WSSPC
WESTERN STATES SEISMIC POLICY COUNCIL

We develop seismic policies and share information to promote programs intended to reduce earthquake related losses.

A non-profit earthquake consortium for the western states

Winter 2017
e-Newsletter
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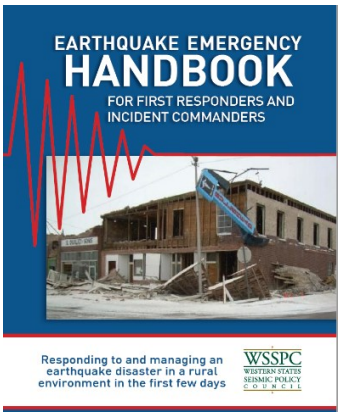
In This Issue

WSSPC Completes State Projects for Alaska, Hawaii, and Utah/Idaho/Oregon

WSSPC completed the following three projects using FEMA FY15 State support.

Earthquake Emergency Handbook for First Responders and Incident Commanders

Emergency Managers and Geologists from several states came together to create this field guide/handbook for first responders and incident commanders in rural communities with limited resources. It is intended to guide response within the first 48 to 72 hours after an earthquake – before State and Federal assistance is available. The February 21, 2008 M6.0 Wells, Nevada earthquake provided the impetus for the development of the handbook. The number one "lesson learned" stated in the emergency response section of the Wells earthquake disaster review was the need to develop an earthquake emergency handbook for Incident Commanders in similar situations. The handbook is available as a pocket-sized document for use in the field or as a pdf: Earthquake Emergency Handbook.



The pocket-sized handbook is available from:
(10,500 copies)

Utah Division of Emergency Management
c/o Bob Carey, Earthquake Program Manager
State Office Building, Room 1110
Salt Lake City, Utah 84114-1201
bcarey@utah.gov

Alaska's Next Big Earthquake Workshop and Report

WSSPC was a sponsor of the 2015 Alaska's Next Big Earthquake Workshop. The workshop had three goals in addition to producing a workshop report:

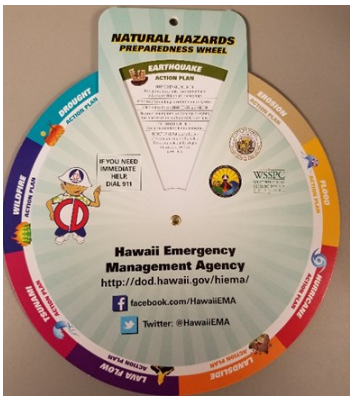
- Create new multi-jurisdictional and public-private partnerships
- Identify steps needed to make a long-term working group successful
- Identify a small set of actionable state priorities

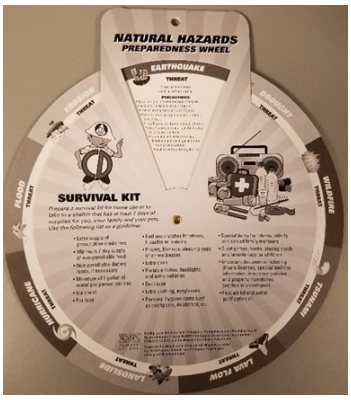
Printed products are the following:

- *Alaska's Next Big Earthquake Workshop Report* (200 copies): *http://nextearthquake.gi.alaska.edu/sites/default/files/NBE%20summary%20document-final_0.pdf*
- *The Benefits of Enhanced Earthquake Monitoring and Potential Earthquake Early Warning in Alaska* (30 copies) *http://seismic.alaska.gov/download/ashsc_meetings_minutes/ASHSC_Benefits_EQ_Monitoring_6_27_16.pdf*
- *Are You Prepared for the Next Big Earthquake in Alaska?*(10,000 copies)

Hawaii Natural Hazards Preparedness Wheels

The Hazards Wheel is a fun way to learn more about nine different hazards, including earthquakes and tsunamis. On one side, the wheel explains what the threat is and what preparedness actions to take and on the colored side it gives an easy to follow action plan if faced with that hazard.





WSSPC Committee Update

Policies have been returned to the committees with the Board's comments and requests for changes. Committees have until March 24, 2017 to make changes and return them to the WSSPC office. The revised drafts are on the WSSPC website at: *http://www.wsspc.org/public-policy/2017-wsspc-draft-policy-recommendations/*

Draft PR 17-1: Improving Tsunami Public Education, Mitigation and Warning Procedures
Draft PR 17-3: Earthquake Monitoring Networks
Draft PR 17-4: Identification and Mitigation of Unreinforced Masonry Structures
Draft PR 17-5: Earthquake Emergency Handbook for First Responders and Incident Commanders
Draft PR 17-6: Post-Earthquake Information Management System
Draft PR 17-7: Earthquake Early Warning Systems
Draft PR 17-8A: Seismic Design of New Schools

Thank You 2016 WSSPC Affiliate Members!

WSSPC welcomes all members of the professional community who share the common goal of reducing losses from earthquakes. Thanks one more time to our 2016 Affiliate Members:

Corporate

√ Degenkolb Engineers, Inc.
√ Saunders Construction, Inc.
√ State Farm Insurance Companies

Non-Profit Organizations

√ Applied Technology Council
√ California Earthquake Authority
√ Earthquake Engineering Research Institute

Government

√ City and County of San Francisco, Earthquake Safety Implementation Program
√ City of Las Vegas, Department of Building and Safety
√ Clark County, Nevada, Department of Building and Fire Prevention Bureau

Individual

√ Dominic Sims

Join as an Affiliate Member for 2017 and get the following benefits:

- Recognition of support with a link on the WSSPC website to your organization
- Participation on WSSPC Committees providing input to policy recommendations
- Quarterly E-Newsletters and Monthly Bulletins
- Opportunities to exhibit and sponsor activities

NEWS

Deep Earthquakes Discovered Along Newport-Inglewood Fault Zone

Recently, a team from Caltech in Pasadena, California, identified small earthquakes occurring along the Newport-Inglewood fault zone that are deeper than 24 kilometers. A quake that deep extends through the crust into the Earth's upper mantle.

Researchers first started investigating deeper earthquakes in late April 2012 following the 8.6 magnitude quake that struck off the coast of Sumatra in the Indian Ocean. No one could explain how an intraplate quake on a strike slip fault got so big and so deep.

The implications for seismic hazard are unclear: the potential to generate large earthquakes could increase the hazard or the deep earthquakes could remain small with little damaging effect. At this time, all of the deep earthquakes that have been identified have been around a magnitude 2. Scientists are racing to learn more since the San Andreas fault is also a strike-slip fault which puts it at risk of experiencing deep earthquakes as well. U.S. Geological Survey (USGS) geophysicist Brad Aagaard states, "It's worth further investigation, on multiple fronts, to look at what the physics of the Newport-Inglewood really are. Only time will tell if these new types of earthquakes can occur all over the planet, and the type of threat they really pose."

References:

http://www.sciencealert.com/californian-earthquakes-can-strike-a-lot-deeper-than-scientists-ever-expected

http://www.latimes.com/local/lanow/la-me-ln-new-kind-earthquake-20161006-snap-story.html

http://www.livescience.com/31417-sumatra-earthquake-explained.html

Arizona Introduces Hard of Hearing Training

When a disaster strikes people turn to television, radio broadcasts, social media and word of mouth to get updates and learn what next steps should be taken. What are individuals supposed to do if they can't *hear*? Arizona's Department of Emergency and Military Affairs, Department of Forestry and Fire Management, and Maricopa County Department of Emergency Management partnered with the Arizona Commission for the Deaf and the Hard of Hearing who came together to answer that question for Arizonans.

A 3-day *Emergency Response Interpreter Credentialing (ERIC)* Program was developed to provide American Sign Language (ASL) interpreters and Communication Access Realtime Translation (CART) captioners with the tools needed to assist emergency responders during a disaster event. The program gave participants a broad overview of emergency management terminology and processes, shelter operations and family preparedness. Any individual who successfully completes the ERIC training is considered a Technical Specialist and will be added to the list of required emergency responders for disasters.

The training has received positive feedback from its participants. Jackie Moats, certified ASL interpreter and ERIC program graduate states, "Emergency response communication has typically been inaccessible to Deaf citizens whose primary means of communication is sign language, and participating in ERIC allows me to be a part of the solution."

Reference:

https://dema.az.gov/emergency-management/emergency-management/news/pilot-program-addresses-accessibility-emergency

Seaside, Oregon to Move Schools out of Tsunami Inundation Zone

Having a safe place to evacuate to following a tsunami is crucial. Seaside, a small coastal town in Oregon, is located almost entirely within a tsunami inundation zone. Local advocates have been concerned about student safety as well as the deteriorating condition of the schools, and placed a $99.7 million bond measure on the November ballot to move 3 schools out of the tsunami inundation zone. Residents supported the bond with a vote of 65% to 35%.

"This victory belongs to our community which had the foresight to see how important high quality schools are to the future of everyone who lives in the Seaside School District," Superintendent-emeritus Doug Dougherty said. "New schools benefit the entire community, strengthen our economy and, in this case, provide a safe place for all in an emergency."

The new schools, replacing Gearhart Elementary School, Broadway Middle School and Seaside High School, are expected to be completed in 4 years.

References:

http://www.opb.org/news/series/election-2016/seaside-schools-tsunami-zone-vote-result/

http://www.dailyastorian.com/Free/20161108/voters-backing-seaside-schools-bond

http://temblor.net/earthquake-insights/want-to-be-tsunami-ready-follow-this-towns-example-1718/

Getting Ready for a Cascadia Event

The conclusions of the final draft after action report of the June 2016 *Cascadia Rising* exercise revealed that Washington and Oregon were not ready to face a large scale Cascadia Subduction Zone earthquake. The report stressed the urgent need for residents to prepare, and the need for state and local governments to develop "comprehensive and coordinated response plans" to follow during catastrophic events. The report also noted that catastrophic response is unlike other responses because the first responders themselves and their support infrastructure are also impacted.

The scenario estimates of damage are truly staggering – more than 14,500 fatalities and 27,000 injuries in Washington and Oregon. Other damages would include: severe food and water shortages; sanitation problems; healthcare crises; inoperable power grids and transportation systems; communication problems; lack of seismically resilient buildings and infrastructure; and understaffed and underfunded emergency management departments.

To address actions that government should take in the event of a Cascadia earthquake, Washington's Governor Jay Inslee has convened a Resilient Washington Subcabinet. The subcabinet has been directed to:

- Identify data and information gaps that hinder preparedness and response plans
- Identify data and information to help guide a strategic public education campaign centered on personal preparedness.
- Develop potential actions that can be coordinated across state agencies, local jurisdictions and federal partners to reduce risk and improve response in the event of an earthquake or tsunami.
- Identify, prioritize and estimate costs for state actions that will improve public safety and earthquake preparedness and response.

The public also plays a critical role in preparedness and personal survival. An important step in preparedness that many forget about is having insurance in case of a severe event. Earthquake insurance is not typically included in an average homeowner's insurance policy; it needs to be purchased separately. Renters can also purchase earthquake insurance to cover their belongings in their rental property. Tsunami flood damage may be covered by flood-insurance policies from FEMA through the National Flood Insurance Program. Each state regulates insurance offerings which may vary from state to state; a

full list of state insurance commissioners is found here: *http://www.patientadvocate.org/index.php?p=178.*

References:

http://mil.wa.gov/emergency-management-division/resilient-washington-subcabinet

https://assets.documentcloud.org/documents/3152696/CR16-State-AAR-Final-Draft-Oct-21-2016.pdf

https://hazards.colorado.edu/article/washington-wake-up-call-lots-more-prep-needed-before-a-cascadia-event

http://www.seattletimes.com/seattle-news/earthquake-insurance-in-washington-what-you-need-to-know/

New Fault Discovered Parallel to San Andreas fault

Scientists from Scripps Institution of Oceanography at the University of California San Diego and the Nevada Seismological Laboratory at the University of Nevada, Reno made the discovery of a fault running parallel to and west of the San Andreas fault in southern California. Named the Salton Trough fault, it has been hidden because it is submerged beneath the Salton Sea.

The region has experienced magnitude 7 earthquakes approximately every 175 to 200 years, but it has been 300 years since the last large earthquake.

"The extended nature of time since the most recent earthquake on the Southern San Andreas has been puzzling to the earth sciences community," said Graham Kent, the Nevada State Seismologist. "Based on the deformation patterns, this new fault has accommodated some of the strain from the larger San Andreas system, so without having a record of past earthquakes from this new fault, it's really difficult to determine whether this fault interacts with the southern San Andreas Fault at depth or in time."

References:

http://www.sciencealert.com/a-second-fault-line-running-parallel-to-san-andreas-has-just-been-identified

https://scripps.ucsd.edu/news/new-fault-discovered-earthquake-prone-southern-california-region

Fault Linkage Points to Increased Seismic Hazard

Scientists have long questioned whether the Hayward and Rodgers Creek faults are connected under San Pablo Bay in the San Francisco Bay area. Using seismic reflection, shipborne magnetometer data and kinematic modeling, U.S. Geological Survey scientist Janet Watt and others have discovered a vertical or steeply northeast dipping structure interpreted as the link between the two faults.

If the two faults are actually connected, the seismic hazard is much greater than previously thought. A rupture along their combined length of 190 km is capable of producing a M7.4 earthquake which would be more than five times stronger than the 1989 Loma Prieta quake on the San Andreas fault that killed over 60 and collapsed the Bay Bridge.

To get an idea of the expected shaking intensity from a slightly smaller magnitude earthquake (M7.2), the USGS has produced a simulation of an earthquake propagating north and south from the linked faults beneath San Pablo Bay.

References:

http://earthquake.usgs.gov/regional/nca/simulations/hayward/M7.2.php

http://www.mercurynews.com/2016/10/20/2-bay-area-earthquake-faults-found-to-be-connected/

http://advances.sciencemag.org/content/2/10/e1601441

HAZARD MITIGATION & PREPAREDNESS

New Gas Shutoff Standards Published

ANSI/ASCE/SEI Standard 25, dealing with earthquake-actuated automatic gas shutoff devices, was updated in 2016 from the previous version in 2006. The purpose of the update is to provide "greater transparency regarding the performance of these devices".

WSSPC policy recommendation 16-12 recommends that if a decision is made to install the earthquake actuated gas shutoff devices, the most current ANSI/ASCE/SEI Standard 25 be used, and installed to manufacturer's specifications.

References:

http://www.wsspc.org/wp-content/uploads/2016/06/ADOPTED_PR_16-12_Gas_Shutoff_Devices_WEB.pdf

http://ascelibrary.org/doi/book/10.1061/9780784413890

WASHDOT Tests Flexible Bridge Technology

Washington State Department of Transportation is constructing a flexible bridge that not only is expected to withstand a magnitude 7.5 earthquake, but also able to return to its original shape after the shaking is over.

This new technology is going live after being tested in the laboratory for over 15 years by Professor Saiid Saiidi in the Earthquake Engineering Laboratory at the University of Nevada in Reno. "We have solved the problem of survivability, we can keep a bridge usable after a strong earthquake," said Saiidi.

The top of the bridge columns are made of a bendable concrete composite with poly-vinyl fibers that resist cracking and the rods in the joints are made from a nickel-titanium alloy that will return to their original shape after the earthquake.

Even though the materials are 90 times more expensive than the traditional materials, the new materials are only being used in critical areas, rather than the entire bridge. The cost of the new bridge will only be 5-10 percent more than a traditional bridge.

The bridge is an off-ramp and will take northbound drivers from State Route 99 into the heart of Seattle. It is scheduled for completion in Spring 2017.

References:

http://www.unr.edu/nevada-today/news/2016/saiid-seattle-bridge-columns

http://www.king5.com/news/local/first-of-a-kind-bridge-to-survive-earthquakes/351906635

http://www.citylab.com/tech/2016/12/seattle-flexible-bridge-engineering-earthquake/510638/

http://www.wsdot.wa.gov/news/2016/11/14/wsdots-new-flexible-bridge-technology-designed-stand-seattles-next-big-earthquake

WSSPC Logo Wear

A special selection of men's and women's shirts emblazoned with the WSSPC logo is now available for order directly from Lands End: *https://business.landsend.com/store/wsspc/*.

AAA's "Road to Ready" Game

AAA has created a "Road to Ready" preparedness game (*http://aaa.com/roadtoready)* for residents with Northern California, Nevada and Utah zip codes. During the game you choose from three settings: at home, in the car, and at work. Each setting takes you through what would typically happen if an earthquake hit. You are asked questions such as: What do you do if there is an electrical fire in the kitchen; What do you do if a power line falls on the roof of the car; and What do you do after all employees have gathered in the designated meeting space? As you answer the questions you are rated on a red, yellow, green scale to show how close you were to the correct answer that is given.

You can also create a safety plan and download a disaster preparedness supply checklist from the website.

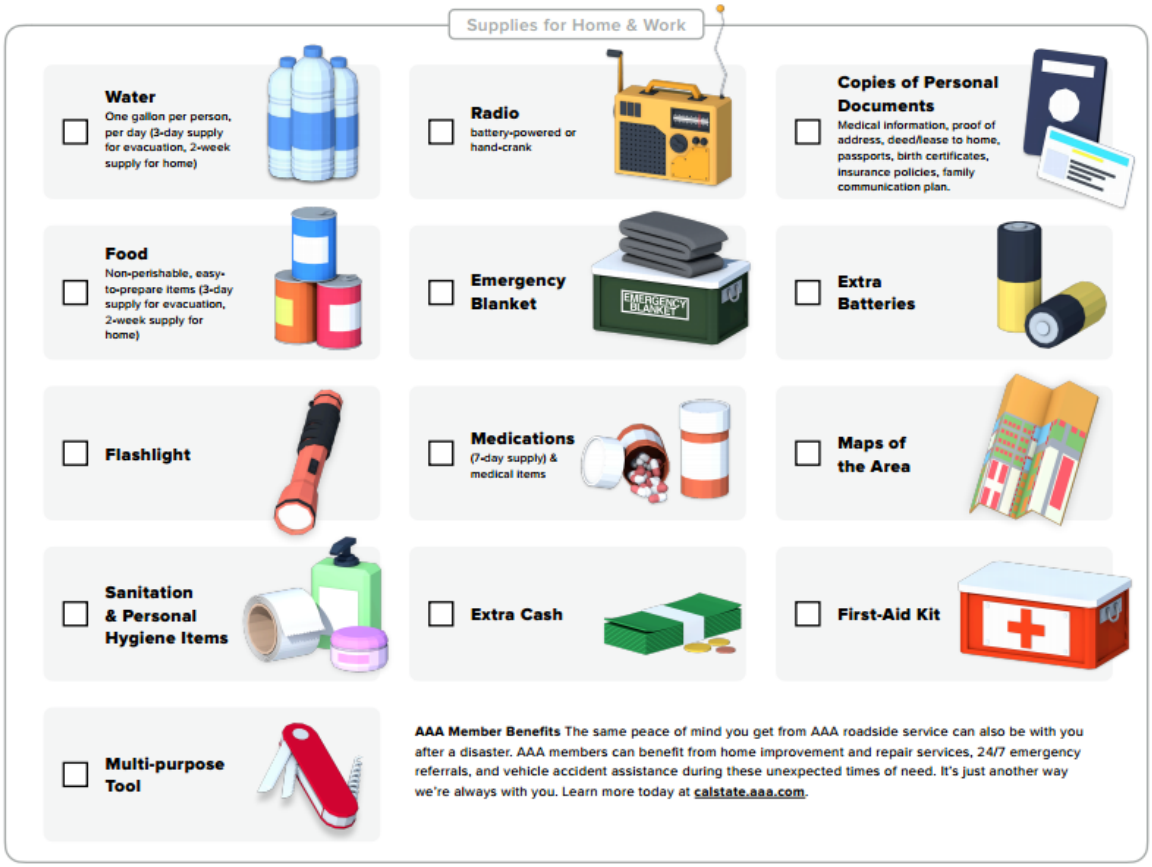


Figure: AAA Disaster Preparedness Kit Supply Checklist

Reference:

https://calstate.aaa.com/community?zip=95814&stateprov=ca&city=sacramento&devicecd=PC&referer=www.aaa.com

American Society of Civil Engineers Releases Tsunami-Resilient Design Standards

For the first time, tsunami-resilient design standards have been developed by the American Society of Civil Engineers (ASCE) and incorporated into the International Building Codes. "Rather than ignoring a hazard and suffering the consequences, tsunamis should be factored into the planning, siting, design, and construction of high-risk buildings," said Gary Chock, Chair of ASCE's Tsunami Loads and Effects Subcommittee.

Probabilistic hazard and inundation maps for the 5 Pacific states most at risk from tsunami were developed and included in a digital geodatabase tool that provides site-specific tsunami conditions (inundations and run-up elevations) that structures should be designed to resist. Recent damaging tsunamis have shown that the existing building codes were not strong enough to resist the impact of the tsunami forces on the buildings.

The potential number of residents and visitors threatened by major tsunamis on the Pacific coasts is a significant number: up to 3.5 million, according to the following data.

State	# of Residents	# of Tourists	Miles of Coastline	Estimated Damage
California	275,000	400,000-2,000,000	840 miles	>$200 billion
Oregon	25,000	55,000	300 miles	$8.5 billion
Washington	45,000	20,000	160 miles	$4.5 billion
Hawaii	200,000	175,000	750 miles	$40 billion
Alaska	105,000	Highly seasonal	6,600 miles	$10 billion

Table: Data from Seattlepi.com

The new design standard is published in ASCE 7-16, Chapter 6, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures,* and a companion guide, *Tsunami Loads and Effects: Guide to the Tsunami Design Provisions of ASCE 7-16*.

References:

http://www.asce.org/templates/press-release-detail.aspx?id=22544

http://www.seattlepi.com/local/science/article/West-coast-tsunami-risk-maps-Building-codes-9450210.php

RESILIENCE AND RECOVERY

"The Mw 6.0 South Napa Earthquake of August 24, 2014: A Wake-up Call for Renewed Investment in Seismic Resilience across California"

A study of the August 2014 South Napa earthquake was recently released by the Alfred E. Alquist Seismic Safety Commission. The Commission engaged the Pacific Earthquake Engineering Research Center (PEER) to better understand impacts to infrastructure, buildings, and businesses; lessons learned from this and other recent earthquakes; and emergency response. The study is comprised of 20 findings and 12 priority recommendations for improving the state of California's seismic resilience.

The priority recommendations were a culmination of public testimony, interviews of local government and businesses, and a workshop involving Commission, Commission staff, and PEER. Several of the recommendations include:

- Identify the locations of complex and integrated fault zones in the state, like the West Napa fault zone, and prioritize these for evaluation and mapping and potential designation as Alquist-Priolo Earthquake Fault Zones.
- Convene a State task force that includes local waste and wastewater providers as well as fire departments across the state to identify vulnerabilities, mitigation options, and financial mechanisms to enhance the seismic resilience of local water and waste-water systems, particularly in areas vulnerable to widespread ground failure and that lack alternative water supplies for firefighting.
- Review and revise, as needed, State regulations guiding the transfer and housing of inmates in county jails during times of emergency.

Additional recommendations were made and placed in the Appendix but were not identified as high priority due to logistical and financial considerations.

References:

http://peer.berkeley.edu/publications/peer_reports/reports_2016/CSSC1603-PEER201604_FINAL_7.20.16.pdf

http://www.seismic.ca.gov/pub/Napa_Quake_Report_News_Release_8-22_Revise.pdf

***Resilient San Francisco* Report; Ottelini's Departure**

The San Francisco Office of Resilience and Recovery released its report, *Resilient San Francisco,* outlining its strategic vision for making San Francisco a more resilient city. The report was the culmination of the Rockefeller Foundation's grant to the city and the mission of Chief Resilience Officer Patrick Otellini and his team. The report had four broad goals on how to make San Francisco a more resilient city:

1. Plan and Prepare for Tomorrow;
2. Mitigate, Adapt and Retrofit;
3. Ensure Housing for San Franscians Today and After a Disaster; and
4. Empower Neighbors and Neighborhoods Through Improved Connections.

The Rockefeller Foundation's grant program has ended; Otellini has stepped down from his position and will be joining Swinerton Builders, a construction company. City Administrator Naomi Kelly will take the lead in implementing the recommendations upon Otellini's departure.

References:

http://www.sfchronicle.com/politics/article/SF-s-chief-resilience-officer-leaving-post-10599706.php

http://sfgsa.org/sites/default/files/Document/Resilient%20San%20Francisco.pdf

http://sfgov.org/orr/

ADDITIONAL RESOURCES & PUBLICATIONS

California Earthquake Early Warning System Benefit Study

California's Office of Emergency Services partnered with the Alfred E. Alquist Seismic Safety Commission and engaged the Pacific Earthquake Engineering Research Center to prepare a report of the value of a statewide earthquake early warning system (EEWS) to the state's economy and infrastructure. The total estimated cost to launch a statewide EEWS would be around $28 million with annual operating costs around $17 million.

The researchers interviewed 24 organizations representing 14 important sectors of the state's infrastructure and economy during the six-month investigation. The organizations perceived high value to society and their organizations in having an EEWS and recognized the benefits to public and employee safety, business resiliency, and the protection of critical operations that serve local communities.

The full 90-page report is found here:
http://peer.berkeley.edu/publications/peer_reports/reports_2016/CaOES-CSSC1604-PEER201606-CAEEWS-Benefits-Study_FINAL_8.31.16.pdf

The Benefits of Enhanced Earthquake Monitoring and Potential Earthquake Early Warning in Alaska: A Stakeholder Survey

This Alaska Seismic Hazards Safety Commission publication explains the benefits of improved monitoring and earthquake early warning in five sections: *Earthquake characterization, Earthquake hazard assessment, Infrastructure Monitoring, Advancing national science priorities, and Earthquake Early Warning.* Due to the compressed time frame to prepare the report, the responses from the earthquake community should be viewed as a sampling.

Reference:
http://seismic.alaska.gov/download/ashsc_meetings_minutes/ASHSC_Benefits_EQ_Monitoring_6_27_16.pdf

Quake Forecast for Wasatch Front Region

The Working Group on Utah Earthquake Probabilities released its assessment of the probability of large earthquakes occurring in the Wasatch Front region. U.S. Geological Survey Fact Sheet 2016-3019 forecasts a 43% chance of a magnitude 6.75 or greater earthquake in the next 50 years, and a 57% probability of a magnitude 6.0 or greater earthquake. The Wasatch Front region includes the Wasatch fault zone, Oquirrh-Great Salt Lake fault zone and Stansbury fault zone in Utah, the Eastern Bear Lake fault in Utah and Idaho, the Bear River fault zone in Utah and Wyoming, and the Rock Creek fault in western Wyoming.

A large quake in the region could result in 2,000 - 2,500 fatalities, 84,000 families displaced from unsafe homes, lifeline disruptions, and economic losses of $33 billion, according to a scenario published in 2015.

References:
https://pubs.er.usgs.gov/publication/fs20163019

https://ussc.utah.gov/pages/help.php?section=EERI+Salt+Lake+City+M7+Earthquake+Scenario

PEOPLE & TRANSITIONS

WSSPC Welcomes New Members and Representatives:

Nelia Dunbar, New Mexico State Geologist and Director of New Mexico Bureau of Geology & Mineral Resources, Earth and Environmental Science Department.

Charles V. Esteves, Civil Defense Administrator, Guam Homeland Security/ Office of Civil Defense.

Marilyn Gally, formerly the State Hazard Mitigation Officer, appointed Director of the Emergency Management Office within the

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Colorado Division of Homeland Security and Emergency Management.

Angie Lane, State Hazard Mitigation Officer, Oregon Office of Emergency Management

Jason Marquiss, the new Deputy Director of Washington Emergency Management Division, serving under Director Robert Ezelle.

Kevin Reeve, State Hazard Mitigation Officer, Alaska Division of Homeland Security and Emergency Management.

Robert Turner, Assistant Deputy Minister, HQ-British Columbia Emergency Management.

2016-2017 WSSPC Board of Directors

WSSPC welcomes **Steve Masterman**, Alaska State Geologist/Director of the Division of Geological and Geophysical Surveys as the newest member of the Board.

Peter McDonough, member of the Utah Seismic Safety Commission, assumes the position as Chair.

Returning Board Members:

Karen Berry, Colorado State Geologist and Director of the Colorado Geological Survey;

Mark Ghilarducci, Director of the California Governor's Office of Emergency Services;

John Metesh, Montana State Geologist and Director of the Montana Bureau of Mines and Geology;

Mike O'Hare, Director of the Alaska Division of Homeland Security and Emergency Management; and

Brad Richy, Director of the Idaho Office of Emergency Management.

CONFERENCES, WORKSHOPS & EVENTS

World Earthquake Conference
January 9-13, 2017
Santiago, Chile

NTHMP Annual Meeting
January 30-February 3, 2017
Portland, Oregon
For more information: *http://nws.weather.gov/nthmp/2017annualmeeting/*

EERI Meeting
March 7-10, 2017
Portland, Oregon
For more information: *https://www.eeri.org/cohost/registration/2017-annual-meeting-registration*

Seismological Society of America Meeting
April 18-20, 2017
Denver, Colorado
For more information:
http://meetings.seismosoc.org/

National Earthquake Program Managers (NEPM) Meeting
April 24-27, 2017
Oklahoma City, Oklahoma

WSSPC Committee Meetings
April 26, 2017 (2-5PM)
Oklahoma City, Oklahoma

WSSPC Board & Annual Business Meeting
April 28, 2017 (8AM-12PM)
Oklahoma City, Oklahoma

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If you have a newsworthy item for our e-Newsletter, please forward it to Erin Mommsen Program Manager at: *emommsen@wsspc.org*