

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3, 2020
Meeting Notes

Meeting Participants:

Trina Addison - Virginia
Jason Ballmann - Southern California
Earthquake Center
Douglas Bausch - NIYAMIT / FEMA Ctr.
Teresa Beecham - Georgia
Dan Belanger - Alaska
Mark Benthien - Southern California
Earthquake Center
Brian Blake - Central U.S. Earthquake
Consortium
Sharon Blankenheim - California
Bill Blanton - FEMA HQ
Kyren Bogolub - Colorado
Hilda Booth - Arkansas
Jeff Briggs - Missouri
Regina Browne - U.S. Virgin Islands
Steve Brukwicki - Kentucky
Jordan Burns - NIYAMIT / FEMA Ctr.
Bob Carey - Utah
Mike Conway - Arizona
John Crofts - Utah
Maximilian Dixon - Washington
Jon Foster - FEMA HQ
Miriam Geio - FEMA
Michael Grimm - FEMA HQ
Andrew Herseth - FEMA HQ
Sarimar Hiraldo - FEMA HQ
Jasmine Johnson-Divinity - Mississippi
Kevin Kalbaugh - North Carolina
Alison Kearns - FEMA RIX
Noriko Kibble - FEMA RIV
Cheickh Koma - FEMA RVII
Edward Laatsch - FEMA HQ
Annie Laukaitis - CES / FEMA Ctr.
Jose Lebron - FEMA RII
Mairi Litherland - New Mexico
Michael Mahoney - FEMA HQ
Ginger Martin - Georgia
Steven McCabe - NEHRP
Rachel McCaster - South Carolina
Sean McGowen - FEMA RVIII
Darlene Messina - FEMA RIII
John Metesh - Montana
Kevin Miller - California
Bart Moore - FEMA RVI
Justin Moresco - Applied Technology
Council
Paul Morey - FEMA RI
Chelsea Morganti - New Mexico
Simone Nageon de Lestang - Earthquake
Engineering
Research Institute
Chelsea Nied - Washington
Ann Ogata-Deal - Hawaii
Lovell Orr - FEMA RIV
Althea Rizzo - Oregon
Anne Rosinski - FEMA RIX
Daniel Ryan - FEMA RV
Pascal Schuback - Cascadia Region
Earthquake Group
Pataya Scott - FEMA HQ
Deborah Scott - FEMA
John Sherstobitoff - British Columbia
Amanda Siok - FEMA RX
Jeff Sopol - GHI International / DHS S&T
Ctr.
Adam Stewart - Tennessee
Diana Thomas - North Carolina
Mike Tong - FEMA HQ
Heidi Tremayne - Earthquake Engineering
Research
Institute
Alika Valdez - Texas
Matthew Wall - Western States Seismic
Policy Council
Amber Whittaker - Maine
Jim Wilkinson - Central U.S. Earthquake
Consortium
Seth Wittke - Wyoming
Janell Woodward - Nevada
Alesia Za Gara - CES / FEMA Ctr.

NEPM Day 1 – Monday, March 2nd, 2020

I. Welcome and Introduction – Maximilian Dixon, Jeff Toney, Kevin Miller

Kevin Miller welcomed everyone to the meeting. He stated that while people in other states thought that California had everything figured out when it came to earthquakes, that wasn't the case. California was constantly learning as they experienced earthquakes. This week, everyone had a lot to learn from each other. He looked forward to a great week and introduced Jeff Toney.

Jeff Toney introduced himself as the new director of the San Diego Office of Emergency Services and welcomed everyone to San Diego. Jeff stated that he used to work for CalOES and wrote many earthquake plans. Every project helps emergency managers work on their gaps and determine what they're missing in order to move forward. Jeff was happy to host everyone and was excited for the week.

Maximilian Dixon introduced himself as the NEPM Chairperson for 2020. He went over housekeeping items. He stated that he was looking forward to learning from everyone this week, then passed the microphone around the room to introduce everyone.

II. State/Territory Earthquake Program 101

a. Program Needs (funding, partnerships, gaps, support) – Jeff Briggs

Jeff Briggs thanked everyone for joining. He explained that the session was intended to be an introductory foundation for new program managers, but it could also serve as a refresher for those who had been in the position for a while. Ultimately, this presentation was put together to give everyone a common understanding of what's going on in the Earthquake Program. Jeff had been in his position for four years.

Jeff Briggs began his presentation by asking the meeting attendees how many of them would say a significant part of their job is public awareness and outreach. Many people raised their hands. He then asked how many people have a background in geology. Few people raised their hands.

- Are you a geologist?
- A seismologist?
- A "rockologist" of any sort?

Jeff Briggs stated that most people in the earthquake program were not "rockologists," but that was okay.

- Get to know your partners. They're smarter than you!
 - State organizations
 - State Geologic Survey
 - FEMA
 - USGS
 - FLASH, OPP, ATC, CUSEC, SCEC
 - Universities

2020 National Earthquake Program Managers Meeting
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- Professional groups (engineers, architects, scientists)
- Emergency managers

Jeff Briggs asked how many states had a geologic survey. Most people raised their hands.

- Same job, different duties
 - Needs vary
 - Different states have different needs, and that's OK

Jeff Briggs asked how many people felt they were the only person in their state that worked on earthquake education. He admitted that he felt that way.

- Two things we all share
 - Federal funding
 - Awareness

Jeff Briggs noted that they all share some federal funding. Everyone in the room came to NEPM because they had the opportunity to participate in federal funding and receive resources from FEMA. Over the next few days, Jeff challenged everyone to meet their FEMA regional coordinator if they hadn't already.

Maximilian stated there would be a chance to meet the regional in the afternoon.

Jeff Briggs continued his presentation.

- Fight apathy
 - Increasing awareness is our constant effort
 - EQ is the biggest threat many of us face
- ShakeOut
 - The biggest outreach effort we've got
 - Coordinated by SCEC, regional partners
 - Chance to grow and measure it

The beauty of ShakeOut is that it is very easy to measure how many people went to the trouble to register and participate.

- Shameless thievery
 - Sharing each other's great ideas

Jeff Briggs stated that the best part of the conference was the ability to "steal" ideas from other states. This was why the agenda was set up to allow every state a few minutes to stand up and talk. It gave states the opportunity to network and see what could be borrowed.

- Make a great canned presentation
 - Usable for all audiences
 - Consistent messaging
 - Establishes you in your state

Jeff Briggs thanked everyone for their time and encouraged everyone to learn from each other throughout NEPM.

b. Training Needs (EQ program managers, new and old) – Althea Rizzo

Althea Rizzo began her presentation by noting that every earthquake program manager came from a different background. She has been in her position for twelve years and did not have a background relating to earthquakes. She began to present on ways to learn as a new earthquake program manager.

- The basics of emergency management
 - Have a basis of understanding of the role of ICS
 - IS-100a: Intro to ICS
 - IS-200a: ICS for Single Resources and Initial Action Incidents
 - IS-700b: Intro to National Incident Management System (NIMS)
 - IS-800b: Intro to the National Response Framework (NRF)
 - IS-120.a: Introduction to Exercises
 - IS-230.d: Fundamentals of Emergency Management
 - IS-235.b: Emergency Planning
 - IS-240.a: Leadership and Influence
 - IS-241.a: Decision Making and Problem Solving
 - IS-242.a: Effective Communications
 - IS-244.a: Developing and Managing Volunteers
 - IS-00008.a Building for the Earthquakes of Tomorrow
 - IS-00394.a" Protecting Your Home or Small Business from Disaster

The next step was drilling down into your role using the ICS courses. These were the best way for her to get up to speed with her colleagues.

- The rest depends on your position
 - Basics of geology
 - Know at least the basics of the seismic hazards in your region
 - Communications and marketing
 - Social media
 - Grants management
 - Policy development
 - Local, state, federal

Althea noted that she was not an expert in geology. However, it was important to develop a relationship with your seismologist. She had never done anything related to grants management before beginning this position, and there were many learning curves she had to get through. Althea noted that it was important to be involved in politics, as this position was much more political than it seemed at first glance.

- Good to know
 - How to win friends and influence people
 - Poker face
 - Writing and communication skills
 - Understand how to communicate scientific data and hazard information to the public
 - Understand how to communicate scary information in a non-scary way
 - How to build coalitions

Althea thanked everyone for their time and concluded her presentation.

c. Best Practices (EQ Program Managers) – Jim Wilkinson

Jim Wilkinson presented on best practices and how to make programs different for each state.

- Do your homework- read, learn, and attend meetings outside of EM
 - Whatever your program interest, integrate into those areas opposite yours
 - i.e. mitigation/response, EM/geology, etc.
 - It can be painful but also very rewarding
- Program success is dependent on inside as well as outside input
 - Regularly set meetings with others, develop a relationship- est. face to the program
 - Create a program vision - strategic plan
 - Visit your at-risk communities frequently and remain in touch
- Projects and activities will follow
 - Rural/Urban – where's the real risk in your state? Where do you get the most bang for your program buck?
 - Program will never reach a desired level of success sitting in your office.

d. Best Practices (video projects) – Pascal Shuback

Pascal Shuback presented on best practices for video projects.

- 2 weeks ready – craft an emergency kit whiteboard video
 - Simple design
 - Audio layering allows for translation capabilities
 - Worked with creative team to allow for variables
- Benefits
 - YouTube, Vimeo – Different audience, access (streaming)
 - Accessibility – mobility, embedding, closed captioning, language translation
 - Cost – iPhone > iMovie > Publish is the easiest, or you can go all the way with a creative team
 - Analytics – distribution, viewers, dynamic

Pascal stated that a whiteboard video they created was a great tool to use for campaigns. If anyone planned to create a video, it was important to ask their creative team for all the supportive material (b-roll).

Pascal stated that they merged the comic books, so the emergency management information was in the back. It's important to not be offended by online. He felt that Vimeo was very helpful and noted it had government rates and ad control. YouTube and Vimeo also had built-in streaming information. He added that closed captioning could now be added on YouTube.

- Helpful hints
 - Get as much video as you can
 - Buy a video kit for your phone (recommended one is \$250)
 - Provides much better audio
 - Invite the public – competitions!! (more details later)
 - Share

Pascal stated that apps such as TikTok could be useful for ShakeOut outreach. Videos were becoming increasingly popular, and it was important to use them for outreach.

Jeff Briggs asked if he would need to have an agency account to post on sites such as TikTok and YouTube.

Pascal answered yes. However, people often used their personal accounts to post work-related information because they were passionate about it. When doing that, it was important to note that the information was not being posted from a work account.

Maximilian noted that people can work together to provide canned videos and messaging. If someone was shy in front of the camera or just getting started, he felt Facebook Live was wonderful place to start creating videos. 500 people may view someone doing a 5-minute preparedness video. Once some of this material was developed, it was amazing what it could be used for.

e. Best Practices (seismic retrofits) – Bob Carey

Bob Carey introduced his presentation by stating that the Utah Seismic Retrofit Program makes up most of their earthquake program. As a group and community, they speak with one voice.

Bob stated that relationships help people work towards a common goal in the community. It was also beneficial to be able to leave geologic issues to the geologists, even though he had a geologic background.

- Seismic Retrofit Projects
 - University of Utah Marriott Library
 - State Capitol and Salt Lake City Hall
 - Fire stations
 - Water Conservancy Districts
 - School districts
 - Local libraries
 - Fix the Bricks
 - Private sector

The first Pre-Disaster Mitigation Grant (PDM) project they did was with the University of Utah. They asked the Seismic Safety Commission to create a letter in support of that project. The Commission also wrote a letter for the State Capitol retrofit. Some of the other projects they did in the early stages of PDM were with fire stations. Bob noted that the state of Utah did a rapid visual screening of schools. This provided money for them to do a bigger sampling of the state.

- Wasatch Front URM Reduction Strategy
 - Resilient Wasatch Front 2023 Priority
 - Joint FEMA Region VIII – State of Utah
 - National Mitigation Investment Strategy Pilot Project
 - Project Review Committee
 - Project Development Committee

Bob then displayed the three goals of the National Mitigation Investment Strategy:

- Show how mitigation investments reduce risk
- Coordinate mitigation investments to reduce risk

- Make mitigation investment standard practice

f. Best Practices (2 Weeks Ready) – Althea Rizzo

Althea noted that as they learn more about natural disasters, they had found three days is not enough time to be prepared for a disaster. Oregon was in the process of developing a new program to replace Map Your Neighborhood, a program where people got together and participated in learning preparedness activities.

While they had used Map Your Neighborhood since 1995, but Althea stated it was time for an upgrade. The governor of Oregon stated that by 2025, they needed 250,000 households to be ready for two weeks of preparedness instead of three days.

The program began with a social event because it's important for people to know their neighbors even if they didn't participate in a preparedness activity. Communities that know each other are much more resilient after these types of disasters. After the social event, they went into the family planning process which consists of two weeks of journaling where they consider what they would need to do or have access to in order to get through two weeks. Then they worked on their food, water, and waste plans and learned how to camp in their homes, backyards, and neighbors' backyards.

Afterwards, they had another community event to get to know their neighbors more. This helped people connect beyond a social level. From there they took a first aid course, but Althea stated that this was where they hit blocks because it was expensive to take a first aid course. This was a challenge and they were looking to find a cheaper way to have this happen. From there an emergency management activity taught them what the government will and will not do for them.

Next, a teach out portion challenged them to take all the information they had learned so far and teach it to others. From there, the participants had a "camp in" where they lived in their home without power, water, internet, or waste collection. Participants were encouraged to set their heat to a minimum of 59 degrees. Afterwards, participants assessed their experiences and participated in another celebratory social event in their neighborhood. Participants could then go to the next level which could be participating in community gardening or other options.

Maximilian stated that Althea mentioned a cell phone app and clarified that it was called 2 Weeks Ready. They needed to ensure the app provided many functions. Maximilian noted they were coordinating with Oregon to work on it collaboratively.

g. Best Practices (statewide initiatives) – Kevin Miller

Kevin Miller presented on statewide initiatives in California.

- Successful Programs
 - Preparedness
 - Earthquake Country Alliance (ECA)
 - The Great California ShakeOut Drills
- Mitigation
 - Earthquake Brace + Bolt (EBB)
 - HR 5494 "The Catastrophe Loss Mitigation Incentive and Tax Parity Act"
- Earthquake County Alliance
 - Created in 2003 in SoCal; expanded statewide in 2009 after first ShakeOut;

- Redwood Coast in 1992
- 1500+ *Public-Private-Grassroots* leaders
- *Statewide Sector-based committees develop resources and programs*
- *Regional Alliances organize local events and outreach campaigns*
- Support provided by California's Office of Emergency Services
- ECA Statewide Activities
 - Develop Messaging and Resources:
 - EarthquakeCountry.org
 - Terremotos.org
 - *Support Tsunami Preparedness Week:*
 - TsunamiZone.org/california
 - Creation and Coordination of The Great California ShakeOut:
 - ShakeOut.org/california
- EarthquakeCountry.org
 - *Seven Steps to Earthquake Safety*
 - www.EarthquakeCountry.org/sevensteps
 - Hazard and Risk Information
 - www.EarthquakeCountry.org/risk
 - Downloadable resources
 - www.EarthquakeCountry.org/resources
 - Join the ECA:
 - www.EarthquakeCountry.org/alliance
 - En Español:
 - www.Terremotos.org
- ECA Sector-Based Outreach
 - Participation Bureau
 - Media Bureau
 - Events Bureau
 - K-12 Schools
 - Higher Education
 - Seniors and People with Disabilities
 - Businesses
 - Public Sector
 - Healthcare
 - Non-Profit & Faith-Based Organizations
 - Multi-Cultural
 - Museums, parks, libraries, etc.
 - Email info@earthquakecountry.org to learn more
- Great ShakeOut Earthquake Drills
 - Schools, organizations, and families practice earthquake safety and other aspects of their emergency plans
 - 2019: 68+ million people worldwide; 10.8 million in California
 - 2020 International ShakeOut Day: October 15
 - Learn more and register: ShakeOut.org
- Why Drop, Cover, and Hold On?

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- Strong consensus for many years, based on data for how people are injured, and experience of Urban Search and Rescue firefighters
- Prevents being thrown to the ground
- Reduces injury from falling or flying items, including structural elements and exterior façades (brick, glass, etc.)
- Increases chance of surviving collapse
- Earthquake Brace and Bolt – California Residential Mitigation Program
 - What is it? Incentive to retrofit
 - Types of work conducted in the brace and bolt project include bolting the house foundation and stiffening the lower associated walls for additional support of and strength to the entire structure.
 - A \$3,000 rebate makes seismic retrofitting more accessible to the public and creates additional incentive to get a seismic retrofit right now.
 - Ideally, reinforcement helps the house stay in place during an earthquake and prevents damage from shifting walls and/or sliding foundations.
 - Spending time and money ahead of a disaster may save hundreds of thousands of dollars or prevent a total loss.
 - How does it work?
 - New Zip Codes each year
 - Submit application during enrollment
 - Await acceptance
 - Standardized process
 - Actual work completed in about 1 week
 - Houses that meet Chapter A3 specifications are typically:
 - wood-framed construction built before 1979
 - built on a level or low slope
 - constructed with a 4-foot (or less) cripple wall under the first floor **OR**
 - constructed with a cripple wall between 4 feet and 7 feet (requires an engineered solution)
 - have a raised foundation
- HR 5494: The Catastrophe Loss Mitigation Incentive and Tax Parity Act
 - Under federal law, when a state entity issues a FEMA funded residential grant through the Stafford Act, that grant is not considered income for purposes of federal personal income tax.
 - When a state entity provides an identical grant that is NOT federally funded, the IRS takes the position that those monies are to be considered income for federal personal income tax purposes, and the recipient must report that as income on their federal tax return.
 - **HR 5494, the Catastrophe Loss Mitigation Incentive and Tax Parity Act, eliminates this federal tax penalty on state-funded residential mitigation grants – for earthquake, windstorm & wildfire.**
 - HR 5494 currently has 19 bi-partisan co-sponsors from 5 states: **Alabama, California, North Carolina, South Carolina and Wisconsin**. We have been advised adding more bi-partisan support from additional states will increase the chances of passage this year.
 - The bill has been endorsed by a large number of national organizations, the National Associations of Insurance Commissioners, and the US Chamber of Commerce.
 - **THE ASK**: *Please ask your Congressional delegation to contact*

Congressman Mike Thompson and become a co-sponsor of this legislation. Even if your state does not currently have a state funded natural catastrophe program, passage of HR 5494 would ensure that if your state chooses to stand up a program in the future – your citizens will not face the federal tax penalty that currently discourages those who need the assistance the most from even applying.

10:00 – 10:30: Break

II. State/Territory Updates

a. Georgia

- Record Breaking Year! Congratulations!
 - More than 24.1 million people participated in Shakeout right on October 17, this year's International Shakeout Day.
 - In 2019, Georgia had a 66% increase of participates from 2018!
 - You can be a part of millions around the world holding earthquake drills and exercises all throughout the year. Congratulations for making 2019 another record-breaking year!
- GEMA's ShakeOut Awareness Efforts
 - Planners at GEMA visited numerous Georgia county schools to educate and promote the great southeast shakeout: The following activities were performed
 - Shakeout educational presentations with school faculty and students
 - Brochure contest and awards presented to participates
 - Over 1000 shakeout items distributed to students & faculty
 - Shakeout drill performed on 10/17 at 10:17 am
 - <https://gema.georgia.gov/press-releases/2019-12-11/gemahs-recognizes-northwest-georgia-students-brochure-contest>
- Results from the Great Southeast ShakeOut
 - 104,728 Georgian's registered for the great southeast shakeout 2019. As compared to 63,680 that registered for the drill in 2018.
 - Over 450 students participated with GEMA's brochure contest

Maximilian asked how they got 450 students to participate in this exercise.

The Georgia earthquake program manager stated that they worked hard to get that level of participation. They were also able to promote this because earthquakes were in the curriculum, so this was used as an assignment. Everyone in the school was involved in this activity. This year, they planned to work with other counties.

Someone asked how they reached out to the schools initially.

The Georgia earthquake program manager stated that they asked for a list of schools and a middleman from GEMA helped them get in touch with each school. She added that they had a chair with the ShakeOut logo on it and offered to send more information if anyone wanted to order one. Backpacks were also ordered with items inside that could be used for earthquakes and other types of emergencies.

Someone asked how the items were funded.

The Georgia earthquake program manager replied that they applied for the NEHRP grant this past year.

b. Nevada

Janell Woodward stated that when Nevada had a seismic committee, they would meet with Utah's seismic committee every two years. Their former chief made a change that got rid of their seismic committee and absorbed everything into the mitigation committee. Janet noted that they still had a joint meeting with Utah every two years. This past year, Utah's committee came to Nevada and hosted an earthquake summit that was opened up to each jurisdiction and earthquake partners. Building on what Utah did with their Unreinforced Masonry (URM) summit, they submitted the same questions and asked what they could do with each of their states to move forward and deal with some of these situations. They also discussed how weather effected them when they conducted PDAs.

They recently had a weather person come up and discuss the effects of earthquakes. Janell added that they also discussed the Ridgecrest earthquakes and what they could learn from those events. Some of the casinos in Las Vegas had to evacuate because of what they felt from the earthquake. The NEHRP grant went to the Nevada Bureau of Mines and Geology which was doing a clearinghouse setup. Schools also participated in statewide ShakeOut drills.

Janell concluded by noting that they people were now installing window clings. They didn't need to use their grant to fund this because FEMA paid for it outside of the NEHRP money they received.

c. Colorado

Kyren Bogolub stated that as a seismologist, her background of knowledge was more data driven. She noted that she'd discuss the C0 network. Half of Colorado looks flat while the other half is full of mountains. This created two different types of earthquake hazards. Kyren displayed a map of activities she had created to show what they had accomplished over the last year. The blue triangles represented the existing seismic networks, and the white triangles showed where she wanted to place seismic networks.

Kyren wanted to install stations in collaboration with seismic states because it would help recruit more people who were interested in seismology to do outreach. She concluded by stating she hoped to work more on relationships with the educational institutions.

Someone stated that in Arizona they had a network but struggled to fund it.

Kyren replied that in Colorado they were funded by an oil and gas tax.

d. Maine

Amber Whittaker stated, who worked for the Maine Geological Survey, also came more from the data side. Their earthquake program was managed by Anne Fuchs and John York. The beginning of March was a busy time for Maine because they were entering flood season. Amber thought it was nice to come into this program from the data point to see what she can be doing for NEMA.

Amber displayed the location and magnitude of earthquakes in Maine over the past 50 years.

She noted that she had only experienced earthquakes in Maine. It was easy to forget about earthquakes and be unprepared. The magnitude 5 and 7 earthquakes that caused damage highlighted the importance of being prepared. She stated that these earthquake locations revealed hundreds of landslides that were completely unknown. Out of concern, her team partnered with NEMA to characterize the landslides. The red dots on the map in her presentation displayed where they thought a landslide was. When they went and looked at the landslides, Amber cored down through them to get a carbon date. She found that the landslides had clustered in time. In adjacent Quebec, they had similar landslides that were also clustered in time which they concluded were triggered by earthquakes.

- Materials Shear Wave Velocity
 - Past project:
 - Surficial geologic data coded to NEHRP site classes compared to site classes derived from slope analysis (Wald method) = Wald underestimates classes A (least hazard) and E (greatest hazard).
 - Future initiatives:
 - Field measurement of shear wave velocity
 - Observations at depth (outwash over clay = hazard underestimate)

Someone asked if the landslides were rapidly moving.

Amber replied that yes, they were rapidly moving. One earthquake in 1898 that destroyed a town and created a flood hazard area.

III. Lunch

IV. State/Territory Updates

a. North Carolina

Kevin Kalbaugh stated that this time last year, the earthquake program moved from the mitigation side of the house over to the planning side.

Kevin held up the North Carolina playing cards and some magnets and explained that they had increased ShakeOut participation by 75% last year. They hoped to see continuous improvement in their ShakeOut efforts. With the election, they might not be able to use billboards or other mediums, so were trying to spread the word through schools.

- Puerto Rico Deployment
 - 2 Teams (12-Person Team for 14 days, 15-Person Team for 9 days)
 - 7,923 structures assessed over 23 days
 - NCEM Team Lead, NC Office of State Fire Marshall Engineers & Building Inspectors, Private Sector Engineers/Architects, USAR Specialists

Someone felt a 75% increase couldn't have just come from playing cards and magnets.

Kevin replied that it also came from reaching out to school districts. They piggybacked earthquakes with hurricanes. It was also put in their weather updates.

Hilda Booth asked if the people who went to Puerto Rico spoke Spanish.

Kevin replied that they had a close relationship with Puerto Rico. He stated there were two translators on each team that went out with the building inspectors, and someone from Puerto Rico also went with them.

b. South Carolina

Rachel McCaster from the South Carolina Emergency Management Division shared that this was her first NEPM.

- Earthquake Awareness/Education Video
 - What the 1886 Charleston earthquake would look like today
- Enhanced SCEMD In-House Training Program
 - Rehearsal of Concept Drill with EMD Staff
 - Identified problems in assessing damage to SEOC/AEOC; Code Red implementation
- Inventory of Lifeline Sector Infrastructure
 - Identified infrastructure is mapped and loaded into Palmetto (SCEMD Common Operating Picture)

Maximilian asked how they got the information for lifelines.

Rachel replied that they had been reaching out to the state agency for information.

Maximilian asked if they did work on private sector infrastructure lifelines.

Rachel replied that they hadn't dived into that.

c. US Virgin Islands

Regina Brown stated that in addition to falling under planning and preparedness, earthquakes also fell under hazard mitigation preparedness. They were developing an earthquake plan that should be available this year and a hazard mitigation plan that would be "the plan of all plans." Regina stated they were awarding 4.1 million from FEMA for this plan, and it was due September 1, 2021. They were also trying to rebuild their tsunami sirens.

Someone asked if she could discuss the hazard mitigation resilience plan.

Regina replied that under hazard mitigation money that came from disaster recovery money, they were going to update their hazard mitigation plan. They're being very thorough and it's going to look at mitigation in a new way. Regina stated that governor is very on board with this. Jack Heidi helped them come up with the scope of work and told them that they have a chance to do this right now that they have all these new experiences.

Amanda Siok stated that on Wednesday afternoon she'd be giving a presentation on this.

d. Texas

The Earthquake Program Manager brought up the website <https://www.beg.utexas.edu/texnet-cisr/texnet>. He stated that the Texas emergency managers used to be under the office of Public Safety, but they were now part of their own state agency. They wanted to be more academic and focus more on risk. They took the NERHP grant this year to begin working with the Texas Department of Education to work on fragility curves. They wanted to be able to pinpoint events and survey if there was any long- or short-term damage. TexNet was also creating a catalog to grab all this activity in Texas.

Someone asked if they had an induced seismicity issue at all.

The Earthquake Program Manager could not comment on that.

V. Consortia/Partner Presentations

a. Cascadia Region Earthquake Workgroup (CREW)

Pascal stated he was the Executive Director of CREW and began his presentation.

- Background
 - CREW arose out of several regional earthquake hazard meetings sponsored by FEMA and USGS between 1992 and 1996.
 - One of the four NEHRP Consortia
- CREW's objectives:
 - Linking business, academics and governments for earthquake mitigation
 - Providing realistic scenarios to help the region and others for more effective planning
 - Promoting, educating and motivating decision makers, emergency managers and the general public to reduce risks associated with earthquakes
 - Serving Northern California, Oregon, Washington and British Columbia, Canada
- Early Earthquake Warning (EEW)
 - Continuing our multiyear EEW outreach, education and training strategy
 - Lifelines EEW Symposiums
 - Energy (Electrical) – 70 participants
 - Water – June 2020
 - Healthcare - 2021
 - Protective Actions Paper release
 - State of the art knowledge of protective actions appropriate for Earthquake Early Warning
 - Continuing our multiyear EEW outreach, education and training strategy
 - MyShakeAlert.org
 - ShakeOut
 - Social media support
 - ShakeOut Video Contest
 - More Earthquake & Tsunami Comic Books
 - WA EMD Disaster Playing Cards

- ShakeOut Video Contest
 - Middle and High school students making creative ShakeOut videos – Maximilian will detail more.
 - Funded through CREW's NEHRP funding
- Partnerships
 - Building the public, private, academic, technical, health alliance, nonprofit, other sectors and communities to increase the resilience, readiness, and safety in the Pacific Northwest or wherever our partners or the need arises.

b. Central United States Earthquake Consortium (CUSEC)

Brian Blake presented on CUSEC initiatives.

- State Geologists MRPs
 - Geology Field Reconnaissance Team
 - Geologic Survey Support Specialist
 - Geologic Field Reconnaissance Specialist
- Building Safety Assessment
 - NIMS Typing Workgroup
 - Missouri SAVE Deployment
 - Puerto Rico EMAC Request
 - Arkansas
 - Indiana
 - Missouri
 - Tennessee
- Rapid Visual Screening
 - Streamlines FEMA P-154 3rd Edition RVS Process
 - Inputs update GIS dashboard in real-time.
 - Immediate download of GIS/HAZUS Data
 - Pilot Projects in ME, MO, and others
- Regional Information Sharing Platform (RISP)
 - Shaken Fury 2019
 - Idaho Technology Workshop & Partnership
 - Wasatch / Cascadia Planning

c. Western States Seismic Policy Council (WSSPC)

Matt Wall displayed the WSSPC website (<https://www.wsspc.org/>) and read the missions, goals, and public policy pages. Matt stated that one of their policies was on the clearinghouse.

Matt gave his email, mwall@wsspc.org, to everyone and asked them to reach out if they wanted to talk further. Matt stated they're looking at what they can do to coordinate policies. They didn't see the other work involved with development. WSSPC provided the technical aspect to help develop the policies that went forward, which would draw a straight line to identify the risks and the hazards.

d. ATC

Justin Moresco from ATC introduced himself and gave an update on NETAP, a FEMA program that ATC implemented. Its purpose was to provide trainings on earthquake risk reduction which were purposely intended for a broad audience. They began training by updating the NETAP Resource Guide each year to summarize the training. The most recent Resource Guide went out in November 2019.

In addition to the resource tab, participants could input contact information and note which trainings they were interested in. Justin stated that they worked with their contacts at FEMA HQ to approve a set number of trainings. A list was sent out in early January, and their target was to provide a full day of trainings for each state or territory, however, many states and territories that were eligible didn't request trainings. In the past, NETAP provided other types of technical assistance trainings, but the Resource Guide was recently updated a few weeks ago to clarify that NETAP was exclusively focused on trainings.

Justin noted that they were a nonprofit based in the San Francisco Bay area. They were founded in 1973, and their mission was to develop advanced resources.

Justin stated that all expenses were paid for by FEMA, and it was the responsibility of the local organizing group to provide a menu and have at least 25 people show up.

e. Earthquake Engineering Research Institute (EERI)

- Established in 1948, EERI is the leading non-profit membership organization that connects multidisciplinary professionals dedicated to reducing earthquake risk.
- EERI Mission
 - EERI will **reduce earthquake risk** by:
 - Advancing the science and practice of earthquake engineering,
 - Improving understanding of the impact of earthquakes on the physical, social, economic, political, and cultural environment, and
 - Advocating comprehensive and realistic measures for reducing the harmful effects of earthquakes.
- Why EERI
 - **CONNECT:** EERI brings people and disciplines together to make an impact.
 - **LEARN:** EERI offers opportunities for you to learn and share the latest research, strategies, and best practices.
 - **LEAD:** EERI provides emerging and established leaders with the tools and opportunities to make a case for earthquake resilience, wherever you are.
- Programs to reduce earthquake risk
 - Learning from earthquakes
 - School Earthquake Safety Initiative
 - World Housing Encyclopedia
 - Confined Masonry Network
 - Concrete Coalition
 - *Earthquake Spectra* Journal
 - Public policy & advocacy

- Oral history
- Learning from Earthquake Risk
 - **EERI's Flagship Earthquake Reconnaissance Program**
 - Multi-disciplinary teams of researchers for nearly 50 years
 - Investigates damaging earthquakes to learn lessons that inform earthquake engineering and risk management
- LFE Products
 - **Clearinghouses**: virtual websites, physical locations, & coordination calls
 - Data map & photo galleries with geo-located reconnaissance photos
 - Briefing **webinars**
 - Reconnaissance reports & special issues in EERI's journal *Earthquake Spectra*
- EERI Regional Chapters
 - Alaska
 - British Columbia
 - Great Lakes
 - National Capital
 - New England
 - New Madrid
 - New York - Northeast
 - Northern California
 - Oregon
 - Sacramento, California
 - San Diego California
 - Southern California
 - Utah
 - Washington
- EERI Provides Unique Opportunities for Students and Young Professionals
 - EERI Competitions: **Seismic Design**, Student Paper, **Fellowships**
 - **Travel Grants** to EERI meetings
 - Leadership: Student Leadership Council, Internships, Shah Prize
 - Friedman Family **Visiting Professionals** Program
 - Online access to *Earthquake Spectra*, and more!
- EERI's Capabilities for Supporting State Earthquake Programs
 - Seismic Mitigation Planning
 - Clearinghouse Plan development (Idaho, CA)
 - Earthquake Scenarios (Seattle, San Francisco, Hayward Fault, Utah Wasatch Front, San Diego)
 - Mapping (FEMA GeoPlatform, CA, Montana)
 - School Assessments (EERI School Earthquake Safety Initiative, Alaska, Washington)
 - Workshops/Trainings (Oregon URM Training, Concrete Coalition, CA Earthquake Clearinghouse)
 - Tools & Websites (Nevada URM field data collection, California Earthquake Clearinghouse)
 - Property Inventory and Seismic Inspection of Critical Structures and Lifelines

- American Samoa – FEMA P-58 & USRC Ratings
- New York – FEMA P-58 & USRC Ratings
- Alaska Schools – ATC 154
- Idaho – ATC 154
- Washington State Schools – ASCE 31, Shear Wave Measurements and HAZUS
- Wyoming – HAZUS
- Nevada – URM Database Verification
- Earthquake Awareness and Education
 - Oregon – Training Workshop for local officials
 - CA Mobile Home Flyer
 - CA Earthquake Early Warning
 - CalVIVA – Phase 3
 - Scenario Projects – Utah, San Diego, Montana
 - School Seismic Safety – Washington, Alaska
 - Hazard Mapping - Vermont

VI. 2:00-2:30: Break

VII. Grants Training

a. Jon Foster

Jon Foster from the NEHRP team at FEMA HQ stated that members from the Grant Directorate Department would be conducting a grants training session. This session would be recorded so it could be taken back and shown to the states.

Jon requested that the states sit with their Regional Earthquake Program Managers. He noted that NEHRP was a multi-agency program with two bodies that assisted with program governance: the Advisory Committee on Earthquake Hazards Reduction (ACEHR) assessed the trends, developments, and science, and the interagency Planning Commission Working Group (PCWG) was involved in program coordination. The PCWG had been involved in is updating the NEHRP strategic plan.

Jon displayed a timeline of the NEHRP program and introduced Robert Tale and Deborah Scott who began conducting the grants training.

- Natural Hazards Reduction Program (NEHRP)
 - Established by the Earthquake Hazards Reduction Act of 1977 (P.L. 95-124)
 - Federal Government's long-term program to lead its efforts "to reduce the risks of life and property from future earthquakes in the US..."
 - NEHRP is a multi-agency program with four principal agencies
 - Program also coordinates with other associated agencies like NASA and NOAA, who also perform earthquake-related work.
 - Office of Science and Technology Policy (OSTP) and Office of Management and Budget (OMB) also serve on Interagency Coordinating Committee (ICC)
- National Program Goals
 - Improve understanding of earthquake processes and impacts.
 - Develop cost-effective measures to reduce earthquake impacts on individuals,

- the built environment, and society-at-large.
- Improve the earthquake resilience of communities nationwide.
- FEMA Grant Process
 - Program Development and Eligibility
 - Appropriation is enacted
 - Notice of Funding Opportunity/ Program Guidance
 - Development
 - Risk Allocation Determination
 - Grant Solicitation Posted
 - Application Submission and Review
 - Grant Rollout
 - Application Submission
 - Application Review
 - Award Determinations and Obligations
 - Final Award Determinations
 - Develop Award Package
 - Congressional Notification
 - Recipient Notification of Award
 - Federal Funding Obligated in the FEMA Financial System
 - Program Implementation and Management
 - Funding Available to Recipient through Payment Requests
 - Recipient Implements Approved Projects
 - Programmatic and Financial Reporting
 - Grant Amendments Requested/ Approved
 - Strategic and Financial Monitoring
 - Evaluation and Closeout
 - Evaluation and Feedback
 - Final Progress and Financial Status Reports
 - Grant Closeout
 - Grant Management Journey
 - Award Terms and Regulations
 - System Access & Grant Acceptance
 - Grant Management Responsibilities
 - Monitoring and Audits
 - Closeout
 - Tools and Helpful Links
- Award Terms and Regulations
 - **2 CFR Part 200**
 - Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. (https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl)
 - **Notice of Funding Opportunity (NOFO)**
 - Program-specific guidance and requirements associated with your grant program and grant
 - **Award Package**
 - Provides the terms and conditions specific to your federal award
 - **Information Bulletins**
 - Administrative instructions and guidelines critical to supporting the

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

effectiveness and efficient delivery of FEMA Grant Programs. (<https://www.fema.gov/grant-programs-directorate-information-bulletins>)

- If you would like to be added to the distribution list, email AskCSID@fema.gov
- Know Your Points of Contact
 - HQ Program Analyst
 - Conducts all programmatic pre-award, award and post-award activity.
 - Reviews programmatic reports and project activity
 - HQ Grants Management Specialist
 - Conducts all financial pre-award, award and post-award grant administration functions not delegated to the Regions
 - Regional Program Analyst and Grants Management Specialist
 - Conducts all financial pre-award, award, and post-award grant administration functions for programs managed in the Regions.
 - Conducts quarterly cash analysis and monitoring activity for most FEMA grant programs.
- System Access
 - NDGrants Systems
 - Ensure Points of Contact are Accurate
 - Authorized Official Receives All Notifications
 - Reference Tool for NDGrants (<https://www.fema.gov/non-disaster-grants-management-system>)
 - Payment and Reporting System (PARS)
 - Must Register Twice (Payment Request & Reporting)
 - PARS Registration Page (<https://isource.fema.gov/sf269/execute/OnlineUserRegistration>)
 - SAM.gov
 - Ensure banking and organization information is up to date
- Grant Acceptance
 - Read Notice of Funding Opportunity (NOFO)
 - Read Award Package
 - Award Letter
 - Award Amount & Cost-Share
 - Agreement Articles
 - Period of Performance
 - Approved Projects & Detailed Budget
 - Obligation Document
 - Accept grant in ND Grants
 - Acceptance Due Date: Refer to NOFO
 - PARS Award Acceptance completed by GMS
- Detailed Budget Approval
 - Check Award's Agreement Articles for Budgetary and/or Programmatic Hold(s)
 - As necessary, work with HQ or Regional GMS to develop an approved Detailed Budget
 - Allowable, Allocable, Reasonable & Necessary

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Cost Categories: Indirect Costs
 - Negotiated Indirect Cost Rate Agreement: Ratio or percentage of total indirect costs to direct cost base
 - NOFOs must include the Federal agency's policies, procedures, and criteria related to indirect cost reimbursement, matching, or cost share
 - Contact for negotiating Indirect Cost Rate Agreements: Financial Assurance Audit Liaison Division, 540-504-1811
- Grant Management Tips
 - Maintain adequate written procedures and policies
 - Manage and monitor project activity and progress
 - Maintain adequate financial system:
 - Clear financial paper trail
 - Associate grant expenditures to a specific funding source
 - Maintain Source Documentation
- Financial Reporting: Accurate Data
 - Federal standards
 - Recipient: Required to expend and account for grant funds
 - State laws/procedures
 - Internal accounting system
 - Federal Financial Report (FFR) SF 425 used for all recipients
 - Reporting requirements found in grant terms and conditions and/or the NOFO/program guidance
 - Specific instructions for each line item of the report can be found at the following website:
 - [OMB Standard Forms \(http://www.whitehouse.gov/omb/assets/omb/grants/standard_forms/ffr_instructions.pdf\)](http://www.whitehouse.gov/omb/assets/omb/grants/standard_forms/ffr_instructions.pdf)
- Quarterly Federal Financial Reporting (FFR)
 - System: PARS
 - Requirement: Provide cumulative financial status update on each grant, on a quarterly basis.
 - Reporting Period: Refer to NOFO
 - Due: 30 Days After Reporting Period End Date
 - Specific instructions for each line item of the report can be found at the following website:
 - https://www.fema.gov/media-library-data/20130726-1847-25045-2862/sf_425_instructions.pdf
 - Additional Financial requirements
 - Payment Request
 - Utilize PARS systems to request grant funds
 - Ensure proper accounting of drawdown activity
- Amendments = Change
 - **Types of Amendments**
 - Scope of Work Change
 - Budget Changes
 - Period of Performance Extension
 - Formal request with compelling justification required

- Authorized Official/ POC Changes
- An amendment is a formal written change to the award that typically requires prior written approval from FEMA in accordance with 2 CFR, the NOFO/program guidance, applicable program regulations, and terms and conditions of the award
- Amendments are covered in 2 CFR 200.308
- Amendments also referred to as:
 - Modifications
 - Revisions
 - Extensions
- Amendments:
 - Require approval from funding agency
 - Require strong justification for approval
 - Must meet original program intent
 - Must comply with grant terms and conditions
 - Costs must be allowable, allocable, reasonable, and necessary, in accordance with 2 CFR Subpart E (Cost Principles) and the applicable fiscal year funding opportunity and program guidance
- Examples of Program Amendments
 - Period of performance extension
 - Extensions require explicit prior approval when
 - The extension requires additional Federal funds
 - The extension involves a change in approved scope
 - Change in scope or objectives of project
 - Change of Authorized Official or key person
 - Disengagement for more than three months, or 25% reduction in time, of approved project director or lead
- Standard Procedures for Amendments
 - Amendment requests must be in the form of a letter submitted on official letterhead
 - Request must be signed by the recipient's authorizing official
 - Budget change requests require submission using the same format as the original application and must include a budget narrative
 - Agencies must review requests and notify recipient of approval/non-approval within 30 calendar days. If the revision is still under consideration at the end of 30 calendar days, the Federal awarding agency must inform the recipient in writing of the date when the recipient may expect the decision.
 - Approved requests result in a modification to the award documentation
- Types of Monitoring
 - Desk Reviews:
 - Financial or Programmatic
 - Office-based verification of compliance
 - Requires documentation submission to federal reviewer
 - Site Visits:
 - Financial or Programmatic
 - On-site direct contact with stakeholders
 - Visual review of operations, inventory, procedures and performance sites
- What is Financial Monitoring

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Conducted to assure compliance with applicable Federal grant requirements
- Documents are used to validate expenditures
- Written policies, procedures, and financial reports are reviewed

- Monitoring: Examples of Required Documentation
 - Application
 - Award Package
 - Amendments
 - Performance and Financial Reports
 - Expenditure Source Documentation
 - Subrecipient Grant Files
 - Policies and Procedures
 - Indirect Cost Rate Agreements
 - Audit Reports (\$750,000 or more)

- Source Documentation Requirements
 - Accounting records must be supported by:
 - Cancelled checks / External source (e.g. financial institution)
 - Time and attendance records
 - Payroll registers
 - Subaward documents
 - Receipts
 - Invoices and purchase orders
 - Executed contracts (including history of procurement activity)
 - Travel authorization forms/travel vouchers
 - Federally approved indirect cost rate agreement
 - Fringe benefit rate
 - Inventory Records

- Audit Types
 - Performance Audits Conducted by the U.S. Government Accountability Office (GAO)
 - Performance Audits Conducted by Department of Homeland Security's Office of Inspector General (DHS/OIG)
 - Audits under the Single Audit Act
 - Requirement: For Non-Federal entities that expend \$750,000 or more of Federal funds in their fiscal year.

- Common Audit Finding
 - Inadequate written policies and procedures
 - Lack of subrecipient monitoring or monitoring plan
 - Procurement Issues
 - Inadequate accounting procedures
 - Period of Performance expiration
 - Failure to manage audit results
 - Inventory management deficiencies

- Preparing for Closeout
 - Per 2CFR §200.343, no later than 90 days after POP end date, the recipient must:

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- submit all financial, performance, and other reports required under the grant
- must liquidate all obligations incurred under the Federal grant
- As your grant approaches the period of performance (POP) end date:
 - Be sure to reconcile all internal accounting, to include a potential final drawdown
 - Ensure that all applicable contractors and sub-recipients have been paid
 - If applicable, ensure that agreed upon cost shares have been satisfied
 - Review inventory tracker to ensure that applicable inventory is purchased and properly tracked
 - Review grant file to ensure that it is complete and prepared for retention
- Final Closeout Package
 - Final Performance/Progress Report
 - Final Federal Financial Report (SF-425)
 - Other Programmatic Reports based on Terms and Conditions
- Final Performance Progress Report
 - Ensure at closeout that the report is labeled as final
 - In the narrative describe benefits to the program and improved capabilities. Tell your story
 - By project, as shown in the example
 - Attach additional pages, as necessary
 - Make sure all additional documentation required by the NOFO is attached
- Final Federal Financial Report SF-425
 - Due within 90 days after the period of performance end date or any approved extension date
 - Ensure that your report is marked “FINAL”
 - Ensure that there is no Cash on Hand in box 10c
 - No unliquidated obligations
 - No remaining Recipient share (match) to be provided
 - Indicate exact balance of unobligated funds
 - Final federal amount charged for indirect costs
 - Indicate total program income earned and expended
 - Signature of authorized official for Recipient
 - Remit check to FEMA for excess funds
- Retention of Records
 - Retention of records 2 CFR 200.333-337
 - General rule: Three (3) years from the date of submission of final expenditure report as reported to FEMA (or pass-through entity, for subrecipients)
 - Exceptions to the general rule include but not limited to: records for real property and equipment must be retained three (3) years after final disposition; records must be retained until resolution of any action such as litigation claim, negotiation, or audit; when the non-Federal entity is notified in writing to extend the period; additional requirements for program income and indirect costs
 - Non-Federal recipients must also follow their own records retention policies
 - Obligation to protect records

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Authorized access to records
- Technical Assistance Resources
 - Have a Need for Technical Assistance?
 - GPD Technical Assistance Webpage
<https://www.fema.gov/technical-assistance>
 - Email Distribution List: Information Bulletins (IBs) or Federal POC
 - Contact AskCSID at 1-800-368-6498 or askcsid@fema.gov
- Upcoming ND Grants Recipient Training
 - March 4, 2020 1pm- 3pm Webinar -
<https://fema.connectsolutions.com/e9on03kmrsr2/event/registration.html>
 - March 11, 2020 1pm- 3pm Webinar -
<https://fema.connectsolutions.com/ee968vbormuu/event/registration.html>
 - March 25, 2020 1pm- 3pm Webinar -
<https://fema.connectsolutions.com/esgk657fdvkr/event/registration.html>
 - April 1, 2020 1pm- 3pm Webinar -
<https://fema.connectsolutions.com/e579dltut88/event/registration.html>
 - April 8, 2020 1pm- 3pm Webinar -
<https://fema.connectsolutions.com/elyzshue2yrg/event/registration.html>
 - May 13, 2020 1pm- 3pm Webinar -
<https://fema.connectsolutions.com/effw0sx5yf7b/event/registration.html>
- What is Programmatic Monitoring?
 - Conducted to ensure recipient accomplishments align with the objectives of the Federal award.
 - Analyzing and resolving issues to ensure compliance with applicable terms and regulations, before they become audit findings.
 - Address concerns or issues that may have impeded progress towards the established goals.
 - Allows for explanation with problems, delays, adverse conditions, or favorable developments meeting time schedules and objectives
- FEMA NEHRP Grant Monitoring Plan
 - Baseline Monitoring
 - Oversight throughout the award lifecycle
 - Approved Workplan, the Deliverable Schedule, and Budget, will be monitored throughout the award lifecycle
 - Identify recipients and awards that are currently noncompliant
 - Implement Enhanced Monitoring when required
 - Enhanced Monitoring
 - Not a disciplinary action, or a precursor to a corrective action
 - Opportunity to identify courses of action to address shortcomings associated with the grant
 - Will help the program office and the award recipient ensure that the goals of the program and the intent of the grant are both met.
 - Consists of *Desk Reviews* and *Site Visits*
- Grant Lifecycle
 - Pre-Award
 - Creation of NOFO

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Annual CCA Call
- Application Assistance
- Application Review
- Recommendation
- GM Assistance
- Award
 - Grants Mgt. Assistance
 - Eligibility Determination
 - Award
- Post-Award
 - Post Award Meeting
 - Noncompliance Brief
 - Qtr. PPR Reviews
 - 3rd Qtr. Review
 - Baseline Monitoring
 - Enhanced Monitoring
 - Recipient Assistance
- Closeout
 - Final Progress Report
 - Compliance Determination
 - Finalize Monitoring Report
 - Grants Mgt. Assistance
 - Closeout
- Other FEMA Grant Programs
 - Building Resilient Infrastructure and Communities (BRIC)
 - Emergency Management Performance Grant (EMPG) Program
 - Hazard Mitigation Assistance (HMA)
 - Hazard Mitigation Grant Program (HMGP)
 - Pre-Disaster Mitigation (PDM)
- Questions
 - FEMA Centralized Scheduling and Information Desk (CSID)
 - Phone: 1-800-368-6498
 - Email: AskCSID@fema.gov
 - NDGrants
 - Email: NDGrants@fema.dhs.gov
 - Grants Management Service Desk
 - Phone: 1-866-927-5646
 - Email: ASK-GMD@dhs.gov
 - Your Regional Earthquake Program Manager

Someone asked if NEHRP was moving to FEMA GO, the new grant system that was slowly being rolled out.

Robert answered yes; they will eventually be using FEMA GO.

He then noted that every team must register through SAM.gov and they should make sure their SAM.gov account was up to date.

Maximilian asked if there was a mobile mode for ND Grants.

Deborah didn't believe there was, but she offered to find out more and reach out to him.

Jon encouraged everyone to call into the grants training webinars. He added that at FEMA HQ, they called into these webinars and trainings. Last September, they had a training on ND Grants for the EQ Workgroup.

Jon stated that every quarter when they receive the performance progress report, they'll conduct the assessment of the award. Enhanced monitoring is triggered if it didn't look like the award would be successfully completed. There were different ways to get these scores on the risk assessment score sheet.

Jon then explained that the NEHRP program did many great activities. They were at the 95% stage of releasing an interactive mitigation dashboard that would allow users to select a state and fiscal year. The dashboard was only for NEHRP mitigation activities. Jon noted that they would also release the data in the spreadsheet that goes with this training.

Amanda stated that she would be hosting a study called Demystifying Federal Funding on the first day of NEC. She encouraged everyone to attend if they were interested in finding out ways to receive more federal funding.

Someone noticed a slide that said "pre-award". She wondered if that meant pre-award cost would be counted as part of the eligible budget.

Jon replied that there's no pre-award cost.

Someone asked if there were any manageable costs associated with this grant.

Deborah did not think there was.

Someone asked how far in advance they needed to give notice for an extension.

Debora answered that as soon as someone knew they needed an extension, they should submit it. The grants team would then have 30 days to get back to them.

Brian stated that a few of his states couldn't be there. He asked if anyone knew of any changes to the FY20 direct state assistance program.

Jon said that would be discussed after this session. He noted that they would have two separate calls around May.

VIII. NEHRP Updates

Bill Blanton introduced himself as the Branch Chief for the BSB. He noted that many great things had been done regarding earthquake awareness that could not have happened without everyone's help.

- Our FEMA Team
 - FEMA Headquarters Staff
 - Management of technical guidance, improvement of National codes & standards, and research-based training
 - Develop Agency Guidance and standards

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Communications and Outreach
- Management of the FEMA NEHRP, State Assistance Grant Program
- Building National partnerships
- FEMA Regional Staff – Primary State Contact
 - Fulfillment of FEMA's NEHRP responsibilities
 - Regional implementation of NEHRP Strategic Plan
 - Management of Earthquake Direct State Assistance (EDSA) Grants
 - Building Regional partnerships
- FEMA NEHRP Headquarters Staff
 - Edward Laatsch – Division Director (Agency Rep for NEHRP)
 - Bill Blanton – Building Science Branch Chief
 - Mike Mahoney – Senior Staff Member/EQ Codes/Special Projects (PBSD)
 - Andrew Herseth – EQ Existing Buildings Guidance
 - Mai 'Mike' Tong – EQ New Buildings Guidance
 - David Javier – Program Manager, State Assistance
 - Jon Foster – Program Manager, State Assistance
 - Tammy Roy – Management Analyst
- This Week at NEC
 - Wednesday, March 4th
 - 12:30 PM – 1:30 PM – What is an Earthquake Program and How Do We Work Together Better to Reduce Seismic Risk? (Grande Ballroom) – Amanda Siok (Region 10 EQPM)
 - 2:00 PM – 3:30 PM – Seismic Sorcery: Obtaining Funds to Perform Mitigation Magic (Nautilus 3) – Amanda Siok (Region 10 EQPM)
 - 4:00 PM– 5:30 PM – FEMA Guidance on Post-Disaster Building Safety Evaluations (Nautilus 5) – Drew Herseth (HQ)
 - 4:00 PM – 5:30 PM- Preliminary Reconnaissance Findings from the 2020 Puerto Rico Earthquake Sequence (Nautilus 3)—Mike Mahoney (HQ)
 - Thursday, March 5th
 - 2:00 PM – 3:30 PM – Beyond California: Disaster Resilience Planning from Across the Nation (Nautilus 4) – Sean McGowan (Region 8 EQPM)
 - 4:00 PM– 5:30 PM – Development of NIST-FEMA Recommendations for Achieving Functional Recovery (Nautilus 2) – Mike Mahoney (HQ)
 - 4:00 PM– 5:30 PM – Development and Key Changes of the 2020 NEHRP Recommended Seismic Provisions for Buildings and Other Structures (Nautilus 1) -- Mike Tong (HQ)
 - Friday, March 6th
 - 12:15 PM – 12:30 PM – Closing Thoughts – David Maurstad (FIMA Deputy Associate Administrator) to provide closing thoughts with Leslie Chapman-Henderson (President and CEO, Federal Alliance for Safe Homes (FLASH)) and Laurie Johnson (Consulting and EERI President) at the Grande Ballroom.
- New Products
 - FEMA P-58, Performance Based Seismic Design Guidelines (a seven-volume set and all are either new or updated)
 - FEMA P-2006, Example Application Guide for ASCE/SEI 41-13
 - FEMA P-2012, Assessing Seismic Performance of Buildings with
 - FEMA P-2018, Seismic Evaluation of Older Concrete Buildings for Collapse Potential

- FEMA P-1100 (Vulnerability-Base Seismic Assessment and Retrofit of One- and Two- Family Dwellings)
- FEMA P-530 (Earthquake Safety at Home)
- FEMA P-2055 (Post-disaster Building Safety Evaluation Guidance)

Bill stated that he wanted everyone to visit them at NEC. They would be at booth 23. He added that everyone should pick up the QR code postcards which had all the same information as the flash drives.

a. FEMA P-530, Earthquake Safety at Home

Drew Herseth stated that last year, they were working on FEMA P-530. Today they published it, and it was available on the FEMA Library. This publication was an update, but the new edition tried to focus more on the audience. It used to be earthquake safety for homeowners, but a lot of the information didn't apply to homeowners alone. This publication was broken down into sections that they hoped could be compartmentalized.

Alesia Za Gara noted that it was now on the FTP site.

- Earthquake Safety at Home
 - The original FEMA P-530 was released fifteen years ago and only available in print.
 - 2020 edition designed with the audience in mind.
 - Chapters were intentionally compartmentalized so they could be extracted and used outside the context the larger document provides.
 - Earthquakes Across America
 - Prepare
 - Protect
 - Survive
 - Respond
 - Recover
 - Repair
 - Supplement: Earthquakes Across America
 - Get your copy today!
 - <https://www.fema.gov/media-library/assets/documents/186094>
- Earthquakes Across America
 - Written by Lucy Jones
 - A primer on earthquakes that shows readers why everyone should care about earthquakes, wherever they live. Half of all Americans are at risk from earthquake shaking and can suffer if a regional economy is severely damaged.
 - Readers learn that what they experience during an earthquake is not determined by the magnitude, but by how strong shaking is where you are and how that shaking impacts the built environment.
 - The chapter also covers how earthquakes are detected, and how readers can help when you feel earthquakes.
- Prepare / Protect
 - **Prepare** provides guidance for actions that readers and their families can take to reduce damage and personal injury from earthquakes through preparation and planning.

- **Protect** informs readers how to quickly determine vulnerabilities of their home to earthquakes and identify measures that can be taken to address them before the next earthquake.
- **Survive / Response**
 - **Survive** provides best practice recommendations on how readers can protect themselves and their families during and immediately after an earthquake event.
 - **Respond** addresses earthquake safety at home in the first days after a damaging earthquake. Included is a Home Safety Checklist and a Checklist Summary that should be used in the recovery phases following an earthquake.
- **Recover & Repair**
 - **Recover & Repair** addresses earthquake safety at home in the weeks and months following a damaging earthquake. Restarting utilities and repair of damage are discussed.
- **a. FEMA P-2055, FEMA Guidance on Post-Disaster Building Safety Evaluations**

Drew presented on FEMA P-2055, *FEMA Guidance on Post-Disaster Building Safety Evaluations*.

- Disaster Recovery Reform Act (DRRA) of 2018 (Signed 10/15/18)
 - DRRA Sec. 1241: Post-disaster Building Safety Assessment
 - Requires FEMA to publish guidance on conducting post-disaster building safety assessments by licensed architects and engineers, specifically related to structural integrity and livability
 - Requires FEMA to ensure the functions of post-disaster building safety assessment are accurately resource typed within the National Incident Management System (NIMS)
- FEMA P-2055 Project Stats and Acknowledgements
 - Stakeholder organizations engaged
 - (SLTTs, HUD, AIA, ICC, NCSEA, ASHRAE)
 - 7 SME authors on the project development team
 - 8-member project review panel
 - 30 participant stakeholder workshop
 - 16 FEMA staff reviewed
 - 1,000+ review comments (for all drafts)
 - 225 pages
 - 4,000+ downloads since publication on November 27, 2019
 - 200+ downloads in Puerto Rico after recent earthquakes
- Building Code Administration and Enforcement Requirements for Building Safety Evaluations
 - Section 2.5 in FEMA P-2055 describes the authorities granted to code officials related to building safety evaluations and the resulting action that may be needed
 - **Building code officials have the authority to:**
 - Inspect for unsafe conditions
 - Prevent access to a structure or facility that they deem as damaged and unsafe

- Close sidewalks and streets adjacent to unsafe buildings:
- Deputize or delegate certain powers of their authority, including those listed above
- See P-2055 for the specific sections of the IBC, IRC and IEBC
- See P-2055 for the specific sections of the IBC, IRC and IEBC
- DRRA Sec. 1206: Eligibility for Code Implementation and Enforcement
 - Amended Stafford Act Sec. 402 & 406
 - Authorizes FEMA to provide post-disaster assistance to state and local governments for building code and floodplain management ordinance administration and enforcement.
 - Adds post-disaster surge staffing assistance for code officials
- FEMA Public Assistance Program
 - Safety Inspections are eligible for PA funding as an Emergency Protective Measures
 - The 2018 *Public Assistance Program and Policy Guide* (PAPPG) states that:
 - *“Post-incident safety inspections for public and private facilities are eligible, as well as posting appropriate placards (e.g., “red-tagging” a building that is unsafe)”*
- FEMA P-2055 Types of Incidents (Disasters)
 - **Earthquake**
 - Hurricane
 - Tornado
 - Flood
 - Tsunami
 - Land Instability
 - Volcano
 - Snow/hail/ice
 - Fire
 - Explosion
- FEMA P-2055 Target Audience
 - **Primary:** Architects, engineers, and building officials.
 - **Secondary:** Emergency managers and health officials.
 - **Tertiary:** Policy makers at local, state, tribal, territorial, and federal level.
 - The target audience has been expanded beyond the architects and engineers explicitly listed in the Section 1241(a) charging language to include others who are directly involved in the post-disaster assessment process and to include policy makers since recommendations include legislative changes.
- Pre-Disaster
 - Pre-planning
 - Resource Typing
 - Certification and Training
 - Mutual Aid Resources and Agreements
 - Volunteers, Liability, Good Samaritan Laws, Workers’ Compensation
 - Laws and Policies
- Post-Disaster
 - Implementation of Plans

- Safety of Evaluators and Tools
- Evaluation Prioritization
- Deployment Resources
- Data Collection and Reporting
- Quality Assurance
- Reevaluation Triggers
- Changing a Placard
- Cordoning and Barricading
- Communication

b. Puerto Rico Earthquake Sequence

Jose Lebron stated that he was part of a team that was deployed in Puerto Rico ten days after the earthquake. The sequence of earthquakes started on December 28, 2019. The biggest earthquake was a magnitude 6.4 on January 7, 2020.

- Presidential Disaster Declaration
 - Individual Assistance (IA)
 - 25 municipalities approved for IA
 - Over 32,000 applicants
 - \$21 million approved
 - FEMA's Transitional Sheltering Assistance is available and allows eligible survivors to shelter in a participating hotel, for a limited period of time, as a bridge to intermediate and long-term housing.
 - Public Assistance (PA)
 - 14 municipalities approved for PA
 - Does not include Permanent Repairs
 - Only includes Debris Removal and Emergency Protective Measures (Categories A and B)
- FEMA Mitigation Grant for Building Codes After 2017 Hurricanes in Puerto Rico
 - Government of Puerto Rico received \$79 million from FEMA's Hazard Mitigation Grant Program to improve code enforcement
 - The code enforcement and code update is part of the \$3 billion in hazard mitigation grant funding made available to Puerto Rico during hurricane recovery
 - 2018 Puerto Rico Building Codes based on the 2018 I-Codes, including reference to ASCE 7-16
 - FEMA/NEHRP Supported Projects/Training in Puerto Rico
 - Past adoption of Hazard-resistant Building Codes
 - Initial adoption of 1997 UBC
 - Adoption of the 2009 I-Codes (with amendments) as the 2011 PRBC
 - Technical trainings for designers and technical audiences:
 - Including a recent Seismic Building Code Symposium by SK Ghosh (Feb 21)
 - and other NETAP provided courses on topics like
 - ATC-20, ROVER, P-154, etc.
- Areas of Focus for Field Work
 - Residential buildings

- Performance of elevated single-family homes
- Schools and other critical facilities (hospitals, police and fire)
- Previous mitigation grants for school seismic retrofits
 - 1989, 1996, 2004 School Retrofit (Seismic) for 109 schools
- Updated guidance on Post-disaster Building Safety Evaluations (FEMA P-2055, related to ATC-20 Post-EQ Building Safety Evaluations)
- Field Schedule
 - January 17– Site Visit Day 1
 - Check in with FEMA OPS and JRO
 - Establish protocols and contacts
 - Field visits to Salinas and Ponce
 - January 18 – Site Visit Day 2
 - Check in with FEMA Branch IV, Ponce EOC
 - Review protocols and contacts
 - Field visits to Ponce, Guanica, Yauco
 - January 19 – Site Visit Day 3
 - Meet at FEMA Branch IV
 - Review protocols and contacts
 - Field visits to Guanica, Yauco, Guayanilla, Penuelas, Ponce

Jose stated that they saw some buildings that had ATC 20 inspections conducted. A church had been red tagged while a house closer to the epicenter of the earthquake was hardly damaged because it was built to code compliance. He displayed another house that was built less than two months before the earthquake that was destroyed.

Jose stated that the last earthquake in Puerto Rico to cause a lot of damage was in 1980. HE felt it was important to focus on preparing guidance that showed people what they could do during the construction of houses. It was also important to follow building codes. He noted that mortgages in Puerto Rico provided risk insurance which covered earthquakes.

Jose displayed a school that would be closed for the rest of the year. He then displayed a partially collapsed church that was built 150 years ago, explaining that it could have been an eligible building for FEMA as a part of DRRA. There were many buildings in Puerto Rico that were over 50 years old. If the aftershock continued, they could have more damage. Jose stated that there are not enough inspectors to go out and inspect houses. He then explained that Puerto Rico had “weak anchor structure.” That is when someone without any building knowledge tries to give building instructions.

Jose concluded his presentation and thanked everyone for having him.

c. NEHRP State Assistance Grant Program Updates

Jon thanked everyone for having him. He shared that his team was currently working on the NOFOs, and they were in draft mode right now. They hoped to publish in the middle of May, which would allow them to grant the awards in the middle of July.

Jon noted that the Department of Homeland Security (DHS) Financial Assistance Policy and Oversight (FAPO) did an assessment on the FEMA NEHRP program and identified areas for enhancing the program. FEMA HQ planned to implement these programs for the states and territories, as well as the consortia. If the NOFO was published in mid-May, they would have

calls with the consortia, partners, and states to discuss the upcoming changes. Jon stated that their intent was to update everyone and encourage states to put more emphasis on planning and seismic inspections. More information on the guidance would be presented on the separate calls right around the middle of May.

Someone asked if the Puerto Rico MAT study would be available in Spanish.

Drew replied that there wasn't a MAT planned for the earthquake as of now. Currently, the Presidential Disaster Categorization was only for categories A and B, which meant there was no reason to have a MAT right now.

Ed stated that without the ability to go to an FCO in the field and make a request, it wouldn't be appropriate to ask for that unless the further declaration occurred.

Someone asked if the category A and B changes were permanent.

Drew clarified that they were only talking about as of now and this morning. It could get declared tomorrow for permanent repairs. Drew noted that there were many sessions on Puerto Rico this week. If there were any further developments on the declaration, it would be announced.

Bill thanked everyone.

IX. Close for the day

Maximilian thanked everyone for joining and stated that he was excited for the final day of NEPM. Everyone gathered for a group photograph, shown below:



NEPM Day 2 – Tuesday, March 3rd, 2020

I. Welcome and Overview of the Day

Maximilian opened the meeting by thanking everyone for joining. He noted the agenda items for

the day and stated there would be a strategic planning workshop. During the workshop, everyone would break out into their FEMA regions, then people would be chosen to brief out at the end.

II. State/Territory Updates

a. Puerto Rico

Sarimar Hiraldo introduced herself and thanked everyone for having her. She noted that she occupied a position of special assistance to the program manager and had worked with the program previously.

Sarimar displayed previous activities that her team has accomplished. She noted that they took an earthquake tour with a school of blind children. Her team also brought their earthquake simulator to events so people could experience what an earthquake feels like.

Sarimar noted that the 2019 Work Plan consists of creating a virtual tour. She added that they were currently working on an earthquake plan that was divided into six phases. They were in the revision of the first two phases. This project was funded by the EMPG.

Sarimar displayed some examples of their educational campaign that was funded by EMPG. With their EMPG, they bought an earthquake simulator that people enter enter and try.

Maximilian asked Sarimar how much the simulator was.

Sarimar stated that it was \$282,000.

b. California

Kevin Miller chose opening images of the Ridgecrest events on the 4th and 5th of July. The state EOC was activated for two weeks. Kevin's team assistance with the EOC, and they were with the second wave of deployment from EMAC to Puerto Rico.

- California ShakeOut/Earthquake Country Alliance Support
 - Provides support to the Southern California Earthquake Center (SCEC) for coordination of California's Earthquake Country Alliance preparedness/mitigation education efforts, manage the Great California ShakeOut, and support and enhance regional alliances:
 - Project continuation; previously funded through NEHRP State Assistance and NEHRP Direct State Support.
 - Project to be accomplished through sub-grant to SCEC.
 - Federally-Eligible Grant Activities:
 - Increase earthquake awareness and education; and
 - Encourage the development of multi-State groups for such purposes.
 - <https://www.shakeout.org/>
 - <https://www.earthquakecountry.org/>
- California: Business Non-Structural Mitigation and Continuity Planning Integration, Resilient Workplace Workshops
 - This final development phase of the project will bring the business continuity planning web-based tool to small-to-medium sized businesses participating in a

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- resilience workshop.
- Funding supports two “Resilient Workplace Workshops”, to be held in Northern and Southern California, focused on newly-launched web services geared towards earthquake resilience for small to mid-sized businesses, non-profits, and organizations for all-hazard resilience.
- In 2017, this project was partially funded by NEHRP and leveraged existing resources such as FEMA QuakeSmart and DRB Tool Kit. The completed project will be directly useful to all NEHRP states and territories.
- Project to be accomplished through a sub-grant to Disaster Resistant Business Toolkit Workgroup (DRBTW).
- Federally-Eligible Grant Activities:
 - Develop/enhance seismic mitigation plans; and
 - Increase earthquake awareness and education.
- <https://www.drbt toolkit.org/>
- California: California Earthquake Clearinghouse Workshops and State Operation Center SOPs
 - This project will allow Cal OES, as one of the managing partners of the California Earthquake Clearinghouse, to provide personnel to assist with logistics, the development of workshop materials, and travel in support of two workshops to be held in Northern and Southern California, focused on educating our partners on response benefits and mitigation opportunities supported by Clearinghouse activities.
 - Project to be accomplished by Interagency Agreement with the California Geological Survey.
 - Federally-Eligible Grant Activities:
 - Develop/enhance seismic mitigation plans;
 - Prepare inventories and conduct seismic safety inspections of critical structures and lifeline infrastructure;
 - Increase earthquake awareness and education; and
 - Encourage the development of multi-State groups for such purposes.
 - <http://californiaeqclearinghouse.org/>
- California: Earthquake Awareness, Mitigation, and Insurance Outreach Materials
 - This project will allow Cal OES to reproduce hard copies of outreach materials to increase earthquake preparedness, mitigation, education, and awareness of earthquake insurance. While the majority of earthquake preparedness and mitigation outreach materials are available via digital formats, there are annual requests for physical outreach from small faith based organizations and non-profits as well as staff to distribution at outreach events.
 - Project to be accomplished by directly charging printing costs to the grant.
 - Federally-Eligible Grant Activities:
 - Increase earthquake awareness and education; and
 - Supporting the promotion of Earthquake Insurance.
 - <https://www.caloes.ca.gov/cal-oes-divisions/earthquake-tsunami-volcano-programs>
- Additional Earthquake Program Tasks, Projects and Programs
 - **Our statewide approach in support of ShakeOut**, state employee paystubs, intranet blogs, emails (DCHO and LCHO) to state government (SWEPC), local government, CalVolunteers, DCHO videos in English and Spanish on Youtube -

- the reason that we keep growing participation.
- **Continued support with the HayWired scenario with the Exercise toolkit** – suggested by Cal OES with ECA is facilitating. Goal to get local governments and organizations on board to be aware of the impacts and utilize the scenario in their local exercises.
 - **North Coast PSAs** – for earthquake preparedness and the “elephant in the room”
 - real life situations: in the grocery store, in the casino, etc.
 - **Supporting Earthquake Early Warning and integrating reporting on ShakeAlert and MyShake** into our established earthquake reporting systems.
 - **Drafting a State Level Volcano ConOps** with a nexus to earthquake as an increase in seismicity can be an indicator of unrest above background levels.
 - **Focusing with ECA on preparedness document accessibility** with font/color/size. State requirement for website accessibility. As well as equality of graphics across multiple languages.
 - **Coordination of NETAP courses, including**
 - FEMA P-154 and ROVER (Rapid Visual Screening of Buildings for Potential Seismic Hazards (Third Edition), and Rapid Observation of Vulnerability and Estimation of Risk)
 - FEMA E-74 (Reducing the Risks of Nonstructural Earthquake Damage)
 - **Tsunami Preparedness and Hazard Mitigation Program** – implementation and coordination year round

Jeff Briggs asked if the North Coast PSAs were shareable with other states.

Kevin Miller responded that they were and offered to email them to Jeff.

c. Alaska

Dan Belanger introduced himself as the Earthquake and Tsunami Program Manager. He stated that at the last NEPM, he presented on the recent Alaska earthquake. He was still in the response and recovery stage of the earthquake and collecting many projects for the HMGP numbers. Dan noted that they had a PDM program as well.

- HMGP 12 Mo. Estimate 02/11/2020
 - 75% Federal Share: \$14,462,058
 - 25% State Share: \$4,820,686
 - Total Amount of Funding: \$19,282,744
- There are currently at least 30 projects that will be Ranked and Prioritized.
- PDM
 - Federal Share: \$4 million
 - Local Share: \$1.6 million
 - Total Amount of Funding: \$5.6 million
- 23 fender assemblies for port docking project
- DA
 - \$22,956,652 490 PA projects
 - \$964,691 360 IA applicants
- Total \$23,921,343

- Elements of the Alaska Earthquake and Tsunami Program
 - ASHSC legislative audit was completed and recommended for another 8 year commitment
 - USGS, DGGs & AEC created a response workgroup to review the field guide developed by DGGs and compare to actual event
 - 2018 IBC adoption should be adopted 2020 legislative session.
 - Alaska Housing Finance Corporation (AHFC) guidelines and inspection form for site-built residential construction. Applies to home construction financed through AHFC only.
 - UAF/ AK Earthquake Center is seeking funding to maintain 43 EarthScope seismic stations from USGS
 - draft policy recommendation for Resilient Critical Infrastructure
 - ASCE 7 Tsunami Mapping Discrepancies in Alaska
 - **NETAP Courses-**
 - ATC 20/FEMA P-154 Rapid Visual Screening
 - FEMA 395, Earthquake Safety and Mitigation for Schools
 - Course: FEMA 232 Description: Homebuilders' Guide to Earthquake Resistant Design and Construction
 - Course: FEMA P-749 Earthquake-Resistant Design Concepts: An Introduction to the NEHRP Recommended Seismic Provisions for New Buildings and Other Structures
 - Course: Building Code Overview Description: Building Codes- Why They Matter

Someone asked if Alaska had a home retrofit program that they supported.

Dan replied that they did not.

Someone asked Dan if he had seen pushback on building code adoption.

Dan replied that he didn't see pushback as much as lack of enforcement. Frontier areas had more difficulties adopting.

Amanda stated that the Alaska Homebuilders Association was very supportive of a statewide building code, but the state was hesitant to adopt something because of social equity issues.

Dan compared Alaskan communities that didn't have running water systems to the modern city of Anchorage. That level of variation made creating statewide law difficult.

Someone asked which community was impacted by the earthquake.

Dan replied that it was the Anchorage area, which was also where the majority of the population was located.

Jeff Briggs stated that in his states, they had low homeowner's insurance rates. He asked if Dan had a similar problem in Alaska.

Dan did have similar issues. One issue was high deductibles, while another was lack of insurance in many areas. In more developed areas, many people had homeowner's insurance but not earthquake insurance. Some people didn't have enough money after the earthquake to

fix their home, so they packed up and left.

d. Oregon

Althea Rizzo stated that they were working on a new program called ‘2 Weeks Ready’. This was an immersive process, and people were trained to champion the program. It started with a social event because even if community members didn’t participate in a preparedness activity, it was important to know their neighbors. Communities that know each other are much more resilient after these types of disasters. After the social event, they went into the family planning process which consists of two weeks of journaling where they consider what they would need to do or have access to in order to get through two weeks. Then they worked on their food, water, and waste plans and learned how to camp in their homes, backyards, and neighbors’ backyards.

Afterwards, they had another community event to get to know their neighbors more. This helped people connect beyond a social level. From there they took a first aid course, but Althea stated that this was where they hit blocks because it was expensive to take a first aid course. This was a challenge and they were looking to find a cheaper way to have this happen. From there an emergency management activity taught them what the government will and will not do for them.

Next, a teach out portion challenged them to take all the information they had learned so far and teach it to others. From there, the participants had a “camp in” where they lived in their home without power, water, internet, or waste collection. Participants were encouraged to set their heat to a minimum of 59 degrees. Afterwards, participants assessed their experiences and participated in another celebratory social event in their neighborhood. Participants could then go to the next level which could be participating in community gardening or other options.

- ShakeAlert
 - Timeline
 - Will be “soft” launched over the summer
 - WEA test in in 2020 will be Lab only (In-house) to coincide with WA test
 - July/ August
 - Live WEA test to public in 2022+
 - App testing
 - Tentative “LIVE” date: October 15, 2020, ShakeOut

Additionally, Althea’s team was working on Tsunami Guidebooks. Althea explained that one of her local roles at the Office of Emergency Management (OEM) was creating the Guidebooks for local responders. There’s also an Evacuation Drill Guidebook. If it had been 5 years since a community had an evacuation drill, there may be nobody left who remembered the drill or knew how to do it.

This last spring, they held a tsunami debris workshop in Astoria, OR. The outcome of that symposium was a series of webinars that they were offering every few months. Althea reported that this series would continue. They were also working with California to create a guidance document on tsunami debris.

Someone asked what financial resources they had for the two-week program and if they have a sustainability model that could carry this on for decades.

Althea stated that they had a bill in legislature that they planned to get money from, however it

didn't look like that would happen anymore, so they would need to use their NEHRP grant funding which was only \$10,000.

Cheickh suggested that they could tie it into a local mitigation earthquake plan.

Althea replied that they could do that through some local funding.

Someone asked if they would be funded through the mitigation grants or preparedness.

Althea thought that was a good question; they hadn't looked into it yet.

Maximilian stated that Washington may have some funding that they could use to help Althea next year.

e. Hazus

Jordan Burns, the risk analysis coordinator for Hazus, stated that they help FEMA manage the Hazus program. They sat between the scientists and engineers that came up with the data to do this, and lately wanted to refine the program to serve both of those stakeholders better.

Jordan felt that Hazus's most valuable ability was that they did the math that related hazard to risk. Hazus was trying to emphasize the damage functions which made them unique. This was all done to get to loss. Dollars and deaths drove mitigation made people more aware of risk. They were always trying to advocate greater use of Hazus.

Jordan stated that Hazus would be open source. They were leaving the ArcGIS platform and wrote a whitepaper about this a while ago. Jordan stated that they're trying to emphasize the fact that outside agencies should be able to easily use Hazus. They started the process slowly, and the end game was for Hazus to be a collection of open source tools that could be run on a service without internet. Instead of downloading Hazus in its entirety, GitHub would allow users to download the specific tool they needed quickly. Their first open source tool, written in Python, was for floods, and they were scheduled to develop one for earthquakes this year. They were especially excited to share their code. They believed that if it was used in other people's research, it would speed the pace of innovation.

Jordan shared another exciting development: they would change the model to run at the structure default. This was great because it was better than nothing, which is what many people had. It would also make things much faster because it would be more of a local assumption. The Microsoft building footprints were comprehensive, but they didn't come with a lot of information. They were working to guess those attributes. If anyone had any good local data at the structure level, Jordan asked them to please let him know.

Jordan noted they would be presenting this integration at NEC this year. She commented that many of these were outdated until last year. They were recently updated in the model and would be automatically updated on a yearly basis. Jordan stated that they were comparing the losses for the Rose Canon Scenario.

They has been research done that shows people don't want to run the Hazus model, they just want to get the results. Jordan stated that they were building the Hazus Loss Library, which consisted of risk assessments that had been run through Hazus. The library was currently in beta and would be finalized by summer.

f. ShakeOut

Mark Benthien explained that the Southern California Earthquake Center (SCEC) was the earthquake science center. He led outreach and communications with Jason Ballmann, who did a lot of development and coordination of materials. They had a fantastic ShakeOut turnout this year in terms participation. Mark reminded everyone that ShakeOut is on the third Thursday of October.

- Southern California Earthquake Center
 - 1000+ scientists at 75+ institutions worldwide ([SCEC.org](https://www.scec.org))
 - Coordinates research on earthquake system science (statewide and beyond) with funding from NSF and USGS
 - Offers college internships and develops educational materials
 - Manages (globally) Great ShakeOut Earthquake Drills and TsunamiZone Drills
 - Founded and administers the Earthquake Country Alliance
- Great ShakeOut Earthquake Drills
 - Schools, organizations, and families practice earthquake safety and other aspects of their emergency plans
 - 2019 Record Participation:
 - **68.0 million** people worldwide
 - **21.8 million** nationwide
 - **10.8 million** California
 - **2.5 million** Southeast states
 - **1.5 million** Washington
 - (record #s in many other regions too)
 - 2020 International ShakeOut Day: **October 15** (but can drill any day)
 - Learn more and register: [ShakeOut.org](https://www.shakeout.org)
- How? Collective Impact Framework
 - The strategy focuses on **who** is engaged, **how** they work together, and **how** progress happens.
- State, Regional, and National Customized Websites
 - ShakeOut websites are now online in English, Spanish, French, Italian, and Japanese
- Everyone... Everywhere & Growing!
 - More participants and additional states/countries each year
 - 2008: 5.4 million (Southern California- **ShakeOut Scenario**)
 - 2009: 6.9 million (all California)
 - 2010: 8 million (California, Nevada, and Guam)
 - 2011: 12.1 million (15 states/territories & British Columbia)
 - 2012: 19.4 million (26 states/territories, 5 countries with official drills)
 - 2013: 24.9 million (44 states/territories, expansion worldwide)
 - 2014: 26.5 million (47 states/territories, participation in 60 countries)
 - 2015: 43.9 million (51 states/territories, 70+countries, including New Zealand's second drill, and Iran)
 - 2016: 55+ million (includes major earthquake drills in more countries)
 - 2017: 57+ million (continued expansion)
 - 2018: 62+ million (increased participation and new regions)

- 2019: 67+ million (further increases across US and more countries)
- ShakeOut Drills Manuals
 - **Level 1:** Drop, Cover, Hold On drill
 - **Level 2:** Drop, Cover, Hold On, then evacuation, search/rescue
 - **Level 3:** Adds Continuity Planning
- School ShakeOut Resources
 - ShakeOut Drill Planning Resources for Schools
 - School Preparedness Information
 - ShakeOut Educational Resources
 - REMS TA Center Links
 - ShakeOut.Org/schools
- College ShakeOut Resources
 - Messaging templates, instructor's guide, and PowerPoint slides (with link to Drill Broadcast): **www.ShakeOut.org/colleges**
- Options for Government Agency Participation
 - Options for:
 - holding a ShakeOut Drill
 - coordinating participation
 - promoting ShakeOut
 - Examples of government organized ShakeOut drills
 - **ShakeOut.org/resources**
- Healthcare ShakeOut Resources
 - ShakeOut Manual for Healthcare Organizations
 - CMS Emergency Preparedness Rule Requirements FAQ
 - Other resources for planning and promoting your drill/exercise
- Earthquake Country Alliance
 - Created in 2003 in SoCal; expanded statewide in 2009 after first ShakeOut
 - 1500+ *Public-Private-Grassroots* leaders
 - *Statewide Sector-based committees* develop resources and programs
 - *Regional Alliances* organize local events and outreach campaigns
 - Support provided by California's Office of Emergency Services
 - **EarthquakeCountry.org**

Mark displayed the Seven Steps to Earthquake Safety which can be viewed online at EarthquakeCountry.org/sevensteps. He stated that there were new graphics for Step 1 and new worksheets and statistics for Step 3.

- Step 5: Adapt Your Response
 - If you can't get back up, don't get down
 - Bend over and cover your head and neck with your arms/hands
 - Instruct others how to assist you
 - Practice is key
 - **EarthquakeCountry.org/disability**
- Seniors and People with Disabilities Resources

- Earthquake Preparedness Guide for People with Disabilities and Other Access or Functional Needs
- Adapts messaging from ECA's *Seven Steps to Earthquake Safety*
- EarthquakeCountry.org/disability
- Earthquake Safety Video Series
 - Youtube.com/greatshakeout
 - Separate short videos:
 - indoors, nearby table/desk
 - indoors, no table/desk
 - theater/stadium
 - near the shore
 - in a car
 - in bed
 - people with mobility disabilities
 - Download (with captions):
 - ShakeOut.org/messaging
- New Animated GIFs
 - These and more available at:
 - ShakeOut.org/messaging
 - EarthquakeCountry.org/step5
 - [@SCEC](https://Giphy.com/scec)
 - Twitter's GIF library

Mark displayed a poster titled Protect Yourself During Earthquakes. He then shared quotes from people from different states who shared how ShakeOut taught them about earthquake risk in their area. Following that, Mark shared different ShakeOut emails that they sent out to those who have registered for ShakeOut.

- ShakeOut.org/messaging
 - Social media messaging
 - **#ShakeOut**
 - News release templates
 - Downloadable earthquake safety videos
 - Animated GIFs and more!
- New ShakeOut.org/FAQ Page!
 - Table of future ShakeOut dates
 - Earthquake safety topics
 - ShakeOut profile and registration solutions
 - ShakeOut context and history
 - Basic media needs (for PIOs and journalists)
- National Coordination (SCEC)
 - SCEC is the background organization (with support from FEMA/CalOES) for ShakeOut nationally
 - Creates and distributes regionally customized "ShakeOut Update" email newsletters (monthly/weekly, April-October)
 - Sends personalized emails to people who haven't renewed their registration for the current year (beginning in April)

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Calls larger organizations nationwide to invite them to renew or register
- Posts frequent Social Media messaging
- Develops new resources (videos, animations, drill guidance, etc.)
- Coordinates ShakeOut Evaluation
- ShakeOut Coordinator Tools
 - ShakeOut Coordinators now have online access to registration data and tools in order to:
 - Encourage past registrants to renew their organization's participation;
 - Recruit organizations that have never officially participated;
 - Establish new partnerships with people who are responsible for the preparedness and planning of their business, school, government agency, or organization; and
 - Identify participants with exemplary ShakeOut plans, to highlight as local best practices and perhaps to expand into multi-organizational community drills.

Mark displayed the ShakeOut Coordinator Portal and the content that would be asked in the questionnaire sent out to ShakeOut participants.

- Drill Activities
 - Were the following activities included in your ShakeOut drill this year?
 - Drop, cover, hold on drill – 93%
 - Emergency plan test – 70%
 - Building evacuation drill – 52%
 - Other – 25%
- Earthquake Self-Protective Action
 - Did DCHO as part of ShakeOut drill?
 - 2019 – 93%
 - 2014 – 90%
 - 2009 – 82%
- Other Actions Taken
 - As part of your ShakeOut participation, did you...?
 - Encourage others to participate – 85%
 - Review disaster plan – 80%
 - Reduce physical exposure – 73%
 - Devote more time to emergency planning – 68%
 - Follow ShakeOut on social media – 32%
 - Post content on social media – 24%
- Outcomes: Preparedness Actions
 - Which things have you or your household done to prepare for earthquakes? Did you do them because of the ShakeOut?
 - Learn how to stay safe during an earthquake
 - 38% because of ShakeOut
 - 51% other reasons
 - Learn what to do to stay safe after an...
 - 36% because of ShakeOut
 - 49% other reasons

- Learn how to get prepared before an...
 - 33% because of ShakeOut
 - 50% Other reasons
- Complete or update a household disaster plan
 - 22% because of ShakeOut
 - 44% other reasons
- Identify an out of area contact person
 - 19% because of ShakeOut
 - 51% other reasons
- Keep shoes and flashlights by bed
 - 19% because of ShakeOut
 - 51% other reasons
- Store 3 days of food at home
 - 15% because of ShakeOut
 - 64% other reasons
- Store 3 days of water at home
 - 15% because of ShakeOut
 - 64% other reasons
- Have a first aid kit
 - 14% because of ShakeOut
 - 75% other reasons
- Updated Earthquake Plans
 - As part of your ShakeOut participation, did you review or update your disaster plan, policies, or procedures?
 - 2019 – 80%
 - 2014 – 47%
 - 2009 – 41%
- Future Plans
 - Evaluation committee
 - Regional access to data
 - Longitudinal (linked) tracking
 - Survey collaboration, other agencies
 - Work with healthcare
 - Special topics
- 2020: Plan to Share Survey Results
 - Full export of 2019 data with no identifying information
 - Qualitative needs to be manually reviewed
 - Report with charts for 2019 data and longitudinal results
 - Cannot do export/reports for every state/territory/region
 - Individual States/Regions/Territory with more than 500,000 participants:
 - CA, WA, UT, OR, NV, Central US, Southeast US
 - Groups of States/Territories with 100,000-499,999 participants:
 - Individual states/territories by request
 - States/Territories with <100,000:
 - Grouped with multiple states/territories
 - Individual states/territories will require additional funds
- U.S. ShakeOut Organizers Council

- Plan new shared messaging, common goals, engage national organizations jointly
- Quarterly call?
- Members?
- All state/territory/region coordinators
- 5-7 as an “Executive Committee”?
- Chairs?
- 2020 ShakeOut Goals
 - 15 million California? 5 million Central US? 3 million Southeast? 1 million Oregon? 500K NorthEast? 250K Alaska? 700K Nevada?
 - Opportunities:
 - *School districts, individual schools, and private schools*
Shakeout.org/schools
 - *Higher Education: technical schools, community colleges, universities*
Shakeout.org/colleges
 - *Local governments* (register all employees, promote participation)
 - *Major Employers*
 - *Building Owners and Managers* (building-wide drills)
 - *Faith-based organizations* (weekend prior to ShakeOut)
 - Remember: any day of the year & as little as 5 minutes
 - Can combine with other drills, as long as DCHO included
- Connect with ECA & ShakeOut
 - 213-740-3262
 - info@earthquakecountry.org
 - info@shakeout.org
 - [Twitter.com/eca](https://twitter.com/eca)
 - [Twitter.com/shakeout](https://twitter.com/shakeout)
 - #ShakeOut
 - [Facebook.com/greatshakeout](https://facebook.com/greatshakeout)

III. State/Territory EQ Program Strategic Planning Workshop

Maximilian wanted everyone to get together with their regions and walk through their strategic plans.

Maximilian explained that the strategic planning process was important because it helped people learn their roles and responsibilities and in turn justify funding and priority. If people felt anything was missing from their plan, they could identify that by looking at other strategic plans. Maximilian stated that Washington recently went through this process.

a. California Strategic Plan

Kevin introduced California's strategic plan.

- Mission
 - To foster a culture of earthquake and tsunami readiness involving the whole of community in California.
- Authorities

- **8585.1 The OES Director shall coordinate all**
 - State emergency planning and preparedness
 - Disaster response and recovery
 - Disaster mitigation, and
 - Homeland security activities.
- **8587.7 Non-Structural Earthquake Hazards Pamphlet**
 - How to mitigate nonstructural EQ hazards in schools
 - Involves OES, Dept. of Education, DGS, Seismic Safety Commission
- **8657 California Earthquake Prediction Evaluation Council**
 - Advises the Governor on the existence of earthquake or volcanic prediction having scientific validity
- **8690.45 Earthquake Emergency Investigations Account**
 - Funding for the Seismic Safety Commission
 - Enables investigation of damaging earthquakes Commission
 - May fund investigation expenses.
- **Earthquake Early Warning (SB135 - Padilla)**
 - Cal OES to develop, in collaboration with various entities including the USGS, a comprehensive statewide earthquake early warning system in California.
- **Tsunami Warning Education and Research Act, 2017 (TWER).**
 - Public Law 109-424, 33 U.S.C. 3201 seq.
 - TWERA provides the framework and funding support for Federal and State tsunami programs in the National Tsunami Hazard Mitigation Program (NTHMP).
- Program Goals
 - **Raise Awareness**
 - Develop stakeholder alliances
 - Draw on lessons learned
 - Promote information campaigns
 - Develop web tools, information materials and videos
 - **Enhance Collaboration**
 - Elected officials
 - Emergency managers
 - Professional associations
 - News Media
 - Partner with other agencies with similar goals
 - **Maintain Readiness**
 - Build and maintain an EQTSU ready community
 - Promote their readiness among their social circles
 - Foster EQTSU readiness as a social movement
 - **Support Outreach**
 - Leverage those already engaged in EQTSU readiness to reach out to those not engaged
 - Promote hazard mitigation planning within our program scope
 - Support lectures, workshops, exercises and technology transfer
 - **Promote Technology**
 - Promote modeling, recording, evaluating and assessing impacts
 - Improve preparedness, mitigation, warning, response and recovery
 - Ensure technologies are state of the art
 - Assess program effectiveness

Maximilian stated that there were a number of ways to have effectiveness. For example. Giving away little prizes worked well for Washington. Four or five question survey cards could be given out before a presentation and collected at the end to pull a few prize winners.

b. Washington

Maximilian presented on Washington's strategic plan.

- Vision
 - Enable the recognition, understanding, communication of, and planning for natural hazards and risk. Empower individuals and communities through public awareness and engagement to make informed risk management decisions necessary to prepare for, adapt to, withstand, and quickly recover from natural hazard incidents (Community Resilience).
- Hazards + Outreach Strategic Plan
 - Goal 1: Reduce vulnerability to natural hazards
 - Understand baseline of natural hazards
 - Understand baseline of risk
 - Inspire and support natural hazards risk reduction
 - Goal 2: Support the development of reliable, coordinated public info & warning systems
 - Improve and maintain outreach
 - Improve alert & warning processes and systems
 - Goal 3: Improve and expand natural hazards external and internal coordination
 - Develop and maintain partnerships
 - Goal 4: Improve and maintain situational assessment capacity for natural hazards events
 - Develop and update SOPs and briefing packets
 - Support CSZ planning
 - Plan for post-event clearinghouse
 - Develop and support building safety assessment capacity
 - Goal 5: Increase internal and external program capacity
 - Increase and maintain program funding
 - Maintain program staff
 - Improve development of staff skill and knowledge
 - Maintain program continuity
 - Improve program organization
- Goal 1: Reduce vulnerability to natural hazards (Long-term Vulnerability Reduction)
 - Objective 1: Maintain Current Understanding of Natural Hazards
 - Strategy 1.1: Update hazard modeling/science
 - 1.1.1 Complete probabilistic tsunami modeling at 1/3 arc-second resolution for all WA coastal areas and affected major river channels
 - 1.1.2 Earthquake faults and secondary hazards affecting WA
 - 1.1.3 Volcanoes
 - Strategy 1.2: Support improvement of monitoring equipment and processes
 - Objective 2: Maintain Current Understanding of Risk
 - Strategy 2.1: Update risk assessments and scenarios

- 2.1.1 Complete combined earthquake and tsunami HAZUS runs for all WA coastal areas
 - 2.1.2 Support identification of all unreinforced masonry buildings in WA
 - 2.1.3 Support school seismic safety assessments in WA
 - 2.1.4 Maintain GIS/HAZUS capability
 - Strategy 2.2: Understand baseline of preparedness
 - 2.2.1 Conduct surveys
 - 2.2.2 Support local surveys
 - 2.2.3 Support Social Science Research
 - Strategy 2.3: Understand baseline of mitigation
 - 2.3.1 Support natural hazards updates to WA enhanced hazard mitigation plan
 - 2.3.2 Support natural hazards updates to WA THIRA and SPR
 - 2.3.4 Coordinate with state hazard mitigation officer to track seismic and tsunami mitigation projects
 - Strategy 2.4: Conduct gap analyses
- Objective 3: Inspire and Support Natural Hazards Risk Reduction
 - Strategy 3.1 Support seismic and tsunami related building code improvements in WA
 - Strategy 3.2 Support adoption of seismic retrofit ordinances and programs in WA
 - Strategy 3.3 Coordinate with state hazard mitigation officer to streamline seismic and tsunami mitigation project application process for HMA funding
 - Strategy 3.4 Facilitate the implementation of ShakeAlert EEW in WA
 - Strategy 3.5 Support tsunami and lahar evacuation capacity
 - Strategy 3.6 Support school participation in mandated EQ/TSU/VOL drills
 - Strategy 3.7 Support and conduct exercises
 - Strategy 3.8 Support tsunami maritime risk reduction
 - 3.8.1 Complete development of tsunami maritime mitigation and response strategies for all major ports and harbors in WA:
- Goal 2: Support the development of reliable, coordinated public information & warning systems
 - Objective 1: Improve and Maintain Outreach
 - Strategy 1.1: Develop and update natural hazards related materials
 - 1.1.1 Print, digital, and web content
 - 1.1.2 Determine and address gaps in outreach materials
 - 1.1.3 Work with partners to develop and update talking points/pre-canned messaging/PSAs
 - 1.1.4 Complete outreach toolkits for the Great WA ShakeOut, ShakeAlert EEW, and tsunami/lahar evacuation/drills
 - 1.1.5 Coordinate with partners to share materials and information consistently
 - Strategy 1.2: Coordinate with internal and external partners to conduct outreach and education activities
 - 1.2.1 Conduct EQ/TSU/VOL roadshows
 - 1.2.2 Outreach campaigns (Great ShakeOut, Two Weeks Ready, ShakeAlert EEW...)

2020 National Earthquake Program Managers Meeting
San Diego, CA | March 2 – March 3rd, 2020
Meeting Notes

- Strategy 1.3: Develop and maintain media relationships and presence
 - 1.3.1 Increase number of people we reach
- Objective 2: Improve and Maintain Alert & Warning Processes and Systems
 - Strategy 2.1: Develop and update WA EMD SOPs for natural hazards
 - Strategy 2.2: Develop and update warning systems
 - 2.2.1 AHAB tsunami sirens
 - 2.2.2 Lahar sirens
 - 2.2.3 ShakeAlert EEW system (cell phone app)
- Goal 3: Improve and expand natural hazards external and internal coordination
 - Objective 1: Develop and Maintain Partnerships
 - Strategy 1.1: Leverage/share materials and best practices
 - Strategy 1.2: Support development of a National Earthquake Program
 - Strategy 1.3: Facilitate and participate in workgroups and committees
 - 1.3.1 International, national, regional, state, tribal and local
 - Strategy 1.4: Support state preparedness, mitigation, response and recovery activities
- Goal 4: Improve and maintain situational assessment capacity for natural hazards events
 - Objective 1: Develop and Update SOPs and Briefing Packets
 - Strategy 1.1: Develop essential elements of information (EEl)s lists for EQ/TSU/VOL events
 - Strategy 1.2: Develop and update EQ/TSU/VOL scenario briefing packets for decision makers
 - Strategy 1.3: Align with Alert and Warning Center SOPs
 - Strategy 1.4: Align with SEOC situational awareness processes
 - Objective 2: Support Cascadia Subduction Zone Planning
 - Strategy 2.1: Provide technical expertise
 - Strategy 2.2: Support development, coordination and updating of catastrophic/CSZ planning (FEMA, State, DOD, National Guard, Coast Guard...)
 - Objective 3: Support Development of a Post-Event Clearinghouse Process
 - Strategy 3.1: Develop MOUs
 - Objective 4: Develop and Support Building Safety Assessment Capacity
 - Strategy 4.1: Implement WAsafe into the CEMP
 - Strategy 4.2: Practice utilizing the WAsafe/WA EMD resource request and deployment processes for rapid building safety assessment
- Goal 5: Increase internal and external capacity

Maximilian stated he works closely with his State Hazard Mitigation Officer (SHMO) because it was important and putting together guidance with a SHMO could be greatly beneficial. Washington State was currently working on that for tsunamis. It was great because they had an enhanced hazard mitigation plan, and it was good to help support for technical information. They were ensuring the updated hazard information was streamlined. Maximilian stated that he

would go into this more during NEC.

Someone remembered that at a conference last year, Dr. Kaniewski stated that they were going to figure out how to encourage more creative and innovative research as part of the new BRIC program because he didn't feel the states took advantage of it. They asked what Maximilian's thoughts were on promoting good engineering and natural hazard research instead of focusing on local hazard mitigation.

Maximilian stated that in Washington, they did a lot of gap assessments because some guidance was missing. It was challenging to see the entire process or to put it all together and walk people through the steps. It had been a struggle to put that guidance together. Maximilian knew many people had talked about connecting the strategic plan to the hazard mitigation plan, and he recognized it was difficult.

Someone replied that there were many eligible FEMA nonprofits that had applied for grants under Hazard Mitigation Grant Program (HMGP) or PDM, but most of the focus seemed to be on local hazard mitigation plans. He encouraged Maximilian to look at the local nonprofits under HMGP.

Someone else stated that by using the planning money, they were able to fund the university to use the HMGP for research.

Maximilian noted that this could be used as a topic for next year.

Matt stated that the states would need to prioritize types of hazards. It was a question of capacity in addition to complexity.

Amanda commented that she would be presenting on the funding behind this at NEC. She would get into the requirements of hazard mitigation plans and encouraged everyone to attend.

Matt stated that when a state understood their baseline in mitigation, they could identify that type of strategy for future funding. Whatever application they submitted wasn't technically eligible unless they had a path to put that strategy in there.

Drew noted that a few years ago, there was a presentation on FEMA P-1000, and there was a whole section on mandated earthquake safety laws.

Jeff Briggs asked what the process was for revisiting the strategic plan once it was written.

Maximilian stated that it should be revisited at least once a year. He stated that once this was put together, it could be inputted into the agency strategic plan.

c. Consortia Strategy

Jim Wilkinson from CUSEC began discussing their strategic plan.

- Establishment of CUSEC and Subsequent Strategic Plan
 - NEHRP Est. 1977
 - 44 C.F.R. PART 361—NATIONAL EARTHQUAKE HAZARDS REDUCTION ASSISTANCE TO STATE AND LOCAL GOVERNMENTS
 - Title 44 - Emergency Management and Assistance
 - Mitigation

2020 National Earthquake Program Managers Meeting
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Meeting Notes

- Preparedness/response planning
 - Public awareness/earthquake education
 - Other Activities
- FEMA Est. 1979
- CUSEC Est. 1983
 - Public awareness/earthquake education
 - Mitigation
 - Preparedness/response planning
 - Application of research
- Mission
 - Provide dynamic support to multi-state response and recovery planning, resource acquisition; public education and awareness; promotion mitigation; and research associated with earthquake preparedness in the Central United States.
- Vision
 - Be an effective and economically sustainable multi-state organization providing leadership (advocating actions designed to) in reducing deaths, injuries, property damages and economic loss resulting from earthquakes in the Central United States.
- CUSEC's Role
 - CUSEC serves as a “coordinating hub” for the region, performing the critical role of coordinating the multi-state efforts of the central region. Its coordinating role is largely facilitative and not as the primary implementer of emergency management functions which is the responsibility of each individual state.
 - Further, the Board confirmed its earlier position to contain CUSEC's activities to earthquake hazards, as this is the only shared concern among the member states. Below are the roles defined for each outreach goal.
- Strategic Plan Goals and Objectives
 - Goal 1: Public Awareness
 - Raise the level of public awareness of the earthquake hazard in the central U.S.
 - Serve as a resource for standardized (but customizable) messaging and collective awareness campaigns.
 - Leverage groups outside of emergency management that have large audiences to engage the public for awareness and preparation.
 - Promoting coordinated Earthquake Awareness Weeks (or events) across all states, collectively and in each state.
 - Use website, newsletter, and social media for public awareness.
 - Explore gaining resources and partnerships to craft and deliver PSAs.
 - Goal 2: Mitigation
 - Promote the adoption of mitigation programs, tools, and techniques to reduce vulnerability.
 - Advance program and policy improvements and recommendations to FEMA and other organizations such as NEHRP.
 - Create partnerships with the private sector to develop plans and infrastructure to reduce economic loss caused by earthquakes.

- Develop, market, and implement trainings on programs, tools, and techniques.
- Assist with the development and dissemination of helpful technology.
- Explore additional partnerships with the sister organizations to increase the impact on policy and training.
- Goal 3: Multi-State Planning
 - Foster multi-state planning for response and recovery to a damaging earthquake.
 - Cultivate inner and intra state relationships and partnerships via frequent CUSEC gatherings of state directors and affiliated persons/organizations.
 - Formalize agreements for mutual response and recovery through individual state plans.
 - Continue to convene working groups to deepen the planning and partnerships and to develop (encourage?) innovations.
 - Coordinate military support to civilian authorities through National Guard Bureau planning.
 - Continue multi-state planning exercises with various partners.
 - Continue regional and national projects.
 - Support state geologist(s) in developing Mission Ready Packages.
- Goal 4: Research
 - Promote the application of research and lessons learned to improve the level of preparedness.
 - Build relationships with geological survey agencies and academic organizations to identify partnership opportunities.
 - Distill applicable research findings and promote (disseminate to) with member agencies (States) and through other distribution mechanisms.
 - Consider a CUSEC summit to explore applied research.
- Formalizing National Collaboration Among Consortia
 - Identify national shortfalls
 - Training
 - Policy
 - Legislative
 - Program deliverables
 - Provide a mechanism for building out ideas and concepts
 - RVS
 - RISP

IV. Consortia Strategy

Matt Wall noted that he would discuss directions that WSSPC is moving into. When it was created in 1979, WSSPC was not designed to be an operational entity. Rather, it was designed to encourage and support the states and their different operations. Matt emphasized that partnerships saved states from the need to do everything themselves. He explained that a state's goals should be measurable so that during regular reviews, they could determine if their goals had been achieved, and if not, why.

Matt then noted that a strategy or goal should not be seen as being single-year oriented. He

emphasized it was normal not to be able to achieve every goal at once and encouraged everyone to look at things from the perspective of a 5-year plan. It was important for the states to be fluid and adapt their language to meet the needs of the politicians in place. It wasn't unusual to create an objective that could be presented to a different audience. When working with presentations, Matt stressed it was important to know the audience. It was necessary to be able to communicate to multi-people, multi-agencies, etc.

V. FEMA Stakeholder Mitigation Efforts

Amanda was excited about the presentations being given throughout NEPM. She noted that her presentation today was a pre-cursor to the presentation she would give the next day.

Amanda noted that the Hazard Mitigation Grant Program (HMGP) was tied to disaster declarations. The highest it had been recently was \$375 million. This money didn't have to be used just for that disaster or disaster-impacted community.

Emergency Management Performance Grants (EMPG) were preparedness grants that gave up to \$350 million. These went through the state emergency preparedness coordinator.

The Pre-Disaster Mitigation Grant (PDM) program had up to \$250 million. BRIC would hopefully come out in September and bump the program up to \$500 million.

Amanda noted that the National Mitigation Investment Strategy (NMIS) was created because FEMA was tired of focusing money on response and would like to focus it on mitigation.

NEHRP was funded at \$600,500. With the reauthorization of NEHRP, this pot of money would not grow. Instead of discussing NEHRP funding, Amanda wanted to discuss to integrate with other programs to get money.

HMGP required a state to have to have a state hazard mitigation plan, which had three points to it and outlined which hazards the state was vulnerable to as well as how they planned to address their vulnerability. The plans were updated every 5 years, and there was free training available on how to create one.

Most states had a hazard mitigation planner who reviewed the state hazard mitigation plan. The job was tedious, but they knew what these people were asking for.

Amanda noted that Federal Integration Teams (FIT) could help support mitigation planners as well. This was an extra resource that could be accessed through FIT. Amanda stated that there were three components of the HMGP process: the planning process, hazard assessment, and mitigation strategy. First, the SHMO looked at the plans, then the state and local hazard mitigation planning teams looked at them. FEMA didn't have a template for these plans because they wanted it to be a process for reducing vulnerability.

Amanda stated that the RVS data should be put into the local hazard mitigation plans. She noted integrating more data into the planning process and sharing more information would allow them to develop a bigger and better final product. Amanda explained that if a state earthquake program manager identified what they wanted in the plan, the plans would be developed locally, the state would prioritize them, and then they would get the award. If an earthquake program manager was strategic about getting their projects through the HMP, they should also consider being strategic with the NEHRP funding to do those smaller projects.

Someone asked how non-state partners could get access to that money.

Amanda replied that it must be through a county or jurisdiction, or they could sub-contract.

Someone asked if the HMGP requirements would change because of BRIC.

Amanda hadn't heard anything about that.

Someone noted that education and outreach were not eligible under PDM.

Amanda replied that HMGP required public engagement which, along with other outreach efforts, was funded through the planning grants. Education and outreach needed to ask people to take specific, measurable action.

VI. Brief Out by Region

Maximilian asked if there was anything that wasn't covered.

Jeff Briggs was considering how to digest the strategic plan information into something they could leave with. He did not realize the board of directors of CUSEC mandated the goals. Jeff stated that he could fit what he does into mitigation and outreach. Perhaps they could use those as their four goals, then put objectives under each one of those goals.

Maximilian thought that sounded good. Identifying key goals was the purpose.

Jim stated that the other states need to think about how to write things and align things with their consortium.

Maximilian stated that they had different constraints and goals. There were broad things they want to align but not everything needed to be aligned.

Matt appreciated that topics are being put in the "parking lot." With respect to the WSSPC states, they had an earthquake program manager call each month. Matt stated that WSSPC is able to help states develop these strategies if they participate in the call. They could also reach out and pull in regional participation.

VII. State/Territory Updates

a. Washington

- Great Washington ShakeOut 2019
 - Accomplishments
 - Increased participation by over 160,000
 - Engaged more students with the youth video contest (over 30 submissions)
 - Engaged new stakeholders through inspiring them to become community Champions
 - Increased ShakeAlert Earthquake Early Warning outreach in schools
 - Supported legislation that now requires schools to conduct earthquake, tsunami and lahar drills

- 2 Weeks Ready Mobile Application
 - Engage the community on how to get prepared (2 Weeks Ready)
 - Provide ShakeAlerts (USGS) and Tsunami Alerts (NTWC)
 - Provide protective action recommendations and post-earthquake safety actions (pop-up box 2 minutes after the ShakeAlert with first 6 or 7 safety actions to take)
 - Collect and disseminate “Did you feel it?” info (using pictures tied to MMI)
 - Disseminate last known location and status info to identified emergency contacts
 - Collect and disseminate damage info (pictures etc.)
 - Collect info on how prepared people are and what the community needs to improve their preparedness and help us prioritize limited funds/capacity
 - www.MyShakeAlert.org

b. Missouri

- Save Coalition Enhanced Training
 - 1,000 Members
 - 8-10 training classes each year
 - 3-year membership
 - State funded, EMPG match
 - Special classes in leadership, bridge inspection
 - May 2019 Tornado Deployment
 - 20 inspectors assessed 600 buildings in two days
 - Used Collector app for quick data collection
- School Structural Assessments
 - Volunteers assess buildings for seismic vulnerability
 - Seismic Safety Commission sponsored
 - 19 schools, nearly 200 buildings so far
 - No state funding, NEHRP pays for project coordinator and volunteer expenses
 - Better measurement of success needed –follow-up visits under way
 - Considering app for better data collection, BRIC program for additional funding
- Earthquake Summit
 - 2nd annual conference for professionals in southeast MO to discuss EQ prep/response
 - Grew quickly from discussion of basic information needs
 - Planning committee (EMD, fire, school, health, state partners)
 - no funding (sponsors, locals)
 - 350 attendees
 - Media, streaming
 - Public event as well, w/Q&A

c. Tennessee

Adam Stewart presented on the Tennessee Earthquake Program.

- ShakeOut numbers still increasing year to year
 - 2019: 581,497

- 2020: 600,000 +
- Department of Education liaison assisting with East Region exposure and registration
- Without Warning Comic Book
- Emergency Go-Kit Passport
- TNSAVE
 - Training
 - ATC-20 in all three regions of Tennessee
 - Exercises
 - Vigilant Guard 2021
 - Deployment
 - Mission Ready Team Typing
- Rapid Visual Screening of Facilities
 - Work with sector partners to create an inventory of county-owned facilities
 - Schools, Fire Stations, Police Stations.
 - Results used to provide locals with understanding of risks, update mitigation plans, and improve loss estimations.
 - Fayette County will be pilot in Tennessee

Adam gave a shoutout to Jeff on gathering people to attend the Summit.

d. Utah

Bob Carey stated that they had about one third of the state participating in ShakeOut. He noted that they had been conducting ATC 20 trainings for Ogden Public Works, SEAU, and LDS. Upcoming trainings would be held for U of U, SLCC, SUU, and the Ogden School District.

Bob noted that they recently did a joint conference with Nevada. They took the program that was on the second day and tried to walk through it to see how they could get creative funding. They also recently had the USSC 25th anniversary. They had a celebration where people gathered and gave small presentations and had displays.

- Other USSC activities
 - Student Grant Program
 - Airport Tour
 - National Mitigation Investment Strategy Pilot Project
 - Sunset Legislation
- Odds and ends
 - Emergency Communications Workshop
 - Basin and Range Earthquake Summit (BRES) – February 2021
 - National Level Exercise – May 2021
 - Lifeline Workshops and COA's
 - State Hazard Mitigation Team (SHMT)
- Publication Updates
 - Putting Down Roots
 - URM Guide

- Insurance Brochure
- Earthquake Scenario
- School Building Report
- USSC Activities Report

e. Mississippi

- 26 NMSZ Critical Seismic Counties
- DeSoto, Marshall and Tunica Counties border Shelby County, TN (Memphis)
 - November 21, 2019 – Prentiss County
 - 2.3 Magnitude
 - Felt as far away as 234 miles in Kentucky
- MEMA & CUSEC
 - Earthquake screening and mitigation pilot project in Tunica, MS
 - Phase 1: Seismic Safety Inspections/Critical Facility Inventory
 - Oversee a facility inventory project using the FEMA P-154 Rapid Visual Screening of Buildings for Potential Seismic Hazards methodology
 - Phase 2: Non-Structural Mitigation Pilot
 - Identify non-structural mitigation supplies that can be provided to the schools/facilities
 - CUSEC will provide MEMA with a tabletop earthquake “shake table”
- The Great ShakeOut
 - 2018
 - 341,610 participants statewide
 - 2019
 - 334,115 participants statewide
- NETAP Funded Training
 - Mississippi will host two courses this year
 - **FEMA P-154 and ATC-20 (combo)**
 - Rapid Visual Screening of Buildings for Potential Seismic Hazards
 - Procedures for Post Earthquake Safety Evaluation of Buildings
 - **FEMA P-767**
 - Earthquake Mitigation for Hospitals
- Contact
 - Jasmine Johnson – Earthquake Program Manager
 - Phone: 601-933-6374
 - Email: jdivinity@mema.ms.gov

f. Alabama

- About AEMA
 - Vision
 - Building resiliency for tomorrow, strength for today, applying lessons from yesterday for a better Alabama
 - Mission
 - To support our citizens, strengthen our communities, and build a culture of preparedness through a

comprehensive Emergency Management Program

- Program Updates
 - Spring/Summer 2019
 - Monitored and discussed with Geological Survey of Alabama (GSA) increased earthquake activity in south Alabama
 - July 2019
 - Collaborated with GSA and CUSEC for the New Madrid earthquake exercise Shaken Fury
 - Met with GSA and FEMA to discuss earthquake hazard mitigation NEHRP funding and earthquake activities in the state
 - September/October 2019
 - Shared in planning activities with GSA for the Great ShakeOut earthquake drill. Over 100,000 citizens registered.
 - Participated in preparedness events throughout the state.
 - Ongoing
 - GSA (NEHRP funding) is running Level 2 HAZUS models to estimate damage from potential moderate and large magnitude earthquakes in seismically active areas of the state.
- Contact
 - Natasha W. Jackson, EQ Program Manager
 - Office – 205-280-2274
 - Mobile – 205-258-9478
 - natasha.jackson@ema.alabama.gov

g. Arizona

- Research and Monitoring
 - Quaternary faulting
 - Mead Slope fault
 - Lake Mary Fault
- AZ Broadband Network
 - 15 seismometers
 - Records M2.5+
 - Not regional/funding
- Earthquake Awareness and Activism
 - Great Arizona ShakeOut
 - Partners: DEMA, FEMA, County Emer. Mgr, Educators, Health Services, Red Cross & others
 - **ACES** ~ Arizona Council on Earthquake Safety – 2020!
AZGS, ASU, UA, NAU, DEMA, Cocopah Tribe, County Emer Mgmt., WSSPC, EERI, SEAoA

h. Montana

John Metesh introduced himself as part of the State Geologic Survey. There had been about 50,000 recorded earthquakes in Montana. For 2019, they located about 3,200 earthquakes.

John stated that they were also trying to do research on the earthquake and magnitude reoccurrence in Montana. He displayed a map of a copper mine that had 42 billion gallons of contaminated water. There was a dam above the mine that they were looking for a permit to extend. While these dams were located in a very seismically active area, the earthquakes had not been high magnitude.

They recently released a story map of Montana's seismic hazards, and the Montana Seismic Geologic Survey put together historic earthquake photographs and earthquake preparedness information. John thanked everyone for having him and concluded his presentation.

i. New Mexico

Chelsea Morganti began her presentation by stating that the level of earthquake monitoring had varied over the years in New Mexico. Fault mapping determined that there was potential for large, damaging earthquakes. They were also working on the hazard for potential produced seismicity and were looking at what other states have experienced as well.

- Earthquakes in New Mexico
 - Tectonic activity from Rio Grande Rift, E-W extending rift that extends from Colorado to northern Mexico
 - Recent activity from induced seismicity in Delaware and Raton Basins
- Improving Seismic Monitoring in New Mexico
 - Induced seismicity is occurring in Delaware Basin and Raton Basin
 - Donated equipment allowed us to install two new stations last year (blue triangles)
 - Working on proposal to install 10 new stations (yellow squares)

j. Virginia

Debbie Messmer introduced herself as the Grants Administrator and SHMO for Virginia. On August 3, 2011, there was an earthquake in Virginia. The financial impact was between \$200 and \$300 million, only about \$100 million of which came from insurance.

- Earthquake 2018 Grant
 - Promotion of Great ShakeOut through the website and social media – over 1.2 million participants in Virginia (2019)
 - Earthquake trifold was published – 50,000 guides were sent out through our Regional Offices and main office
- Earthquake 2019 Grant
 - Promotion of Great ShakeOut through the website and social media – over 1,500 participants in Virginia so far (2020)
 - Create a video whiteboard sketch walkthrough of the earthquake in Louisa County (2011)

k. Wyoming

Seth Wittke from WSGS gave updates on Wyoming.

- Wyoming Office of Homeland Security
 - 2019 Great Wyoming Shakeout
 - Worked with WSGS for cross-promotion
 - Future
 - 2020 Shakeout
 - Restaffing
 - Creating a resiliency officer
- Wyoming State Geologic Survey
 - Ski Lake
 - Trenched in summer, 2019
 - Multiple agencies/groups
 - 2 Holocene events?
 - < 14,000 years ago
- Greys River Fault
 - Summer 2019
 - Extend the fault trace ~10km to the north
 - First time using UAS data

I. Arkansas

Hilda Booth stated that this year, she was concentrating on building resiliency through preparedness with schools. She made many connections that helped her get into schools. She also worked closely with the Arkansas Geological Survey to get legislation for mandated drills for Arkansas. They hoped this would be done in 2021. Hilda stated that they were also purchasing an earthquake kiosk and had purchased comic books.

Hilda noted that they do about four classes a year, but it was difficult to keep the students interested. FEMA E-74 trainings would be conducted with the NETAP money they received. They built participation during ShakeOut last year through billboards and social media. In February, they hoped to have an earthquake summit in Arkansas. Hilda stated that “2 Weeks Ready” was a huge part of her campaign and added that instead of the passports she used to hand out, she was encouraging everyone to fill out the forms on [Ready.gov](https://www.ready.gov). Her goal was to spend 1-2 days per week in the field this year.

VIII. NEPM Meeting

a. 2021 NEPM Committee Chair and Vice Chair

Jeff Briggs is the 2021 NEPM Committee Chair. Janell Woodward was nominated as the 2021 NEPM Vice Chairperson.

b. 2020 NEPM Planning committee members

Brian Blake, Hilda Booth, Bob Carey, Jon Foster, Maximilian Dixon, and Matthew Wall volunteered to be committee members. Ed Fratto (NESEC) was nominated to the committee, as well.

c. Location

Jim stated that the Virginia earthquake 10-year anniversary was coming up in 2021.

Matt recommended not choosing Virginia until they were able to run it by Debby. He suggested having several locations to choose from.

Someone suggested St. Louis.

Jeff Briggs stated he needed to double check with his management on whether they could host.

New York City was nominated.

Memphis, Tennessee was suggested.

Ed suggested combining this with another conference in order to get everyone to a location. There were other events they could tag team with.

Jeff Briggs requested everyone to send him relevant events.

Chieckh suggested coinciding it with the Earthquake Insurance Symposium that may be in St. Louis around the right time.

Amanda stated it would be interesting to combine this meeting with a state chapter planning meeting.

Althea stated that cost needed to be considered if this was paired with another meeting.

Jim stated that they need to choose a location with a seismic connection, low cost, and an ability to get to the place.

d. NEMA EQ Subcommittee Meeting/White Paper Discussion

Maximilian stated that they had great discussion and went over key goals and objectives. He asked the room what the top goals and objectives for a national earthquake program for seismic risk reduction were.

Someone stated that they want to retrofit URM's.

Seth stated that they want to identify them before they retrofit.

Matt stated that they would want to identify vulnerable structures and infrastructure before planning for mitigation actions and activities.

Someone stated that they needed to make recommendations of what did and didn't work in the program.

Ed stated that they should work on improving the partnership between federal, state, and regional folks. He noted the agenda was shifted this year, but they need to work on their relationship since they are a partnership.

Maximilian stated that relationships have improved over the years.

Jeff Briggs liked that idea. He thought that if they say improve relationships, they could also improve partnerships between many different organizations.

Anne stated that relationships between the emergency management community and seismic community should be considered as well, including pre-event and event response. Anne felt they needed to take a more holistic approach.

Someone stated that they were trying to assist academia in assessing real risks they identified and suggested creating a strategy to bring this information down.

Jim asked how many FEMA representatives read the 2014 white paper. He thought it should be distributed among FEMA to read it.

Jeff Briggs suggested maximizing funding and something regarding awareness and outreach.

Someone said that they could increase funding through mitigation planning.

Amanda stated that if they went through HMGP, it could be meaningful to frame a workshop around how to standardize that process.

Maximilian wondered how they defined helping people get the money and the planning processes.

Matt Wall didn't want anyone to forget the opportunity to leverage funds. When they looked at funding, they couldn't limit themselves any more than just being FEMA people. They needed to explore and push for more comprehensive programmatic funds for the earthquake programs.

Jim felt there was no reason the state directors couldn't go to the mitigation committee. It strengthened NEHRP to show that they were making it broader.

Maximilian asked how they defined those comprehensive mitigation activities.

Jeff Briggs stated that perhaps they should try to coordinate for the most efficient use of funding.

Kevin stated that he didn't know if that captured what they're getting to. He asked what the solution was to the inefficient use of funding.

Maximilian thought efficient and comprehensive funding for seismic risk reduction should be a topic.

Dan stated that they didn't have a national effort for a common language on earthquakes. Besides "drop, cover and hold on," there wasn't a national campaign, nor was there a federally led campaign either.

Someone thought there used to be a national effort besides ShakeOut.

Maximilian stated that they want a bigger, nationally organized ShakeOut outreach. He noted that with ShakeAlert, they were pushed to come out with two white papers on protective actions for earthquakes. They were both available through USGS and could be used towards recommended protective actions. The first one was approved and then USGS led the other one.

Maximilian thought there were things in regard to hazard, mitigation, support, and efficiency that could improve.

Someone stated that shakeout got people ready for the event itself but not the localized risk.

Maximilian noted that it was an exercise meant to do the outreach around specific earthquake hazards and preparedness.

Cheickh stated that USGS had a ShakeMap.

Jordan stated that the Hazus team had something to create a two pager. They now worked with USGS during real events to run a two pager.

Anne stated that in Region 9, they were working on a retrofit toolkit. It was well in the process and a good opportunity to utilize it.

Matt stated that with respect to the outreach associated with earthquakes, he thought there's an opportunity to look at the Cascadia consequences. This could be impactful, but he wondered what impact it would have?

Maximilian stated that it was extremely important for folks from the East Coast to come in to participate in Cascadia because the events would likely cause Washington to be crippled. Unaffected regions would be the ones to help everyone out. Those folks needed to work with Region 10 to learn the needs and how to help.

Someone stated that it sounded like Washington and Oregon had an established relationship. That wasn't something that was established for New Mexico. Why shouldn't this be national effort, and how does New Mexico build relationships?

Maximilian didn't have the capacity to stop analyze, test, and keep going. It was challenging. Would New Mexico have the time or capacity to process what they need to? They were focusing on this in Washington because there was so much out there, and they couldn't process it all.

Someone thought this was simply an identification of a gap. A lot of times, there were things out there that nobody knew about even though they had been out there for 10 years.

Someone wondered if they had a process of identifying key points since there was so much information.

Pascal stated that they needed to move their ways off email and onto a Microsoft Teams account that was online and running. If people started getting too many emails, then they would be left out.

Maximilian stated that they had the technology to improve information sharing. It was the process which was an issue.

Jordan stated that the Hazus team would love for people interested in Hazus updates to sign up for emails.

Maximilian clarified that they should improve information organization and dissemination.

Jeff Briggs stated that a big part of their job was educating the public. They needed so much information that it was a challenge.

Anne agreed with this comment, adding that they needed to improve data driven decision-making for mitigation.

A challenge Pascal had seen coming to NEPM was constant repetitiveness. New people constantly needed to be retrained. He thought there should be a place for information to be kept for new people, so they could be trained without bugging the older people.

Maximilian stated that Brian would be posting the presentations in addition to sending out the Hazus website (<https://www.fema.gov/hazus>), team photos, and topics that they covered. On those topics, he wanted everyone to flesh them out and assign roles and responsibilities of who will do what. Maximilian would also send out the white paper with people's comments.

- Decided goals for the National Earthquake Program
 - Identify our at-risk infrastructure and structures and mitigate the risk. Especially, URMS (inventory them, implement laws to require them to be retrofitted and provide funding to retrofit them)
 - Identify successful partnerships and identify gaps between all levels of government and the science/research community. Improve the "Science to Practice" process.
 - Improve information sharing for hazard and risk assessment processes.
 - Maximizing funding: how do we define the process to achieve monies? Don't just limit funding to depending upon FEMA for \$, what other sources exist? How do we pool and better utilize funding opportunities? As a National goal, what does that look like? Efficient and comprehensive funding for seismic risk reduction.
 - Awareness and outreach: we don't have a national effort for common language of EQ prep, need a national campaign theme in addition to ShakeOut. Nationally organized outreach.
 - Home retrofitting: how do we increase and improve? FEMA 9 has a retrofit toolkit. National and state retrofit toolkit has broad-based application, successful cost-effective programs to incentivize the home retrofit efforts.
 - Improve data driven decision making. Who's keeping track of best practices/products/information, prioritize, and identifying gaps. Lack of awareness of other successful projects, research, process of identifying key points, who decides/collects/shares this information?

e. Topics for 2021 NEPM Meeting

Maximilian stated that they always had presentations, a FEMA training and updates, and the Earthquake Program 101.

Maximilian asked who would be willing to come in early and set up Earthquake Program 101.

Brian said he could.

A few earthquake program managers also offered to fly in early for it.

Jeff Briggs explained that although it was called the Earthquake Program 101, often went beyond that. Half of the allotted hour and a half was really a best practices discussion which was useful for the whole room. He didn't feel it was worth an extra day for a lot of people, unless they could come up with several hours of stuff that would only be useful for new people.

Seth suggested that they could have an ice breaker event the night prior and have a discussion among new people.

Matt commented that they were talking about helping to train new earthquake program

managers. It made sense that the people volunteering to come in a day early might want an opportunity to discuss this with people who have been in the program for a while. This could be a kick start towards a curriculum development.

Pascal stated that if someone from the west coast had a meeting on the east coast, they couldn't plan anything for the day before just because of the flight.

Someone stated that they shouldn't break out the Earthquake Program 101 if they didn't break out other sessions that weren't applicable to everyone.

Jason agreed and stated that it was nice to have breakout groups. He thought it was amazing how much people learned during these sessions, even if they had been in the program for a while.

Jeff Briggs wanted to hear any topic ideas that anyone had for next year's meeting.

Someone thought it would be interesting to hear from someone outside the US about how they prepare communities.

Someone else wanted to see a follow up where people sat down with their regions.

Someone else noted that they could have some states combine on projects.

Amanda added that FEMA's mitigation program required FEMA planners to meet with the state hazard mitigation planner.

Jeff Briggs had assumed they would start by looking at an agenda similar to this year's agenda.

Someone suggested incorporating more state hazard mitigation officers in the meeting.

- Decided Topics for NEPM 2021
 - EQ Manager 101
 - State/Territory presentations (include lessons learned and challenges?)
 - Grants management/funding
 - Invite more State Hazard Mitigation Officers
 - Opportunities/activities to help improve integration, getting to know each other better
 - Continue working/developing strategic plan with lessons learned (especially with FEMA, regional partnerships, working with other states to partner on joint projects etc.)

IX. Close

Maximilian thanked everyone for all their hard work and closed the meeting.