

Sean McGowan, PE

sean.mcgowan@fema.dhs.gov | Denver, CO 80225 | 303-235-4681

Civil Engineer | PE

Innovative Professional Engineer dedicated to managing earthquake mitigation and robust building code adoption and enforcement.

- Exhibits expert knowledge of earthquake hazard, risk analysis, and building codes.
- Strong track record collaborating with teams of engineers, scientists, and IT specialists in the delivery of engineering web tools, building upon Master's education in Civil Engineering and 8+ years of directly related work experience. Proven leadership, teamwork, and research skills.

Experience

FEDERAL EMERGENCY MANAGEMENT AGENCY, DFC, Bldg. 710A, Denver, CO 80225 4/2016 to Present
Earthquake Program Manager | Building Science Lead, FEMA Region VIII

Report to Risk Analysis Branch Chief. Collaborate regularly with state program managers, FEMA Headquarters, USGS, universities, research centers, non-governmental organizations, and the private sector.

- Serve as the subject matter expert for FEMA response efforts in the event of an earthquake in the Region.
- Develop and execute strategic plans for earthquake mitigation and building code adoption & enforcement.
- Guide exercise scenario selection and perform Hazus risk analyses for scenario earthquakes.
- Advocate for retrofit and other mitigation efforts in earthquake-prone areas.
- Partner with State and Local leaders in the pursuit of stronger building code adoption and enforcement.
- Deliver training and outreach to State and Local partners on building code and earthquake-related topics.
- Trained to perform damage assessments after major disasters.

U.S. GEOLOGICAL SURVEY, 1711 Illinois St., Golden, CO 80401 1/2009 to 4/2016
Civil Engineer, National Seismic Hazard Mapping Project and Engineering Risk Assessment Project

Report to Research Structural Engineer. Interact regularly with industry, FEMA, DoD, BLM, Army Corps of Engineers, the UN, state and city governments, academia, research centers, foreign governments, & nonprofits.

- Identify and implement steps needed to monitor and evaluate effectiveness of earthquake-related *USGS* maps, webpages, and web applications in enhancing earthquake safety and mitigating earthquake risk.
- Serve on USGS study groups to determine future directions in earthquake science and communicating earthquake risk to the building industry, engineering community, and the general public.
- Coordinate team of IT specialists and engineers in the development of earthquake engineering web applications for use with building codes (such as the *International Building Code*) and calculating risk of damage for *HAZUS* building types. These applications target key NEHRP objectives.
- Technical review of *HAZUS* studies performed by industry contractors for USGS publications.
- Use *HAZUS*-compatible data to calculate earthquake risk to portfolios of buildings.
- Daily interaction with building industry and engineering community to inform them of cutting-edge innovations and developments in the physical sciences that impact earthquake design and building codes.
- Authored reports on *U.S. Seismic Design Maps* and *Worldwide Seismic Design Tool* web applications (in review). Wrote and presented conference papers on behalf of USGS.

Education | Certifications | Skills

Licensed Professional Engineer - Colorado PE# 0049534

Safety Assessment Program (SAP) certified structural inspector – ID#: 82606

UNIVERSITY OF COLORADO - Master of Science, Civil Engineering 5/2009

Masters Thesis: Extracting Values of Some Key HAZUS-MH Seismic Vulnerability Parameters from Dynamic Test Results, with Application to Adobe Dwellings. Advisor: Keith Porter, Ph.D.

PRINCETON UNIVERSITY - Bachelor of Science, Civil & Environmental Engineering 6/2006

Proficient in: MATLAB, MS Office, C. Experience in: HAZUS, ArcGIS, SAP 2000, R.

Foreign Languages: Intermediate Spanish. Sustainable development projects in: Mexico, Peru, Ethiopia.

Publications: *FEMA 366 - HAZUS Multi-Hazard Estimated Annualized Earthquake Losses for the United States Using structural damage statistics to derive macroseismic intensity within the Kathmandu valley for the 2015 M7.8 Gorkha, Nepal earthquake*