

**RICH D. KOEHLER, III, Ph.D., P.G.**  
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## **CUMMULATIVE RESUME**

### **EDUCATION**

University of Nevada Reno, NV, Ph.D. 2009  
Humboldt State University, Humboldt, CA: *M.S.*, Environmental Systems (Geology), 1997  
University of California, Santa Cruz, CA: *B.A.*, Earth Science, 1992

### **DISSERTATION**

Late Pleistocene regional extension rate derived from earthquake geology of late Quaternary faults across Great Basin, Nevada between 38.5° and 40°N latitude, University of Nevada Reno, Reno, Nevada, 242 p. (committee: S.G. Wesnousky, J.G. Anderson, C. Kreemer, T. Bullard, R. Siddharthan).

### **MASTERS THESIS**

Terrace formation, drainage adjustment, and tectonic geomorphology of the Van Duzen/North Fork Eel Rivers headwater region, northern California, Humboldt State University, CA. (Committee: Gary Carver, Harvey Kelsey, Bud Burke).

### **PROFESSIONAL EXPERIENCE**

University of Nevada, Reno, Mackay School of Earth Sciences and Engineering, and Nevada Bureau of Mines and Geology, Assistant Professor, 2015-2020, Associate Professor, Dec. 2020-date  
Koehler Geohazards, LLC, Founder and Principal Geologist, 2015-date  
University of Alaska, Fairbanks, Geology and Geophysics Dept., Affiliate Faculty, 2011-2015  
Humboldt State University, Adjunct Faculty, 2009-2016  
State of Alaska, Dept. of Geological and Geophysical Surveys, Earthquake Geologist 2009-2015  
Center for Neotectonic Studies, University of Nevada, Reno, Research Assistant, 2004-2009  
William Lettis & Associates, Inc., Walnut Creek, CA, Project Geologist, 1999-2004  
US Geological Survey, project paleoseismologist, 10 trenches, Puget Sound, Wa, 1998-2003  
Natural Resources Management Corporation, Eureka, CA, Staff Geologist, 1998-1999  
Louisiana-Pacific Corporation, Calpella, CA, Watershed Geomorphologist, 1997  
Humboldt State University, Humboldt, CA, Research Assistant, 1994-1997  
USDA Forest Service, Cave Exploration Team, Prince of Wales and Dall Islands, Alaska, 1993

### **RESEARCH INTERESTS AND REPRESENTATIVE EXPERIENCE**

Over the last 25 years my work has focused on earthquake geology, Quaternary geology, paleoseismology, geomorphology, and engineering geology. I have experience evaluating regional neotectonics, as well as paleoseismic histories on individual faults, and use a variety of techniques including air photo and lidar interpretation, Quaternary geomorphic mapping, soil stratigraphy, trenching, and geochronology to assess geohazards in a wide variety of terrains.

I have conducted paleoseismic studies funded by the U.S. Geological Survey (NEHRP) and the National Science Foundation (NSF) throughout the western U.S. including faults in California, New Mexico, Washington, Alaska, and Nevada. My international experience includes projects in Turkey, Taiwan, Guatemala, Guinea, Jamaica, Haiti, and Kyrgystan. I have also conducted geologic studies for large infrastructure projects including: (1) potential dam sites in the northern Sacramento Valley, California for the California Department of Water Resources; (2) Pacific Gas and Electric Company's Diablo Canyon Nuclear Power Plant, San Luis Obispo, California; (3) Entergy Potomac's Grand Gulf nuclear power plant expansion in Mississippi; (4) Baku-Tbilisi-Ceyhan (BTC) crude oil pipeline, Turkey and (5) multiple proposed natural gas pipelines in Alaska.

My current work is focused on; (1) researching active faults and Quaternary geology in the Great Basin and surrounding region to better characterize seismic hazards, (2) conducting quadrangle scale mapping in Nevada; and (3) assessing geologic hazards for a variety of infrastructure projects.

### **TEACHING EXPERIENCE**

Field Geology (GEOL 450), University of Nevada, Reno, Spring 2021, 2020, 2019, 2018, and 2017  
Mapping faults from geomorphology (GEOL 701J) University of Nevada, Reno in conjunction with ASU  
Fall 2020.

Summer Field Geology (GEOL 451), Quaternary section, University of Nevada, Reno, Summer 2020,  
2019, 2018, 2017, and 2016.

Earthquake Engineering (GE 479), two lectures, UNR Spring 2019

Advanced Geology-Paleoseismic trenching (GEOL701j), UNR, Fall 2018

Special Problems/Independent Study (GEOL 495), University of Nevada, Reno, Spring 2018

Special Problems/Independent Study (GEOL 495), University of Nevada, Reno, Fall 2017

Introductory Field Geology (GEOL 260), University of Nevada, Reno, Spring 2016

Instructor (U. of West Indies): Spring 2009, One day field Neotectonics course, Jamaica

Teaching Assistant (HSU): Summer 2006 and 2007, Field Camp, Quaternary Section

Teaching Assistant (UNR): Spring 2007, Introductory Geology

Teaching Assistant (UNR): Spring 2006 and Spring 2007 Photo Geology

Teaching Assistant (UNR): Fall 2006, Quaternary Field Mapping

Instructor (UNR): Spring 2005, Introductory Geology

### **GRANTS AND CONTRACTS**

- 2023- US Geological Survey, STATEMAP, Project 2, Quaternary mapping of the Upsal Hogsback quadrangle (\$159,045k, Koehler \$30k) and Project 4, Refined fault mapping on lidar datasets of the Bonham Ranch and Dry Valley fault systems (\$31k, Koehler \$27k).
- 2022- Lidar fault mapping support for Orogen Royalties Callaghan Property, funded by Renaissance Exploration, Inc. (\$16,504).
- 2022- US Geological Survey, STATEMAP, Project 5, Quaternary fault mapping of the Bonham Ranch and Dry Valley-Smoke Creek Ranch fault zones in the Sheepshead Spring, Sand Pass, Red Rock Canyon, and Parker Canyon 7.5' quadrangles, 1:24,000 scale (\$53,948, Koehler \$32k) and Project 2, Geologic maps of the Bedell Flat and Spanish Springs Peak 7.5' quadrangles, 1:24,000 scale (\$121,926, Koehler ~50k). Part of larger STATEMAP proposal (total \$691,000).
- 2021- US Geological Survey, NEHRP, Defining slip rates using <sup>10</sup>Be surface exposure dating for the Polaris and Truckee faults near Truckee, California. Collaborative with North Carolina State University (L. Owen; P. Figueiredo) and Oxford University (I. Pierce) (\$54,000).
- 2021- Southern California Earthquake Center (SCEC), Dating prior earthquakes along faults of the 2019 Ridgecrest sequence. Research Collaboration UNR and Arizona State University (~\$25,000).

- 2021- StateMAP, Geologic mapping in Reno-Carson City urban area: Bedell Flat, Spanish Springs Peak, Como, and Parran 7.5' quadrangles (\$188,894, Koehler 23 days, \$61,000), part of larger StateMAP proposal, total amount of grant \$518,767.
- 2020- Nevada Department of Emergency Management, Earthquake Direct State Assistance Grant, Documentation of the M6.5 Monte Cristo earthquake: Impacts and lessons learned for Nevada, Koehler 10 days (\$68,540).
- 2020- US Geological Survey, NEHRP, Liquefaction susceptibility mapping in the Reno-Sparks metropolitan area, Nevada (\$52,362).
- 2020- US Department of Energy, **IN**novative **Geothermal** Exploration through **Novel Investigations Of Undiscovered Systems (INGENIOUS)**. PI Ayling, multiple contributing partners, Koehler, 3 months (Lead compilation, mapping, and attribution of Quaternary faults and earthquake data) (\$10M).
- 2020- US Geological Survey, STATEMAP Proposal, Geologic mapping in Reno-Carson City urban area: north half of the Verdi 7.5' quadrangle (\$28,644), part of larger StateMap proposal, total amount of grant \$299,974.
- 2020- Nevada Office of Nuclear Projects, Assessment of previous seismic hazard studies, Yucca Mountain, Nevada: Scoping report on applications of new technologies to reduce critical data gaps (\$100,000).
- 2020- Southern California Earthquake Center (SCEC), Trenching the causative faults of the 2019 Ridgecrest sequence, Collaborative proposal with ASU, (\$41,000).
- 2019- Southern California Earthquake Center (SCEC), Rapid proposal to date deposits and evaluate paleoearthquakes along the July 5, 2019 Ridgecrest earthquake rupture, (\$2000 field support)
- Mission Support and Test Services, LLC: Site-Directed Research and Development (SDRD projects FY 2020: Invited Proposal, Geothermal Play Fairway Analysis of the NNSS: Using an Innovative GIS-Based Data Integration and Geostatistical Methodology to Assess the Geothermal Energy Potential of the NNSS, Koehler 25 days, (\$19,107) not awarded.
- 2019- Department of Energy, Regional Carbon Sequestration Partnership Grant, Multi-state partnership to evaluate carbon storage potential in geologic basins in Nevada, total grant, \$233,521, 14 days for Koehler (\$17,520) not awarded.
- 2020- US Geological Survey, NEHRP, Paleoseismic trenching investigation of the Dog Valley fault (\$68,687).
- 2019- US Geological Survey, NEHRP, Fault trace mapping and paleoseismic investigation of earthquake history and recurrence along the Bonham Ranch fault zone, north of Reno, Nevada, (\$65,597).
- 2019- Nevada Department of Emergency Management, Earthquake Direct State Assistance Grant, Development of a Nevada specific post-earthquake technical clearinghouse web site and operations plan (\$45k).
- 2019- US Geological Survey, STATEMAP, New geologic mapping in the Verdi quadrangle, part of larger StateMAP proposal award (\$54,800), Koehler 30% (\$25,971), total award \$157,631.
- 2018- US Geological Survey, NEHRP, Nevada Quaternary fault database: A new publically accessible web-based resource (\$58,490).
- 2018- US Geological Survey, STATEMAP, New geologic mapping in Reno-Carson City urban area: Granite Peak 7.5' quadrangle (\$53,728) and Washoe City 7.5' quadrangle (\$53,795), part of larger NBMG, StateMAP proposal.
- 2017- UNR/DRI Joint Postdoc Competition, Climatic, tectonic, and geochronologic studies of alluvial fans within the western Basin and Range province, Nevada, (50k/annum, 2 years) not awarded.

- 2017- US Geological Survey, NEHRP, New lidar mapping and paleoseismic characterization of the Petersen Mountain fault zone, north of Reno, Nevada (\$62,683).
- 2017- US Geological Survey, NEHRP, Development of an earthquake chronology and recurrence data for the southern Warm Springs Valley fault – using high resolution lidar and trenching, Washoe County, Nevada (\$40,526)
- 2018- US Geological Survey, NEHRP, 2018 Working Group on Nevada Seismic Hazards (\$22,452).
- 2017- Fault trenching research project, Barrick Goldstrike, awarded March 2017 (\$25,000)
- 2017- NSF, Investigating the temporal continuity of slip rates distributed across the Great Basin, USA, and the relationship of active faults to the evolution of tectonic deformation (\$272,000) not awarded.
- 2017- US Geological Survey, STATEMAP, Granite Peak quadrangle, Koehler ~10%, part of larger grant (\$299 k)
- 2016- Paleoseismic characterization of the Petersen Mountain fault zone, north of Reno, Nevada (\$70,089) not awarded.
- 2014/2015- Geologic hazards study, ASAP natural gas pipeline, Phases 4 and 5 (\$170 k)
- 2014- Fault characterization and Geologic Hazards of the Yukon Crossing Area (\$630 k)
- 2014- Technical review of fault crossings Donlin Gold Gas line (\$25k)
- 2013- Geologic hazards study, ASAP natural gas pipeline, Phase 3 (\$400 k)
- 2013- Technical Review of Lake Clark fault zone for the Pebble Partnership (\$15 k)
- 2012- Geologic hazards study along gas pipeline Livengood to Anchorage, Phase 2 (\$202 k)
- 2011- Technical Review of Susitna-Watana hydroelectric Project, Alaska (\$30 k)
- 2011- Geologic hazards along gas pipeline and lidar, Phase 1, Anchorage to Livengood (\$556 k)
- 2004- US Geological Survey, NEHRP, San Gregorio fault study (\$80,000)
- 2003- US Geological Survey, NEHRP, San Andreas fault study (\$44,000)
- 2002- California Department of Forestry and Fire Protection, Noyo River sediment study (\$40,000)
- 2002- US Geological Survey, NEHRP, Pillar Point Marsh paleoseismic study (\$40,000)

#### **AWARDS**

2009 Top Student Presenter, Seismological Society of America  
2008 Outstanding Student Paper Award, American Geophysical Union  
2007 Geological Society of Nevada, Student poster competition winner  
2006 Jonathan O. Davis Scholarship, Desert Research Institute  
2005 Geological Society of America, student research grant  
2005 Geological Society of America, student research grant  
2005 Geological Society of America, Outstanding student research award  
1997 Northern California Geological Society, student research grant

#### **AFFILIATIONS AND REGISTRATION**

California Professional Geologist, # 7615  
Geological Society of America  
American Geophysical Union  
Seismological Society of America  
Friends of the Pleistocene

#### **STUDENT ADVISMENT**

Noah Williams - M.S. thesis committee member  
James McNeil – Ph.D. primary advisor, University of Nevada, Reno (expected 2024)

Coni De Masi – Ph.D. primary advisor, UNR (2021). Now at U.S. Forest Service  
Kyle Smith - Ph.D. committee, University of Alaska, Fairbanks (2020). Now at Institute of Earth Sciences, Academia Sinica  
Colin Chupik – M.S. primary advisor, UNR (2019). Now at U.S. Bureau of Reclamation  
Ian Pierce – Ph.D. committee, UNR (2019). Now at University of Oxford  
Tabor Reedy – M.S. committee, UNR (2018). Now at U.S. Bureau of Reclamation  
James Hengesh - Ph.D. examiner, University of Western Australia (2018). Now at Interface Geohazards Consulting, LLC.  
Dylan Carstens – B.S. thesis, UNR (2018)  
Erin Warnock – B.S. thesis, UNR (2017)  
Beau Whitney - Ph.D. examiner, University of Western Australia (2015). Now at Fugro, Inc. France  
Rachel Frohman - M.S. committee, University of Alaska, Fairbanks (2014)  
Paul Sundberg - B.S committee, Humboldt State University (2009). Now at Laco Assoc., Eureka, CA

### **SYNERGISTIC ACTIVITIES**

2023 Organizing committee, short course chair, GSA Cordilleran meeting, Reno, NV  
2022 Session chair, GSA Cordilleran meeting, Las Vegas, NV  
2022 Organizing committee, Basin and Range Earthquake Summit (BRES)  
2021-date Associate member, American Association of State Geologists (AASG)  
2021 Advisor, City of Reno, Regional Emergency Operations Center  
2021 Co-leader, NBMG Earth Science Week field trip  
2021 Organizing committee/session chair, GSA Cordilleran meeting, Reno, NV  
2021 Participant, USGS workshop to develop earthquake response and data collection apps  
2021 Organizing committee, Basin and Range Earthquake Working Group, Salt Lake City, UT  
2020-2021 National Seismic Hazards Map reviewer, USGS, evaluation of Quaternary fault sources  
2020 Proposal reviewer, ACS Petroleum Research Fund  
2020-2022 Organizer and field trip leader for American Association of State Geologists meeting  
2019 Participant, Idaho scenario earthquake virtual clearinghouse exercise  
2017 USGS NEHRP proposal review panel member, Central and Eastern US  
2016-date Member, Basin and Range Province Earthquake Working Group (BRPEWG)  
2016 Organizer, UNR Lidar data short course by Ramon Arrowsmith(ASU)  
2016 Session convener, Seismological Society of America annual meeting, Reno, NV  
2016 Field trip leader, NBMG Advisory Board Meeting, Rainbow Mountain earthquake rupture  
2016 Scientific review and organization committee for the 7<sup>th</sup> International INQUA workshop on Paleoseismology, Active Tectonics, and Archaeoseismology (PATA days), Colorado  
2015 Chair, Alaska's Next Big Earthquake workshop, Fairbanks, AK  
2015 Field Trip co-leader, NBMG, 1915 Pleasant Valley Earthquake Centennial field trip  
2015 Testimony in the Alaska Senate State Affairs Committee for HB 35 to establish Great Alaska Earthquake Remembrance Day.  
2015-2020 Western States Seismic Policy Council (WSSPC), Chair, Basin and Range Committee  
2015-2017 Nevada Earthquake Safety Council (NESC)  
2010-date Member, Geotechnical Extreme Events Reconnaissance (GEER)  
2014 Editor, field trip guidebook, 50<sup>th</sup> anniversary of the Mw9.2 Alaska earthquake, IGCP 588  
2014 Program Committee member, Seismological Society of America annual meeting  
2014 Organizer, 10<sup>th</sup> National Conference on earthquake Engineering, Anchorage, AK  
2013-2015 Western States Seismic Policy Council (WSSPC), Alaska representative  
2013 USGS NEHRP proposal review panel member, Pacific Northwest/Alaska  
2010-2015 Member, Alaska Tsunami Mapping Team, National Tsunami Hazard Mitigation Program  
2010-2015 Alaska Seismic Hazards Safety Commission, Commission member and vice-chair

- 2009 Participant, Global Earthquake Model, (GEM) Faulted Earth workshop
- 2009 Participant, active faulting in the Northern Walker Lane workshop, Reno, NV
- 2007 Participant, Nevada Quaternary Faults Working Group, Reno, NV
- 2004 Participant, Bay Area Fault Working Group, Walnut Creek, CA

### **Departmental Service**

- 2017-2022 DGSE undergraduate curriculum committee
- 2020-2022 NBMG personnel review committee
- 2021-2022 NBMG tenure and promotion committee
- 2021 Participation in interviews for NBMG Geologic Mapping Specialist
- 2019 Participation in search for DGSE department chair position
- 2019 Search committee member for NBMG business manager position
- 2019 Search committee member for NBMG field geologist position
- 2019 NBMG booth for Nevada legislative session, UNR day
- 2019 Search Committee member, NBMG Economic Geology position
- 2018 Search committee chair, NBMG digital curator position
- 2016 Search committee member, NBMG tectonics position
- 2015 Participation in interviews for DGSE petrology position

### **Training**

- 2022 Internet security awareness training, UNR
- 2021 Mentoring Mentors seminar, UNR
- 2021 Preventing Harassment & Discrimination, UNR
- 2018 Effective Teaching Practices: cohort G, UNR
- 2017 Implicit Bias/Search Chair and Committee Training, UNR
- 2017 Planning and writing successful grant proposals workshop, UNR
- 2013 Communicating with policy makers workshop, WSSPC
- 2011 Emergency Management Institute, Introduction to Incident Command System ICS-100
- 2010 Wilderness First Aid, 8 hour course, Safety Ed
- 2009-2015 Firearms Instruction/Bear safety training, DGGS
- 2005 Excellence In Teaching Program, UNR
- 2003 Seismic Hazards Analysis Workshop, Association of Engineering Geologists
- 2002 Engineering Geology for Timber Harvesting, Wildland Management, and Watershed Restoration Workshop, Association of Engineering Geologists

### **POST EARTHQUAKE INVESTIGATIONS**

- 2020 M6.5 Monte Cristo Mountains earthquake, Nevada, Field coordinator, surface rupture team, collaboration with USGS and CGS
- 2019 Mw6.4 and Mw7.1 Ridgecrest earthquakes, southern California, surface rupture team, collaboration with USGS, CGS, and GEER
- 2018 M7.0 Anchorage Alaska earthquake, Rapid response co-team leader (GEER), collaboration with USGS
- 2010 M7 Port-au-Prince, Haiti earthquake, NSF rapid response team, collaboration with GEER
- 2008 M6 Wells Nevada earthquake, UNR rapid response team, collaboration with Utah Geological Survey
- 2000 M7.6 Chi-Chi, Taiwan earthquake, Surface rupture and engineering response team, collaboration with Pacific Gas & Electric Co.
- 1992 M7.3 Landers, California earthquake, reconnaissance, University of California, Santa Cruz, field camp.

## **PUBLICATIONS**

\*Indicates student working under my advisement

- Scott, C., Adam, R., Arrowsmith, R., Madugo, C., Powell, J., Ford, J., Geray, B., Koehler, R., Williams, A., Sarmiento, A., Thompson, S., Dawson, T., and Kottke, A., (submitted), Anticipating coseismic fault ruptures from pre-rupture mapping, *Geosphere*.
- Pierce, I., Mukambayev, A., Abdrakhamatov, K., Rakhmedinov, E., **Koehler, R.D.**, Marshall, N., and Walker, R. (submitted), Assessment of Geothermal Resources in Kyrgyzstan and Southeast Kazakhstan, *Geothermics*
- Haeussler, P., Bender, A., Powers, P. Koehler, R.D., and Brothers, D., (submitted), Updating the crustal seismic sources for the 2023 National Seismic Hazard Model for Alaska, *American Geophysical Union Monograph*.
- Koehler, R.D.**, 2022, Lidar mapping and field observations along the Mount Callaghan faults, central Nevada, Nevada Bureau of Mines and Geology Open-File report 2022-10.
- \*Pierce, I. and Koehler, R.D., (2023), 3D paleoseismology from iOS lidar and Structure from Motion photogrammetry: a case study on the Dog Valley fault, California, *Seismica*, 2(1), <https://doi.org/10.26443/seismica.v2i1.208>.
- Kozaci, O., Hoirup, D.F., Zachariasen, J.A., Bloszies, C., Hiotchcock C.S., **Koehler, R.D.**, Lindvall, S.C., McDonald, E., Feigelson, L., Abramson-Ward, H., Hartleb, R., and Huebner, M., 2022, West shore Lake Oroville lineament geologic investigation, northern California, ASCE Lifelines conference, Infrastructure Resilience special publication No. 5, UCLA Natural Hazards Risk and Resiliency Research Center (NHR3), p 52-65.
- Hatem, A.E., Collett, C.M., Briggs, R.W., Gold, R.D., Angster, S.J., Field, E.H., Powers, P.M., and **Earthquake Geology Working Group**, 2022, Simplifying complex fault geometries for systems-level analysis: Earthquake geology inputs for the U.S. National Seismic Hazard Model 2023, *Scientific Data*, v.9, p. 506.
- GBCGE, NBMG, UNR, 2022, Authors: Ayling, B., Faulds, J., Morales Rivera, A., **Koehler, R.D.**, Kreemer, C., Miawsky, E., Coolbaugh, M., Micander, R., dePolo, C., Kraal, K., Wagoner, N., Siler, D., DeAngelo, J., Glen, J., Peacock, J., Batir, J., Gentry, E., Berti, C., Lifton, Z., Clark, A., Kirby, S., Hardwick, C., and Kleber, E., 2022, *INGENIOUS – Great Basin Regional Dataset Compilation [data set]*, DOI 10.15121/1881483.
- Koehler, R.D.**, 2022, Quaternary mapping and paleoseismic trenching of the Bonham Ranch fault: as active structure along the Walker Lane/Basin and Range transition zone, Nevada, USA. In proceedings of the 11<sup>th</sup> International INQUA meeting on Paleoseismology, Active Tectonics, and Archeoseismology (PATA), September 25-30, 2022.
- \*Pierce, I., Haddon, E., Dee, S., Elliott, A., Engle, Z., Hartshorn, E., **Koehler, R.D.**, Pickering, A., and Seitz, G. (in prep), Sub-centimeter Structure-from-Motion imagery of surface ruptures from the 2020 M6.5 Monte Cristo Range earthquake, Nevada.
- Hatem, A.E., Collett, C.M., Briggs, R.W., Gold, R.D., Angster, S.J., Powers, P.M., Field, E.H., Anderson, M., Ben-Horin, J.Y., Dawson, T., DeLong, S., DuRoss, C., Thompson Jobe, J., Kleber, E., Knudsen, K.L., **Koehler, R.D.**, Koning, D., Lifton, Z., Madin, I., Mauch, J., Morgan, M., Pearthree, P., Pollitz, F., Scharer, K., Sherrod, B., Stickney, M., Wittke, S., and Zachariasen, J., 2022, Earthquake geology inputs for the U.S. National Seismic Hazard Model (NSHM) 2023 (western US) (ver. 2.0, February 2022): U.S. Geological Survey data release, <https://doi.org/10.5066/P9AU713N>.
- Koehler, R.D.**, S. Dee, A. Elliott, A. Hatem, A. Pickering, I. Pierce, G. Seitz, 2021, Field response and surface rupture characteristics of the 2020 M6.5 Monte Cristo Mountains earthquake, central Walker Lane, Nevada: *Seismological Research Letters*, v. 92, 823-839.

- \*Chupik, C., **Koehler, R.D.**, and Keen-Zebert, A., 2022, Quaternary mapping, and paleoseismic investigation of the Warm Springs Valley fault, northern Walker Lane, Nevada- northern California, *Bulletin of the Seismological Society of America*, v. 112, no. 1, p. 575-596.
- \*De Masi, C., **Koehler, R.D.**, Dee, S., Keen-Zebert, A., 2021, Early development of strike-slip faulting: Paleoseismic study along the Petersen Mountain fault, northern Walker Lane, Nevada, *Journal of Quaternary Science*, v. 36, no. 3, p. 403-414.
- \*Pierce, I., and **Koehler, R.D.**, 2021, iPad lidar scanning for 3D trenching: a new methodology for paleoseismologists demonstrated on the Dog Valley fault, Truckee, CA, *Association of Environmental and Engineering Geologist, AEG News*, v.64, no.3., 9. 29-32.
- Cabas, A., Beyzaei, C., Stuedlein, A., Franke, K.W., **Koehler, R.D.**, Zimmaro, P., Wood, C., Christie, S., Yang, Z., and Lorenzo-Velazquez, C., 2021, Geotechnical lessons learned from the M7.1 2018 Anchorage Alaska earthquake, *Earthquake Spectra*, v. 37, no. 4, 2372–2399.
- Hatem, A.E., Collett, C.M., Gold, R.D., Briggs, R.W., Angster, S.A., Field, E.H., Anderson, M., Ben-Horin, J.Y., Dawson, T., DeLong, S., DuRoss, C., Thompson Jobe, J., Kleber, E., Knudsen, K.L., **Koehler, R.**, Koning, D., Lifton, Z., Madin, I., Mauch, J., Morgan, M., Pearthree, P., Petersen, M., Pollitz, F., Scharer, K., Powers, P., Sherrod, B., Stickney, M., Wittke, S., and Zachariassen, J., 2021, Earthquake geology inputs for the National Seismic Hazard Model (NSHM) 2023, version 1.0: U.S. Geological Survey data release, <https://doi.org/10.5066/P918XCUU>.
- Dee, S., **Koehler, R.D.**, Elliott, A.J., Hatem, A.E., Pickering, A.J., Pierce, I., Seitz, G.G., Collett, C.M., Dawson, T.E., De Masi, C., dePolo, C.M., Hartshorn, E.J., Madugo, C.M., Trexler, C.C., Verdugo, D.M., Wesnousky, S.G., and Zachariassen, J., 2021, Surface rupture map of the 2020 M6.5 Monte Cristo Range earthquake, Esmeralda and Mineral counties, Nevada: Nevada Bureau of Mines and Geology Map 190, 2 sheets, scale 1:14,000, 26 p.
- Duross, C., and 47 others, 2020, Ridgecrest displacement observations for use in constructing along-strike displacement distributions for the M6.4 and M7.1 ruptures, *Bulletin of the Seismological Society of America*, v. 110, no. 4, p. 1400-1418.
- Hammond, W.C., Blewitt, G., Kreemer, C., **Koehler, R.D.**, and Dee, S., 2020, Geodetic observation of seismic cycles before, during, and after the 2020 Monte Cristo Range earthquake using the MAGNET GPS network, *Seismological Research Letters*, v. 92, 647-662.
- Koehler, R.D.**, 2020, Assessment of potentially active faults in the northwestern Livengood quadrangle, Alaska, State of Alaska, Division of Geological & Geophysical Surveys, Report of Investigation, 2020-4, 35 p.
- Cabas, A., Beyzaei, C., Franke, K., **Koehler, R.D.**, Pierce, I., Stuedlein, A., Yang, Z., and Christie, S., 2020, Turning Disaster into Knowledge: Geotechnical aspects of the 2018 Mw 7.1 Anchorage Alaska earthquake, *Proceedings Geo-Congress 2020*, February 25-28, 2020.
- Koehler, R.D.**, Reger, R.D., Spangler, E.R., and Hubbard, T.D., 2019, Assessment of geomorphology and geologic hazards in the Parks Highway-Minto Flats-Dalton Highway infrastructure corridor: Cook Inlet to Prudhoe Bay, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-8, 82 p., 4 sheets.
- Pierce, I.\*, Williams, A., **Koehler, R.D.**, and Chupik, C., 2020, High resolution structure-from-motion models and orthophotos of the southern sections of the 2019 Mw7.1 and Mw6.4 Ridgecrest, earthquakes surface ruptures, *Seismological Research Letters*, 91, 4, 2124-2126.
- Ponti, D.J., Blair, J.L., Rosa, C.M., Thomas, K., Pickering, A.J., Akciz, S., Angster, S., Avouac, J.P., Bachhuber, J., Bacon, S. et al., 2020, Documentation of surface fault rupture and ground deformation features produced by the Ridgecrest M6.4 and M7.1 earthquake sequence of July 4 and 5, 2019, *Seismological Research Letters*, v. 91, no. 5, 2942-2959.
- Stewart, J.P. (Ed.), Brandenberg, S.J., Want, P., Chukwuebuka, C., Hudson, K., Mazzoni, S., Bozorgnia, Y., Goulet, C.A., Davis, C.A., Ahdi, S.K., Zareian, F., Fayaz, J., **Koehler, R.D.**, Pierce, I., Chupik, C., Williams, A., Akciz, S., Hudson, M.B., Kishida, T., Hudnut, K.W., Brooks, B., Gold, R., Ponti, D.,



- Scharer, K., Hernandez, J., Patton, J., Olson, B., Dawson, T., Blake, K., Donnellan, A., Lyzenga, G., and Conway, E., 2019, Preliminary report on engineering and geological effects of the July 2019 Ridgecrest earthquake sequence, Version 1 and 2, Geotechnical Extreme Events Association (GEER), report number GEER-064.
- Koehler, R.D.**, Franke, K.W. (Eds.), Beyzaei, C.Z., Cabas, A., Christie, S., Dickenson, S., Pierce, I., Stuedlein, A., and Yang, Z., 2019, Geotechnical engineering reconnaissance of the 30 November 2018 Mw7.1 Anchorage, Alaska earthquake, Version 2.0, Geotechnical Extreme Events Association (GEER), report number GEER-059b.
- Wong, I., Thomas, P., **Koehler, R.D.**, and Lewandowski, N., 2019, Assessing the seismic hazards in Jamaica incorporating geodetic and Quaternary fault data, *Bulletin of the Seismological Society of America*, Vol. 109, No. 2, pp. 716-731.
- Nicolisky, D.J., Suleimani, E.N., **Koehler, R.D.**, and Salisbury, J.B., 2019, Developing an approximate tsunami hazard zone for areas with poor topographic coverage in Alaska, *Pure and Applied Geophysics*, v. 176, pp. 3185-3205.
- Anderson, J.G., **Koehler, R.D.**, and 22 others, 2019, A seismic hazards overview of the urban regions of Nevada: Recent advancements and research directions, *Seismological Research Letters*, v. 90, no 4, pp. 1577-1583.
- Koehler, R.D.**, and Anderson, J.G., 2019, 2018 Working Group on Nevada Seismic Hazards – Summary and recommendations of the workshop, Nevada Bureau of Mines and Geology Open-File Report 19-2, 44 p.
- Franke, K., and **Koehler, R.D.** (Eds.), Beyzaei, C.Z., Cabas, A., Pierce, I., Stuedlein, A., and Yang, Z., 2018, Geotechnical engineering reconnaissance of the 30 November 2018 M7.0 Anchorage, Alaska earthquake, Version 1.0, Geotechnical Extreme Events Association (GEER), report number GEER-059, doi:10.18118/G6P07F
- Koehler, R.D.**, and Chupik, C.M., 2018, Subsurface trenching investigation in support of the Barrick Goldstrike N. Carlin Trend Structure Project, Nevada Bureau of Mines and Geology Open-File Report 18-2, 18 p.
- Koehler, R.D.**, 2019, Active faulting in the North Valleys region of Reno, Nevada: A distributed zone within the northern Walker Lane, *Geomorphology*, v. 326, p. 38-53.
- Koehler, R.D.**, and Carver, G.A., 2018, Active faults and Seismic Hazards in Alaska, Alaska Division of Geological & Geophysical Surveys, Miscellaneous Publication MP 160, 59 p.
- Witter, R.C., Briggs, R., Engelhart, S.E., Gelfenbaum, G., **Koehler, R.D.**, Nelson, A., LaSelle, S., Corbett, R., and Wallace, K., 2018, Evidence for frequent large tsunamis spanning locked and creeping parts of the Aleutian megathrust, *Geological Society of America Bulletin*, v. 131, no. 5/6, p. 707-729.
- Koehler, R.D.**, 2017, Castle Mountain fault, southcentral Alaska: Observations on slip partitioning from lidar and paleoseismic trenching, pp. 206-209, *In*: Clark, K.J., Upton, P., Langridge, R., Kelly, K., Hammond, K., 2017, Proceedings of the 8<sup>th</sup> International INQUA Meeting on Paleoseismology, Active Tectonics, and Archeoseismology, Handbook and Programme, 13-16 November, 2017, Lower Hutt (NZ): GNS Science Miscellaneous Series 110, 441 p.
- Koehler, R.D.**, 2016, Reconnaissance geologic observations along the Petersen Mountain fault zone northwest of Reno, Nevada, U.S.A., *In*: McCalpin, J.P., and Gruetzner, C. (eds.), 2016, Proceedings of the 7<sup>th</sup> International INQUA meeting on paleoseismology, active tectonics, and archeoseismology, INQUA-TERPRO Commission, ISBN 978-0-9974355-2-8, Published digitally by the Crestone Science Center, Crestone, CO 81131 USA, Guidebook No. 12.
- Koehler, R.D.**, Reger, R.D., and Spangler, E., and Gould, A.I., 2016, Investigation of potentially active tectonic faults along the route of the proposed ASAP pipeline, Livengood To Anchorage, Alaska, State of Alaska, Division of Geological & Geophysical Surveys, Report of Investigation 2015-4, 71 p.

- Nicolosky, D.J., Freymueller, J.T., Witter, R.C., Suleimani, E.N., **Koehler, R.D.**, 2016, Evidence for shallow megathrust slip across the Unalaska seismic gap during the great 1957 Andreanof Island earthquake, central Aleutian Islands, Alaska, *Geophysical Research Letters*, v. 43, no. 19, 10,328-10,337.
- Witter, R.C., Carver, G.A., Briggs, R., Gelfenbaum, G., **Koehler, R.D.**, La Selle, S.P., Bender, A., Engelhart, S.E., and Hemphill-Haley, E., 2015, Unusually large tsunamis frequent a currently creeping part of the Aleutian megathrust, *Geophysical Research Letters*, v. 43, Issue 1, p. 76-84.
- Christophersen, A., Litchfield, N., Berryman, K., Thomas, R., Pagani, M., Henshaw, P., wyss, B., Wallace, L., Ries, W., Hayes, G., Haller, K., Toshikazu, Y., **Koehler, R.D.**, Clark, D., Wolfson-Schwehr, M., Boettcher, M., Villamor, P., Horspool, N., Ornthammarath, T., Zuniga, r., Langridge, R., Stirlig, M., Goded, T., Basili, R., Stein, R., Costa, C., Yeats, R., 2015, Development of the Global Earthquake Model's neotectonic fault database, *Natural Hazards*, v. 79, p. 111-135.
- West, M., Haeussler, P.J., Ruppert, N.A., Freymueller, J.T., and the **Alaska Seismic Hazards Safety Commission**, 2014, Why the 1964 Great Alaska earthquake matters 50 years later, *Seismological Research Letters*, v. 85, No. 2, p. 1-7.
- Witter, R.C., Briggs, R.W., Engelhart, S.E., Gelfenbaum, G., **Koehler, R.D.**, and Barnhart, W., 2014, Little late Holocene strain accumulation and release on the Aleutian megathrust below the Shumagin Islands, Alaska, *Geophysical Research Letters*, v. 41, p. 2359-2367.
- Koehler, R.D.**, Reger, R.D., Sicard, K., and Spangler, E., 2013, Yukon River bridge landslide: geologic and Geotechnical Evaluation, Alaska Division of Geological & Geophysical Surveys, Preliminary Interpretive Report, PIR 2013-6.
- Koehler, R.D.**, and Farrell Woods, R-E, 2013, Paleoseismic and lidar investigations along the Cathedral Rapids and Dot "T" Johnson faults, Interior Alaska: Report of Investigations 2013-4, Alaska, Division of Geological & Geophysical Surveys.
- Koehler, R.D.**, 2013, Alaska's Quaternary Faults and Folds (QFF): Digital Data Series DDS 3, Alaska Division of Geological & Geophysical Surveys, Fairbanks, AK, USA.
- Koehler, R.D.**, Burns, P.A.C, and Weakland, J., 2013, Digitized faults of the Neotectonic map of Alaska (Plafker and others, 1994), Miscellaneous Publication MP150, Alaska Division of Geological & Geophysical Surveys.
- Koehler, R.D.**, Mann, P., Prentice, C.S., Grandison-Wiggins, M., Bedford, B., and Brown, L., 2013, The Enriquillo-Plantain Garden fault in Jamaica: paleoseismology and seismic hazard, *Bulletin of the Seismological Society of America*, v. 103, issue 2a, p. 971-983.
- Koehler, R.D.**, and Carver, G.A., 2012, Active and potentially active faults along the Alaska Highway corridor, Tetlin Junction to the Canada border, Alaska Division of Geological & Geophysical Surveys, Preliminary Interpretive Report, PIR 2012-2.
- Alaska Seismic Hazards Safety Commission**, 2012, Pacific Northwest earthquakes and potential effects on Alaska, Miscellaneous Publication MP 148, Alaska Division of Geological & Geophysical Surveys.
- Koehler, R.D.**, Farrell, R-E, Burns, P., and Combellick, R., 2012, Quaternary faults and folds of Alaska: A digital database, Miscellaneous Publication MP 141, Alaska Division of Geological and Geophysical surveys.
- Hubbard, T.D., **Koehler, R.D.**, Combellick, R.A., 2011, High-resolution LIDAR data for Alaska infrastructure corridors, Raw-Data File 2011-3, Alaska Division of Geological and Geophysical Surveys.
- Bemis, S., Carver, G.A., and **Koehler, R.D.**, 2012, The Quaternary thrust system of the Northern Alaska Range, *Geosphere*, v. 8, no. 1, p. 1-10.
- Koehler, R.D.**, and Reger, R.D., 2011, Reconnaissance evaluation of the Lake Clark fault, Tyonek area, Alaska, Preliminary Interpretive Report 2011-1, Alaska Division of Geological and Geophysical Surveys.

- Koehler, R.D.**, and Mann, P., 2011, Field observations from the 12 January 2010 Haiti earthquake: Implications for seismic hazards and future post-earthquake reconnaissance investigations in Alaska, Report of Investigations 2011-2, Alaska Division of Geological & Geophysical Surveys.
- DuRoss, C.B., de Polo, C.M., **Koehler, R.D.**, Bowman, S.D., McDonald, G.N., and Shaw, L.M., 2011, Immediate Scientific Response to the 2008 Wells, Nevada, Earthquake, *In*: de Polo, C.M. and LaPointe, D.D., 2011, The 21 February 2008 Mw 6.0 Wells, Nevada Earthquake, Nevada Bureau of Mines and Geology special Publication 36.
- Koehler, R.D.**, Personius, S.F., Haeussler, P.J., Schwarz, D., and Seitz, G., 2011, A paleoseismic study along the central Denali fault, Chistochina Glacier area, south-central Alaska, Report of Investigation 2011-1, Alaska Division of Geological and Geophysical Surveys.
- Koehler, R.D.**, 2010, Technical review of a trench across a potential fault scarp feature east of Lower Talarik Creek, Lake Iliamna area, southwestern Alaska, Alaska Division of Geological & Geophysical Surveys, Miscellaneous Publication 139.
- Prentice, C., Mann, P., Crone, A.J., Gold, R.D., Hudnut, K.W., Briggs, R.W., **Koehler, R.D.**, Jean, P., 2010, Seismic hazard of the Enriquillo-Plantain Garden fault in Haiti inferred from paleoseismology, *Nature Geoscience*, v. 3, p. 789-793.
- Geo-Engineering Extreme Events Reconnaissance (GEER), 2010, Contributing Authors: Rathje, E., Bachhuber, J., Cox, B., French, J., Green, R., Olson, S., Rix, G., Wells, D., Suncar, O., Harp, E., Mann, P., and **Koehler, R.**, Geotechnical Engineering Reconnaissance of the 2010 Haiti Earthquake, version 1, Report of the National Science Foundation-Sponsored GEER team.
- Koehler, R.D.**, and Wesnousky, S.G., 2011, Late Pleistocene regional extension rate derived from earthquake geology of late Quaternary faults across Great Basin, Nevada between 38.5° and 40° N latitude, *Geological Society of America Bulletin*, v. 123, no. 3-4, p. 631-650.
- Hanks, T., and **Koehler, R.D.**, 2009, Diffusion-equation representations of landform evolution in the simplest circumstances, *In*: Bierman and Montgomery, *Key Concepts in Geomorphology*, online vignettes.
- Turner, R., **Koehler, R.D.**, Briggs, R.W., and Wesnousky, S.G., 2008, Paleoseismic and slip rate observations along the Honey Lake Fault, northeastern California, *Bulletin of the Seismological Society of America*, v. 98, no. 4, 1730–1736.
- Nelson, A.R., Personius, S.F., Sherrod, B.L., Buck, Jason, Bradley, L-A, Henley II, Gary, Liberty, L.M., Kelsey, H.M., Witter, R.C., **Koehler, R.D.**, Schermer, E.R., Nemser, E.S., and Cladouhos, T.T., 2008, Field and laboratory data from an earthquake history study of scarps in the hanging wall of the Tacoma fault, Mason and Pierce Counties, Washington: U.S. Geological Survey Scientific Investigations Map 3060, 3 sheets.
- Koehler, R.D.**, Kelson K.I., Matthews, G., Kang, K. H., and Barron, A.D., 2007, Mapping pre-historic terraces, historic terraces, and channel sediment distribution, South Fork Noyo River: A tool for understanding sources, storage, and transport, Pacific Southwest Research Station, USDA Forest Service Gen. Tech. Rep. PSW-GTR-194.
- Kelson, K.I., A.R. Streig, **R.D. Koehler**, and Keng-Hao Kang, 2006, Timing of Late Holocene Paleoequakes on the Northern San Andreas Fault at the Fort Ross Orchard Site, Sonoma County, California, *Bulletin of the Seismological Society of America*, 96, p. 1012-1028.
- Koehler, R.D.**, Baldwin, J.N, and Prentice, C., 2005, Holocene Geologic Characterization of the Northern San Andreas Fault, Gualala, California, *In*: Proceedings 2005 Northern California Earthquake Program meeting, U.S. Geological Survey.
- Koehler, R.D.**, Witter, R.C., Simpson, G.D., Hemphill-Haley, E., and Lettis, W.R., 2005, Paleoseismic Investigation of the Northern San Gregorio Fault at Pillar Point Marsh near Half Moon Bay, California, *In*: Proceedings 2005 Northern California Earthquake Program meeting, U.S. Geological Survey.
- Johnson, S.Y., A.R. Nelson, S.F. Personius, R.E. Wells, H.M. Kelsey, B.L. Sherrod, K. Okumura, **R. Koehler, III**, R. Witter, L. Bradley, and D.J. Harding, 2004, Evidence for late Holocene earthquakes

- on the Utsalady Point fault, northern Puget Lowland, Washington, *Bulletin of the Seismological Society of America*, v. 94, no. 6., 2299–2316.
- Johnson, S.Y., A.R. Nelson, S.F. Personius, R.E. Wells, H.M. Kelsey, B.L. Sherrod, K. Okumura, **R. Koehler, III**, R. Witter, L. Bradley, and D.J. Harding, 2003, Maps and data from a trench investigation of the Utsalady Point fault, Whidbey Island, Washington, U.S. Geological Survey Misc. Invest. Map 2420, 1 plate.
- Nelson, A.R., Johnson S.Y., Kelsey, H.M., Wells, R.E., Sherrod, B.L., Pezzopane, S.K., Bradley, L.A., **Koehler, R.D.**, and Bucknam, R.C., 2003, Late Holocene Earthquakes on the Toe Jam Hill Fault, Seattle Fault Zone, Bainbridge Island, Washington, *Geological Society of America Bulletin*, v. 115, no. 11, p. 1388-1403.
- Nelson, A.R., Johnson, S.Y., Wells, R.E., Pezzopane, SK., Kelsey, H.M., Sherrod, B.L., Bradley, L.A., **Koehler, R.D.**, III, Bucknam, R.C., Haugerud, R.A., and LaPrade, W.T., 2002, Field and Laboratory data from an earthquake history study of the Toe Jam Hill fault, Bainbridge Island, Washington: U.S. Geological Survey Open-File Report 02-0060.
- Knutson, S., Blakely, B., Blakely, J, **Koehler, R.D.**, McGahey, B., Vaniperen, T., 1995, A tale of two river caves, Rio Canlish and Rio Oqueba, *National Speological Society News*, P. 152-159.

## **GEOLOGIC MAPS**

- Faulds, J.E., **Koehler, R.D.**, Dellerman, N.P., and Green, H., 2022, Geologic map of the Parran quadrangle, Churchill County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 2022-02, scale 1:24,000, 4 p.
- Reger, RD., Hubbard, T.D., and **Koehler, R.D.**, 2021, Surficial geology and geohazards in the Alaska Highway Corridor, Alaska: Alaska Division of Geological & Geophysical Surveys, Professional Report 124, 149 p., 18 sheets, scale 1:63,360.
- Faulds, J.E., **Koehler, R.D.**, and Henry, C.D., 2021, Preliminary geologic map of the south half of the Verdi quadrangle, Washoe County, Nevada: Nevada Bureau of Mines and Geology Open-File Report 21-3, scale 1:24,000, 4 p.
- Carlson, C.W., **Koehler, R.D.**, and Henry, C.D., 2019, Preliminary geologic map of the Washoe City quadrangle, Washoe County Nevada: Nevada Bureau of Mines and Geology Open-File Report 19-4, scale 1:24,000, 7 p.
- Reger, R.D., Stevens, D.S.P., and **Koehler, R.D.**, 2015, Surficial geology of the Tyonek area, south-central Tyonek Quadrangle, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigations 2015-7, 38 p. 1 sheet, scale 1:63,360.
- Delattre, M.P. and **Koehler, R.D.**, 2009, Geologic map of the Camp Meeker 7.5' Quadrangle, Sonoma County, California: A digital database, Version 1.0, California Geological Survey Preliminary Geologic Map.
- Delattre, M.P., and **Koehler, R.D.**, 2008, Geologic Map of the Sebastopol 7.5' quadrangle, Sonoma County, California: A digital database: California Geological Survey Preliminary Geologic Map.
- Witter, R.C., Knudsen, K.L., Sowers, J.M., Wentworth, C.M., **Koehler, R.D.**, and Randolph C.E. with digital database by Wentworth, C.M, Brooks, S.K., and Gans, K.D., 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California, U.S. Geological Survey, Open-File Report 2006-1037, Version 1.1.
- Bezore, S.P., **Koehler, R.D.**, and Witter, R.C., 2003, Geologic Map of the Two Rock 7.5' Quadrangle Sonoma County, California: A Digital Database, Version 1.0, California Geological Survey Preliminary Geologic Map, scale 1:24,000.
- Clahan, K.B., Bezore, S.P., **Koehler, R.D.**, and Witter, R.C., 2003, Geologic Map of the Cotati 7.5' Quadrangle Sonoma County, California: A Digital Database, Version 1.0, California Geological Survey Preliminary Geologic Map, scale 1:24,000.

## **TSUNAMI INUNDATION MAPS**

- Suleimani, E.N., Salisbury, J.B., Nicolsky, D.J., and **Koehler, R.D.**, 2019, Regional tsunami hazard assessment for selected communities on Kodiak Island, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-6, 31 p., 7 sheets.
- Suleimani, E.N., Salisbury, J.B., Nicolsky, D.J., and **Koehler, R.D.**, 2019, Regional tsunami hazard assessment for the communities of Port Alexander, Craig, and Ketchikan, Southeast Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-7, 23 p., 5 sheets.
- Suleimani, E.N., Salisbury, J.B., Nicolsky, D.J., and **Koehler, R.D.**, 2019, Regional tsunami hazard assessment for False Pass and Perryville, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-3, 16 p., 2 sheets.
- Suleimani, E.N., Salisbury, J.B., Nicolsky, D.J., and **Koehler, R.D.**, 2019, Regional tsunami hazard assessment for Shemya, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-4, 13 p., 1 sheet.
- Suleimani, E.N., Salisbury, J.B., Nicolsky, D.J., and **Koehler, R.D.**, 2019, Regional tsunami hazard assessment for communities on the Kenai Peninsula, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2019-5, 20 p., 3 sheets.
- Suleimani, E.N., Nicolsky, D.J., and **Koehler, R.D.**, Salisbury, J.B., 2018, Regional tsunami hazards assessment for Andreanof Islands, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2017-2, 19 p., 2 sheets.
- Nicolsky, D.J., Suleimani, E.N., Freymueller, J.T., and Koehler, R.D., 2018, Potential maximum permanent flooding, Port Valdez, Alaska, in Nicolsky, D.J., Suleimani, E.N., Haeussler, P.J., Ryan, H.F., **Koehler, R.D.**, Combellick, R.A., and Hansen, R.A., 2013, Tsunami inundation maps of Port Valdez, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2013-1A, 77 p., 1 sheet.
- Suleimani, E.N., Nicolsky, D.J., Freymueller, J.T., and **Koehler, R.D.**, 2018, Potential maximum permanent flooding for King Cove and Cold Bay communities, Alaska, in Suleimani, E.N., Nicolsky, D.J., **Koehler, R.D.**, Freymueller, J.T., and Macpherson, A.E., Tsunami inundation maps for King Cove and Cold Bay communities, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2016-1A, 2 sheets, scale 1:12,500.
- Nicolsky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2018, Potential maximum permanent flooding, Nikolski, Alaska, in Nicolsky, D.J., Suleimani, E.N., and Koehler, R.D., Tsunami inundation map for the village of Nikolski, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2016-7A, 1 sheet, scale 1:12,500.
- Nicolsky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2018, Potential maximum permanent flooding, Cordova and Tatitlek, Alaska, in Nicolsky, D.J., Suleimani, E.N., and **Koehler, R.D.**, Tsunami inundation maps of Cordova and Tatitlek, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2014-1A, 2 sheets.
- Suleimani, E.N., Nicolsky, D.J., and **Koehler, R.D.**, 2018, Potential maximum permanent flooding, Yakutat, Alaska, in Suleimani, E.N., Nicolsky, D.J., and **Koehler, R.D.**, Tsunami inundation maps for Yakutat, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2016-2A, 1 sheet, scale 1:10,000.
- Nicolsky, D.J., Suleimani, E.N., Freymueller, J.T., and **Koehler, R.D.**, 2017, Potential maximum permanent flooding maps for Unalaska and Akutan, Alaska, in Nicolsky, D.J., Suleimani, E.N., Freymueller, J.T., and Koehler, R.D., Tsunami inundation maps of Fox Islands communities, including Dutch Harbor and Akutan, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2015-5A, 2 sheets, scale 1:12,500.
- Nicolsky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2017, Tsunami inundation maps for the city of Sand Point, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2017-3, 61 p., 4 sheets, scale 1:15,000.

- Nicolosky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2017, Potential maximum permanent flooding maps for the communities of Chignik and Chignik Lagoon, Alaska, in Nicolosky, D.J., Suleimani, E.N., and Koehler, R.D., Tsunami inundation maps for the communities of Chignik and Chignik Lagoon, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2016-8A, 2 sheets.
- Nicolosky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2017, Potential maximum permanent flooding maps for Chenega, Alaska, in Nicolosky, D.J., Suleimani, E.N., and Koehler, R.D., Tsunami inundation maps of the villages of Chenega Bay and northern Sawmill Bay, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2014-3A, 1 sheet, scale 1:3,500.
- Suleimani, E.N., Nicolosky, D.J., and **Koehler, R.D.**, 2017, Updated tsunami inundation maps of the Kodiak area, Alaska: Alaska Division of Geological & Geophysical Surveys Report of Investigation 2017-8, 38 p., 10 sheets.
- Nicolosky, D.J., Suleimani, E.N., **Koehler, R.D.**, and Salisbury, J.B., 2017, Tsunami inundation maps for Juneau, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2017-9, 66 p., 5 sheets.
- Nicolosky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2016, Tsunami inundation map of the village of Nikolski, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2016-7, 34 p., 1 sheet, scale 1:25,000.
- Suleimani, E.N., Nicolosky, D.J., **Koehler, R.D.**, Freymueller, F.T., and Macpherson, A.E., 2016, Tsunami inundation maps of King Cove and Cold Bay communities, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2016-1, 73 p., 2 sheets, scale 1:63,360.
- Suleimani, E.N., Nicolosky, D.J., and **Koehler, R.D.**, 2016, Tsunami inundation maps of Yakutat, Alaska, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2016-2, 47 p., 1 sheet, scale 1:10,000.
- Nicolosky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2016, Tsunami inundation maps for the communities of Chignik and Chignik Lagoon, Alaska, Alaska Division of Geological & Geophysical Surveys Report of Investigation 2016-8, 48 p., 2 sheets, scale 1:12,500.
- Newell, J.T., Maurits, S.A., Suleimani, E.N., **Koehler, R.D.**, and Nicolosky, D.J., 2015, Tsunami inundation maps for Alaska communities: Alaska Division of Geological & Geophysical Surveys Digital Data Series 10.
- Suleimani, E.N., Nicolosky, D.J., and **Koehler, R.D.**, 2015, Tsunami inundation maps of Elfin Cove, Gustavus, and Hoonah, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-1.
- Nicolosky, D.J., Suleimani, E.N., Freymueller, J.T., and **Koehler, R.D.**, 2015, Tsunami inundation maps of Fox Islands communities, including Dutch Harbor and Akutan, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-5, 67 p., 2 sheets, scale 1:12,500.
- Nicolosky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2014, Tsunami inundation maps of Cordova and Tatitlek, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2014-1.
- Nicolosky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2014, Tsunami inundation maps of the village of Chenega Bay and northern Sawmill Bay, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2014-3A.
- Nicolosky, D.J., Suleimani, E.N., Haeussler, P.J., Ryan, H.F., **Koehler, R.D.**, Combellick, R.A., and Hansen, R.A., 2013, Tsunami inundation maps of Port Valdez, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2013-1, 77 p., 1 sheet, scale 1:12,500.
- Suleimani, E.N., Nicolosky, D.J., and **Koehler, R.D.**, 2013, Tsunami inundation maps of Sitka, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2013-3, 76 p., 1 sheet, scale 1:250,000.

## **FIELD TRIP GUIDEBOOKS**

- Koehler, R.D.**, 2022, Seismic Hazards and Evolving Landscapes, Reno-Tahoe-Carson Area, Guidebook for the Geological Society of Nevada Symposium 2022, Vision for Discovery, May 1, 2022.
- Koehler, R.D.**, 2022, Geologic Hazards in a Rapidly Evolving Landscape: Active Faulting and Geologic Hazards Along the Carson Range--Kings Canyon Fault System, guidebook prepared for the 114<sup>th</sup> annual meeting of the AASG, June 14, 2022.
- Koehler, R.D.** and Mercander R., 2022, **A River Runs Through it: Truckee River-Lake Tahoe Tour**, guidebook prepared for the 114<sup>th</sup> annual meeting of the AASG, June 15, 2022.
- Mercander, R., **Koehler, R.D.**, Ayling, B.F., Muntean, J.L., and Faulds, J., 2021, A tale of three rivers and the rapidly evolving landscapes of western Nevada (Guide for the Earth Science Week Field Trip, October 16, 2021): Nevada Bureau of Mines and Geology Educational Series XX, X p.
- Koehler, R.D.**, Geologic Hazards in a Rapidly Evolving Landscape: Active Faulting and Geologic Hazards Along the Carson Range--Kings Canyon Fault System, prepared for the AASG 2020 annual meeting, June 7, 2020.
- Koehler, R.D.**, Seismic hazards and evolving landscapes, Reno-Carson-Tahoe area, prepared for the Geological Society of Nevada, 2020 GSN symposium (May 17, 2020).
- Koehler, R.D.**, 2019, The M6.4 and M7.1 Ridgecrest earthquakes surface ruptures: Guide for the Las Vegas chapter of the Association for Engineering Geology, field trip Oct. 12 and 13, 2019.
- Koehler, R.D.**, Zuza, A.V., and Faulds, J.E., 2016, A River Runs Through It-Geology along the Truckee River Valley from Reno to Pyramid Lake, Guide for the Earth Science Week Field Trip, October 16, 2016, Nevada Bureau of Mines and Geology Educational Series E-59.
- Koehler, R.D.**, 2016, The 1954 Rainbow Mountain-Stillwater Earthquake sequence and paleoseismology, central Nevada, Nevada Bureau of Mines and Geology, Advisory Board Meeting Field Trip, Aug. 24, 2016.
- Haeussler, P.J., Shennan, I., and **Koehler, R.D.**, 2014, The 1964 Great Alaska Earthquake and tsunami and the geologic consequences of subduction: Anchorage to Whittier, Prepared for the Seismological Society of America, May 3, 2014.
- Barlow, N.L.M., and Koehler, R.D, compilers, 2015, Seismic and non-seismic influences on coastal change in Alaska—Fieldtrip guide and conference abstracts, 5<sup>th</sup> International Conference of IGCP 588: Alaska Division of Geological & Geophysical Surveys Guidebook 12, 165 p
- Hubbard, T.D., Reger, R.D., **Koehler, R.D.**, Gallagher, P.E., and Sotherland, L.E., 2012, A Guide to the Quaternary Geology and Geohazards of the Alaska Highway Corridor, Alaska, Field Trip Guidebook for the Alaska Cell of the Friends of the Pleistocene.
- Koehler, **R.D.**, and Farrell, R-E, 2012, Appendix B: Investigations along the Cathedral Rapids and Dot “T” Johnson faults, Interior Alaska: paleoseismology and lidar, In: 2012, Field Trip Guidebook for the Alaska Cell of the Friends of the Pleistocene.
- Koehler, R.D.**, Bill Hammond, Tony Crone, and Tom Hanks, 2009, Paleoseismic, Geomorphic, and Geodetic studies across the Central Great Basin: Exploring active deformation along the eastern edge of the Pacific/North American plate boundary, (a.k.a. The Great Scarp Hunt, US Highway 50), Field Trip Guidebook for the Pacific Cell of the Friends of the Pleistocene.
- Koehler, R.D.**, Redwine, J., and Burke, R., 2008. Quaternary Tectonics Field Trip: an investigation of the tectonic setting of western Nevada, March 28-31, 2008, Humboldt State University, 43p.
- Koehler, R.D.**, 2006, Terrace formation and drainage adjustment in response to migrating uplift, 80 km east of the Mendocino Triple Junction, Northern California, In: 2006, Signatures of Quaternary crustal deformation and landscape evolution in the Mendocino deformation zone, NW California, Field Trip Guidebook for the Pacific Cell of the Friends of the Pleistocene.

## **NEHRP and SCEC FINAL TECHNICAL REPORTS**

- \*Pierce, I., **Koehler, R.D.**, and Wesnousky, S.G., 2021, Paleoearthquake trenching investigation of the Dog Valley fault, Final Technical Report, U.S. Geological Survey Earthquake Hazards Program (Award #G20AP00055).
- \*Pierce, I., **Koehler, R.D.**, Williams, A., and Arrowsmith, R., 2021, Trenching the causative faults of the 2019 Ridgecrest sequence, Final Technical Report to Southern California Earthquake Center (SCEC), Award number 20103.
- Koehler, R.D.** and Vican, J., 2020, Nevada Quaternary fault database: A new publically accessible web-based resource, Final Technical Report, U.S. Geological Survey (Award #G19AP00009).
- Koehler, R.D.**, De Masi, C., and Dee, S., 2019, New lidar mapping and paleoseismic characterization of the Petersen Mountain fault zone, north of Reno, NV, Final Technical Report, U.S. Geological Survey (Award #G18AP00007).
- Koehler, R.D.**, and Chupik, C., 2019, Development of earthquake chronology, recurrence and slip rate data for the northern Warm Springs Valley Fault – Using trenching and high-resolution UAV photography, Washoe County, Nevada, Final Technical Report, U.S. Geological Survey (Award #G18AP00020).
- Koehler, R.D.**, and Anderson, J.G., 2019, Working Group on Nevada Seismic Hazards, Final Technical Report, U.S. Geological Survey (Award #G17AC00406).
- Dee, S., dePolo, C., and **Koehler, R.D.**, 2019, Paleoseismic investigation of the Eglington fault, Clark County, NV. Final Technical Report, U.S. Geological Survey National Earthquake Hazards Reduction Program (Award #G18AP00013).
- Dee, S., Ramelli, A.R., and **Koehler, R.D.**, 2018, Pilot paleoseismic investigation of faults in the North Valleys, Reno, NV, Final Technical Report, U.S. Geological Survey National Earthquake Hazards Reduction Program (Award # G16AP00060).
- Kelson, K.I., Streig, A.R., and **Koehler, R.D.**, 2005, Timing of Late Holocene Paleoearthquakes on the Northern San Andreas Fault at the Fort Ross Orchard Site, Sonoma County, California, U.S. Geological Survey, National Earthquake Hazards Reduction Program (Award #02HQGR0069).
- Koehler, R.D.**, Baldwin, J.N., and Prentice, C.S., 2005, Holocene Geologic Characterization of the Northern San Andreas Fault, Gualala, California, Final Technical Report to U.S. Geological Survey, National Earthquake Hazard Reduction Program (Award # 03HQGR0045).
- Koehler, R.D.**, Witter, R.C., Simpson, G.D., Hemphill-Haley, E., and Lettis, W.R., 2004, Paleoseismic Investigation of the Northern San Gregorio Fault at Pillar Point Marsh near Half Moon Bay, California, Final Technical Report to U.S. Geological Survey, National Earthquake Hazard Reduction Program (Award # 02HQGR0071).
- Kelson, K.I., **Koehler, R.D.**, and Kang, Keng-Hao, 2003, Initial evaluation of paleoearthquake timing on the northern San Andreas fault at the Fort Ross Orchard Site, Sonoma County, California, Final Technical Report to U.S. Geological Survey, National Earthquake Hazard Reduction Program (Award # 00-HQ-GR-0072).
- Kelson, K.I., **Koehler, R.D.**, and Kang, Keng-Hau, 2003, Surface deformation produced by the 1999 Chi-Chi (Taiwan) earthquake and interactions with built structures, Final Technical Report to the U.S. Geological Survey, National Earthquake Hazards Reduction Program (Award # 01-HQ-GR-0122).
- Witter, R.C., Patton, J.R., Carver, G.A., Kelsey, H.M., Garrison-Laney, C., **Koehler, R.D.**, and Hemphill-Haley, E., 2002, Upper-Plate Earthquakes on the Western Little Salmon Fault and Contemporaneous Subsidence of Southern Humboldt Bay over the Past 3,600 Years, Northwestern California, Final Technical Report to the U.S. Geological Survey, National Earthquake Hazards Reduction Program (award # 01HQGR0125).
- Baldwin, J.N., Kelson, K.I., Witter, R.C., **Koehler, R.D.**, Helms, J.G., and Barron, A.D., 2002, Preliminary Report on the late Holocene slip rate along the central Calaveras fault, southern San Francisco Bay Area, Gilroy, California, Final Technical Report to the U.S. Geological Survey, National Earthquake Hazards Reduction Program, (Award number 00-HQ-GR-0073)
- Baldwin, J.N., **Koehler, R.D.**, Barron, A.D., 2002, Paleoseismic Feasibility Study of the Green Valley



Fault, San Francisco Bay Area, California, Final Technical Report to the U.S. Geological Survey, National Earthquake Hazards Reduction Program (award # 01-HQGR-0123).

Kelson, K.I., **Koehler, R.D.**, Baldwin, J.N., Witter, R.C., Lettis, W.R., and Sojourner, A.C., 2000, Paleoseismic Investigations of the Northern Hayward Fault, San Francisco Bay Region, California, Final Technical Report to the U.S. Geological Survey, National Earthquake Hazards Reduction Program (award # 1434-HQ-98-GR-00044).

**Koehler, R.D.** and K.I. Kelson, 2000, Paleoseismologic Assessment of the Northern Tijeras-Canoncito Fault System, Central New Mexico, Final Technical Report to the U.S. Geological Survey, National Earthquake Hazards Reduction Program (award # 99-HQ-GR-0107).

## **OTHER REPORTS**

Motamed, R., Ryan, M., Lambeth, G., Toth, J., Parks, M., Garcia, F., Bassal, P.C., Pease, J., and **Koehler, R.D.**, 2021, Preliminary report on geotechnical aspects of the May 15<sup>th</sup> 2020 magnitude 6.5 Monte Cristo Range Earthquake in Nevada, Geotechnical Extreme Events Reconnaissance, Report GEER-71.

Faulds, J., **Koehler, R.D.**, Smith, K., Kreemer, C., Hammond, W., dePolo, C. and Kent, G., (2020), Preliminary scoping report of previous geologic, seismic, paleoseismic, and geodetic studies at Yucca Mountain, Nevada: Implications for understanding seismic hazards at the proposed high-level nuclear waste repository. Prepared by NBMG for the Nevada Office of Nuclear Projects.

Contributor, 2016, Alaska's next big earthquake, Workshop Report, November 12-13, 2015, University of Alaska, Fairbanks.

Crone, T., and Koehler, R.D., 2016, 2016 Fault Delineation Program Final Report, Summary of 2016 Field Investigations, AK LNG Project, For Worley Parsons, Inc.

Crone, T. and **Koehler, R.D.**, 2015, 2015 Fault Delineation Program Final Report, Summary of 2015 Field Investigations, AK LNG Project, For WorleyParsons, Inc.

Hengesh, J.V. and **Koehler, R.D.**, 2004, Paleoseismic investigations for fault crossing design validation, BTC pipeline fault crossings, Lot B contractor area, Turkey, For: STA Joint Venture on behalf of Botas.

**Koehler, R.D.**, and Hengesh, J.V., 2003, Geologic Hazard assessment for Lawson's Landing development, Dillon Beach, Marin County, California, For EDAW, Inc.

**Koehler, R.D.**, Randolph Loar, C., and Kelson, K.I., 2002, Geologic investigation of fault zones along southern boundary of Altamont landfill and resource recovery facility, Altamont, CA. For LFR, Inc., Granite Bay, CA.

Baldwin, J.N. and **Koehler, R.D.**, 2002, Fault location report, Portola Valley Town Center.

**Koehler, R.D.**, and J. Bachhuber, 2001, Ralston Penstock, Geologic and Geotechnical Evaluation, Final Technical Report to Placer County Water Agency, Foresthill, California.

**Koehler, R.D.**, K.I. Kelson, G. Mathhews, 2001, Sediment Storage and Transport in the South Fork Noyo River Watershed, Jackson State Demonstration Forest, Final Technical Report to California Department of Forestry and Fire Protection.

**Koehler, R.D.**, Brankman, C.M., and Kelson, K.I., 2000, Fault rupture hazard investigation, proposed caretaker residence, 10025 Foothill Road, Sunol, CA, For Metro Building Co., Pleasanton, CA.

**Koehler, R.D.**, J.M., Sowers, F. Mileham, and C. Tipple-Golec, 2000, An Assessment of Trails, Watercourses, Soils, and Redwood Forest Health in Joaquin Miller Park, Oakland, California, with Recommendations for Management, Report to City of Oakland, Department of Parks and Recreation, pp. 30, appendix 29 p.

**Koehler, R.D.** and S. Brown (Natural Resource Management, Corp.), 1999, Maple/Canyon Creek Road Inventory, Report to California Department of Fish and Game (Contract #FG-8090 WR), Simpson Timber company, and Southern Pacific Industries, pp. 14, 10 maps.

**Koehler, R.D.** and S. Brown (Natural Resource Management, Corp.), 1998, Stitz Creek Sediment Source Assessment and Sediment Reduction Recommendations, Report to The Pacific Lumber Company, pp.

28, 10 maps.

Surfleet, C., **R.D. Koehler**, T. Daugherety, A. Nadig, 1998, Garcia River Watershed Analysis, Report to Louisiana-Pacific Corporation, pp. 160.

Carver, G, **R.D. Koehler** and C.F. Narwold, 1995, Archeoseismology of Afognak Island, Alaska, Report to Afognak Native Corporation.

### **INVITED PRESENTATIONS**

U.S. Department of State geothermal capacity-building project workshop with the Peruvian Geological Survey: Quaternary hazards and fault trenching in NV/CA, August 22, 2022.

114<sup>th</sup> annual meeting of the American Association of State Geologists (AASG): Characterizing distributed deformation across the northern Walker Lane, California and Nevada, June 13, 2022.

Southern California Earthquake Center (SCEC) workshop on Coordinating Post-Earthquake Field Data Collection: Perspectives on post-earthquake reconnaissance studies: Ridgecrest and Monte Cristo Range earthquakes, January 12, 2022.

Earthquake Engineering Research Institute (EERI) northern California chapter meeting: Clearinghouse operations and surface effects of the 8 July 2021 M6.0 Antelope Valley earthquake, Dec. 9, 2021.

Arctic Seismic Resiliency Workshop, Anchorage, AK: Rapid Earthquake Reconnaissance: Helping to better understand the distribution of hazards and improving resiliency, September, 20-23, 2021.

Basin and Range Earthquake Working Group (BREWG) meeting: Summary of the 15 May 2020, M 6.5 Monte Cristo, Nevada Earthquake, virtually, Feb. 9, 2021.

Basin and Range Earthquake Working Group (BREWG) meeting: The earthquake hazards program at NBMG, an update of recent research, virtually, Feb. 9, 2021.

Geological Society of Nevada speaker series, Reno, NV: Rapid response to the M6.5 Monte Cristo, Nevada earthquake, the largest earthquake in Nevada in 65 years, June 16, 2020.

National Earthquake conference, San Diego, CA: Future research directions in earthquake engineering: Insights from field evaluation of the 2018 Anchorage Alaska earthquake, March 5, 2020.

National Earthquake conference, San Diego, CA: Rapid reconnaissance and geologic effects of the 2019 Ridgecrest earthquake sequence, lightning talk, March 4, 2020.

Basin and Range Province Earthquake Working Group meeting, Salt Lake City, Utah: The Earthquake Hazards Program at NBMG, February 5, 2020

Nevada-Utah Earthquake Summit, Reno, NV: Scientific response to the 2019 Ridgecrest, California earthquake sequence, Oct. 16, 2019

Association for Engineering Geology, Las Vegas meeting: The 2019 M6.4 and M7.1 Ridgecrest, California earthquakes and implications for Nevada, Oct., 11, 2019.

Basin and Range Province Earthquake Working Group meeting, Salt Lake City, Utah: The Earthquake Hazards Program at NBMG, February 6, 2019

Association of Engineering Geology (AEG), Great Basin Chapter dinner, Reno, NV: Characterization of fault slip rates in the North Valleys area of Reno, NV: application of new lidar data and ongoing studies, October 18, 2018.

Utah Quaternary fault parameters working group, Salt Lake City, UT: Progress towards an updated Nevada seismic Hazards Model, February 14, 2018.

Basin and Range Province earthquake working group (BRPEWG) meeting, Salt Lake City, UT: Nevada presentation on technical issues facing the Basin and Range province, February 15, 2018.

Working Group on Nevada Seismic Hazards Workshop, Reno, Nevada: Efforts to better characterize the seismic potential of faults in the North Valleys region, Reno, Nevada, February 5, 2018.

CARIUSA STEM Workgroup, Kingston, Jamaica: A Quaternary fault database for Jamaica: Implications for seismic hazard assessment, March 13, 2017.

University of Nevada, Reno, Geography Department spring colloquium: Assessing geologic hazards along a 900-km-long natural gas pipeline, Alaska: Evolving landscapes in big country, Mar. 8, 2017.

- Utah Quaternary fault parameters working group, Salt Lake City, UT: Updating Quaternary fault parameters for the Reno and Las Vegas Areas, Nevada, February 8, 2017.
- Nevada Earthquake Safety Council meeting, Las Vegas, NV: Preparation for earthquake early warning in Alaska: a potential path forward for Nevada, November 2, 2016
- Nevada Bureau of Mines and Geology annual open house: Unravelling the earthquake history along the most exiting road in America, Quaternary Faults and Paleoearthquakes in Central Nevada, Oct. 15, 2016.
- Lions Club luncheon: Nevada's earthquake hazards: Historical and Pre-Historical Earthquakes, Sept 27, 2016.
- Earthquake Economic Resiliency Forum for the greater Reno/Sparks, Carson, Tahoe and Truckee region, Eldorado Resort Casino: Historical Earthquakes in the Nevada-California border region, 2016, April 19, 2016.
- Chico State University geology seminar series: Far-field plate boundary deformation: paleoseismic perspectives from Nevada and Alaska, February 16, 2016
- Informational meeting on tsunamis for emergency managers in the communities of Hoonah and Gastavus, Alaska: Tsunami hazards in southeast Alaska from local and distant sources, December 1, 2014.
- Western State Seismic Policy Council, annual awards luncheon: Seismic hazards field investigations in Alaska, July, 21, 2014.
- Tsunami Operations Workshop, Alaska Division of Homeland Security and Emergency Management, Kodiak, Alaska: Tsunami hazards in Alaska 50 years after the 1964 Great Alaska Earthquake, February 11-12, 2014.
- Informational meeting on tsunamis for emergency managers in the community of Sitka, Alaska: Local and distant tsunami hazards and paleotsunami reconnaissance, November 2, 2013.
- Institute of Electrical and Electronics Engineers lecture series, University of Alaska, Fairbanks: Application of LiDAR to geohazard characterization in Alaska, October 24, 2013.
- Osher Lifelong Learning Institute, University of Alaska, Fairbanks: Subduction zone paleoseismology and tsunami studies in Alaska (50 years after 1964), September 30, 2013.
- University of Alaska Fairbanks geology seminar series: Paleoseismology of the Castle Mountain, Denali, and Pass Creek faults, Alaska, March 22, 2013.
- Tsunami Operations Workshop, Federal Emergency management Agency, Cordova, Alaska: Paleotsunami research in the Aleutians, October 30, 2012.
- Tsunami Operations Workshop, Federal Emergency Management Agency, Sitka, Alaska: The Fairweather fault and recently glaciated terrain: Potential sources for local tsunamis in Southeast Alaska, September 13, 2011.
- Association of Engineering Geology (AEG) student chapter meeting, University of Alaska, Fairbanks: The 2010 Port au Prince, Haiti earthquake: preventable consequences and lasting effects, February 24, 2011.
- University of Alaska, Fairbanks geology seminar series: Neotectonic adventures in Alaska: The moletrack from yo-yo's to pingos, November 12, 2010.
- Alaska Mining Association breakfast meeting, Fairbanks, AK: Seismic hazards in Alaska: Lessons learned from recent destructive earthquakes in Haiti and Chile, March 26, 2010.
- Alaska Geological Society: Field observations of the 12 January 2010 Port Au Prince Haiti earthquake and implications for seismic hazards in Alaska, April 16, 2010.
- 22<sup>nd</sup> Biennial Fairbanks Alaska Mining conference, Artic International Mining Symposium: The Enriquillo-Plantain garden fault, Haiti: Implications for seismic hazards in Alaska, March 11, 2010.
- Alaska Seismic Safety Commission: The 2010 Port Au Prince, Haiti earthquake: Links between the globally missing earthquake, and seismic hazard assessment in Alaska, March 4, 2010.
- U.S. Geological Survey, GHSC Seminar Series, Golden Colorado: Ten days in Haiti: Reconnaissance evaluation of the Port Au Prince 12 January 2010 earthquake, Feb. 24, 2010.

**RADIO INTERVIEWS, PRESS RELEASES, AND ARTICLES RELATED TO MY WORK**

Southern California Earthquake Center (SCEC), newsletter article, Remote teaching collaboration on mapping active faults for probabilistic fault displacement hazard, December 15, 2020. <https://www.scec.org/article/638>

Southern California Earthquake Center (SCEC), newsletter article, In the trenches – Paleoseismic studies of the 2019 Ridgecrest ruptures, December 15, 2020, <https://www.scec.org/article/637>

KSNV-Las Vegas, interviewed for television segment on the 2019 Ridgecrest, CA earthquakes and ongoing aftershock activity, October 30, 2020. <https://news3lv.com/news/local/special-report-could-seismic-shifts-trigger-faults-around-las-vegas>

Las Vegas Review Journal article (July 6, 2020), Earthquakes in Las Vegas? The answer lies in the Walker Lane, <https://www.reviewjournal.com/local/local-las-vegas/earthquakes-in-las-vegas-the-answer-lies-in-walker-lane-2068321/>

Nevada Today article (June 1, 2020), Monte Cristo earthquake fault still active with 6,500 aftershocks, <https://www.unr.edu/nevada-today/news/2020/monte-cristo-earthquake>

Nevada Today article (February 20, 2020), Finding Faults: How the burgeoning Walker Lane may split the American West, [https://www.unr.edu/nevada-today/stories/walker-lane?utm\\_source=newsletter021320&utm\\_medium=email&utm\\_content=walker&utm\\_campaign=NevadaWeekly](https://www.unr.edu/nevada-today/stories/walker-lane?utm_source=newsletter021320&utm_medium=email&utm_content=walker&utm_campaign=NevadaWeekly)

Nevada Today article (June 17, 2019), Seismic Nevada: Sequence of 60 earthquakes in Sun Valley, Washoe Valley, College of Science leads effort to monitor, research, assess earthquake hazards, <https://www.unr.edu/nevada-today/news/2019/earthquakes-in-nevada>

Wired magazine article on the northern Walker Lane (May 2019), Move over, San Andreas: There's an ominous new fault in town, <https://www.wired.com/story/walker-lane-move-over-san-andreas-fault/>

Press release. State publishes landmark report on active faults and seismic hazards in Alaska (2018), DNR press release. <http://dnr.alaska.gov/commis/pic/releases/9-13-18%20State%20publishes%20landmark%20report%20on%20active%20faults%20and%20seismic%20hazards%20in%20Alaska.pdf>

Western States Seismic Policy Council Summer 2018 newsletter: Summary of Koehler and Carver (2018) featured in newsletter. <https://www.wsspc.org/wp-content/uploads/2018/06/2018-summer-newsletter.pdf>

Sierras eastern front long overdue for large earthquake, 2016, Associated Press, SFGate 4/19,16 Evidence of historic tsunamis found in Aleutian Islands, WSSPC spring newsletter, 2016

Unknown tsunami trigger hides along a creeping Aleutian fault, EOS, v. 97, No. 8, 4/15/2016

On Remote Island, surprise of large tsunamis, Humboldt State Now magazine, March 18, 2016, <http://now.humboldt.edu/news/on-remote-islands-surprise-evidence-of-big-tsunamis/>

- KTUU, channel 2 news, Lacie Grosbold interview, January 16, 2014, Special segment on the 1964 earthquake “Unstable Ground”.
- Raven Radio, KCAW, FM 90.1, New map shows likely tsunami flood zones, November 21, 2013, <http://www.kcaw.org/2013/11/21/new-map-shows-likely-tsunami-flood-zones/>
- KUAC, FM 89.9, Earthquake Map, Dan Bross reports, <http://fm.kuac.org/post/earthquake-map>
- Fairbanks Daily News Miner, March 14, 2010, Alaska Geologist Returns from Haiti Earthquake Zone, [http://www.newsminer.com/features/sundays/alaska\\_science\\_forum/alaska-geologist-returns-from-haiti-earthquake-zone/article\\_8c091d19-d37f-540e-b1a3-60ad665fd4c3.html](http://www.newsminer.com/features/sundays/alaska_science_forum/alaska-geologist-returns-from-haiti-earthquake-zone/article_8c091d19-d37f-540e-b1a3-60ad665fd4c3.html)
- Fairbanks Daily News Miner, January 31, 2010, Alaska Geologist off to Haiti, [http://www.newsminer.com/features/sundays/alaska\\_science\\_forum/alaska-geologist-off-to-haiti/article\\_02df28a0-0769-5713-b204-91439c9a6dcc.html](http://www.newsminer.com/features/sundays/alaska_science_forum/alaska-geologist-off-to-haiti/article_02df28a0-0769-5713-b204-91439c9a6dcc.html)
- RedOrbit, February 24, 2010, rapid Response Science Missions Assess Potential for Another Major Haiti Earthquake, [http://www.redorbit.com/news/science/1827642/rapid\\_response\\_science\\_missions\\_assess\\_potential\\_for\\_another\\_major\\_haiti/?source=r\\_science](http://www.redorbit.com/news/science/1827642/rapid_response_science_missions_assess_potential_for_another_major_haiti/?source=r_science)
- Nevada Today, June 2, 2009, Geology Doctoral Student Receives Top Honor, <http://www.unr.edu/nevada-today/news/2009/geology-doctoral-student-receives-top-honor>
- SFGate, October 13, 2003, solving a geological puzzle/coast Range between S.F. and Mendocino has long baffled experts, <http://www.sfgate.com/bayarea/article/Solving-a-geological-puzzle-Coast-Range-between-2582915.php>

## ABSTRACTS

\*indicates student working under RDK

- Elliott, A., Hatem, A., Trexler, C., **Koehler, R.D.**, Dee, S., and Pierce, I., Investigating the causative mechanism of widely distributed fracturing around the 2020 M6.5 Monte Cristo Range earthquake, NV USA, presented at the Seismological Society of America Annual meeting, San Juan, Puerto Rico, April 17-20, 2023.
- Haeussler, P., Bender, A., Powers, P. Koehler, R.D., and Brothers, D., Updating the crustal and intraslab seismic sources for the 2023 National Seismic Hazard Model for Alaska, presented at the Seismological Society of America Annual meeting, San Juan, Puerto Rico, April 17-20, 2023.
- Summers G.F., Engelhart, S.E., Woodroffe, S.A., Briggs, R.W., Dura, T., **Koehler, R.D.**, and Witter, R.C., 2023, Testing the hypothesis of a nonpersistent rupture boundary at Sitkinak Island, Alaska, presented at INQUA meeting Rome, Italy.
- Koehler, R.D.**, 2022, The Bonham Ranch fault, Nevada: paleoseismic observations along the eastern margin of the northern Walker Lane, presented at the Southern California Earthquake Center (SCEC) annual meeting, September 12-14, 2022.
- Zuckerman, M., Scott, C., Arrowsmith, R., Adam, R., **Koehler, R.D.**, Madugo, C., and Kottke, A., 2022, Pre-rupture fault mapping from geomorphic features to inform probabilistic fault displacement hazard analysis, presented at the Southern California Earthquake Center (SCEC) annual meeting, September 12-14, 2022.
- Adam, R., Scott, C., Arrowsmith, R., Zuckerman, M., Madugo, C., **Koehler, R.D.**, Reano, D., and Kozaci, O., 2022, Development of the geomorphic indicator ranking system for pre-rupture fault mapping, presented at the Southern California Earthquake Center (SCEC) annual meeting, September 12-14, 2022.
- Elliott, A.J., Milliner, C., Xu, X., Dee, S., **Koehler, R.D.**, Pierce, I., Hatem, A., and Pickering, A., 2022, Near-field co- and post-seismic deformation from multiple InSAR products constrain field observations of the complex surface rupture of the 2020 M6.5 Monte Cristo Range, Nevada earthquake, presented at the American Geophysical Union annual meeting, Chicago, IL, Dec. 12, 2022.

- Koehler, R.D.**, Dee, S., Elliott, A., Hatem, A., Pickering, A., Pierce, I., and Seitz, G., 2022, Field response and surface-rupture characteristics of the 2020 M6.5 Monte Cristo Range earthquake, central Walker Lane, Nevada, Presented at the 2022 Basin and Range Earthquake Summit (BRES), Oct 17-20, 2022, Salt Lake City, UT.
- Elliott, A., Dee, S., **Koehler, R.D.**, Pierce, I., Hatem, A., Ruhl, C., and Xu, X., 2022, Rupture in the Mina Deflection: Activation of the full range of faults during the single 2020 Monte Cristo Range earthquake, Presented at the 2022 Basin and Range Earthquake Summit (BRES), Oct. 17-20, 2022, Salt Lake City, UT.
- Koehler, R.D.**, Lifton, Z., Kleber, E.J., Knudsen, T., Kirby, S., dePolo, C., Faulds, J., and Ayling, B., 2022, Quaternary fault compilation for the INGENIOUS Geothermal Project, Presented at the 2022 Basin and Range Earthquake Summit (BRES), October 17-20, 2022, Salt Lake City, UT.
- Dee, S., **Koehler, R.D.**, Elliott, A., Hatem, A., Pickering, A., pierce, I., and Seitz, G., 2022, Field response and surface-rupture characteristics of the 2020 M6.5 monte Cristo Range earthquake, central Walker Lane, Nevada, presented at the Association of Engineering Geology (AEG) annual meeting, Las Vegas, NV, September 12-17, 2022.
- Faulds, J.E., Henry, C.D., **Koehler, R.D.**, and Kreemer, C., 2022, The Walker Lane: An incipient plate boundary dissecting the American west and potential heir to the San Andreas fault, presented at the Association of Engineering Geology (AEG) annual meeting, Las Vegas, NV, September 12-17, 2022.
- Witter, R.C., Briggs, R.W., Dura, T., Engelhart, S.E., Nelson, A.R., **Koehler, R.D.**, and Haeussler, P.J., 2022, Paleoseismological perspectives on megathrust locking, rupture, and tsunami hazard in Alaska, presented at the Seismological Society of America annual meeting, Bellvue, Washington, April 19-23, 2022.
- Koehler, R.D.**, 2022, Characterizing cryptic faults across the northern Walker Lane/Basin and Range transition zone, California and Nevada, Geological Society of America Cordilleran meeting, Las Vegas, NV, March 15-17, 2022.
- Ayling, B. and 33 others, 2022, Innovative Geothermal Exploration through Novel Investigations Of Undiscovered Systems (INGENIOUS) Project Introduction and Activity Update, Geothermal Rising conference, Reno, NV, August 28-31, 2022.
- Elliott, A., Milliner, C., Xu, E., Dee, S., **Koehler, R.D.**, Hatem, A., Pierce, I., and Pickering, A., 2021, Near-field co- and post-seismic deformation from multiple InSAR products constrain field observations of the M6.5 Monte Cristo Range, Nevada, earthquake surface rupture, presented at American Geophysical Union annual meeting, New Orleans, LA, December 13-17, 2021.
- \*McNeil, J.C. and **Koehler, R.D.**, 2021, Preliminary paleoseismic observations of the Ione Valley fault, Basin and Range Province, central Nevada. Poster Presentation at 2021 SCEC Annual Meeting.
- \*Pierce, I., Williams, A. M., Koehler, R. D., & Arrowsmith, R. (2021). Trenching the causative faults of the 2019 Ridgecrest sequence. Poster Presentation at 2021 SCEC Annual Meeting.
- Dura, T., Briggs, R.W., Engelhart, S.E., Witter, R.C., **Koehler, R.D.**, and Padgett, J.S., 2021, Limits of prior megathrust rupture from stratigraphic and microfossil observations in the western Kodiak Island region, presented at Geological Society of America annual meeting, Portland, Oregon, October 10-13, 2021.
- Kozaci, O., Hoirup, D.F., Zachariasen, J.A., Bloszies, C., Hiotchcock C.S., Koehler, R.D., Lindvall, S.C., McDonald, E., Feigelson, Abramson-Ward, H., Hartleb, R., and Huebner, M., 2021, West shore Lake Oroville lineament geologic investigation, northern California, presented at ASCE Lifelines conference (San Fernando Earthquake Conference), Book of Abstracts version 1.1, UCLA Natural Hazards Risk and Resiliency Research Center (NHR3), Report # GIRS-2021-05, February 9, 2021 moved to February 7-11, 2022.
- Zachariasen, J., O'Neil, M., **Koehler, R.D.**, and Dee, S. 2021, Contribution to the Sierra Nevada Digital Earth Science Atlas: A digital compilation of neotectonics features, Geological Society of America Cordilleran Section meeting, May 12-14, 2021, virtual.

- McNeil, C.J. and **Koehler, R.D.**, 2021, Preliminary paleoseismic observations of the Ione Valley fault, Basin and Range Province, Nevada, Geological Society of America Cordilleran Section meeting, May 12-14, 2021, virtual.
- deMasi, C., and **Koehler, R.D.**, 2021, Deciphering shorelines from scarps: Fault trace mapping and paleoseismic investigation of the Bonham Ranch fault zone, north of Reno, Nevada, Geological Society of America Cordilleran Section meeting, May 12-14, 2021, virtual.
- Witter, R.C., Briggs, R., Engelhart, S., **Koehler, R.D.**, Dura, T., Haeussler, P., Vane, C., and Nicolsky, D., 2021, Coastal geology implies persistent late Holocene aseismic slip accompanies large M7–8 earthquakes in the Shumagin gap, Seismological Society of America annual meeting, 19–23 April 2021.
- Pierce, I., and **Koehler, R.D.**, 2021, New paleoseismic data demonstrate Holocene activity along the Dog Valley Fault, Truckee, CA, Seismological Society of America annual meeting, 19–23 April 2021.
- Elliott, A., Dee, S., **Koehler, R.D.**, Hatem, A., Pierce, I., Pickering, A., Seitz, G., Xu, X., 2021, Widely distributed rupture along an array of left-lateral, normal, and right-lateral faults in the May 15, 2020 M6.5 Monte Cristo Range, NV earthquake in the Mina Deflection of the Walker Lane, Seismological Society of America annual meeting, 19–23 April 2021.
- Koehler, R.D.**, Scott, C., Arrowsmith, R., Sarmiento, A., Dawson, T., Thompson, S., 2021, Teaching active fault mapping and applications towards developing new fault displacement hazard datasets, Seismological Society of America annual meeting, 19–23 April 2021.
- \*Pierce, I., Williams, A., **Koehler, R.D.**, Seitz, G., and Dee, S., 2021, Characteristics of surface rupturing earthquakes in the Walker Lane, USA from centimeter scale imagery and paleoseismic trenching, presented at Tectonic Study Group, Geologic Society of London (virtual), Jan 5-8, 2021.
- Koehler, R.D.**, and \*Pierce, I., 2021, The Truckee fault zone, California USA: Distributed active faulting in the northern Walker Lane, Presented at the 10<sup>th</sup> International INQUA meeting on Paleoseismology, Active Tectonics, and Archeoseismology (PATA), November 2021, Hornitos, Chile.
- \*Pierce, I., **Koehler, R.D.**, Williams, A.M., Dee, S., and Seitz, G.G., 2020, Characteristics of surface rupturing earthquakes in the Walker Lane from centimeter scale orthoimagery, presented at the Southern California Earthquake Center (SCEC) annual meeting (virtual), Sept 14-17, 2020.
- Elliott, A., Dee, S., Koehler, R.D., and 17 others, 2020, Comparison of ground-based and space-based surface rupture mapping of the May 15, 2020 M6.5 Monte Cristo Range earthquake, Nevada, presented at the Southern California Earthquake Center (SCEC) annual meeting (virtual), Sept 14-17, 2020.
- Faulds, J.E., Koehler, R.D., and Hammond, W.C., 2020, The Walker Lane: An incipient plate boundary dissecting the American West and potential heir to the San Andreas fault, presented at Association of Engineering Geologists annual meeting (virtual), Sept. 18, 2020.
- Dee, S., **Koehler, R.D.**, Elliott, A., deMasi, C., Haddon, E., Hatem, A., Pickering, A., Pierce, I., Seitz, G. and Wesnousky, S., 2020, Surface rupture from the 2020 M6.5 Monte Cristo Range earthquake, Nevada, presented at the Geological Society of America annual meeting, Oct. 26-30, 2020.
- Elliott, A., Dee, S., **Koehler, R.D.**, and 16 others, 2020, Comparison of ground-based and space-based surface rupture mapping of the May 15, 2020 M6.5 Monte Cristo Range earthquake, Nevada, presented at American Geophysical Union virtual meeting Dec. 2020.
- Prater, A., Dura, T., Briggs, R., Witter, R., Engelhart, S., **Koehler, R.D.**, and Padgett, J., 2020, Limits of prior megathrust rupture from stratigraphic and microfossil observations at Sitkalidak Island, AK, presented at Geological Society of America virtual meeting Oct. 26-30, 2020.
- Prater, A., Dura, T., Briggs, R., Witter, R., Engelhart, S., **Koehler, R.D.**, and Padgett, J., 2020, Stratigraphic and microfossil evidence of repeated late Holocene tsunami inundation at Sitkalidak Island, AK, presented at American Geophysical Union virtual meeting Dec. 2020.
- Koehler, R.D.**, Pierce, I., Williams, A., and Chupik, C., 2020, The surface rupture pattern associated with the 2019 Mw6.4 and Mw7.1 Ridgecrest California earthquakes: Implications for seismic hazards in the Walker Lane, presented at the EERI National Earthquake Conference, San Diego, California, March 5, 2020.

- Hudnut, K., Fletcher, J.M., and **Koehler, R.D.**, 2020, Oblique rifting, cross-fault domains, and active detachment faults, presented at the Geological Society of America Cordilleran section meeting, May 12, 2020, Pasadena, California.
- Prater, A., Dura, T., Briggs, R., Witter, R., Engelhart, S., **Koehler, R.D.**, and Padgett, J., 2020, Stratigraphic and microfossil evidence of repeated late Holocene tsunami inundation at Sitkalidak Island, AK, presented at the annual meeting of the Seismological Society of America, Albuquerque, New Mexico, April 27-31.
- Hudnut, K., Hernandez, J., Blake, Kl., Pierce, I.\*, Williams, A., **Koehler, R.D.**, Brooks, B., Ericksen, T., Morelan, A., Haddon, E., Shelly, D., Mencin, D., Seitz, G., Seeber, L., and Pacheco, J., 2019, Cross-fault interaction in the July 2019 Ridgecrest earthquake sequence, southern California: What did we see in the field from imagery and GPS data prior to the M7.1?, American Geophysical Union – Fall meeting, San Francisco, California, December 11, 2019.
- Olson, B., and **Ridgecrest Earthquake Working Group**, 2019, Slip distribution, slip sense, and slip styles along strike of the Ridgecrest earthquake sequence surface ruptures, presented at the annual meeting of the Geological Society of America, September 22, 2019, Phoenix, AZ.
- Delano, J., and **Ridgecrest Earthquake Working Group**, 2019, Collaborative field and remote sensing response from the 2019 Ridgecrest earthquake sequence, presented at the annual meeting of the Geological Society of America, September 22, 2019, Phoenix, AZ.
- Faulds, J.E., **Koehler, R.D.**, Hammond, W.C., Carlson, C.W., Pierce, I., dePolo, C.M., and Henry, C.D., 2019, The Walker Lane – Eastern California Shear Zone, Potential heir to the San Andreas fault: Outstanding regional-scale research questions and lessons learned from geodesy, historical seismicity, and long-term evolution, presented at the annual meeting of the Geological Society of America, September 22, 2019, Phoenix, AZ.
- Williams, A., Pierce, I., **Koehler, R.D.**, Akciz, S., Chupik, C., and Bormann, J., 2019, Detailed fracture map and orthophoto of the southern portion of the M6.4 2019 Ridgecrest earthquake, presented at the Southern California Earthquake Center (SCEC) annual meeting, Sept 9-11, 2019, poster #223
- Padilla, S., Akciz, S., Hatem, A., Dolan, J., and **Ridgecrest Rupture Mapping Group**, 2019, Fault slip distribution along the southern 15 km of the M7.1 Ridgecrest earthquake surface rupture, presented at the Southern California Earthquake Center (SCEC) annual meeting, Sept 9-11, 2019, poster #219.
- Pierce, I.\*, Williams, A.M., **Koehler, R.D.**, Akciz, S.O., Chupik, C.\*, and Bormann, J.M., 2019, Detailed fracture map and orthophoto of the southern portion of the M7.1 2019 Ridgecrest earthquake, SCEC contribution #9587, presented at the Southern California Earthquake Center (SCEC) annual meeting, Sept 9-11, 2019, poster #218.
- Kendrick, K., and **Ridgecrest Rupture Mapping Group**, 2019, Geologic observations of surface fault rupture associated with the Ridgecrest M6.4 and M7.1 earthquake sequence by the Ridgecrest Rupture Mapping Group, presented at the Southern California Earthquake Center (SCEC) annual meeting, Sept 9-11, 2019, poster #217.
- Stewart, J., and **37 others**, 2019, Engineering and geological effects of the July 2019 Ridgecrest earthquake sequence, presented at the Southern California Earthquake Center (SCEC) annual meeting, Sept 9-11, 2019, poster #244.
- Brandenberg, S., and **GEER Reconnaissance Team**, 2019, GEER reconnaissance following the 2019 Ridgecrest earthquake sequence, presented at the Southern California Earthquake Center (SCEC) annual meeting, Sept 9-11, 2019, oral presentation.
- Engelhart, S.E., Witter, R.C., Briggs, R.B., Dura, T., **Koehler, R.D.**, Vane, C.H., Nelson, A.R., Gelfenbaum, G., and Haeussler, P., 2019, Groundtruthing the August 6th 1788 Alaskan earthquake: Missing evidence, mislocation, or #fakequake?, presented at the annual meeting of the Seismological Society of America, Seattle, WA, April 23-26, 2019.
- Kozaci, O., Hoirup, D.F., Zachariasen, J., Bloszies, C., Hitchcock, C., **Koehler, R.D.**, Lindvall, S., McDonald, E., Feigelson, L., Abramson-Ward, H., Hartleb, R., and Huebner, M., 2019, West shore



- Lake Oroville lineament geologic investigation, northern California, part 2 of 2, presented at the annual meeting of the Seismological Society of America, Seattle, WA, April 23-26, 2019
- De Masi, C.\*, **Koehler, R.D.**, Dee, S., Chupik, C., Castillo, C., and Kleber, E., 2019, Paleoseismic trench investigation of the Petersen Mountain fault, North Valleys-Reno, Nevada, presented at the annual meeting of the Seismological Society of America, Seattle, WA, April 23-26, 2019.
- De Masi, C.\*, **Koehler, R.D.**, Dee, S., Chupik, C., Castillo, C., Kleber, E., and Keen-Zebert, A., 2019, New observations on the paleoseismic history and sense of slip along the Petersen Mountain fault, north western Nevada, presented at the Cordilleran section meeting of the Geological Society of America, Portland, OR, May 16, 2019.
- Koehler, R.D.**, Franke, K.W., Beyzaei, C.Z., Cabas, A., Pierce, I., Stuedlein, A., and Yang, Z., 2019 Initial observations from the GEER reconnaissance evaluation of the 2018 M7.0 Anchorage Alaska earthquake, presented at the annual meeting of the Seismological Society of America, Seattle, WA, April 23-26, 2019.
- Chupik, C.\*, and **Koehler, R.D.**, 2019, Paleoseismic assessment of slip rate and earthquake history of the Warm Springs Valley fault, western Nevada: Implications for distributed fault ruptures, presented at the Cordilleran section meeting of the Geological Society of America, Portland, OR, May 16, 2019.
- Chupik, C.\*, and Koehler, R.D., 2019, Quaternary geologic mapping and paleoseismic assessment of the Warm Springs Valley fault, Washoe County, Nevada, 2019, presented at the annual meeting of the Seismological Society of America, Seattle, WA, April 23-26, 2019.
- Faulds, J.E., dePolo, C., **Koehler, R.D.**, Hammond, W., and Dee, S., 2019, Finding Fault with the Basin and Range Province: Opportunities and Challenges in Evaluating Active Faults in an Integral Part of an Evolving Plate Boundary, presented at the AEG Foundation 2019 Shlemon Specialty Conference, Las Vegas, Nevada, March 28, 2019.
- Chupik, C.\*, and **Koehler, R.D.**, Quaternary geologic mapping and paleoseismic assessment of the Warm Springs Valley fault, Washoe County, Nevada, presented at the AEG Foundation 2019 Shlemon Specialty Conference, Las Vegas, Nevada, March 28, 2019.
- Dee, S., dePolo, C.M., Taylor, W.J., **Koehler, R.D.**, Mahan, S.A., Gold, R.D., Briggs, R.W., DuRoss, C.B., Springer, K.B., and Pigati, J.S., 2019, Results of Recent Paleoseismic Investigations in Las Vegas Valley. NV, presented at the AEG Foundation 2019 Shlemon Specialty Conference, Las Vegas, Nevada, March 28, 2019.
- Dee, S., Ramelli, A.R., Koehler, R.D., Mahan, S., and De Masi, C., 2019, Paleoseismic Investigation of the Freds Mountain Fault and Faults in Lemmon Valley, North Valleys-Reno, Nevada, presented at the annual meeting of the Seismological Society of America, Seattle, WA, April 23-26, 2019.
- Engelhart, S.E., Janigian, G., Dura, T., Witter, R.C., Briggs, R.W., **Koehler, R.D.**, Padgett, J.S., and Corbett, D.R., 2018, A stratigraphic and microfossil record of tsunami deposits and coseismic land-level changes from Old AHarbor, central Kodiak Island, Alaska, American Geophysical Union annual meeting, Washington, D.C., Dec. 10-14, 2018.
- Witter, R.C., Engelhart, S.E., Briggs, R.B., **Koehler, R.D.**, Nelson, A., Gelfenbaum, G., and Haeussler, P., 2018, What does the present state of locking along the Aleutian megathrust tell us about earthquake and tsunami hazards, Seismological Society of America annual meeting, Miami, FL., May 14-17.
- Koehler, R.D.**, and Anderson, J.A., 2018, The 2018 Working Group on Nevada Seismic Hazards: Future Directions for Improvement of the National Seismic Hazards Map in Nevada, Seismological Society of America annual meeting, Miami, FL, May 14-17, 2018
- Wong, I., Thomas, P., **Koehler, R.D.**, and Lewandoski, N., 2018, Seismic hazard analysis in Jamaica incorporating Quaternary faults, Seismological Society of America annual meeting, Miami, FL, May 14-17, 2018

- Engelhart, S.E., Witter, R.C., Briggs, R.B., Dura, T., **Koehler, R.D.**, Vane, C.H., Nelson, A.R., Gelfenbaum, G., and Haeussler, P., 2018, A tale of two earthquakes? Coastal evidence for 1788 rupture(s) of the Alaska-Aleutian megathrust, EGU annual meeting, Vienna
- Koehler, R.D.**, 2017, Castle Mountain fault, southcentral Alaska: Observations on slip partitioning from lidar and paleoseismic trenching, 8<sup>th</sup> International INQUA meeting on Paleoseismology, active Tectonics, and Archeoseismology (PATA), November 13-16, Benheim, New Zealand.
- Koehler, R.D.**, 2017, Refining the rupture length of the MRE and timing of the penultimate earthquake along the Simpson Park Mountains fault, central Great Basin, Nevada, Seismological Society of America annual meeting, Denver, CO, April 18-20, 2017.
- Janigian, G. Engelhart, S.E., Dura, T., Witter, R.C., Briggs, R.W., **Koehler, R.D.**, Padgett, J.P., and Corbett, D.R., 2017, A stratigraphic and microfossil record of coseismic land-level changes and tsunami deposits from Old Harbor, central Kodiak Island, Alaska, IGCP Project 639, Sea level change from minutes to millennia, September 17-23, St. Lucia, South Africa.
- Suleimani, E., Nicolsky, D., and **Koehler, R.D.**, 2017, The Alaska regional tsunami hazard project, International Tsunami Symposium, Bali-Flores, Indonesia, August 21-25, 2017.
- Nicolsky, D., Suleimani, E., Freymueller, J., and **Koehler, R.D.**, 2016, Hypothetical tectonic tsunami sources along the eastern Aleutian Island Arc and Alaska Peninsula for inundation mapping and hazard assessment, 9<sup>th</sup> Biennial Workshop on Japan-Kamchatka-Alaska Subduction Processes, Fairbanks, AK, May 31-June 3, 2016.
- Koehler, R.D.**, 2016, Reconnaissance geologic observations along the Petersen Mountain fault zone northwest of Reno, Nevada, U.S.A., 7<sup>th</sup> International workshop on paleoseismology, active tectonics, and archeoseismology, INQUA-TERPRO Commission, May30-June 3, Crestone, Colorado.
- Koehler, R.D.**, 2016, Preliminary observations on tectonic geomorphology along the East Reno fault zone, northern Walker Lane, Nevada, Seismological Society of America annual meeting, Reno, NV.
- Witter, R.C., Bender, A., LeWinter, A., Brothers, D., DuRoss, C., Glennie, C., Haeussler, P., **Koehler, R.D.**, Plafker, G., and Scharer, K., 2016, New lidar topography and tectonic geomorphology along the 1958 surface rupture trace of the Fairweather Fault, south of Lituya Bay, Alaska, Seismological Society of America annual meeting, Reno, NV.
- Witter, R.C., Briggs, R.W., Gelfenbaum, G., Engelhart, S.E., **Koehler, R.D.**, Nelson, A.R., La Selle, S., and Reide Corbett, D., 2016, Evidence for frequent large tsunamis in the eastern Aleutians that bridge the boundary between a locked and creeping megathrust, Seismological Society of America annual meeting, Reno, NV.
- Engelhart, S.E., Witter, R.C., Briggs, R.W., Vane, C.H., Dura, T., Reide Corbett, D., Nelson, A.R., Haeussler, P.J., **Koehler, R.D.**, and Gelfenbaum, G., 2015, Repeated large tsunamis during the last 4000 years at Sanak Island, Alaska, Geological Society of America annual meeting, Baltimore, MD.
- Nicolsky, D., Suleimani, E., and **Koehler, R.D.**, 2015, Tsunami modeling and inundation mapping in Alaska, American Institute of Professional Geologists (AIPG) annual meeting 'fire and ice', Sept. 19-22, Anchorage, AK.
- Koehler, R.D.**, 2015, Geologic observations toward resolving the plate boundary slip budget across southcentral and interior Alaska, Geological Society of America Abstracts with Programs, vol. 47, No. 4, p. 54, paper # 20-2, May 11-13, 2015, Anchorage Alaska.
- Koehler, R.D.**, Reger, R.D., Carver, G.A., Spangler, E., and Gould, A., 2014, Castle Mountain fault southcentral Alaska: Observations on slip partitioning from lidar and paleoseismic trenching, Geological Society of America Abstracts with Programs, Vol. 46, No. 6, abstract #247276, October 19-22, 2014, Vancouver, Canada
- Suleimani, E., Nicolsky, D., and **Koehler, R.D.**, 2014, Mapping and Hazard Assessment of Tectonic and Landslide tsunamis in Southeast Alaska, Eos Trans. AGU, Fall Meet. Suppl., Abstract #NH13A-3718.

- La Selle, S., Gelfenbaum, G., Witter, R.C., **Koehler, R.D.**, Carver, G.A., Briggs, R.W., Carver, G.A., and Engelhart, S.E., 2014, Using tsunami deposits to validate inundation modeling at Sedanka Island: Revealing clues about great earthquakes in the Unalaska seismic gap, *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract #NH21A-3831
- Gelfenbaum, G.R., La Selle, S., Witter, R.C., Jaffe, B.E., Briggs, R.W., Koehler, R.D., and Engelhart, S.E., 2014, Inferring relative tsunami magnitudes from sediment transport modeling of tsunami deposits in the Eastern Aleutian Islands, *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract #NH21A-3832
- Nicolosky, D., Suleimani, E., **Koehler, R.D.**, and Freymueller, J.T., 2014, Tsunami modeling and inundation mapping in Alaska: Development of maximum credible tsunami scenarios, Presented at the March 27 and 28, 2014 workshop sponsored by the Port Alberni community and Ocean Networks Canada: Predict: A tsunami detection initiative for British Columbia.
- Hubbard, T.D., and **Koehler, R.D.**, 2014, Geologic Hazards investigations and mapping along proposed natural gas pipeline routes in Alaska, 48<sup>th</sup> annual Alaska surveying & mapping conference, March 24-28, 2014
- Nicolosky, D.J., Suleimani, E.N., **Koehler, R.D.**, and West, M.E., 2014, Tsunami modeling and inundation mapping in southcentral Alaska, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Suleimani, E.N., Nicolosky, D.J., and **Koehler, R.D.**, 2014, Inundation mapping and hazard assessment of tectonic and landslide tsunamis in southeast Alaska, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Briggs, R.W., Barnhart, W.D., Engelhart, S.E., Nelson, A.R., Witter, R.C., **Koehler, R.D.**, Haeussler, P.J., Gelfenbaum, G., Dura, T., 2014, The 1938 M8.2 Semidi Islands earthquake: a re-evaluation of 20<sup>th</sup>-century moment release along the Semidi Islands section of the Alaska-Aleutian megathrust, 5<sup>th</sup> International conference of IGCP 588 and Field trip, Seismic and Non-seismic Influences on coastal Change in Alaska, May 3 to 10, 2014.
- La Selle, S., Gelfenbaum, G., Witter, R.C., Koehler, R.D., Briggs, R.W., Bender, A., 2014, Using tsunami deposits to inform possible earthquake rupture zones near Unalaska Island, Aleutian Islands, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Briggs, R.W., Witter, R.C., Nelson, A.R., **Koehler, R.D.**, Haeussler, P., Engelhart, S.E., Gelfenbaum, G., Dura, T., and Carver, G.A., 2014, Implications of recent paleoseismic observations for models of Alaska-Aleutian Megathrust rupture, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Witter, R.C., Briggs, R.W., **Koehler, R.D.**, Gelfenbaum, G., Engelhart, S., Nelson, A., Carver, G., Bender, A., and Hemphill-Haley, E., 2014, Evidence for high tsunamis in the Fox Islands implies repeated Aleutian megathrust earthquakes in the Unalaska seismic gap, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Schwartz, D.P., Haeussler, P.H., Seitz, G.G., **Koehler, R.D.**, Personious, S., Crone, A.G., and Dawson, T.E., 2014, Recurrence of large earthquakes along the Denali fault system, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Koehler, R.D.** and Reger, R.D., 2014, INVITED, The Castle Mountain fault, south-central Alaska: Sense of slip and slip rate, Seismological Society of America, Annual meeting, Anchorage, AK, April 30-May 2, 2014.
- Suleimani, E., Nicolosky, D., Freymueller, J.T., and **Koehler, R.D.**, 2013, Specification of tectonic tsunami sources along the eastern Aleutian Island Arc and Alaska Peninsula for inundation mapping and hazard assessment, *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract #NH54A-06
- Koehler, R.D.**, Schwartz, D.P., Rood, D., Reger, D., and Wolken, G., 2013, Preliminary paleoseismic observations along the central Denali fault, Alaska, *Eos Trans. American Geophysical Union, Fall Meet. Suppl.*, Abstract #T23C-2598.

- Nicolosky, D., Suleimani, E., and **Koehler, R.D.**, 2013, Tsunami modeling and inundation mapping in southcentral Alaska, Eos Trans. AGU, Fall Meet. Suppl., Abstract #NH41B-1721.
- Koehler, R.D.**, Reger, R.D., and Spangler, E., 2013, A combined field and LiDAR mapping approach to characterizing geologic hazards: Natural gas pipeline corridor Prudhoe Bay to Anchorage, Alaska, Geological Society of America annual meeting, Denver, CO, Abstracts with Programs.
- Witter, R.C., Carver, G.A., Bender, A., Briggs, R., Gelfenbaum, G., and **Koehler, R.D.**, 2013, Six large tsunamis in the past ~1700 years at Stardust Bay, Sedanka Island, Alaska, Eos Trans. AGU, Fall Meet. Suppl., Abstract #NH44A-08.
- Nicolosky, D., Suleimani, E., and **Koehler, R.D.**, 2013, Tsunami modeling and inundation mapping in southcentral Alaska, International Tsunami Symposium, Göcek, Turkey, September 25-28, 2013.
- Suleimani, E., Nicolosky, D., and **Koehler, R.D.**, 2013, Inundation mapping and hazard assessment of tectonic and landslide tsunami sources in southeast Alaska, International Tsunami Symposium, Göcek, Turkey, September 25-28, 2013
- Frohman, R.\*, Wallace, W.K., and **Koehler, R.D.**, 2012, Neotectonics around Fairbanks, Alaska: Where are the active faults? Eos Trans. AGU, Fall Meet. Suppl., Abstract #T31A-2572.
- Frohman, R.\*, Wallace, W.K., and **Koehler, R.D.**, 2012, Neotectonics around Fairbanks, Alaska: Identifying and characterizing active faults, Alaska Geological Society 2012 Tech Conference, September 22, 2012.
- Koehler, R.D.**, Reger, R.D., and Frohman, R.A., 2012, The Castle Mountain fault, south-central Alaska: New lidar-based observations on the sense of slip, Eos Trans. AGU, Fall Meet. Suppl., Abstract #S53D-2530.
- Witter, R., Englehart, S., Briggs, R., **Koehler, R.D.**, and Gelfenbaum, G., 2012, Searching for geological evidence of a 1788 earthquake and tsunami on Simeonof, Shumagin Islands, Alaska, Geological Society of America annual meeting, Abstracts with Programs vol. 44, No. 7, abstract #206745.
- Koehler, R.D.**, Farrell, R.E., Burns, P., Combellick, R.A., and Weakland, J.R., 2011, Digital release of the Alaska Quaternary fault and fold database, Eos Trans. AGU, Fall Meet. Suppl., Abstract S21A-2145.
- Koehler, R.D.**, and Hubbard, T., 2011, Geologic hazards assessment along the proposed in-state gas pipeline: Livengood to Anchorage, Alaska, Association of Environmental and Engineering Geologists annual meeting Anchorage, AK Sept, 19-24.
- Hubbard, T., Reger, D., **Koehler, R.D.**, and Gallagher, P., 2011, Using lidar to aid in evaluating geology and geologic hazards in the Alaska Highway corridor, Association of Environmental and Engineering Geologists annual meeting Anchorage, AK Sept, 19-24.
- Koehler, R.D.**, 2011, Application of lidar to mapping geologic hazards along gas pipelines in Alaska, Geological Society of America, Cordilleran/Rocky Mountain meeting, Abstracts with Programs, Logan, UT.
- Farrell, R.E. and **Koehler R.D.**, 2011, The Quaternary fault and fold database of Alaska: GIS coverages and map compilation techniques, Geological Society of America, Cordilleran/Rocky Mountain meeting, Abstracts with Programs, Logan, UT.
- Koehler, R.D.**, Farrell, R.E., and Carver, G.A., 2010, Paleoseismic study of the Cathedral Rapids fault: Active imbricate thrust faulting along the northern Alaska Range near Tok, Alaska, Eos Trans. AGU, Fall Meet. Suppl., Abstract T33A-2217.
- Prentice, C.S., Mann, P., Weber, J., Crosby, C.J., **Koehler, R.D.**, Pena, L., Crone, A.J., Gold, R.D., Hudnut, K.W., and Jean, P., 2010, Paleoseismology and earthquake hazard in the Caribbean, Geological Society of America, Annual meeting, Abstracts with Programs vol. 42, no. 5, Abstract 182131, Denver, CO.
- Mann, P., Prentice, C., Briggs, R., Taylor, F., Crone, T., Gold, R., Hudnut, K., **Koehler, R.D.**, and Jean, P., 2010, Geologic effects of the January 12, 2010, Haiti earthquake: Tectonic geomorphology,

- surface rupture, coastal uplift and secondary shaking effects, Meeting of the Americas, American Geophysical Union, August 8-13, 2010 Foz do Iguassu, Brazil.
- Hubbard, T., and **Koehler, R.D.**, 2010, Discoveries during geology and geohazards evaluations along the proposed natural-gas pipeline corridor, Dot Lake to Tetlin Junction, Alaska, 22<sup>nd</sup> Biennial Fairbanks Alaska Mining conference, Artic International Mining Symposium, March 11, 2010.
- Koehler, R.D.**, Mann, P., and Brown, L.A., 2009, Tectonic geomorphology and paleoseismology of strike-slip faults in Jamaica: Implications for distribution of strain and seismic hazard along the southern edge of the Gonave microplate, *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract G33B-0648.
- Athey, J.E., Freeman, L.K., Hults, C.P., Szumagala, D.J., Werdon W.B., **Koehler, R.D.**, and Burns, L.E., 2009, Update on Geological and Geophysical Investigations in the Slate Creek mining area, Alaska, Alaska miners association, 2009 annual convention, Fairbanks, AK
- Reger, D., and **Koehler, R.D.**, 2009, Lake Clark fault, assessment of tectonic activity based on reconnaissance mapping of glacial deposits, northwestern Cook Inlet, Alaska, *Eos Trans. AGU, Fall Meet. Suppl.*, Abstract G33B-0658.
- Koehler, R.D.**, and Wesnousky, S.G., 2009, Paleoseismic observations along US Highway 50: An estimate of net long-term extension across the Basin and Range, Nevada, Seismological Society of America, Annual meeting, Monterey, CA, April 8-10, 2009.
- Koehler, R.D.**, and Wesnousky, S.G., 2008, The accommodation of distributed crustal strain across the northern Basin and Range on active faults: A paleoseismic study, *Eos Trans. AGU, 89(53) Fall Meet. Suppl.*, Abstract G21A-0663.
- Koehler, R.D.**, and Wesnousky, S.G., 2008, An Estimate of net extension from a paleoseismic transect across US Highway 50, Basin and Range, Nevada, Geological Society of America, Annual meeting, Abstracts and Program, Abstract 213-2, Houston, Tx.
- Koehler, R.D.**, and Wesnousky, S.G., 2007, Neotectonic observations along US Highway 50, towards estimating net extension across the Basin and Range, Nevada, *Eos Trans. AGU, 88 (52), Fall Meet. Suppl.*, Abstract G21C-0677
- Koehler, R.D.**, and Wesnousky, S.G., 2006, Late Pleistocene Earthquakes Along the Simpson Park Mountains Fault: Long-term Contribution to Basin and Range Extension, Nevada, American Geophysical Union, Fall Meeting, San Francisco, CA.
- Koehler, R.D.** and Wesnousky, S.G., 2006, Long term accommodation of Pacific-North American plate motion within the central Basin and Range, Nevada. The other San Andreas? [abs.]: Southern California Earthquake Center (SCEC) annual meeting, Palm Springs, CA
- Koehler, R.D.** and Wesnousky, S.G., 2006, Preliminary paleoseismic observations along US Highway 50, Basin and Range Province, central Nevada [abs.]: Seismological Society of America, Annual Meeting, San Francisco.
- Kelson, K.I., Streig, A., Koehler, R.D., and Kang, K., 2006, Timing of late Holocene paleoearthquakes on the northern San Andreas fault at the Fort Ross Orchard stiem, Sonoma County California, [abs.]: Seismological Society of America, Annual Meeting, San Francisco.
- Zachariassen, J., Prentice, C.S., **Koehler, R.D.**, and Baldwin, J.N., 2006, Seeing through the redwoods: mapping the northern San andreas fault in dense forest cover using LIDAR [abs.]: Seismological Society of America, Annual Meeting, San Francisco.
- Prentice, C.S., Zachariassen, J., **Koehler, R.D.**, Baldwin, J. Hall, T., and Wright, R., 2006, Application of New Technology to Mapping the Northern San Andreas Fault [abs.]: Seismological Society of America, Annual Meeting, San Francisco.
- Kelson, K.I., Streig, A., and **Koehler, R.D.**, 2005, Evaluation of Paleoeearthquake Timing, Northern San Andreas Fault, Fort Ross, CA, Geological Society of America Cordilleran Section, 101<sup>st</sup> Annual Meeting, San Jose, CA.
- Witter, R.C., Knudsen, K.L., Sowers, J.M., **Koehler, R.D.**, Randolph-Loar, C.E., and Wentworth, C.M., 2005, Maps Depicting Quaternary Surficial Deposits and Liquefaction Susceptibility (1:24,000-Scale)

- in the San Francisco Bay Area, Geological Society of America Cordilleran Section, 101<sup>st</sup> Annual Meeting, San Jose, CA.
- Koehler, R.D.**, Simpson, G.D., Witter, R.C., Hemphill-Haley, E., and Lettis, W.R., 2004, Paleoseismic investigation of the northern San Gregorio fault at Pillar Point marsh near Half Moon Bay, California, In: Zoback, M.L. (ed.), 2004, Proceedings of the first Annual Northern California Earthquake Hazards Workshop, U.S. Geological Survey Open-File Report 2004-1424, Jan 13-14, 2004
- Baldwin, J.N., **Koehler, R.D. III**, and Thompson, S.C., 2004, Preliminary Late Pleistocene Slip Rate of the Green Valley Fault at Lopes Ranch Creek, Cordelia, California, American Geophysical Union, Fall Meeting, San Francisco, CA.
- Prentice, C.S., **Koehler, R.D. III**, Baldwin, J.N., and Harding, D.J., 2004, LIDAR Data as a Tool for Mapping the Northern San Andreas Fault in heavily Forested Areas of Mendocino and Sonoma Counties, California, American Geophysical Union, Fall Meeting, San Francisco, CA.
- Emre, O., **Koehler, R.D.**, Hengesh, J.V., Duman, T.Y., Akyuz, S., Altunel, E., and Barka, A., 2004, Late Holocene Activity of Erzurum Fault Zone in Eastern Anatolia, Turkey, Geological Society of America annual meeting, Abstracts with Programs Vol. 36, No. 5.
- Prentice, C.S., Crosby, C.J., Harding, D.J., Haugerud, R.A., Merritts, D.J., Gardner, T., **Koehler, R.D.**, and Baldwin, J.N., 2003, Northern California LIDAR Data: A Tool for Mapping the San Andreas Fault and Pleistocene Marine Terraces in Heavily Vegetated Terrain, American Geophysical Union, Fall Meeting, San Francisco, CA.
- Kelson, K.I., **Koehler, R.D.**, Kang, K.H., Bray, J.D., and Cluff, L.S., 2003, Interactions between surface fault rupture and buildings during the 1999 Chi-Chi (Taiwan) Earthquake, Geological Society of America, Abstracts with Programs, Vol. 35, No. 6 Annual Meeting, Seattle, Washington.
- S. Y. Johnson, A. R. Nelson, S. F. Personius, R. E. Wells, H. M. Kelsey, B. L. Sherrod, K. Okumura, **R. Koehler**, R. C. Witter, L. Bradley, D. J. Harding, 2003, Evidence for one or two late Holocene earthquakes on the Utsalady Point fault, northern Puget Lowland, Washington, Geological Society of America, Abstracts with Programs, Vol. 35, No. 6, Annual meeting, Seattle, Washington.
- Nelson, A.R., Sherrod, B.L., Johnson, S.Y., Kelsey, H.M., Wells, R.E., Pezzopane, S.K., Bradley, L.A., **Koehler, R.D.**, Bogar, R. and Okumura, K., 2003, Earthquake history of reverse faults and folds in trenches across ALSM-imaged scarps in the Seattle fault zone, Puget Lowland, Washington State, XVI INQUA Congress (abs), Reno, NV.
- Koehler, R.D.**, Kelson, K.I., Matthews, G., Kang, K.H., and A.D. Barron, 2002, The Role of Stored Historic Sediment in Short-term Sediment Production, South Fork Noyo River, Jackson State Demonstration Forest, California, Geological Society of America Abstracts with Programs, Cordilleran Section meeting, Vol. 34, No. 5.
- Koehler, R.D.** and K.I. Kelson, 2002, Paleoseismic Assessment of the Northern Tijeras- Canoncito Fault System, Central New Mexico, Geological Society of America Abstracts with Programs, Rocky Mountain Section Meeting, Vol. 33, No. 4.
- Patton, J.R., R.C. Witter, H.M. Kelsey, E. Hemphill-Haley, G.A. Carver, and **R.D. Koehler**, 2002, Coseismic Subsidence from Combined Upper-Plate and Subduction Zone Earthquakes in Southern Humboldt Bay California over the Past 3000 Years [abs], Seismological Society of America Annual Meeting
- Witter, R.C., G.A. Carver, J.R. Patton, H.M. Kelsey, C.E. Garrison-Laney, **R.D. Koehler**, and W.D. Page, 2001, Evidence for progressive folding of late Holocene tidal marsh deposits along the western Little Salmon fault, Humboldt Bay, northern California (abs), Seismological Research Letters, 72, 270.
- Kelsey, H.M., Andras, K., and **Koehler, R.D.**, 2000, Evidence and Mechanism for Drainage Reversal from South Flowing to North Flowing in the Northern California Coast Ranges in the Last 5 MA, Geological Society of America Abstracts with Programs, Annual Meeting Cordilleran Section,

- Nelson, A.R., Johnson, S.Y., Pezzopane, S.K., Wells, R.E., Kelsey, H.M., Sherrod, B.L., **Koehler, R.D.**, Bradley, L.-A., Bucknam, R.C., Laprade, W.T., Cox, J.W., and Narwold, C.F., 2000, Postglacial and Late Holocene Earthquakes on the Toe Jam Strand of the Seattle Fault, Bainbridge Island, Washington, [abs]: Geological Society of America, Cordilleran Section Meeting, Vancouver, BC
- Koehler, R.D.**, 1999, Terrace Formation, Drainage Adjustment, And Tectonic Geomorphology Of The Van Duzen/North Fork Eel Rivers Headwater Region, Northern California [abs.]: Geological Society of America Abstracts with Programs, Cordilleran Section meeting, v. 31, p. 71.
- Nelson, A.R., Pezzopane, S.K., Bucknam, R.C., **Koehler, R.D.**, Narwold, C.F., Kelsey, H.M., Laprade, W.T., Wells, R.E., Johnson, S.Y., 1999, Holocene Surface Faulting in the Seattle Fault Zone On Bainbridge Island, Washington [abs.]: Seismological Society of America, Annual Meeting, Seattle.
- Koehler, R.D.**, 1997, Quaternary history of the Van Duzen River headwaters along the northern portion of the Lake Mountain fault zone, northern California [abs.]: Geological Society of America Abstracts with Programs, Cordilleran Section meeting, v. 29, p. 42.
- Carver, G.A., Peterson, D.D., Garrison, C.E., and **Koehler, R.D.**, 1996, Paleotsunamic evidence of subduction earthquakes from northern California [abs.]: Geologic Society of America Abstracts with Programs, Annual Meeting Cordilleran Section, v. 28, p. 54.

#### **SENIOR TECHNICAL REVIEW**

- Pacific Gas & Electric Co. (PG&E). Expert review panel for revised Seismic Source Characterization report for PG&E's hydro distribution system (2021).
- Nevada Office of Nuclear Projects. Technical review of paleoseismic studies related the proposed Yucca Mountain nuclear waste repository (2020).
- BGC Engineering, Inc. (BGC). Senior technical review of seismic hazard investigation of the Tailing Storage Facility for the Donlin Gold Project, Nova Gold and Barrack (2019).
- US Bureau of Reclamation. Field review of four paleoseismic trenches along the Gales Creek fault, Oregon (2018).
- Pacific Gas & Electric Co. (PG&E). Field review of potential fault lineaments in the vicinity of Scott Dam, California. With Rockwell Consulting (2018).
- California Department of Water Resources (DWR). Office review of fault lineament mapping north of Frenchman Reservoir. With Infra-Terra, Inc. (2018).
- Michael Baker International. Evaluation and review of FERC comments related to natural gas pipeline route pipeline, Alaska. Report # AK LNG RFI-465 Resource Report 06 (September, 2017).
- Pacific Gas & Electric Co. (PG&E). Review of seismic source model related to PG&E's hydro distribution system and earthquake hazards program (October, 2017).
- Lettis Consultants International, Inc. Review of probabilistic seismic hazards assessment source model for Jamaica LNG project (July, 2017).
- Golder & Associates. Provided senior technical review for seismic source characterization prepared for the Clear Air Force base north of Healy Alaska (2015).
- Susitna-Watana Hydroelectric Project, Crustal Seismic Source Evaluation, AEA11-022, for Alaska Energy Authority (Feb. 2015).
- Alaska LNG, FERC documents, Draft Resource report No. 1 (Project Description) and No. 6 (Geologic Resources), Docket No. PF14-21-000 (2015)
- Susitna-Watana Hydroelectric Project (FERC No. 14241) Initial Study Report, Geomorphology section, Geology and Soils section, and Site-specific seismic hazard study section (October, 2014).
- Copper River Basin Best Interest Finding report, for State of Alaska Division of Oil & Gas (July, 2014).
- Preliminary Geohazard Assessment for Potential Power Plant Sites Mount Spurr, Alaska, for Hattenburg Dilley & Linnell, LLC and ORMAT Nevada, Inc. (Feb 2014).

- West Susitna Access Reconnaissance Study, West Susitna Access to resource Development, Transportation Analysis Report, for the Alaska Department of Transportation and Public Facilities and Shannon & Wilson, Inc., Sisyphus Consulting (December 2013).
- Senior Seismic Hazard Analysis Committee (SSHAC) member, Arizona Public Service's (APS) workshop #2 for the Palo Verde Nuclear Generating Station Sept 24 & 25, 2013.
- Susitna-Watana hydroelectric project, NTP 16, technical Memorandum No. 13, v0.0 (2013), for Alaska Energy Authority, Fugro Consultants, Inc, and MWH Americas.
- Susitna-Watana hydroelectric project, NTP 11 Seismic Studies, Technical Memorandum No. 8, v0, Lineament Mapping and Analyses for the Susitna-Watana Dam site Area (2012) and field review of fault lineament mapping (2013).
- Alaska Energy Authority, alternative energy grants, 30-40 grants per year (2010-2014).
- Point Thompson Project Final Environmental Impact Statement related to draft permit application from Exxon Mobil Corporation to develop a pipeline to the Point Thompson oil field (2012).
- Environmental Protection Agency report "An assessment of potential mining impacts on salmon ecosystems of Bristol Bay, Alaska, Volume 1. Performed for State of Alaska Office of Project Management and Permitting (2012).
- Pebble Partnership, LLC.'s seismic study related to the Pebble mine, Environmental Baseline Document, and assessment of data (lidar, orthophotographs) pertinent to the western extent of the Lake Clark fault (2012).
- Alaska Pipeline Project, Draft Resource report 6-Rev0, Geologic Resources, FERC Docket No. PF09-11-000, USAG-UR-SGREG-000009, Prepared by TransCanada and Exxon Mobil (2011).
- Donlin Gold Project, Natural Gas Pipeline, Plan of Development (2011).
- Shell oil's Chukchi Sea Exploration Plan for the Bureau of Ocean and Energy Management BOEM and Alaska DNR (2011).
- Lake and Peninsula Borough, Alaska, coastal management program (2011).
- Seismic hazards characterization (PSHA) for the Susitna-Watana Hydroelectric dam project southcentral Alaska including technical advisement to Fugro Consultants, Inc. (2011).
- Seismic hazards issues related to proposed natural gas storage facility in Kenai, Alaska, DNR, DGGS (2010)
- Seismic hazards issues related to proposed Hydroelectric power facilities in Alaska, 35 proposals in all regions of the state, DNR, DGGS (2009-2011)
- Field review of paleoseismic trenches excavated by TransCanada Alaska Company, LLC, Foothills Pipe Lines (North B.C.) Ltd., and Foothills Pipe Lines (South Yukon) Ltd. Trenches located along the Bear Creek lineament and Dot "T" Johnson faults within proposed natural gas pipeline corridor, DNR, DGGS (2010).
- Field review of paleoseismic trench excavated across a suspected tectonic lineament near Lake Iliamna, southwest Alaska in the vicinity of the proposed Pebble Mine project. Represented State of Alaska mining, land, and water, large projects permitting department (2010).
- Preliminary fault investigation for residential housing development along the Mount Rose fault, Reno, NV. Client: Marvin Davis & Associates (2008).
- Assisted with the technical review of the Baja LNG terminal seismic hazards report. Evaluated paleoseismic techniques used to evaluate fault activity. AT WLA, Client: Shell Global Solutions (2004).
- Technical review of multiple Environmental Impact Reports (Geology, Soils, and Seismicity sections) prepared for housing sub-divisions in Pittsburg, Ca. At WLA, Client: Adams, Broadwell, Joseph, & Cardozo Attorneys at Law (2002).
- Technical review of field drilling and grading operations for the City of Vallejo, at the Sky Valley housing development. Confirmed the existence of landslide planes and approved keyway depths for landslide hazard mitigation. At WLA, Client: City of Vallejo (2001-2002).



## **SELECTED GEOLOGIC, SEISMIC, AND FAULT HAZARD INVESTIGATIONS**

- California Department of Water Resources. Oroville Dam Spillway Repair (LCI-8) project. Geologic mapping of rock and soil exposures, geotechnical data collection within construction excavations, and paleoseismic trenching. Collaborative work with Infra-Terra, Inc., and Lettis Consultants International (2017).
- Alyeska Pipeline Services Corporation. Provided geological services including advising, field reconnaissance, peer review, and oversight for geotechnical and geohazard assessments for Alyeska's aboveground Integrity Management Program associated with the Trans-Alaska Pipeline System (TAPS) (2014-2015).
- Worley Parsons, ExxonMobil Alaska LNG LCC and Partners – AK LNG Project. The AK LNG Project is a FERC Section 3 LNG export facility that includes project segments for treatment, delivery, and transportation of natural gas from the Alaska North Slope along an 800 mile route to the LNG plant and marine terminal. Duties include field evaluation of active faults and disseminating results of the field program to project engineers. Collaborative work between Koehler Geohazards, LLC, PaleoEarthquake International, LLC., and Carver Geologic LLC (2013-2016).
- Fault crossing evaluation for the Donlin Gold natural gas pipeline. Focus on the western Denali fault. With Michael Baker, Inc and Interface Geohazard consulting, LLC. (2014).
- Seismic hazards assessment along the Trans Alaska Pipeline System (TAPS) at the Salcha River seismic zone. With Carver Geologic, LLC and Alyeska Pipeline Services Company (2013).
- Alaska Gasline Development Corporation - Alaska Stand Alone Pipeline and Bullet Line natural gas pipeline projects. Fault crossing and geologic hazard assessment, Anchorage to Prudhoe Bay, Alaska. Coordinated project from conception, lidar and data review, helicopter field reconnaissance. Collaborative work between DGGS and Alaska Gasline Development Corp. (2011-2015).
- TransCanada/Exxon Mobil – Alaska Pipeline Project (APP). Seismic hazards studies along natural gas pipeline corridor, Prudoe Bay to the Canadian border, geologic mapping and paleoseismic trenching along active faults, verification and delineation of geologic hazards at fault crossings, Collaborative work with DGGS, TransCanada Alaska company LLC (TC Alaska) and ExxonMobil Alaska (2009-11).
- Seismotectonics of Liberia, West Africa, contribution to probabilistic seismic hazard assessment (PSHA) for rail transport route for the Rio Tinto Simandou Iron Ore Project, Liberia (2009) Subconsultant to Lahontan GeoSciences and Scott Wilson Associates.
- Geologic hazard evaluation for hydroelectric canals associated with PG&E's Manton system near Redding, CA including the Armstrong, Al Smith, Keswick, Lake Grace, Shingle Creek, Baldwin, Mill Seat Bypass, Digger feeder, Cross Country, Eagle Canyon, Coleman, Instep, South Battle and Loomis Mills canals. Client: PG&E. Work in conjunction with Piedmont Geosciences. (2008).
- Seismotectonics of Guinea, Developed seismotectonic model for probabilistic seismic hazard assessment (PSHA) for rail transport route and port facility associated with the Rio Tinto Simandou Iron Ore Project, Guinea, West Africa. (2008). Subconsultant to Lahontan GeoSciences and Scott Wilson Associates.
- Fault investigation including setback recommendations for proposed remodel of the Barber Residence, 3372 Nambe Dr., Arrow Creek subdivision, Reno, NV. (2008) Client: Wood Rodgers & Associates.
- Fault investigation of 180 acre parcel near Lemmon Drive/Highway 395, Reno, NV for proposed Walmart development. Client: Wood Rodgers Consultants, Inc. (2008).
- Geologic hazard evaluation for hydroelectric canals in the vicinity of Auburn, CA including Drum, Chalk Bluff, Upper Wise, Lower Wise, Fiddler Green, and South canals. Client: PG&E. Work in conjunction with Piedmont Geosciences. (2007-2008).
- Fault investigation for Spring Creek development, Elko, Nevada. Client: Wood Rodgers Consultants, Inc. (2006)

- Fault trenching investigation for the Baku-Tbilisi-Ceyhan (BTC) crude oil pipeline project, Turkey. Investigation conducted to verify fault locations, width of zone of deformation, style of deformation, earthquake magnitude, and amount and direction of displacement, and to provide fault crossing design validation. Faults evaluated included North Anatolian fault, Ezurum East fault, Ezurum West fault, and Deliler fault. At WLA, client: Botas (2004).
- Office-based analyses for the Congo River natural gas pipeline crossing project, Angola including literature search and review, bathimetric interpretation of canyon landforms, and longitudinal profiles. At WLA, client: Shell Global Solutions (2004).
- Geologic hazards assessment in support of an Environmental Impact Report for the Lawson's Landing development, Dillon Beach, Marin County, CA. At WLA, client: EDAW, Inc. (2003).
- Fault rupture hazard investigation for the proposed Telacu senior housing project along the San Jacinto fault in San Bernadino, California. At WLA, client: Geotechnologies, Inc. (2003).
- Geologic, seismic, and geotechnical studies for Entergy Potomac's Grand Gulf nuclear power plant expansion, Mississippi. Performed detailed geologic mapping within the 1-km, 5-mile, and 25-mile radius study areas. Compiled a seismic source model for the Central United States to update Electric Power Research Institute (EPRI) seismic source and ground motion models to be used in early site permitting. At WLA (2002-2003).
- Fault location assessment for the proposed development of the Portola Valley Town Center Project (PVTCP), Portola Valley, California. The assessment included exploratory trenching (10 trenches) to investigate the location and geometry of the Woodside trace of the San Andreas fault, 14 borings with continuous core sampling, and surveying. At WLA (2001, 2002, and 2003).
- Surface fault rupture hazard study for the Sandy Creek detention basin along the Antioch fault, Antioch, California. At WLA (2002)
- Liquefaction hazard assessment for the El Portal school, San Pablo, California. Study included logging of 4 boreholes. At WLA (2002).
- Rock fracture and fault location study for the Altamont Landfill, Livermore, California. Study assessed fault control of groundwater flow. At WLA, client: Waste Management (2002)
- Seismic hazard evaluation for the Haifa LPG facility, Haifa, Isreal. Work included air photo mapping of fault lineaments and fault strip map compilation. At WLA (2002).
- Fault rupture hazard investigation for the General Mills Yoplait Colombo plant involving trenching the Avalon-Compton segment of the Newport-Inglewood fault. At WLA (2002).
- Geologic and geotechnical hazard evaluation of the Ralston Penstock, a component of Placer County Water Agency's Middle Fork Project. This project consisted of a field reconnaissance of the penstock, and preparation of a rock fall hazard strip map along the penstock alignment. At WLA (2001).
- Fault rupture hazard investigation for the proposed new development at the Eden Church, Hayward, California. Trenches were documented for the presence or absence of active faults capable of producing surface rupture. At WLA (2001).
- Fault rupture hazard investigation for the new pro shop and locker room expansion for the Mira Vista Country Club, El Cerritto, California. Trenches were documented for the presence or absence of active faults capable of producing surface rupture. At WLA (2001).
- Fault rupture hazard investigation for a proposed development at 10025 Foothill Road, Sunol, California. Aerial Photography interpretation and field reconnaissance were used to construct a Quaternary geology site map. Exploratory trenching was used to document the absence of active fault traces in the vicinity of the building footprint. At WLA (2000).
- Fault rupture hazard investigation for the new Alameda County Sheriffs facility, San Leandro, California. Trenches were documented for the presence or absence of active faults capable of producing surface rupture. At WLA (2000-2002).
- Site Geotechnical Characterization (SGC) for the PG&E Diablo Canyon Nuclear Power Plant, San Luis Obispo, California. This work included geologic mapping, trenching, rock fracture analysis,

continuous core drilling, downhole geophysical data acquisition, and report preparation. This information will be used to assess the feasibility of licensing and constructing an interim dry cask storage facility for spent fuel rod assemblies. At WLA (2000-2001).

- Fault rupture hazard investigation for the Juvenile Hall facility, San Leandro, California. Seventeen exploratory trenches were documented for the presence or absence of active faults capable of producing surface rupture. At WLA (2000).
- Geotechnical investigation including drilling, test pit description, and construction monitoring for the Turtle Bay Pedestrian Bridge, Redding, California. At WLA (2000).
- Geotechnical investigation including trenching and drilling to identify the margin of the Blakemont landslide at the proposed development on 7952 Terrace Drive, El Cerritto, California. At WLA (2001).
- Seismic source study for the California Department of Water Resources. This study evaluated the earthquake hazard for potential dam sites in the northern Sacramento Valley, California. At WLA (1999).