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GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

November 18, 2022

Toni Atkins, Senate President pro Tempore
Anthony Rendon, Speaker of the Assembly
California State Capitol
Sacramento CA 95814

Subject: AB 100 Annual Report

Dear Senate President pro Tempore Atkins and Speaker Rendon,

The Alfred E. Alquist Seismic Safety Commission (SSC) was established in 1975 to advise the Governor, Legislature, State and local agencies, and the public about strategies to reduce earthquake risk. The SSC investigates earthquake-related issues and evaluates and recommends to the Governor and Legislature policies and programs needed to reduce earthquake risk.

Assembly Bill 100 (Committee on Budget) enacted as Chapter 20 of the Statutes of 2020, established an annual reporting requirement of the SSC. AB100 recognized that numerous agencies at various levels of government have substantial responsibilities in the fields of earthquake preparedness and seismic safety. Through these annual reports the SSC can assist in providing a consistent policy framework to track and monitor these activities, work with specific state departments as well as various stakeholders on findings, progress, and recommendations that will highlight higher levels of seismic safety and other seismic safety issues. These annual reports will be submitted to the Governor and State Legislature, along with periodically updates by these entities to the SSC, through Commission hearings.

Through examination of existing partnerships, in 2021 the SSC Executive leadership team requested a report from the California Earthquake Authority. This report highlighted the seismic programs and products of the respective organization and included a description of the value of the program(s) and product(s) to the public, State, local government, businesses, and other entities.

This report explains how the California Earthquake Authority helps California's ability to prepare for and recover from damaging earthquakes. Attached, is the California Earthquake Authority *Helping to Mitigate Californias' Seismic Risks.*

Should you have any questions please contact Reggie Salvador at Reggie.Salvador@caloes.ca.gov or 916-845-8473.

Sincerely,

Salina M. Valencia

Salina M. Valencia
California Seismic Safety Commission, Acting Executive Director

Attachment: Helping to Mitigate Californias' Seismic Risks

cc: Mark S. Ghilarducci, Director, Governor's Office of Emergency Services

Helping to Mitigate Californians' Seismic Risks

JULY 19, 2022

This report explains how the California Earthquake Authority (CEA) helps California's ability to prepare for and recover from damaging earthquakes. It outlines the successful and growing seismic risk reduction program that has already retrofitted 17,000 homes. This report also outlines the steps CEA has recently undertaken to strengthen its ability to respond to policyholder needs following the next damaging earthquake.

This report has been compiled in accordance with AB 100.

CEA CALIFORNIA EARTHQUAKE AUTHORITY™

foreword

The strategic mission of the California Earthquake Authority (CEA) is to be a guaranteed source of earthquake insurance for the customers of our participating insurers and help Californians mitigate their risk of earthquake damage and losses. In addition to providing earthquake insurance, CEA, a not-for-profit instrumentality of the state, plays a critical role in improving California's earthquake resilience by reducing the state's earthquake life-safety risk with its successful mitigation research, code development, and retrofit incentive programs. This includes outreach and education to Californians with limited financial resources.

CEA plays an integral role in the state's inevitable need to rebuild and recover after the next catastrophic earthquake. By insuring more than 1.1 million homes in California, CEA is integral to the recovery and resiliency of damaged communities and households when a damaging earthquake strikes.

FRONT COVER PHOTO CREDIT: FEMA

background

On January 17, 1994, a magnitude 6.7 earthquake known as the Northridge earthquake rocked California's San Fernando Valley, northwest of downtown Los Angeles, on a blind-thrust fault that no one knew existed. The earthquake caused an estimated $40 billion in damage, half of which was residential damage. This was the second-most-catastrophic earthquake in the state's recent history after the Great 1906 San Francisco earthquake. With only about half of the $20 billion in residential damage covered by insurance, the Northridge earthquake shook the foundation of the residential insurance industry, which had greatly underestimated the potentially huge costs associated with damage from even a moderate earthquake, let alone one as strong as the Northridge earthquake.

Since the 1980s, California's "mandatory offer" law has required that companies selling homeowners insurance in California also offer earthquake insurance. California homeowners are not required to purchase earthquake insurance, but the law requires it to be available to them.

After the Northridge earthquake, and with the mandatory-offer law in place, many insurance companies that were still recovering from Northridge losses and facing the possibility of another damaging earthquake in the state greatly limited the number of homeowners policies they wrote in California. By January 1995, just one year after the Northridge quake, companies representing 93% of the California homeowner's insurance market had either restricted or stopped writing homeowners policies altogether, creating havoc in the California housing market.

In response to the insurance companies ceasing to write homeowners insurance policies in California, the State Legislature adopted Section 10089.6 of the California Insurance Code in 1996 and created CEA as a public instrumentality of the state to "sell policies of basic residential earthquake insurance." Residential property insurers could offer their own earthquake insurance or become a CEA participating insurance company.

As of 2020, CEA accounted for 67% of the residential earthquake policies in the state. The total property value insured by CEA was over $567 billion according to the California Department of Insurance. By selling our policies exclusively through participating insurance companies, CEA has become one of the largest providers of residential earthquake insurance in the world.

With more than $19 billion in claim-paying capacity, CEA has the financial strength to withstand an earthquake far more destructive than any that has occurred in California's history. As the insured reconstruction value of the homes CEA insures continues to escalate, the organization is evaluating potential strategic initiatives to help reduce the pressure for significant policyholder rate increases, while at the same time enhancing CEA's capability to continue to provide insurance protection for California homes even after an initial catastrophic earthquake.

CEA'S MITIGATION PROGRAM

Since its inception, CEA also has been charged with promoting activities that mitigate seismic risk. State legislation requires CEA's Governing Board to set aside 5% of investment income each year, or $5 million, whichever is less, into a subaccount of the CEA fund called the Loss Mitigation Fund (LMF). The LMF was intended to support programs that supply grants and loans or loan guarantees to homeowners who complete seismic retrofits. The fund was intended to serve all Californians, not just CEA earthquake insurance policyholders.

In 2010, California's governor signed into law Assembly Bill 2746 (Blakeslee) authorizing CEA to contract for the services of a chief mitigation officer (CMO). CEA hired structural engineer Janiele Maffei as the CMO in May 2011. The bill also authorized CEA to accept grants and gifts of property and services for the LMF or the related residential retrofit program from federal, state, and local government sources and private sources.

To effectively manage and promote a statewide seismic retrofit program, in 2011 CEA entered into a joint powers authority (JPA) agreement with the California Governor's Office of Emergency Services to create the California Residential Mitigation Program (CRMP).

Earthquake Brace + Bolt Retrofits

The first CRMP retrofit incentive program, Earthquake Brace + Bolt (EBB): Funds to Strengthen Your Foundation, was launched by the new CEA mitigation department as a pilot project in September 2013. In eight years, EBB has provided up to $3,000 to each of more than 16,000 homeowners who completed a qualifying retrofit of their pre-1980 house with a crawlspace under the first floor.

The EBB retrofit requires the installation of new code-compliant bracing or bolting (or both) with a permit issued by the local building official. The code specifies the type and number of anchors required between the wood structure and the concrete foundation and the length of plywood braces required along the short stud walls surrounding the crawlspace. The EBB retrofit significantly increases the likelihood that the house will not slide or topple off its foundation and that it will remain habitable following a nearby moderate to large earthquake.

CEA estimates that more than 1 million houses in California's high-seismic-hazard areas would qualify for an EBB retrofit, so the need far exceeds presently available LMF funding for retrofit grants to homeowners. However, CRMP continues to look for additional funding sources for the EBB program, including available Hazard Mitigation Grant Program (HMGP) funds.

In 2016, nearly 100 EBB grant recipients retrofitted their homes in Napa using $300,000 in HMGP funds, and currently, more than 8,000 EBB program participants are completing retrofits using $24 million in HMGP funds. CRMP was recently notified that the EBB program will receive an additional $80 million in HMGP funds that will more than double the number of retrofits completed through EBB. While the HMGP is currently the primary source of funding, the LMF was augmented two years in a row with $3 million from the California general fund.

In 2021, as part of an effort to encourage earthquake resiliency among disadvantaged communities, EBB offered a new supplementary grant to homeowners of limited income to retrofit their homes. This new grant will, in most cases, provide 100% of the funds needed to complete a seismic retrofit. To date, more than 4,500 people with a household income of $72,800, or below, have registered for the opportunity to receive the low-income supplementary grant.

The EBB website can be found at EarthquakeBraceBolt.com.

EARTHQUAKE SOFT-STORY RETROFITS

The second CRMP incentive program, the Earthquake Soft-Story (ESS) program, has been awarded $5 million in HGMP funds and will open in late 2022. Older homes with living spaces built over a garage are often referred to as a "soft-story home" and they may be vulnerable to full or partial collapse during an earthquake. ESS will provide grants to homeowners of single-family, wood-framed houses with a soft-story vulnerability. The ESS retrofit will be required to follow the FEMA Plan Set (FEMA P-1100) for Living-Space-Over-Garage dwellings, which is expected to be adopted by the International Code Council by the end of 2022 and be completed with a permit. The retrofit will require adequate foundation anchors; plywood on the perimeter walls; and a seismic resisting element in line with the large, open garage door. The grant amount for ESS has not been determined. The ESS program website will be available at EarthquakeSoftStory.com.

MULTIFAMILY SOFT-STORY (MFSS) RETROFITS

CRMP has applied for Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) grants to open a multifamily (5-10 units) soft-story retrofit grant program. The program would establish a financial incentive per unit for these vulnerable residential structures in areas of moderate to high social vulnerability. The 1994 Northridge earthquake caused significant damage to hundreds of multifamily soft-story structures, including the Northridge Meadows apartment complex where 16 people were killed when the building collapsed. Since then, San Francisco, Los Angeles, and other cities within California have attempted to mitigate this dangerous earthquake risk with mandatory-retrofit ordinances. Other cities have inventories of the MFSS structures within their borders. Financial assistance is needed throughout California to assist MFSS building owners, particularly owners of buildings with low- to moderate-income tenants. Notification on the BRIC grant application is pending. In June 2022, the Governor signed legislation (SB 189) that allocated $250 million to fund a multifamily soft-story housing retrofit program, prioritizing communities of high social vulnerability, to be administered by CRMP. The appropriated funds are scheduled to be available in July 2023.

CEA HAZARD REDUCTION DISCOUNT (HRD)

Mitigation of seismically vulnerable houses is also promoted by CEA through a hazard reduction discount (HRD), which reduces the premium for eligible CEA earthquake insurance policies. Requirements for CEA to establish a minimum HRD are outlined in California Insurance Code Section 10089.40 as follows: "Policyholders who have retrofitted their homes to withstand earthquake shake damage according to standards and the extent set by the board shall enjoy a premium discount or credit of 5 percent on the authority-issued policy of residential earthquake coverage."

CEA initially offered a 5 percent discount. Today, CEA offers a range of hazard reduction discounts from 10–25% depending on the age of the house and the type of foundation. CEA also offers a 21% discount for mobilehomes installed on an approved foundation system or reinforced by an earthquake-resistant bracing system. CEA is pleased to note that over one-third of homeowners who completed an EBB retrofit, after being randomly selected to participate in the program, are CEA policyholders who then qualify for the CEA HRD.

CODE DEVELOPMENT

A successful mitigation program requires a consensus-based standard, such as a code, to ensure that the retrofit will provide the best available engineering and scientific data on damage prevention to protect the structure and its occupants. The following describes the document known as ATC-110, co-sponsored by FEMA and CEA, which contains pre-standards for the retrofits of crawlspace walls (EBB), living spaces over a garage (ESS), hillside houses, and unreinforced masonry chimneys:

"In 2013, the California Earthquake Authority (CEA) and the Federal Emergency Management Agency (FEMA) jointly funded a project with the Applied Technology Council (ATC) to develop a prestandard for the evaluation and retrofit of one- and two-family wood light-frame residential buildings (ATC-110 Project). This class of structure represents the most common type of dwelling in the United States. Although this type of construction has generally provided good performance in past earthquakes, there are well-known vulnerabilities that have led to large numbers of homes being rendered uninhabitable or even unrepairable following an earthquake.

"Improved seismic design and seismic retrofitting of vulnerable configurations will increase the probability that homes are available to provide shelter immediately following moderate to large seismic events. The purpose of this prestandard is to provide a methodology to identify and retrofit specific known vulnerabilities in wood light-frame dwellings. Development of the assessment and retrofit provisions has included the use of the best available seismic numerical modeling tools and engineering practices to assist in the development of assessment methods and to identify retrofit criteria to best achieve targeted performance objectives. Use of the provisions is anticipated to improve earthquake performance but is not intended to prevent earthquake damage."

ATC-110 was published in 2019 as FEMA P-1100 and is going through a consensus-based process to develop the retrofit standards into code. Ongoing, both EBB and ESS will utilize the retrofits in FEMA P-1100.

MITIGATION EDUCATION AND TRAINING

As part of the EBB and ESS programs, CRMP provides education and training to homeowners, contractors, design professionals, and building officials. The EBB and upcoming ESS websites have searchable directories with contractors who have taken FEMA training and design professionals who can help with complicated retrofits that require additional engineering. Training for contractors and building officials is offered every time a new registration period opens for EBB and will be offered for the ESS program. CRMP is also working on introducing a training program for the use of the new FEMA P-1100 standards. This training is expected to be available in late 2022.

CEA STRENGTHENMYHOUSE.COM WEBSITE

The CRMP retrofit incentive programs have websites with detailed information on earthquake hazards, vulnerabilities, and retrofits. However, the registration period for the EBB and ESS programs is not open year-round. Consequently, a homeowner who browses those sites may be discouraged to learn that they are not able to register for a financial incentive during their visit. CEA created the StrengthenMyHouse.com website to provide information to homeowners about their earthquake risk and, most importantly, what they can do to lower that risk. Homeowners can find high-level and detailed information about earthquake retrofitting at StrengthenMyHouse.com.

CEA'S COMMITMENT TO EARTHQUAKE RISK REDUCTION

The unique position of CEA as a not-for-profit instrumentality of the state providing residential earthquake insurance and mitigation programs improves California's earthquake resilience. The mitigation programs operated by CEA and CRMP provide the standards, resources, and financial assistance to reduce the risk of earthquake damage to residential structures and the financial devastation that can happen with that damage. CEA's investment into the LMF and CRMP has successfully leveraged millions of dollars in FEMA grants to provide earthquake-safe, resilient homes for Californians.

Earthquake Response and Claim Handling

CEA claims are assessed, managed, and settled by claim representatives of CEA's 25 participating insurers that sold the underlying CEA policies. CEA reimburses participating insurers for the dollars paid on claims, plus a fee to cover the insurer's loss adjusting expenses. CEA's "insurer response" model recognizes the impracticality of CEA having at the ready its own adjusting force for the moment when the infrequent damaging earthquake strikes and provides efficiencies for CEA policyholders since the participating insurers have active claims operations regularly responding to all homeowners' related claims, not just earthquakes. CEA, in turn, has developed guidance for all participating insurers to follow to ensure all of CEA's claims are handled in a fair, timely, and consistent manner. CEA also has developed internal systems and plans to ensure that it fulfills its obligations in reviewing and approving all claim payment requests from its participating insurers and to audit and reinspect claims to ensure that all of CEA's claims are properly investigated and that appropriate procedures have been followed.

CEA is built on a culture of continuous operational assessment and improvement. Following the magnitude 6.4 and magnitude 7.1 earthquakes that struck near Ridgecrest, California, on July 4 and 5, 2019, CEA initiated a major, end-to-end (from event occurrence through claim reimbursement) review of CEA's readiness to handle the next large earthquake. This independent evaluation produced a favorable overall assessment of CEA's readiness and contained 12 recommendations for CEA to consider for potential operational enhancement. It also prompted CEA's executive leadership to adopt a more "active" approach to preparing for a large earthquake, particularly in providing more policy guidance and ensuring claim handling consistency among CEA's participating insurers. A cross-functional executive advisory group was established to guide the review, prioritization, and allocation of staffing and resources for the implementation of each recommendation.

CEA is well underway in evaluating and acting on all these recommendations. Some key highlights of the major initiatives and actions taken are as follows:

- **Formation of CEA Catastrophe Response and Resiliency Office.** In June 2020, CEA's Governing Board approved the creation of a new executive-level contract position of chief catastrophe response and resiliency officer, to lead CEA's post-earthquake response and claims-handling responsibilities, including catastrophe-response planning, claims administration, and overall enterprise resiliency, and to enable CEA to assume a more active role in the oversight of the industry's response to a major earthquake. The office has four permanent staff and is supported by other CEA personnel and outside consultants to execute its responsibilities.

- **Major revamp of the CEA Earthquake Response Guidelines and testing and training program.** In May 2021, CEA completed building out an Incident Command System (ICS) earthquake response framework that establishes functionally based teams for situational assessment, claims-finance, information and intelligence, logistics, and management. A testing and training program has been implemented that includes regular tests of the functional unit organizational structure, claims-handling systems and processes, and earthquake-response tools (i.e., plans, job aids, procedures, templates, and collaboration and data-management sites). Work continues to refine and further develop procedures and improve team collaboration and data-management sites to support all anticipated levels of earthquake response.

- **Enhancement of earthquake-related claims training provided to participating insurers.** In May 2020, CEA and the Applied Technology Council (ATC) announced the completion of a multiyear project to develop improved and expanded Earthquake Damage Assessment and Repair Guidelines for Residential Wood-Frame Buildings—a two-volume set covering common earthquake damage to typical one- and two-family, wood-frame dwellings, which make up the vast majority of CEA-insured homes. The

new guidelines are available for free download on the CEA website and can be ordered in hard copy through the ATC's online store. CEA developed comprehensive training programs for claim adjusters, engineers, and other insurance-industry professionals on these guidelines, with online training programs now available on CEA's website.

- **Participating insurer catastrophe response planning and engagement**. Each year, CEA formally surveys each participating insurer on its catastrophe-response plans, followed by a series of interviews with the catastrophe/claim liaisons of all participating insurers to review CEA-required training programs and resources, as well as CEA's preparedness, response, and performance expectations of all insurers in various earthquake scenarios. CEA also hosts an annual CEA Claim Manager Conference and distributes a bimonthly claims communication with topics taken directly from the questions and conversations with the participating insurers' catastrophe/claim liaisons.

- **Industry-wide support of capacity and capability to respond to a catastrophic-level earthquake.** CEA provides leadership and staff support for the Natural Catastrophe (Nat Cat) Planning Group—an ad hoc group of more than 20 representatives of CEA, the reinsurance industry, several CEA participating insurers, and other allied entities considering ways to enhance the entire insurance industry's response capabilities for the benefit of policyholders following a catastrophic-level California earthquake. The group is in the process of establishing the "California Insurance (Industry) Emergency Response Association (CIERA)" as a 501(c)(6), nonprofit industry benefit corporation. CEA, as a founding member of the Nat Cat Planning Group, has the goal of strengthening California's earthquake readiness, while always protecting CEA's primary responsibility to protect the interests of CEA's policyholders.

Collectively, these activities significantly enhance CEA's ability to meet the moment of a major earthquake for its policyholders, and also improve community resiliency in such an event.

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