WSSPC News

- WSSPC would like to formally recognize Steve Masterman of Alaska DGGS for his years of service on our Board of Directors! Thank you very much for dedication to our organization and your support of WSSPC members!
- We welcome our new Board of Directors member James (Jim) Faulds from the NV Bureau of Mines and Geology. Thank you for stepping up to serve!
- The WSSPC Spring Board Meeting was held virtually on May 11, 2021. Unfortunately, the Annual Business Meeting could not be convened due to being just a few voting members short of a quorum. A doodle poll was sent out on May 14, 2021 to all voting members. Per responses, the 2021 Annual Business Meeting will be held on June 10, 2021 from 10:00 AM to 11:30 AM PDT. It will be virtual. Meeting information and the agenda has been sent out.
- The 2021 policies up for vote at the Annual Business Meeting were attached to the doodle poll email. If a voting member is unable to make the meeting, they are requested to provide their vote (Accept, Reject, or Abstain) on each policy to mwall@wsspc.org. Thank you.
- Policies up for review in 2022 will be sent out to committees by July 1, 2021. Included in the policies will be two new ones. They are on the topics of fault line setbacks for structures and equity considerations in hazards.
- WSSPC will be applying for FY 2021 FEMA-NEHRP grant funding. Submission due date for this grant is due NLT June 15, 2021 by 5:00 PM (EDT).

WSSPC Monthly Calls

WSSPC hosts monthly calls for three main groups:

- Member Earthquake Program Managers—typically held on the third Thursday of each month
- Member State Geologists and Seismic Commissions & Councils— typically held on the second Tuesday of each month
- The WSSPC Clearinghouse. Work Group—typically held on the third Wednesday of each month

These monthly calls allow us to communicate more regularly and create platforms where we can share ideas. If you are not currently participating in at least one of these calls, we encourage you to do so! For more information, contact Matthew Wall at mwall@wsspc.org.
News of interest:

- **Strike-Slip Fault Tsunamis**

In the research article *Anatomy of strike-slip fault tsunami genesis*, as published in the Proceedings of the National Academy of Science, the authors state there is “...unexpected potential for strike-slip faults to generate devastating tsunamis, without necessarily triggering coseismic underwater landslides or slumps with their associated wave generation. This is a previously unrecognized hazard for coastal cities worldwide. The risk is higher for supershear earthquakes, as in the 1999 Izmit and the 2018 Palu events, which may be the case for an earthquake rupturing the northern segment of the San Andreas Fault.” (from the abstract).

For the tsunami to happen, the researchers found that an “intersonic” earthquake must happen—where the rupture happens so fast that it is faster than the seismic shear waves generated in the crust. Per the authors, this higher risk is one which threatens coastal cities and may force a re-evaluation of their risk, especially those that have bays which are transverse by strike-slip faults such as the San Francisco Bay area.

The authors found that when a strike-slip earthquake happens in a narrow bay, there are three distinct phases which might lead to a tsunami. They are: the initial fault movement and shockwave causing almost instantaneous shaking of the coastal land; the displacement of water while the earthquake is occurring; and gravity-driven motion of the tsunami wave after the ground motion has subsided that carries the wave to shore.

Long-lived shallow slow-slip events on the Sunda megathrust | Nature Geoscience
Earthquake and tsunami forecasts: Relation of slow slip events to subsequent earthquake rupture | PNAS

Priming the pump : Policy Note
Hydraulic Fracturing, Cumulative Development and Earthquakes in the Peace River Region of British Columbia, Canada (scirp.org)

**You can Provide Input for our Resources Webpage and Social Media Page!**

We are continuously updating our resources and reports page on our website! We are looking for input on what you would like to see in our resources page and any specific articles, studies, or projects you would like referenced there.

We have also been expanding our social media. To give more attention to earthquake safety. If you any content you would like to see us start posting, please reach out to WSSPC with your ideas!
News of interest (cont.):

- **Modeling Slow-Slip Events on the Sunda Megathrust**
  As published in Nature Geoscience, the article *Long-lived shallow slow-slip events on the Sunda megathrust* discusses how surface displacement time series have been observed to be linear. And that this linear trend has been presumed to be directly related to the frictionally locked uneven areas at the fault interface.

  Per the authors, there are issues with this linear model. The first issue is their concern with the lack of information on whether all interseismic period show similar rates. The second is the question of whether the frictionally locked areas remain stationary.

  In support of their argument, the authors identified two consecutive interseismic periods at Simeulue Island where the significantly different displacement rates could not be explained by a “sudden reorganization of locked and unlocked regions.” They propose that their observations determined there was a 32-year slow-slip event on shallow, frictionally stable area of the megathrust.

- **Local Impacts from Induced Earthquakes**
  From the article *Local impacts from fracking the Eagle Ford*, “Stanford University geophysicists have simulated and mapped the risk of noticeable shaking and possible building damage from earthquakes caused by hydraulic fracturing at all potential fracking sites across the Eagle Ford shale formation in Texas, which has hosted some of the largest fracking-triggered earthquakes in the United States.” However, the article also specifies the level of risk is dependent upon many factors, most especially population density.

  Recognizing the broad variability of actual risk and the perception of it, the researchers approach was to develop information which “provides the risk of nuisance or damage as a shared frame of reference and tools to evaluate it…” This approach recognizes that induced earthquake risk changes based on multiple factors such distance from the event, forecasts for earthquake magnitude, and geological factors. The authors argue that actions required of the companies doing deep well injection and fracking should not be a one-size fits all situations, but rather based on actual risk. As proposed by the authors, a key factor in this process is open and clear communication between the fracking companies and the public.
Upcoming Workshops and Events
(Note—WSSPC will continue to publish updated information impacting scheduled or cancelled meetings, workshops, or events as we receive it.)

Societal Shock Resilience, an NSF Convergence Accelerator Workshop
Dates: June 7, 8, 11
Location: Virtual
For more information:
Societal Shock Resilience, an NSF Convergence Accelerator Workshop | Southern California Earthquake Center (scec.org)

National Earthquake Program Manager Meeting
Dates: June 15-17, 2021
Location: Virtual
For more information:
Annual NEPM Meeting (eqprogram.net)

SAVE THE DATE!!
WSSPC Clearinghouse Workshop
Dates: November 9-10, 2021
Location: Virtual
More Information to Follow Next Month!

If you have an event or workshop you would like to see posted on in the WSSPC bulletins, please email us at wsspc@wsspc.org

For more information on upcoming NEHRP related events, please visit:
https://www.nehrp.gov/pdf/NEHRP_related_Events.pdf

You and/or your organization can join WSSPC as an Affiliate Member! Information on how to join can be found at:
https://www.wsspc.org/members/affiliate-members/