CEHMC March 2020 notes
March 19, 2020
Phone-in meeting

Attendees
Wayne Charlie, Mark Zellman, Bob Kirkham, Rob Jackson, Linda Rowan, Mike Haughey, Sean McGowan, Matt Morgan, Will Levandowski

Additions to agenda CGS Website updates: USGS eternal grants

Approval of minutes from the January 23, 2020 meeting Approved and seconded.

Critical Facilities Inventory Subcommittee

> *NETAP training:* FEMA E-74 and FEMA P-154, June 12 and 15 (possibly virtual training)

Brochure on Colorado earthquake hazards. Brochure is nearly ready**.** Matt M. will provide a copy to the group.

Update on Cheraw Fault trench re-excavation, Fall 2019 (Mark Zellman)
OSL ages and radiocarbon are back → OxCal
Manuscript in preparation (Ostenaa)
Additional events compared to Crone and Machette (1997) → Slip rate and recurrence up
Per-event offsets are small, roughly a meter or less. Therefore, these events are not full-length ruptures. Nevertheless, there are no obvious segment boundaries along the fault to preclude a full-length rupture
Just SW hill mapped as Rocky Flats: OSL is younger (ages also from Al-Be)
Funding (from CGS?) for cosmogenic Be profile?

Discussion of USGS External Grants solicitation
Input from the group—not the CEHMC as an entity but as a set of individuals with interest and expertise in earthquake hazards specific to Colorado—on outstanding questions and paths forward for improved understanding of CO earthquake hazards and/or risk reduction

----------Golden Fault----------
Rob Jackson: While with City of Denver building dept, DIA control tower was being designed for Zone 2 (Denver building code). Golden Fault was identified as possible contributor to the risk.
Matt Morgan: Literature search 1980s report mapping Ute Pass and Oil Creek…maybe we don't know enough about the research that's been done. Sometimes,
Just start with a basic literature review: Kirkham and Morgan did a critical review
How about a thorough review? A lot of work has been done—Kirkham, Scott, Rocky Flats, …—but it hasn't been synthesized

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Kirkham: working on paper on Jarre Creek Fault trenches (2013?)

--------- Gross synthesis of potentially active Front Range-bounding faults----------
Kirkham started paper to address all of the faults on either side of the Front Range: Can we all get together and synthesize what we do know?
West side faults are accepted as Q-active, but no real consensus on those on the eastern side
All screwed up by confusing ages of terraces along the eastern front: Redefining Quaternary stratigraphy will be critical: Need money for dating! (OSL and a few radiocarbon)
Several faults have been recently identified along the western flank of the Front Range
Kirkham: The difference could be in the Laramide structure

McGowan: Funding through FEMA and other sources--Larger pots go through building code departments

-------- email response from Keith Porter ----------
(Here, summarized by Levandowski)
CEHMC could work on:
earthquake safety policy and communication, especially, workshops etc. to address
earthquake hazard mitigation, response, preparedness, and resilience,
and cross-agency message coordination.
We already have a head start on and could enhance the 4-page brochure we've been collaborating with CGS on: It's already strong on where the hazard is; we could enhance how it addresses mitigation, response, preparedness, and resilience.
A possible work plan to create material for stakeholders:
Step 1 We could write the new material to inform
building owners (e.g., BOMA),
tenants (e.g., Colorado Small Business Development Center),
cities (especially the smaller ones whose codes lag behind current),
and government and NGO agencies
(e.g., Colorado Department of Homeland Security and Emergency Management,
Colorado Hospital Association,
Colorado Department of Public Education).

Maybe there could be a short section--a column or so--aimed at each of several constituencies with common needs.
We could describe and point to low-cost resources (e.g., FEMA P-154, ATC-20, FEMA E-74, *Natural Hazard Mitigation Saves*) they could draw on to assess and mitigate risk.

Step 2 Workshop the literature with a few members of each target group, cross-branding with other Colorado agencies.

Step 3 Revise the literature based on the workshop and distribute the revised brochure through the workshop attendees to their respective groups.

Step 4 Then an event such as an earthquake fair to bring together the people who need help (the membership at larger of those target groups) and the people who can help (Colorado Geological Survey, Structural Engineers Association of Colorado, American Society of Civil Engineers, etc.).

If at all possible, foster multi-peril coordination, e.g., with the Association of State Floodplain Managers, if it wouldn't turn off USGS reviewers. (*WL note: Multi-hazards seem to be of increasing interest to USGS. Coordinating with other agencies would be very helpful.*)

Odds and ends

A brief discussion of the results of and response to Salt Lake City M5.7 (March 18, 2020)
Agreement among the group to try to ahve call-in option for future meetings for Kirkham, Charlie, or others who are not in the Denver Metro area

Date of next meeting: May 21, 2020

Keith Porter will speak on the NIBS report "Natural Hazard Mitigation Saves" and how the CEHMC could promote code adoption and retrofits using the document.