

## SESAC meeting November 3-4, 2022, Moffett Field

### Day 1: November 3, 2022

*In-person SESAC:* Greg Beroza, Michael Hamburger, Aaron Velasco, Rachel Abercrombie, Tim Melbourne

*In-person USGS:* Gavin Hayes, Mike Blanpied, Keith Knudsen, Ryan Gold, Jill Franks.

*Remote SESAC:* Maureen Long, John Anderson, Roland Bürgmann, Bob Pekelnicky, Anne Meltzer

*Remote USGS:* Cecily Wolfe, Bill Barnhart

*Remote Others:* Linda Rowan (Congressional Research Services).

**SESAC Updates** – Greg Beroza will be stepping down as committee chair, leaving SESAC following this meeting; Michael Hamburger will assume committee chair role. Starting with this meeting we will resume tradition of at least one in-person meeting per year, with second meeting either in-person or virtual (schedule and format TBD).

#### *Program briefing – Hayes*

- Budget summary. Includes fixed-cost increase in PB, House, and Senate marks.
- David Applegate's appointed as USGS Director. Jonathan Godt currently acting Associate Director (search in progress). Keith Knudsen stepping down as Acting Earthquake Science Center Director in early December (Christine Goulet appointed as permanent Center Director starting 12/5/22). Open position for ShakeAlert Program Manager (Doug Given acting part time).
- **Action:** Share org charts and matrix explanation. *{Mike has sent to the members.}*

#### Discussion & areas of attention:

- Long-term decrease in scientific personnel
- Extreme and problematic delays in hiring new scientific and technical staff
- Continued encouragement of DEI efforts in hiring, advancement, community engagement, and committee personnel
- Focus on DEI in recruitment, leadership training
- Retention/salary issues in areas with high cost of living
- Challenges to modernization of workplace (remote work policies, etc.)
- Engagement with minority-focused organizations
- Strategic planning for USGS involvement in collaborative NSF-funded centers and initiatives
- Proactive role in preparing for, shaping, and responding to upcoming NSF initiatives
- Ongoing concern over vacancies at high-level positions
- Specific issues related to Bay Area personnel, migration from Menlo to Moffett

#### Data/information requests:

- Long-timeline record of FTE in science centers
- Identification of specific areas of need and relation to ongoing searches/delays

#### *ANSS NSC – Maureen Long with Wolfe and Barnhart*

- ANSS branding for increase recognition. CEO working group to make recommendations.
- ShakeMap and Downstream Products Policy finalized and approved Oct 2022.
- Impact of funding changes as ShakeAlert moves into O&M phase
- Engagement with California Geol. Survey strong-motion initiative
- ShakeAlert migration to cloud
- Incorporation of social science research on communication and accessibility into operations.

#### Discussion and areas of attention:

- ShakeAlert post-alert messaging and delivery mechanisms. Necessity for clear, consistent, and reliable communication to users
- Social science research: should there be a core capability within USGS, standing associations with university experts, or other?
- Ongoing concerns about maintaining core scientific research enterprise in light of shift of seismic monitoring support towards implementing ShakeAlert at the possible detriment to both seismic networks and scientific engagement outside of the ShakeAlert footprint.

#### *External Grants Program – Jill Franks*

- Flat or effective decrease in funding
- Changes (decrease) in number of proposals submitted over time
- Potential changes in proposal format and broader impacts component
- Value of posting Final Technical Reports on USGS website and impact of accessibility requirements.
- Question: How many proposals and what level of funding is associated with the projects recommended for funding but ultimately rejected for lack of funding? **Action:** summarize and provide those numbers from the past few years.
- Discussion on how to reach diverse audience and attract proposals from diverse organizations. Need to keep persistent efforts and tracking progress.
  - Promote external grants by speaking at conferences and workshops.
- Long-term history of grant funding?
  - **Action:** summarize deep history of grants funding and provide to SESAC.
- Duration and timing of grants and its impact on academic timelines and student pipeline (one-year vs. multiple-year funding cycles)
- Impact of publication open access changes and USGS funding policy
- Potential loss of SCEC collaboration – impact on hazard assessment research

### *Earthquake Research Centers Discussion*

- “DEI” needs to be tackled broadly, with advice at levels above SESAC. Language in the NEHRP Strategic Plan is quite uneven. What appears in the NEHRP Implementation Plan will be important. Suggest there be a discussion of strategic approaches at next SESAC meeting.
- Focus in various science areas. Balance of funding in external program—is it stable across regions and topics, and how does it map against balance of investments in the internal program.

### **Day 2: November 4, 2022**

#### *Opening discussion*

- USGS organizational charts -- relationships between NHMA programs and USGS science centers. NEIC sits within the GHSC.
- **Action:** Provide long-term trends in staffing in the science centers.

#### *NSHM SC – John Anderson*

- Upcoming 2023 national NSHM update (schedule mandated by Congress). Goal to finalize calculations by March/April, allow time for community review, publication.
- Future plans include 2025 update for PR + USVI, 2026 for U.S. Pacific Terr., with long-range plan to update every ~6 years (no more than 10).
- Development of parallel research track – develop new methodologies
- Future of CEUS attention and research
- Support for continued examination of induced seismicity hazard, and integration with the NSHM.
- Efforts needed to ensure diversity and inclusion on advisory committees

#### *NEPEC – Roland Bürgmann and Mike Blampied*

- Change to status—proposal to convert NEPEC to a SESAC subcommittee.
- Members expressed support for existence of NEPEC, importance of having advice, and readiness to provide rapid advice.
- Concern and questions about how fast NEPEC can be convened and provide timely advice to USGS and other agencies.
- Dovetailing with CEPEC, which will be revised.
- Need for flexibility, response to rapidly evolving events
- **Action:** pursue options for ensuring that NEPEC can provide rapid advice to USGS, ensure engagement with SESAC.

#### *Social Science and ShakeAlert – Sara McBride*

- Jenkins, McBride, et al. 2022 paper on inclusivity in EEW messaging.
  - Access is defining in the success of EEW. Can everyone receive and understand alerts? Do people have the capacity to effectively respond?

- Reflective framework on engagement of communities potentially impacted by disaster and appropriate research design.
- Technologic privilege. Is latency related to cost of phones, e.g.?
  - Cell phone and geofence tests in Oakland and San Diego.
- Great expectations for ShakeAlert study from UW (Bostrom, McBride, et al.).
- Inclusive messages – blind and deaf users. Study by Cal State Long Beach.
- CCTV analysis on response to alerts, study led by UO (Dare Baldwin, McBride) on Anchorage and Ridgecrest. Methods being applied elsewhere.
- Media and social media analysis for Ridgecrest (McBride).
- Museums and “free-choice learning environments” (Oregon Museum of Sci and Industry). Few earthquake museum displays include preparedness info or anything on EEW.
- DYFI will have questions on EEW. Published in *Spectra*, going through PRA now.
- Computer models for protective actions.

#### *Discussion*

- Ensuring active incorporation of social science research into EEW practice
- Dependence of USGS-based research program on a single FTE (no permanent staff in this arena), heavy reliance on external collaborations
- Challenge of response to major events, incorporating social science engagement
- Relation to broader institutional issues of DEI, need for leadership from central admin
- **Action:** Detailed information on implementation of recommendations from social science research

#### *Open Discussion*

- Revisit staffing needs – limits to mission, hurdles to hiring.
- Role of social science research in USGS and EHP
- ShakeAlert and network support
- NSHM and hazard modeling work. Long-term sustainability of R&D.
- NEHRP strategic plan and whether there are conflicts with SESAC advice to EHP.
- Initiate process for review of external funding program
- Plans for future meetings: Duration? Location? Timing? Mix of in-person/virtual?