



2025 BASIN AND RANGE PROVINCE EARTHQUAKE WORKING GROUP SUMMARY

Tuesday, February 11, 2025

**Utah Department of Natural Resources Building, Auditorium
1594 W. North Temple, Salt Lake City, Utah**

WELCOME AND INTRODUCTION

Group chair Adam Hiscock (Utah Geological Survey [UGS]) called the 2025 Basin and Range Earthquake Working Group (BRPEWG) meeting to order at 8:30 a.m. Mountain Standard Time (MST). This meeting was held at the Utah Department of Natural Resources Building Auditorium, with an additional hybrid virtual component using the Google Meet platform. After welcoming Working Group members and guests, he summarized the agenda for this year's meeting and the BRPEWG's past activities, purposes, as well as goals for the future.

BRPEWG Purpose and Goals

- Establish and coordinate earthquake-hazard research agenda in the Basin and Range Province (BRP), especially collaborative work across state lines.
- Provide a space and resource for Basin and Range states to determine and discuss technical issues related to fault behavior in the Basin and Range Province.
- Share best practices and reports of ongoing work in research programs in the Basin and Range.
- Identify and prioritize BRP cross-border Quaternary faults and future paleoseismic investigations to attribute fault characteristics in Basin and Range state fault databases and the USGS Quaternary Fault and Fold Database of the United States.

U.S. Geological Survey (USGS) Update

Chris DuRoss, Intermountain West (IMW) Regional Coordinator for the U.S. Geological Survey (USGS) Earthquake Hazards Program (EHP) gave an update on the status of the External Grants Program for the last (Fiscal Year [FY] 2024) and current (FY2025) fiscal year funding cycles, as well as information on the upcoming (FY2026) funding announcement for proposals. The FY2026 funding announcement is expected to come out in mid-March 2025, with proposals due in mid-May 2025. He mentioned the USGS is currently soliciting feedback on the External Grants process and IMW research priorities, and to reach out to him via email (cduross@usgs.gov) with feedback.

Updates from Basin and Range State Geological Surveys

Presentations available at BRPEWG website:

<https://geology.utah.gov/hazards/info/workshops/working-groups/basin-and-range-earthquakes/>

- Arizona Geological Survey – Jeri Young Ben-Horin (Virtual)
- Colorado Geological Survey – Enrique Chon and Jim McCalpin (Virtual)
- Idaho Geological Survey – Zach Lifton
- Montana Bureau of Mines and Geology, Geohazards Program Update – Yann Gavillot
- Montana Bureau of Mines and Geology, Seismic Network Update – Mike Stickney
- Nevada Bureau of Mines and Geology – Rich D. Koehler
- Nevada Seismological Laboratory – Christie Rowe
- New Mexico Bureau of Geology and Mineral Resources – Dan Koning

- Oregon Department of Geology and Mineral Industries – Lalo Guerrero
- Utah Geological Survey – Adam I. Hiscock
- Wyoming Geological Survey – James P. Mauch

PRIORITY FAULTS FOR INTERMOUNTAIN WEST STATES

Chris DuRoss (USGS) led a discussion in the afternoon addressing the topic of creating a “Top 5” faults of concern list for each Intermountain West (IMW) state represented in the working group meeting. He had previously requested that each state submit a list of five faults for priority study before the meeting. These “Top 5” fault lists were discussed and compiled, and Chris requested that each state submit their list to him by February 26, 2025. These lists of faults will be included on a citable USGS ScienceBase data release website (see citation and DOI URL below).

DuRoss, C.B., 2025, Priority faults for improving seismic hazard models in the Intermountain West region, version 1.0: U.S. Geological Survey data release, [doi:10.5066/P13XVWR7](https://doi.org/10.5066/P13XVWR7).

URL: <https://www.sciencebase.gov/catalog/item/67912c5ad34ea6a4002bf899>

This data release includes a list of high-priority hazardous faults and associated spatial data for the IMW region of the United States. These are the top five faults or regions of concern per IMW state, based on the 2025 (version 1.0) meeting of the Basin and Range Province Earthquake Working Group. In general, the list includes important, understudied faults where additional research would help to improve regional earthquake rupture forecasts and hazard modeling, reduce earthquake risk, and expand our knowledge of earthquake processes in the IMW region. This information will be used to guide IMW-specific priorities for research included in the USGS Earthquake Hazards Program external research priorities.

WORKING GROUP PRODUCTS AND RELATED DATA

In addition to the IMW priority faults data release available through the USGS, the final agenda, speaker presentations, and this summary document are available on the BRPEWG web page at <https://geology.utah.gov/hazards/info/workshops/working-groups/basin-and-range-earthquakes/>.

MEETING ATTENDANCE

Registration for the meeting was completed through Eventbrite. Below is a list of in-person and virtual attendees who registered for the meeting. Specific attendance was not taken.

In-Person Attendees:

Adam McKean	Utah Geological Survey
Adam Hiscock	Utah Geological Survey
Alex Hatem	U.S. Geological Survey
Christie Rowe	Nevada Seismological Laboratory
Christopher DuRoss	U.S. Geological Survey
Daniel Koning	New Mexico Bureau of Geology
Darlene Batatian	Utah Geological Survey
Eduardo Guerrero	Oregon Department of Geology and Mineral Industries
Emily Morton	University of Utah Seismograph Stations
Emily Kleber	Utah Geological Survey
Greg McDonald	Utah Geological Survey
Ivan Wong	Lettis Consultants International
James Pechmann	University of Utah
James Mauch	Wyoming State Geological Survey
Mandy Willingham	Montana Bureau of Mines and Geology
Mark Zellman	BGC Engineering
Michael Hansen	RB&G Engineering Inc
Mike Stickney	Montana Bureau of Mines and Geology
Nathan Toke	Utah Valley University
Rachel Adam	Utah Geological Survey
Rich Giraud	Utah Geological Survey (Retired)
Rich Koehler	Nevada Bureau of Mines and Geology, University of Nevada Reno
Sean Hutchings	University of Utah
Steve Bowman	Utah Geological Survey
Yann Gavillot	Montana Bureau of Mines and Geology
Zach Lifton	Idaho Geological Survey

Virtual Attendees:

Alba Rodriguez Padilla	Utah State University
Ana Vargo	U.S. Department of Agriculture - Natural Resources Conservation Service
Austin Elliott	U.S. Geological Survey
Ben Laabs	U.S. Bureau of Reclamation
Carl Ege	Utah Division of Water Resources
Chuck Williamson	Utah Dam Safety / Division of Water Rights
Daren Rasmussen	State of Utah

David Dinter	University of Utah
Ellen Lamont	U.S. Bureau of Reclamation
Enrique Chon	Colorado Geological Survey
Fan-Chi Lin	University of Utah
HyeJeong Kim	University of Utah
Jeri Ben-Horin	Arizona Geological Survey, University of Arizona
Jim McCalpin	Colorado Geological Survey
Judith Zachariasen	California Geological Survey
Kris Hornsby	BGC Engineering
Nadine Reitman	U.S. Geological Survey
Nick Ellett	U.S. Bureau of Reclamation
Philip Pearthree	Arizona Geological Survey, University of Arizona
Seth Dee	Nevada Bureau of Mines and Geology
Srisharan Shreedharan	Utah State University
Stormie Elmer	Utah Geological Survey
Susan Jänecke	Utah State University
Tabor Reedy	Bureau of Reclamation
Urbi Basu	New Mexico Bureau of Geology
Wade Renard	IGES, Inc.
William Lund	Utah Geological Survey (Retired)