

CEHMC July 2020 notes

July 16, 2020

Remote Zoom meeting

Attendees: Rob Jackson, Matt Morgan, Jackson Bell, Ivan Wong, Alex Hatem, Allison Shumway, Anne Sheehan, Chuck Mueller, Holly Janowicz, Kyren Rix Bogulub, Michael Haughey, Steve Board, Vince Matthews, Bob Kirkham, Mark Petersen, and Mark Zellman.

Approval of minutes from 21 May 2020 meeting motioned, seconded, and approved.

Agenda Items:

1. **Presentation by Jackson Bell, MS student at CU Boulder on “*Seismic Activity in the Northern Sangre de Cristo Fault Zone*”**

Jackson presented his work to evaluate seismic activity on the northern Sangre de Cristo fault that he performed for his MS Thesis at CU Boulder. His study included 1) Installation of 3 new seismometers in the area to supplement the single station (US.SDCO)., 2) development of an automated phase picker to detect small earthquake events, 3) and relocation of 717 earthquakes between magnitude (M) 0 – 3.

This study determined that 1) sporadic earthquakes have been occurring on the NSDC fault zone since at least 2014; 2) earthquakes increased significantly in 2019 and the rate has remained steady, 3) a majority of the June – Sept 2019 earthquakes appear to be associated with an unnamed west dipping normal fault to the east of the NSDC, 4) most seismic activity in the area are repeating earthquakes, potentially caused by deformation of the Rio Grande Rift.

Comments raised by CEHMC following the presentation included:

- B. Kirkham mentioned that Jackson’s thesis should be available online. M. Zellman was able to find a copy at ProQuest but was unable to find a freely available copy via CU Boulder.
- The lack of lidar data has prevented the search for a related surface fault; however, M. Morgan pointed out that CGS has recently obtained lidar for the area.
- There are no faults in the USGS Quaternary Fault and Fold database or NSHM associated with the source of these earthquakes.

2. **Critical Facilities Inventory Subcommittee**

NETAP training took place June 12-15, 2020. Training was led by K. Porter and included:

- FEMA E-74, Reducing the Risks of Nonstructural Earthquake Damage

- FEMA P-154 and ROVER, Rapid Visual Screening of Buildings for Potential Seismic Hazards (Third Edition), and Rapid Observation of Vulnerability and Estimation of Risk

3. Update of CGS/CEHMC website:

- The website was updated and now includes the CEHMC minutes archive.
- Kyren mentioned that Utah Seismic Safety Commission has lots of content and suggests this to be a model we could follow. She will lead the effort to improve CEHMC website content.
- R. Jackson mentioned that the Alaska seismic commission also has well-developed content to consider and that a link to the Western States Seismic Policy Council (WSSPC) website should be provided.
- M. Morgan suggests adding a link to the CGS bookstore.

4. Brochure on Colorado earthquake hazards

- The brochure is complete and available at the CGS bookstore. Copies have been printed, and hard copies are available by request in volumes of 10 or more.

5. 2019 Cheraw fault trenching update

- M. Zellman reports no significant new information since the last update. Work is focused on resolving the geochronology and development of a manuscript.

6. Pre-Disaster Mitigation (PDM) plans. CEHMC support to CGS.

- Review of hazard mitigation plans – CEHMC asked to meet with consultants to review the plans.
- CEHMC was asked to review a draft plan for NE Colorado.
- CEHMC will provide review input for CGS, but the process has not yet been defined.
- S. Board has requested that CEHMC provide guidance on evaluation of the earthquake hazard mitigation plans. M. Zellman will look into this.

7. Planning 2020 ShakeOut activities

- Deferred for later meeting.

8. Possible Future Speakers

- Kathleen Wilmes of DHSEM on Utah Wasatch Fault Earthquake preparation, a Colorado Perspective.
- Bob Kirkham
- Potential join meeting with Utah Seismic Policy Council

9. 2020 Remaining Meeting Schedule

- Sept 17, and Nov 19.