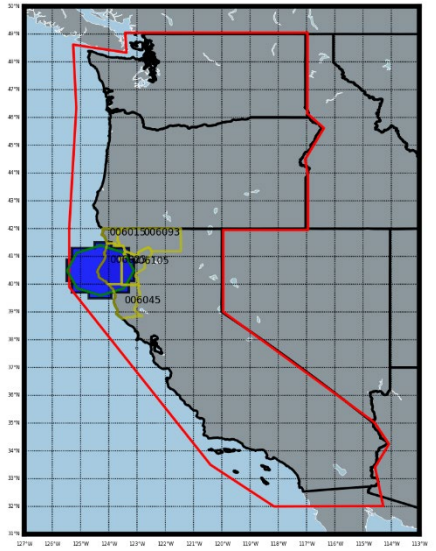


Map Developed by: Jay Patton, CGS

Earthquake Early Warning

- Google delivered just under 3 million ShakeAlert powered alerts to Android phones in California and Oregon.
- 271,277 devices were alerted via the MyShake App
- A Wireless Emergency Alert (WEA) was issued via IPAWS

USGS20221220103432_1671532470



IPAWS Alert Area

ShakeAlert Alerting Area

Cal OES Response & Recovery

Cal OES Response:

- State Operations Center Activated – 2 Shifts (24/7 Coverage)
  - Seismic Hazards Branch Task Force & Duty Officer Support
  - Coordinated with CEA Regarding Requests:
    - ❑ Re-opening of EQ Brace & Bolt Application Period
    - ❑ Staffing for Local Assistance Center
- Fire and Law Branches Deployed to Support Field Response
- Coordination for Local Assistance Center
- Supply Water for areas without water and boil water notices
- Supply Resources needed to support sheltering operations
- Recovery Team Deployed
- Cal OES Coastal Region Deployed to County EOC & Field
- EQ Clearinghouse activated virtually
  - Hosted 3 briefings to share field observations
  - https://californiaeqclearinghouse.org, https://learningfromearthquakes.org/2022-12-20-Ferndale-ca/

Structural Assessments

- Safety Assessment Program (SAP) Inspections in Rio Dell (SAP Personnel – DGS & CalTrans)
  - 582 Structures Assessed following M6.4 Earthquake
  - 555 Structures Re-Assessed & 832 new Structures Assessed following M5.4 Aftershock on 1/01/23
  - Inspectors Demobilized on January 12, 2023
  - IDE Validations Complete
    - ❑ Total Assessments Conducted – 1,942 (including re-assessments)
    - ❑ Total Structures Assessed – 1,387
    - ❑ Green Tagged Structures (Safe to Occupy) – 1,039
    - ❑ Yellow Tagged Structures (Restricted Use) - 257
    - ❑ Red Tagged (Unsafe to Occupy) – 64 (following M5.4) + 27 (M6.4) = 91 red tagged
- Rio Dell independently conducted some assessments – Cal OES has not reviewed this data
- FEMA Preliminary Damage Assessments
  - Bear River Bank of Rohnerville Rancheria: Completed
  - Compiling data to determine eligibility for the tribe
- California Geological Survey & Earthquake Clearinghouse
  - Post-Earthquake Fieldwork – No significant ground deformation found as a result of the earthquake; however, there were approximately 6 landslides less than 100 sq. yards in size

Ferndale Earthquake Photos

Photo Credit: Vladimir Calugaru
Infra Terra, Inc.

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

Memorandum

To: Seismic Safety Commissioners

From: Salina Valencia, Director of Legislation

Date: January 19, 2023

Subject: AB 100 Reporting- California Department of Water Resources

Recommendation:

Staff recommends Commissioners listen to a presentation from Taylor Kanaan, Security and Emergency Management Program, Department of Water Resources. Commissioners should be prepared to ask questions on their seismic programs.

Background:

Assembly Bill 100 (Committee on Budget), enacted as Chapter 20 of the Statutes of 2020 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 has required that entities participate in the annual reporting to the SSC. The California Department of Water Resources is the fourth entity to come before the SSC and underscore the value of their seismic programs to the public.

DEPARTMENT OF WATER RESOURCES
P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

Alfred E. Alquist SEISMIC SAFETY COMMISSION
2945 Ramco Street, Suite 195
West Sacramento, CA 95691

Subject: Department of Water Resources (DWR) – Seismic Safety Summary Report

Dear Salina Valencia:

Enclosed please find the Department of Water Resources (DWR) Seismic Safety Summary Report.

Assembly Bill No. 100, Section 8589.75 requires numerous agencies at various levels of government to annually report substantial responsibilities and efforts undertaken in the fields of earthquake preparedness and seismic safety. Accordingly, This report summarizes DWR's multiple seismic safety risk reduction and recovery programs, conducted through its Division of Operations and Maintenance, Division of Engineering, Division of Safety of Dams, and Division of Flood Management. This report intends to highlight DWR's role within the State's overall earthquake risk reduction and post disaster economic recovery goals, while fulfilling DWR's mission to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance the natural and human environments.

If you have any questions, please contact Taylor Kanaan at Taylor.Kanaan@water.ca.gov or (916) 882-2369.

Sincerely,

John Paasch
Deputy Director, Security and Emergency Management Program
Executive Division

Enclosures

State of California
California Natural Resources Agency
Department of Water Resources

Seismic Safety Summary Report

November 25, 2022

EXECUTIVE SUMMARY

The Department of Water Resources (DWR) is committed to public safety and performs numerous planning and management activities for seismic safety throughout California. DWR remains vigilant and constantly monitors seismic activity with a network of state-of-the-art equipment in more than 100 locations. These instruments provide timely information about the intensity of earthquakes which can be used to estimate the potential for damage to critical infrastructure. This information is used to help prioritize post-earthquake inspections, evaluate how infrastructure respond to earthquake shaking, and guide design decisions for future seismic retrofit projects.

DWR is currently conducting a thorough evaluation to prioritize upgrades for all State Water Project (SWP) facilities, including 26 dams and 36 water storage facilities. Making the necessary seismic retrofit investments to protect California's water system are a top priority for DWR.

Due to California's unique geology and seismic activity, the seismic resiliency of non-federal state jurisdictional sized dams across the state are paramount. DWR's Division of Safety of Dams (DSOD) is entrusted with regulating approximately 1,240 dams across California to safeguard life and property from dam failures. Evaluating dams for seismic stability has been a part of DWR's mission for decades, and DWR regularly works with dam owners to mitigate seismic deficiencies. More than $4 billion has been spent on dam construction, enlargement, alterations, and repairs at over 150 dams over the last decade.

DWR also works closely with local and federal agencies to monitor and improve the state's aging flood control infrastructure. DWR finalized the Delta Flood Emergency Management Plan (DFEMP), which details preparedness, response, and recovery activities in the event of earthquake-induced flooding in the low-lying, heavily leveed region of the Sacramento-San Joaquin Delta.

To prepare to respond to a major earthquake, DWR integrates planning, engineering, and operations activities to build resiliency. DWR evaluates flexibility in operations, performs recurring assessments, and continually expands emergency response capabilities.

1.0 INTRODUCTION

DWR's mission is to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance the natural and human environments. Under this mission, DWR performs numerous planning and management activities for seismic safety throughout California, some of which include:

- The development, operation, and maintenance of the California State Water Project (SWP).
- The implementation of a comprehensive and system-wide approach to dam safety, flood protection, and emergency management.

This report summarizes DWR's multiple seismic safety risk reduction and recovery programs and meets the requirements of Assembly Bill No. 100, Section 8589.75.

2.0 STATE WATER PROJECT

Since the 1960s and 1970s the SWP has been supplying water to almost 27 million Californians and 750,000 acres of farmland through California Water Code authorities. It spans more than 705 miles from Northern California to Southern California and includes 36 storage facilities, 30 pumping and generating plants, and approximately 700 miles of canals, tunnels, and pipelines. Figure 1 below shows the locations of primary SWP storage and water delivery facilities. Planned, built, operated, and maintained by DWR, the SWP is the nation's largest state- owned water and power generator and user-financed water system.

Figure 1: Map of California showing the names and locations of primary SWP storage and water delivery facilities.

Public safety is the highest priority for DWR in its management and operation of the SWP. To ensure public safety, as well as reliable water deliveries and power generation, DWR continually monitors and evaluates seismic activities that could affect the SWP. Major portions of the California Aqueduct are located parallel to and near the San Andreas Fault and other active faults. The SWP's conveyance facilities cross seismically active faults at multiple locations. Figure 2 shows faults in California in relation to the SWP conveyance facilities. SWP pipelines that cross active faults are typically located above ground or at shallow depths to make repairs easier if they are damaged by fault movement.

Figure 2: Shows faults in California in relation to the SWP conveyance facilities.

2.1 DIVISION OF OPERATIONS AND MAINTENANCE

The Division of Operations and Maintenance (O&M) manages the SWP to ensure adequate water supplies are available under various hydrologic and legal conditions while maintaining operational flexibility. O&M also develops, plans and operates the SWP to meet environmental and regulatory requirements, which also apply to the seismic safety programs and projects.

2.2 DIVISION OF ENGINEERING

The Division of Engineering (DOE) provides timely, cost-effective, and quality engineering, geology, construction, geodetic, and administrative services to the public, state water contractors, State, and federal agencies, and other DWR organizations. As such, DOE has historically maintained responsibility for many seismic components required by DWR's programs. These responsibilities vary and are typically dependent on the needs of the programs, such as the Delta Seismic Program and the SWP Seismic Criteria. Some seismic studies, analyses, and investigations are funded by other divisions such as O&M's Dam Safety Program. The SWP Seismic Program is intended to fill the gaps between all the DWR's programs that involve seismic investigations to ensure that a comprehensive approach is being executed. DOE has a $2 million budget over the next five years for the SWP Seismic Program.

2.3 SWP SEISMIC PROGRAM AND PROJECTS

DWR is updating its monitoring systems, performing studies, updating design guidelines, and modernizing SWP facilities across the state.

2.3.1 MONITORING

DWR owns, operates, and maintains seismic monitoring instruments to record ground and structure movement at or near SWP facilities. DWR monitors earthquake activity within the state as well as in nearby states. O&M uses the ShakeCast system developed by the U.S. Geological Survey to send out automatic notifications to staff when post-earthquake inspections are necessary (see section 3.2 for more information). DWR is about three years into a 10-year, $2.5 million effort to modernize its seismic monitoring network.

DWR's Emergency Preparedness Program has created post-earthquake inspection procedures and forms to document seismic-related damage to SWP facilities. DWR inspects SWP facilities following earthquake activity based on estimated shaking intensities at critical facilities. If necessary and based on the earthquake damage, DWR will implement its SWP Emergency Action Plans.

DWR recognizes that seismic monitoring in California continues to be a shared effort between numerous State, federal, research, and other private agencies. To support this effort and maximize the value of seismic data collected, DWR shares its seismic data with members of the California Integrated Seismic Network to assist their efforts to report on significant earthquake activities. DWR also shares seismic data to support the California Earthquake Early Warning System.

2.3.2 STUDIES AND DESIGN GUIDELINES

Delta Seismic Study

The Delta Seismic Study includes geotechnical and seismic assessments, studies, and evaluations of conditions of the levees in the Sacramento-San Joaquin Delta region to gain a better understanding of Delta geology and seismicity. These studies inform DWR's approach for seismic design and analysis of SWP facilities located in and around the Sacramento and San Joaquin Delta. DWR is installing strong motion monitoring system and accelerometers and conducting dynamic response studies of Delta soils including liquefaction analyses, fault sources, ground motions and site response.

SWP Seismic Loading Criteria - Review and Update

The Seismic Loading Criteria Report provides design engineers with guidelines for selecting appropriate seismic loading criteria for a wide variety of SWP facilities, including dams, canals, pipelines, tunnels, check structures, bridges, buildings, utility overcrossings, and pumping and power plants. The seismic design load should be selected based on the criticality of a facility and consequences of its failure.

Because the state of practice in earthquake engineering and seismology continually changes, this document is periodically reviewed and updated to ensure that SWP facilities are always in step with current practice. DOE conducts a review of the Seismic Loading Criteria Report roughly every five years and updates it as needed.

SWP Seismic Studies Program - Statewide

This program evaluates faulting and seismicity in California and the related risks posed by earthquake events affecting SWP facilities. The studies in this program cover statewide initiatives and include development of current state-of-practice for seismic sources, fault rupture, ground motions, and the seismic evaluations and analysis of impacts and risk to existing facilities. Future studies will focus on defining seismic risk for specific study areas, which include the State Water Project facilities in Northern California, Southern California, the Sacramento-San Joaquin River Delta, the Central Valley, and other areas as necessary. These future studies will also include planning- and conceptual-level earthquake design studies and analysis for new SWP facilities located in and around seismic risk areas.

2.3.3 SWP MODERNIZATION PROGRAMS & PROJECTS

DWR is moving forward with the modernization of SWP facilities to reduce seismic and hydrologic risks. DWR will assess the SWP dams and associated appurtenant structures and undertake construction activities to ensure those function safely. Work on most of the projects described below began in 2019.

Perris Dam Remediation Project

The Perris Dam Modernization Project addresses seismic risks that could impact water deliveries and the safety of surrounding communities. In 2005, DWR began the Perris Dam Modernization Project with the seismic retrofit to the dam embankment. The retrofit included several upgrades, such as strengthening the dam's foundation with over 320,000 cubic yards of cement deep soil mixing (CDSM) and adding 1.4 million-cubic-yards of embankment material to buttress the downstream of the 130-foot tall, earthen Perris Dam. When the remaining project components are completed in 2026, DWR will achieve its goal of upgrading its infrastructure to protect water system and enhance public safety. The estimated project cost is $265 million dollars, with roughly $52 million of the funding coming from the Proposition 84 bond.

Sisk Dam Remediation Project

The Sisk Dam Remediation is a joint project between U.S. Bureau of Reclamation and DWR that will add stability berms and other physical features to the existing 3.5-mile-long earthen B.F. Sisk Dam to reduce risks associated with a large seismic event.

Construction on the multi-year project began in the summer of 2022 and is anticipated to be complete in 2028. The estimated cost is $1.1 billion.

Pyramid Dam Modernization Program

In 2019, DWR began assessing the condition of the facility and possible improvements to the emergency and gated spillways. The gated spillway is used approximately once per year and the emergency spillway has never been used. DWR wants to continue safe operations of the gated spillway and emergency spillway if used. DWR conducted seismic evaluations of the gated spillway to determine if any retrofits are necessary to ensure it will work appropriately in the event of an earthquake. Currently, DWR is performing a safety assessment, which will inform DWR's prioritization of projects that will reduce risks associated with the facility.

Castaic Dam Modernization Program

The Castaic Dam Modernization Program began in 2018 and involves reducing seismic risk to the intake tower and access bridge, evaluating the spillway to identify and implement necessary modifications, and improving dam safety monitoring capabilities on various dam components. DWR anticipates the modernization efforts of the program will take about 10 years to complete. To date DWR has:

- Conducted a stability analysis, which indicated the dam structure will continue to perform safely, even in the event of a major earthquake.
- Successfully completed a three-year refurbishment effort of the isolation valves to the State Water Contractor at the Castaic Outlet.
- Completed seismic retrofits of the access bridge to the outlet structures to ensure that personnel can access the outlet structures during a major earthquake.
- Completed a conceptual design report for the Tower Debris Mitigation Project.

Currently, DWR is performing a safety assessment, which will inform DWR's prioritization of projects that will reduce risks associated with the facility. The safety assessment is anticipated to be complete in 2023.

3.0 DIVISION OF SAFETY OF DAMS

Since August 14, 1929, the State of California has regulated dams to prevent failure, safeguard life, and protect property. The California Water Code entrusts dam safety regulatory power to DWR, which delegates that authority to the Division of Safety of Dams (DSOD). DSOD provides oversight to the design, construction, and maintenance of approximately 1,240 non-federal jurisdictional-sized dams in California.

3.1 INSPECTION AND REEVALUATION

Since the 1970s, DSOD has been conducting seismic reevaluations of dams and continues these efforts as the state-of-the-practice advances with respect to earthquake engineering. Dams included in these reevaluations are generally located near high-slip rate faults and could be susceptible to large deformations during a major earthquake event. As a result of these reevaluations, numerous dams have had major seismic retrofits completed over the last decades. DSOD has also conducted reevaluation programs focused on seismic-induced failure modes due to instability of dam structures, radial gate assessments associated with seismic and operational failure modes and, more recently, spillway assessments associated with hydraulic failure modes.

On February 26, 2018, Assembly Bill 1270 added section 6103 to the CA Water Code, which requires DSOD, in consultation with national dam safety and dam safety risk management organizations, to propose amendments to its inspection and reevaluation protocols to ensure public safety. DSOD convened a 14-member multi-disciplinary Technical Advisory Panel to review DSOD's dam safety program. Based on the Panel's recommendations, DSOD has recently begun incorporating risk informed decision making into its dam safety program. Risk analysis methodologies provide a tool to further comprehend the interactions of performance observations, loading probabilities, and engineering analyses to better understand the risk of failure. Risk analysis methodologies are also used to evaluate the potential for a sequence of unusual events and decisions that can lead to a system failure.

3.2 SHAKECAST AT DSOD

DSOD uses USGS's open-source ShakeCast application to provide near-real-time estimates of the severity of earthquake shaking at each dam under its jurisdiction to identify those dams potentially warranting a post-earthquake response.

The ShakeCast application continuously monitors a USGS database for new ShakeMaps, which are mapped representations of ground shaking produced after earthquakes. The application automatically downloads data when it becomes available – typically within a few minutes after the earthquake occurred. ShakeCast produces an email message detailing the time the earthquake occurred, its magnitude, and its location. It compares the intensity of ground shaking at dam locations to a pre-defined threshold set for each dam. If the shaking intensity threshold is met or exceeded, the dam is placed onto a list for potential post-earthquake response. ShakeCast emails the list of dams to DSOD engineers and engineering geologists emergency responders for assessment and possible action.

For all earthquakes that may warrant a post-earthquake response from DSOD, the list of dams from ShakeCast is ranked to address dams of high concern and highest ground shaking first. The emails also note those dams located near the earthquake epicenter that do not require a post-earthquake response.

3.3 INUNDATION MAPPING

As required by California Water Code section 6161, DSOD reviews and approves inundation maps prepared by licensed civil engineers and submitted by dam owners for extremely high, high, and significant hazard dams and their critical appurtenant structures. Inundation maps approved by DSOD are a tool used to develop emergency action plans; they are intended to provide general information for emergency planning under different dam failure scenarios, including the scenario of a Sunny Day instantaneous dam failure due to seismicity. DWR assumes no legal responsibility resulting from the use of this information. Actual evacuation zones and timing will be determined by local emergency managers who are responsible for specific evacuation procedures in an emergency event.

3.4 FUNDING

DSOD's funding comes from a Special Fund that collects fees paid by dam owners. Senate Bill 92 (Chapter 26, Statues of 2017) required DWR to adopt, by regulation, a schedule of fees to cover reasonable regulatory costs in carrying out the supervision of dam safety. These fees support a wide variety of activities, including the annual inspections of state jurisdictional dams; application review and construction inspection work; engineering studies that include hydrologic, structural, and seismic stability re-evaluations; emergency response; and review and approval of mandated flood inundation maps of dams and critical appurtenant structures for emergency preparedness. More than $4 billion has been spent on dam construction, enlargement, alterations, and repairs at over 150 dams over the last decade. Additional funding information is available on DWR's website.

4.0 DIVISION OF FLOOD MANAGEMENT

DWR's Division of Flood Management (DFM) prevents loss of life and reduces property damage caused by floods by monitoring weather and river conditions, issuing forecasts, coordinating flood response, managing emergency information, and participating in flood control projects. In 2018, DFM released the Delta Flood Emergency Management Plan (DFEMP) that provides strategies for response to Delta levee failures, up to and including earthquake-induced multiple island failures. DFEMP provides a concise, but flexible, blueprint for guiding Delta flood emergency management, and focuses primarily on the concept of operations for Delta flood emergency preparedness, response, and recovery. The plan includes the prepositioning of emergency construction materials at existing and new stockpile and warehouse sites in the Delta and developing tactical modeling tools (Delta Emergency Response Tool) to predict flood response logistics, timelines, and sequences of response actions and to restore water quality.

DFEMP has extensively coordinated with state, federal, and local emergency response agencies. In conjunction with local agencies, USACE and Cal OES, DWR conducts tabletop and field exercises to test and revise the plan under real-time conditions.

DWR and USACE provide vital Delta region response to flood and earthquake emergencies that complement Cal OES operations. The Delta Emergency Operations Integration Plan (DWR and USACE, 2019) integrates federal personnel and resources during flood emergency operations.

A 5-year update of DFEMP is currently underway. The 2018 DFEMP was funded by Proposition 1E, and the update is being funded by Proposition 1.

5.0 CONCLUSION

Assembly Bill No. 100, Section 8589.75 requires numerous agencies at various levels of government to annually report substantial responsibilities and efforts undertaken in the fields of earthquake preparedness and seismic safety. Accordingly, this report summarizes DWR's multiple seismic safety risk reduction and recovery programs, conducted through four divisions: O&M, DOE, DSOD, and DFM. This report intends to highlight DWR's role within the State's overall earthquake risk reduction and post-disaster economic recovery goals, while fulfilling DWR's mission to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and to protect, restore, and enhance the natural and human environments.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

2022 DWR Seismic Safety Report

January 19, 2023

Taylor Kanaan

Today's Presentation

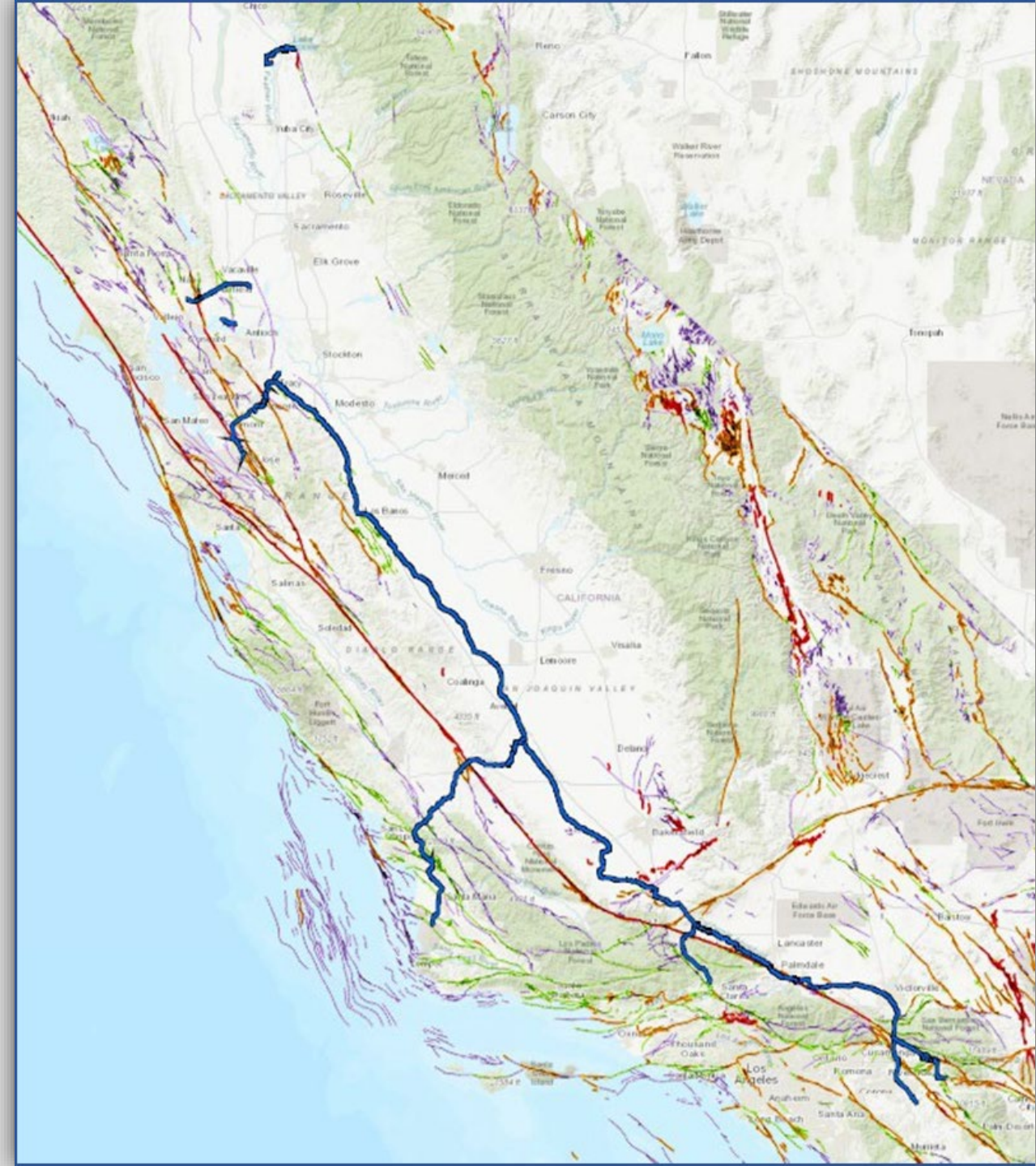
- Introduction to DWR
- State Water Project (SWP)
- Division of Safety of Dams
- Division of Flood Management
- Conclusion

DWR's Mission

"Our mission is to sustainably manage the water resources of California, in cooperation with other agencies, to benefit the state's people and protect, restore, and enhance the natural and human environments."

State Water Project

- Nation's largest state-owned water and power generator
- Spans over 705 miles
- Includes:
  - 36 storage facilities
  - 30 pumping/generating plants,
  - 700 miles of canals, tunnels, and pipelines



Division of Operations & Maintenance

Manages the SWP to ensure adequate water supplies are available under various hydrologic and legal conditions.

Division of Engineering

Provides engineering, geology, construction, geodetic, and administrative services to the public, SWP contractors, State, and federal agencies.

SWP Monitoring

- DWR owns, operates, and maintains seismic monitoring instruments to record ground and structure movement at or near SWP facilities.
- O&M uses the ShakeCast system developed by the U.S. Geological Survey to send out automatic notifications to staff when post-earthquake inspections are necessary.
- DWR is about three years into a 10-year, $2.5 million effort to modernize its seismic monitoring network.

SWP - STUDIES AND DESIGN GUIDELINES

Delta Seismic Study

- Includes geotechnical and seismic assessments, studies, and evaluations of conditions of the levees in the Sacramento-San Joaquin Delta region to gain a better understanding of Delta geology and seismicity.

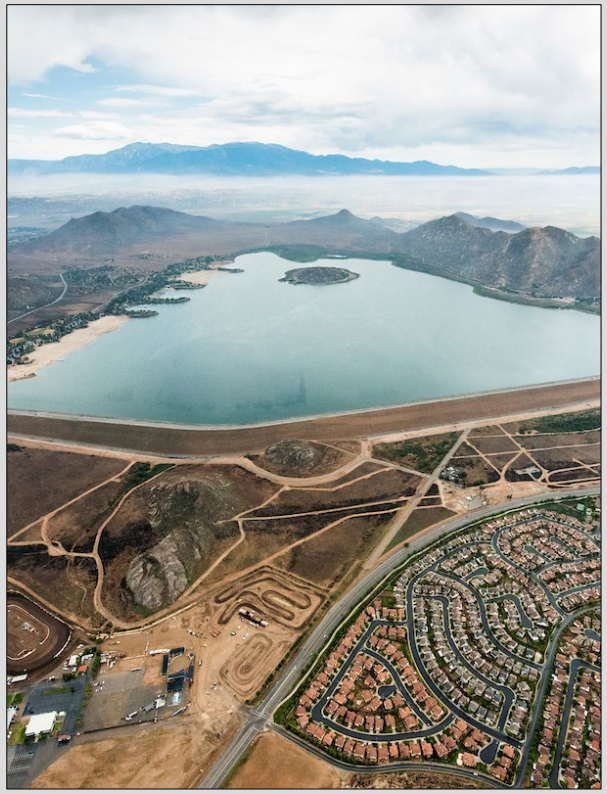
SWP Seismic Loading Criteria - Review and Update

- Provides design engineers with guidelines for selecting appropriate seismic loading criteria for a wide variety of SWP facilities, including dams, canals, pipelines, tunnels, check structures, bridges, buildings, utility overcrossings, and pumping and power plants.

SWP Seismic Studies Program – Statewide

- This program evaluates faulting and seismicity in California and the related risks posed by earthquake events affecting SWP facilities. The studies in this program cover statewide initiatives and include development of current state-of-practice for seismic sources, fault rupture, ground motions, and the seismic evaluations and analysis of impacts and risk to existing facilities.

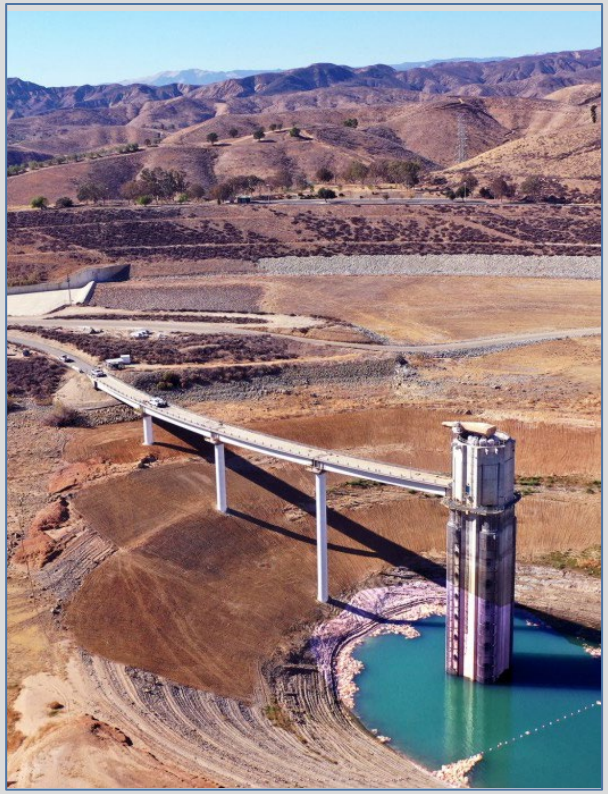
SWP Modernization Programs & Projects



Perris Dam

Sisk Dam

Pyramid Dam



Castaic Dam

Perris Dam

- Seismic retrofits to the dam embankment were completed in 2018.
- The outlet tower is planned for 2023.
- Emergency release facility is planned for 2025.
- The estimated project cost is $265 million dollars.

Sisk Dam

- Add stability berms and other physical features to the existing 3.5-mile- long earthen dam.
- Construction began in the summer of 2022 and is anticipated to be complete in 2028.
- The estimated cost is $1.1 billion.

Pyramid Dam

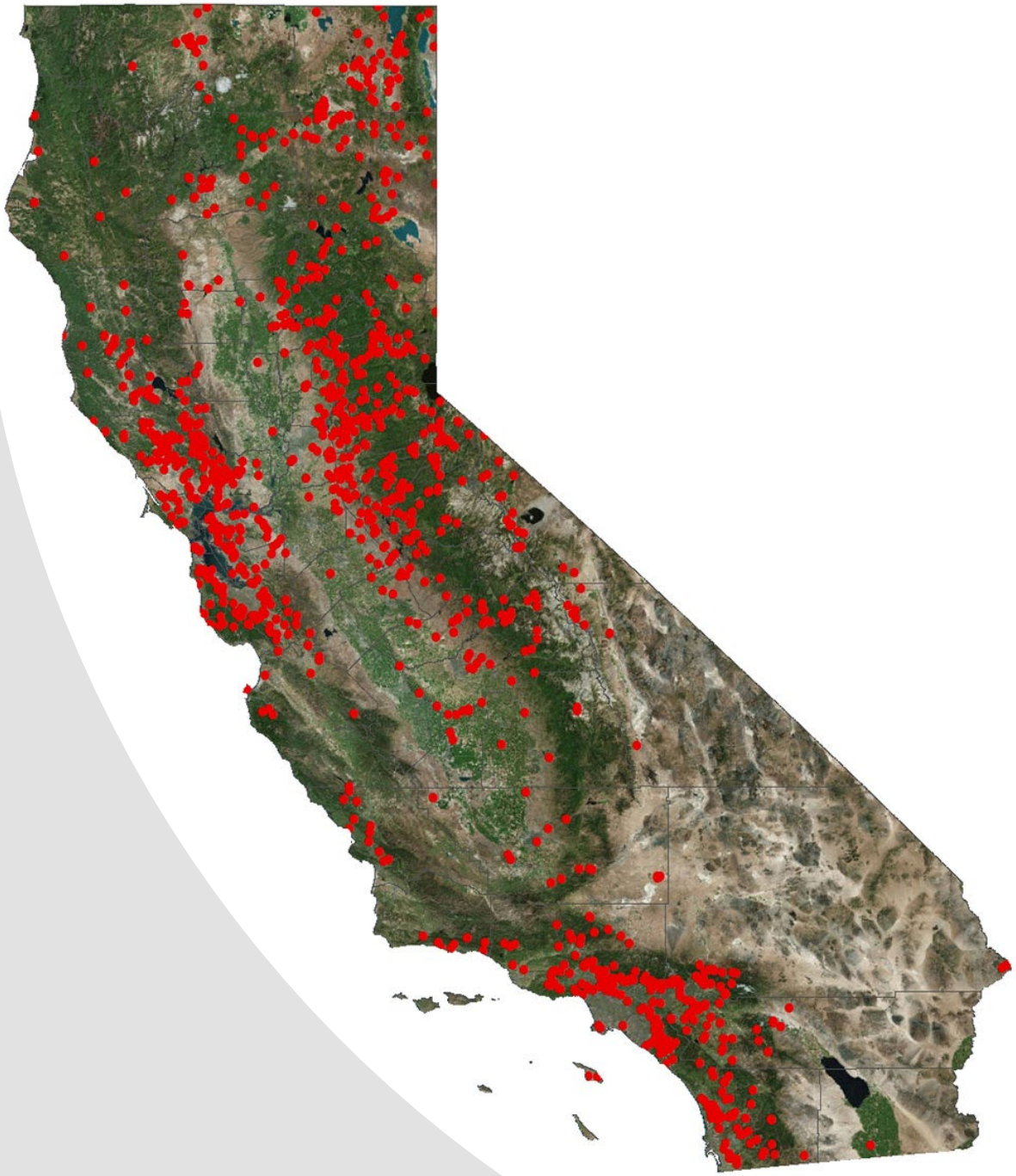
- In 2019, DWR began assessing the condition of the facility and possible improvements to the emergency and gated spillways.
- Currently DWR is performing a safety assessment which is expected to be complete in 2023.

Castaic Dam

- Conducted a stability analysis.
- Completed a three-year refurbishment effort of the isolation valves at the Castaic Outlet.
- Completed seismic retrofits of the access bridge to the outlet structures.
- Completed a conceptual design report for the Tower Debris Mitigation Project.

Division of Safety of Dams

DSOD provides oversight to the design, construction, and maintenance of approximately 1,240 non-federal jurisdictional-sized dams in California.



DSOD Programs

Inspection and Reevaluation

- DSOD conducts seismic reevaluations of dams and continues these efforts as the state-of-the-practice advances with respect to earthquake engineering.

ShakeCast

- DSOD uses USGS's open-source ShakeCast application to provide near-real-time estimates of the severity of earthquake shaking at each dam under its jurisdiction to identify those dams potentially warranting a post-earthquake response.

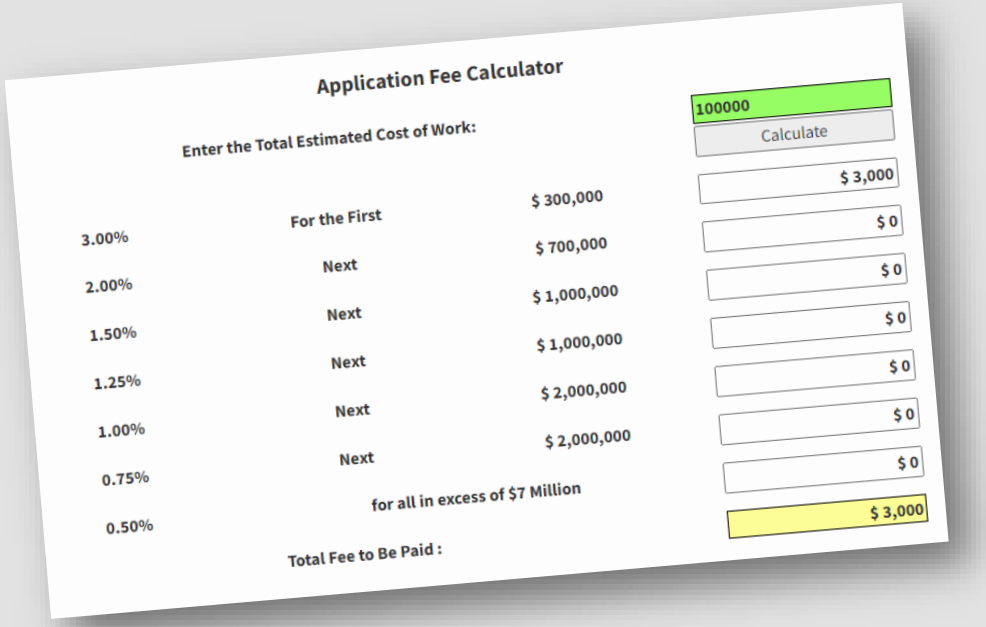
Inundation Mapping

- DSOD reviews and approves inundation maps prepared by licensed civil engineers and submitted by dam owners. Inundation maps approved by DSOD are a tool used to develop emergency action plans; they are intended to provide general information for emergency planning under different dam failure scenarios, including the scenario of a Sunny Day instantaneous dam failure due to seismicity.

DSOD Funding

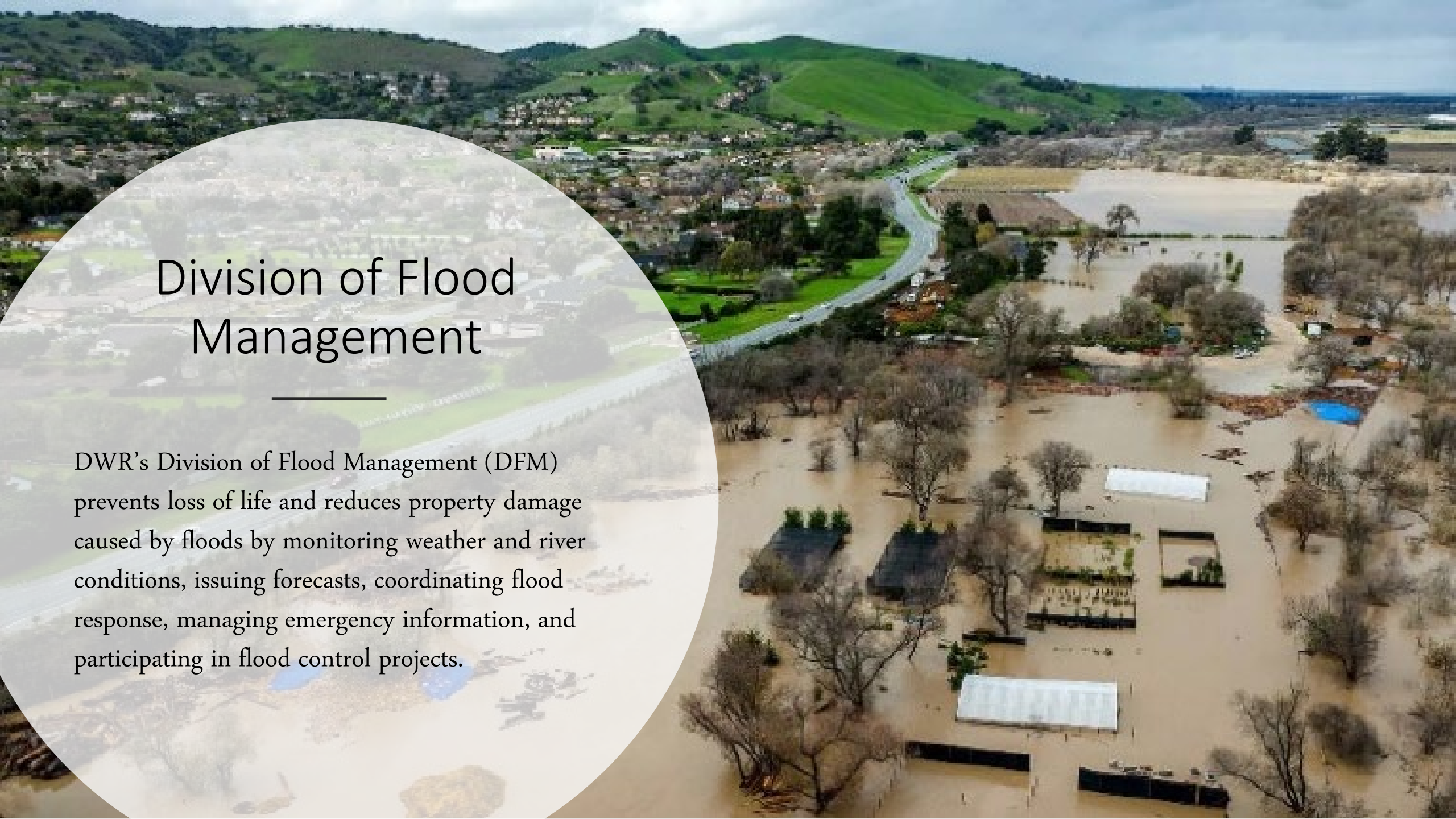
- DSOD's funding comes from a Special Fund that collects fees paid by dam owners. Senate Bill 92 (Chapter 26, Statues of 2017) required DWR to adopt, by regulation, a schedule of fees to cover reasonable regulatory costs in carrying out the supervision of dam safety.
- More than $4 billion has been spent on dam construction, enlargement, alterations, and repairs at over 150 dams over the last decade.

Annual Fee =	Admin Fee+	Dam Fee+
General Rate* Annual Fee =	$1,066	$249 per foot of height
Reduced Rate* Annual Fee =	$213	$50 per foot of height



Division of Flood Management

DWR's Division of Flood Management (DFM) prevents loss of life and reduces property damage caused by floods by monitoring weather and river conditions, issuing forecasts, coordinating flood response, managing emergency information, and participating in flood control projects.



Delta Flood Emergency Management Plan

- Provides strategies for response to Delta levee failures, up to and including earthquake-induced multiple island failures.
- DFEMP provides a concise, but flexible, blueprint for guiding Delta flood emergency management, and focuses primarily on the concept of operations for Delta flood emergency preparedness, response, and recovery.
- A 5-year update of DFEMP is currently underway. The 2018 DFEMP was funded by Proposition 1E, and the update is being funded by Proposition 1.

In Conclusion

This summarizes DWR's multiple seismic safety risk reduction and recovery programs, conducted through four divisions: O&M, DOE, DSOD, and DFM.

Questions?

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

Memorandum

To: Seismic Safety Commissioners

From: Jia Wang-Connelly, Senior Structural Engineer

Date: January 19, 2022

Subject: Updates from FEMA Western Integration Group (WIG)

Recommendation:

Staff recommends Commissioners review the background information in this memo, listen to the presentation, and share your comments/questions if any.

Background:

Anne Rosinski, Earthquake Program Manager with FEMA Region IX, will be presenting on FEMA Western Integration Group (WIG)'s efforts on earthquake preparedness and mitigation. Ms. Rosinski has worked with the Seismic Safety Commission (SSC) over the years. Most recently, she presented to SSC on "A Disaster Resilient Nation with Functional Infrastructure After an Earthquake" on July 7th, 2022.

Seismic Western Integration Group (WIG) comprises Earthquake Program Managers of FEMA Region 8, 9 and 10. The vision of WIG is to have a disaster resilient nation with functional infrastructure after an earthquake. The group created a business strategy in 2021 and now the implementation is in full swing. The SSC will hear about the on-going and future efforts from the group, such as FEMA Critical Infrastructure BCA recommendations…etc.

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

Memorandum

To: Seismic Safety Commissioners

From: Salina Valencia, Director of Legislation

Date: January 19, 2023

Subject: Seismic Safety Commission 2022 Reporting

Recommendation:

Staff recommends Commissioners listen to SSC staff presentations on the draft 2022 Summary Report and 2022 Attorney General Annual Report and authorize Seismic Safety Commission (SSC) staff to make appropriate edits and finalize both reports, which will be placed on the SSC website.

Background:

AB 100 legislation established the SSC as a separate unit within Cal OES. The bill specified the background qualifications for the Commissioners and required the SSC to work with specific state departments and various public entities to submit an annual report to the Governor and the Legislature on findings, progress, and recommendations towards higher levels of seismic safety and other seismic safety issues. The California Earthquake Authority is the third entity to provide a report to the SSC.

Draft Summary Report 2022

This report is provided on a yearly basis to Commissioners, stakeholders, and other interested entities to provide updates on all the Seismic Safety Commission's 2021 activities.

Attorney General Report 2022

In 2007, the Seismic Safety Commission (SSC) was given a gift of $6 million for research and projects related to earthquake risk reduction, the California Research and Assistance Fund (CRAF). The funding mechanism requires the SSC to submit an annual report to the AG's office detailing activities/programs conducted with the funds during the year, and a financial summary.

Summary Report

2022 ALFRED E. ALQUIST SEISMIC SAFETY COMMISSION

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

Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

Alfred E. Alquist Seismic Safety Commission (SSC)

Tel (916)263-5506
Fax (916)263-0594

2945 Ramco Street
Suite 195
West Sacramento CA 95691

www.ssc.ca.gov

Contents

Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

Executive Summary

The following annual report provides a brief overview of the projects of the Alfred E. Alquist Seismic Safety Commission (SSC) in 2022. 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,

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.

2022 SSC Staff

Annde Ewertsen, Executive Director
Salina Valencia, Director of Legislation & Communications
Tanya Black, Administrative Processes Manager
Jia Wang-Connelly, Senior Structural Engineer

Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

2022 SSC Commissioners

Name	Area of Expertise
Honorable Cindy Silva, Chair	Local Government
Fuad Sweiss, Vice Chair	Mechanical Engineering
Ida Claire	California State Architect
Honorable Ken Cooley	State Assembly Member
Alegria De La Cruz	Social Services
Honorable Debra Garnes	Local Government
Mark Ghilarducci	California Governor Offices of Emergency Services
Joone Kim-Lopez	Public Utilities
Mia Marvelli	California Building Standards Commission
Kevin McGowan	Emergency Services
Dr. H. Kit Miyamoto	Structural Engineer
Honorable Anthony Portantino	State Senator
Honorable David Rabbitt	Local Government
Andrew Tran	Insurance
Vincent Wells	Fire Protection

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 (Cal OES). In coordination with Cal OES, 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 collaboration with Cal OES and stakeholders. 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 Cal OES, 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 2021-22 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 (CRAF)
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, the Energy Commission, the California Geological Survey of the Department of Conservation, the California Coastal Commission, Cal OES, and the County of San Luis Obispo.

SSC Operating Budget Fiscal Year 2021-2022

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

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 Seismic Safety Commission 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 reviewed "Wholesale Regional Water System Security and Reliability Act 2022 Notice of Changes to the San Francisco Public Utilities Commission Water System Improvement Program" dated August 19, 2022 and "Fiscal Year (FY) 2021-2022 Annual Report Water System Improvement Program San Francisco Public Utilities Commission" dated September 1, 2022.The Annual Report for the Fiscal Year 2021-2022 revealed, overall completion of the program's construction of this $4.8 billion project is at 98.6%, reduced from 98.9% due to extension of the project and program schedules. However, all projects with Seismic Reliability as primary or secondary Level of Service (LOS) goal have been 100% completed.

As of June 30, 2022, the overall Water System Improvement Program (WSIP) is forecast to be complete on February 1, 2027.

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 Louis Obispo. The IPRP has been reviewing and meeting as warranted with personnel from PG&E and various interveners since 2011.

With the pending extension of Diablo Canyon under SB 846, IPRP will review the report of "findings and recommendations for improved safety" by Diablo Canyon Independent Safety Committee (DCISC) in 2022. [(Public Utilities Code sec. 712.1(e)(1) &(2)]

This project is still in progress.

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 is 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 2022, the SSC received a report from the California Earthquake Authority.

This project is ongoing.

Earthquake and Fire Following Earthquake Resilience of Mid-Rise Cold-Form Steel (CFS) Buildings with the University of California of San Diego (UCSD)
The SSC, Cal OES and UCSD agreed to partner to improve the understanding of CFS framed mid-rise building systems under earthquake and post-earthquake fire conditions. Central to this effort is the earthquake testing, post-earthquake repair, earthquake re-testing and finally live fire testing of a CFS 10-story building constructed on the UCSD large high-performance outdoor shake table. Through the shaking, implementation of repair strategies and fire test, the project team will facilitate an understanding of the performance, recovery time and hence the resiliency of these types of buildings when subject to earthquake and live fire scenarios.

The contract was executed on March 9, 2022. The project is delayed but still in progress.

This page left intentionally blank.

February 1, 2023

James Toma
Supervising Deputy Attorney General
Office of Attorney General
300 S. Spring Street, Suite 1702
Los Angeles, CA 90013

Subject: 2022 Alfred E. Alquist Seismic Safety Commission Status Report on California Research and Assistance Funds

Dear Mr. Toma:

Please find attached the Seismic Safety Commission's (SSC) annual status memo regarding projects completed with support from the California Research and Assistance Fund. The fund balance as of December 31, 2022, is $2,823,320.77.

Although there were no completed projects in 2022, the SSC did initiate a contract with the University of California San Diego for the ShakeTable test of the 10-story cold-form steel framed building that demonstrates earthquake shaking and fire-following earthquake simulation. The project has been delayed so no funds have been issued.

The SSC will continue to deliver research project materials to you as they are completed. Should you have any questions regarding the SSC's research projects, please call our office at 916-263-5506.

Sincerely,

Annde Ewertsen

Annde Ewertsen, Executive Director

cc: Lisa Mangat, Chief Deputy Director of Policy & Administration, Governor's Office of Emergency Services
Cindy Silva, Chair, Seismic Safety Commission
Tanya Black, Administrative Processes Manager, Seismic Safety Commission

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING

Memorandum

To: Seismic Safety Commissioners

From: Annde Ewertsen, SSC Executive Director

Date: January 19, 2023

Subject: Chair and Vice-Chair Election Policy Update

Recommendation:

Staff recommends the Commissioners listen to the recommendations for updating the Seismic Safety Commission (SSC) Election Policy.

Background:

Article 5.1 of the Government Code Section 8589.72. states the SSC shall elect annually from its membership its own Chairperson and Vice Chairperson. It is the policy of SSC to seek candidates for officer position of Chair and Vice-Chair that have the specific skills or expertise necessary to provide leadership for SSC.

In 1994, SSC adopted a policy on election of Chair and Vice-Chair, and it was last updated in 1997.

Significant Changes to The Policy

- Elimination of Nominating Committee
- Update process for candidate(s) nomination
- Various updates and additional processes and procedures within the policy

The Alfred E. Alquist California Seismic Safety Commission

Policy on Election of Officers

Adopted June 23, 1994
Revised September 11, 1997

1. The Commission shall annually appoint a nominating committee from its membership.

2. The Nominating Committee shall not be bound by any former line-of-succession approach, wherein the Vice Chairman becomes the nominee for Commission Chair.

3. All Commissioners, except members of the Nominating Committee, shall be considered as candidates for nomination to the Chair and Vice Chair.

4. The following criteria shall be used when selecting a nominee for Commission Chair:

   - Possesses excellent overall leadership abilities and has a clear vision of the Commission's purpose and future.
   - Understands Commission policies and procedures.
   - Has the trust and respect of the other Commissioners, Commission staff, and the public.
   - Has stature in the earthquake community: scientific, engineering, construction, response, recovery, and public policy.
   - Is a clear thinker and is objective.
   - Has the ability to get things done efficiently and possesses strong consensus-building attributes.
   - Has time available for Commission activities and is willing to make appropriate commitments.
   - Has a broad perspective and understanding of all issues related to seismic safety.
   - Has a sense of and an ability to shape the political process.

Policy and Procedure for Election of Officers
Adopted June 23, 1994
Revised September 1997
Revised January 2023

Policy Statement:
Article 5.1 of the Government Code Section 8589.72. states the SSC shall elect annually from its membership its own chairperson and vice-chairperson. It is the policy of SSC to seek candidates for the officer positions of Chair and Vice-Chair that have the specific skills or expertise necessary to provide leadership for SSC.

The following procedure shall be followed regarding election of the Chair and Vice-Chair:

1. The Chair announces the upcoming election of Chair and Vice-Chair and the procedures to be followed at the first meeting of the year.
2. The annual election of the Chair and Vice-Chair shall be conducted at the next meeting of the SSC (e.g., second meeting of the year).
3. All SSC Commissioners may be considered as candidates for nomination for the Chair and Vice-Chair provided that the term of their appointment does not end prior to the term of the office for which they wish to be considered as a candidate.
4. Candidates will be required to submit a Statement of Qualifications (SOQ) (see attachment) to ensure that they have the proper competencies, experience, and willingness to fulfill their duties and responsibilities as Chair and Vice-Chair. The SOQ will be submitted to the SSC Executive Director to ensure completeness. Only completed SOQs will be distributed to Commissioners for their review of the candidates' qualifications. The SOQs will be considered public documents and should be drafted accordingly.
5. There will be no formal line-of-succession approach from year-to-year, wherein the Vice-Chair becomes the nominee for SSC Chair.
6. Voting shall be conducted in Open Session
    i. The candidates will have an opportunity to address the SSC, for no more than three minutes, regarding their qualifications for the position.

ii. Each SSC Commissioner will have the opportunity to ask one question of each candidate.
iii. SSC Commissioners shall vote on the candidate for approval.
iv. The Chair-elect and Vice-Chair-elect must receive a majority of votes from the Commissioners or their representatives to be elected.
v. In the event that multiple candidates (more than two) are nominated for either position, and no candidate has a majority of votes, the top two candidates will be voted on during a second round.
vi. Election of the Vice-Chair shall be conducted in the same manner as that of the Chair.
vii. If the current Chair and Vice-Chair are the only candidates who have submitted an SOQ, SSC Commissioners will vote to re-appoint.
viii. If candidates for the Chair and Vice-Chair are running unopposed and they are not currently serving as Chair and Vice-Chair, a vote must commence.
ix. If no candidates submit for either position, then nominations may be taken from the floor during the meeting at which the election will take place. The requirement to submit a SOQ shall be waived under such circumstance.
x. Until the positions are filled, the current Chair and Vice-Chair will remain in their respective positions provided they are still members of the Commission.
xi. Chair and Vice-Chair shall assume their duties immediately following the election.

The following criteria shall be used when selecting a nominee for Chair and Vice-Chair as it reflects the duties and responsibilities of those positions:

Willingness to:

- Understand the SSC policies and procedures and Roberts Rule of Order

Policy and Procedure for Election of Officers (cont.)

- Encourage full participation of Commissioners in SSC business
- Ensure individual members do not dominate discussions and that others fully engage in the deliberations
- Consult with Executive Director on the proposed agenda for upcoming meetings
- Conduct/chair meetings
- Adhere to the decisions and policies of the SSC
- Assume leadership role in legislative effort
- Serve as contact for other pertinent organizations
- Make reports at SSC meetings as needed

Has:

- Ability to get things done efficiently and possesses strong consensus-building attributes
- Time available for SSC activities and is willing to make appropriate commitments
- Overall leadership abilities and a broad perspective and understanding of issues related to seismic safety
- A Commission membership term that does not expire prior to the term of the office for which they wish to stand for election

DUTIES:

The duties of the Chair and Vice-Chair are as follows:

Chair:

1. Appoint members and chairs of such committees as are necessary for the orderly conduct of business.
2. Circulate or cause to be circulated an announcement and an agenda for each regular or special meetings of the SSC.
3. Preside during meetings of the SSC.
4. Call for votes on the issue once there has been adequate discussion.
5. Consult on the preparation of reports mandated by the Legislature (e.g., AB 100 report) as well as any other reports requested by the Executive Director.

Policy and Procedure for Election of Officers (cont.)

Vice-Chair:

1. Shall assist the Chair in the performance of the required duties.
2. Shall preside at the meeting if the Chair is unable to attend.
3. Shall perform such other duties as from time-to-time may be assigned by the SSC or by the SSC Chair.

ABSENCES and VACANCIES:

- In the event the Chair is unable to attend or preside over a meeting, the Vice-Chair will preside. If the Vice-Chair is also unable to preside, the Executive Director will assume the duties until the return or availability of the Chair or Vice-Chair.

- If Chair resigns or their term of office expires, then the Vice-Chair shall immediately assume all duties of the Chair. If the vacancy involves the Vice-Chair, the SSC shall elect a new Vice-Chair following the election process described above. If the vacancies involve both the Chair and Vice-Chair, the Commission will conduct new elections.

2023

Procedure of the Election of Chair & Vice-Chair

SEISMIC SAFETY COMMISSION
TANYA.BLACK@CALOES.CA.GOV

Procedure of the Election of Chair & Vice-Chair			
Purpose	The purpose of this document is to explain the process for appointing a new Chair & Vice-Chair for the Seismic Safety Commission (SSC). This process occurs on an annual basis.		
Procedure	The following table identifies who is responsible and what happens during each stage of the Election for the Chair & Vice-Chair. The elections are voted on during an SSC meeting.		
	Stage	**Who is Responsible**	**What Happens**
	1	Chair	The Chair makes a statement announcing the upcoming election of Chair and Vice-Chair. • Interested Commissioners are required to submit a Statement of Qualifications (SOQ) The SOQ will be submitted to the SSC Executive Director. The SOQs will be considered public documents and should be drafted accordingly.
	2	Executive Director SSC Staff	Collect all SOQs from interested Commissioners and for purpose of meeting the eligible requirements. After all SOQs are vetted, SSC Staff will present those SOQs to Commissioners for the purpose of voting.
	3	Commissioners	Will vote to elect the Chair and Vice-Chair at the SSC meeting.
	4	Chair	Calls on the agenda item for the election and announces the candidates.

			Note: If no candidates submit for either position, then nominations may be taken from the floor during the meeting at which the election will take place. The requirement to submit a SOQ shall be waived under such circumstance. Each candidate can address the SSC and then the Chair calls for an independent vote for the new Chair and Vice-Chair.
	5	New Chair & Vice-Chair	When the voting is completed and the new Chair and Vice-Chair are selected, they assume their duties following the election.