



2022 UTAH EARTHQUAKE WORKING GROUPS— UTAH QUATERNARY FAULT PARAMETERS WORKING GROUP VIRTUAL MEETING AGENDA

Wednesday, March 2, 2022

The 2022 Utah Quaternary Fault Parameters Working Group (UQFPWG) meeting will occur, virtually, on Wednesday, March 2, 2022, from 1 to 3 p.m. MST. This shortened meeting will be held virtually on the Zoom platform.

UQFPWG Meeting (2 hours)

1:00 p.m. – 3:00 p.m. (MST)

General Utah Earthquake Geology Updates - 10-Minute Lightning Talks

- Emily Kleber – Utah Geological Survey
 - Welcome and Introduction
- Chris DuRoss – U.S. Geological Survey
 - Earthquake Hazards Program – External Grants Update
- Alex Hatem – U.S. Geological Survey
 - National Seismic Hazard Maps Update
- Nathan Toke – Utah Valley University
 - Timpanogos and Provo Peak Massifs – New Fault Mapping
- Ivan Wong – Lettis Consultants International
 - Warm Springs Fault - East Bench Fault Stepover - New Research
- Adam Hiscock – Utah Geological Survey
 - Utah Geological Survey Quaternary Fault Mapping Update

15-minute break

30+ minutes (Remainder of Meeting) – Discussion of Priority Faults for 2023

UQFPWG 2022 FAULT INVESTIGATION PRIORITIES

The Working Group's list of highest priority fault investigations is largely the same from 2021, with special emphasis on bolded items, which were discussed in detail during the 2021 UQFPWG meeting.

- Acquire new paleoseismic information for areas with ongoing or completed lidar fault mapping projects:
 - **West Valley fault zone – Granger and Taylorsville faults**
 - Cache Valley faults – East Cache and West Cache fault zones
 - Five central segments of the Wasatch fault zone – Brigham City, Weber, Salt Lake City, Provo, and Nephi segments
 - Oquirrh fault zone
 - Sevier fault

- “Salvage paleoseismology” (i.e., earthquake timing investigations as rapid development is encroaching on un-modified paleoseismic trenching sites):
 - **West Valley fault zone – Granger and Taylorsville faults**
 - Cache Valley faults – East Cache and West Cache fault zones

- Use recently acquired lidar data to more accurately map the traces of the:
 - Scipio Valley faults
 - Beaver Basin faults (partial coverage)
 - **Hansel Valley faults**
 - **Paunsaugunt fault**
 - Mineral Mountains west-side faults
 - Stansbury fault zone

- **Opportunistic trenching sites – Funding for dating samples left over from other projects that have been stored and would be useful**

- **Post-Magna earthquake research – Use new geophysical methods to collect more data about the subsurface of the Salt Lake Valley**

This does not include other priorities that have carried over from previous years. Those are identified in table 2 from the 2021 UQFPWG meeting summary (https://geology.utah.gov/docs/pdf/UQFPWG-2021_Summary.pdf).

2023 UQFPWG FAULT INVESTIGATION PRIORITY SUGGESTIONS (from Google Form):

- 2020 Magna Earthquake – David Dinter (University of Utah)

- Utah Lake faults – Nathan Toke (UVU) & Darlene Batatian (Terracon Consultants, Inc.)
 - Darlene Batatian mentioned prioritizing these faults considering the recent news related to the development of Utah Lake.

- West Mountain fault – Nathan Toke (Utah Valley University)

- Warm Springs/East Bench stepover – Ivan Wong (Lettis Consultants International)

- Dayton-Oxford fault of the West Cache fault zone – Susanne Janecke (Utah State University)
- Oquirrh and Topliff Hills fault zones – Michael Bunds (Utah Valley University)
 - Mike and a student (Charles Memmott) have been working on a dataset of scarps and shorelines along the Oquirrh and Topliff Hills fault zones with implications for surface rupturing earthquakes.
- Joes Valley fault zone – Greg McDonald (Utah Geological Survey) and Lucy Piety (U.S. Bureau of Reclamation)
 - Greg mentioned the U.S. Bureau of Reclamation (BOR) has transferred ownership of Joes Valley dam to Emery County, so the paleoseismic trench dating samples collected may not be dated by the BOR. Suggest that it may take external funding to date the samples and analyze the results.
 - Lucy has informed us their samples have been processed, but they have no additional funding to finish working on the project. They have been working on it as time allows.