



**2021 UTAH EARTHQUAKE WORKING GROUP—
UTAH QUATERNARY FAULT PARAMETERS WORKING GROUP
VIRTUAL MEETING AGENDA
Tuesday, February 2, 2021**

REGISTRATION - <https://2021uqfpwg.eventbrite.com>

The 2021 Utah Quaternary Fault Parameters Working Group (UQFPWG) meeting will occur virtually on Tuesday, February 2, 2021. This meeting is separated into a morning session with presentations, and two afternoon sessions with presentations and discussion. The format of this meeting will allow participants to attend the parts that are most relevant to them and provide flexibility with the virtual format. Please check the EventBrite site for timing of sessions and connection information.

**Morning Session: Recent Studies in Utah (2 hours)
8:00 am to 10:00 am (MST)**

General Utah Earthquake Geology Updates— 15-minute presentations

- Welcome, Overview, Technical Overview, and Review of Last Year: Emily Kleber, Utah Geological Survey
- Update on USGS External Grants Program: Chris DuRoss, Intermountain West Regional Coordinator, U.S. Geological Survey
- Earthquake Geology Database Updates for the 2023 National Seismic Hazard Model: Alex Hatem, U.S. Geological Survey
- Preliminary Evaluation of Quaternary Activity on the Duchesne-Pleasant Valley Fault, Uinta Basin, Utah: Julia Howe, U.S. Bureau of Reclamation
- Paleoseismic Results from the Topliff Hills Fault, Rush Valley, Utah: Nathan Toke, Utah Valley University
- Recent Quaternary Fault Mapping in Utah: Adam Hiscock, Utah Geological Survey
- Fault Investigation Along the Central Weber Segment of the Wasatch Fault, Layton, Utah: Evidence for 4-5 Recent Paleoseismic Events: Robert Givler, Lettis Consultants International
- Group Discussion

**Morning Session: Buried Urban Faults and Special Study Zones (1 hour)
10:30 am to 11:30 am (MST)**

Presentations— 15 minutes

- Is There a Potential Surface Fault Deformation Hazard in Downtown Salt Lake City?: Ivan Wong, Lettis Consultants International
- Seismic Land Streamer Results Highlight Earthquake Risks for the Salt Lake City Urban Center: Lee Liberty, Boise State University

Group Discussion

- What is the potential for primary and secondary surface fault displacement and deformation in downtown Salt Lake City?

- Given the large uncertainties regarding such potential, what investigations and mitigative measures should be taken to reduce the potential hazard?

Afternoon Session: Magna Earthquake (2 hours)
1:00 pm to 3:00 pm (MST)

Presentations— 15-minute presentations

- Backprojection Imaging of the 2020 Magna, Utah, Earthquake Using a Local Dense Strong Motion Network: Maria Messimeri, University of Utah Seismograph Stations
- Coseismic Fault Slip and Afterslip Associated with the 18 March 2020 M 5.7 Magna, Utah, Earthquake: Fred Pollitz, U.S. Geological Survey
- Hypothetical Structural Model for the March 18 M 5.7 Magna, Utah, Earthquake: Adam McKean, Utah Geological Survey
- Alternative Models for the Subsurface Geometry of the Wasatch Fault in Light of the 2020 Magna, Utah, Earthquake: James C. Pechmann, University of Utah Seismograph Stations

Group Discussion Questions

- What is the likelihood that the Magna earthquake occurred on a subsidiary fault in the hanging wall of the Wasatch fault? And if it did, does this model require that the underlying Wasatch fault have a shallower dip than the subsidiary fault on which the Magna earthquake occurred?
- Does the existence of the active West Valley fault zone require a listric geometry for the Wasatch fault, i.e., a decrease in the dip of the Wasatch fault below its intersection with the West Valley fault zone? Or are there alternative structural models for the presumed intersection between these two faults?
- More questions, TBD.

Wrap Up (30 minutes)
3:30 pm to 4:00 pm (MST)

- Working Group members 2022 fault priorities discussion for future research.

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