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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, Rank II, 2015-date
University of Alaska, Fairbanks, Geology and Geophysics Dept., Affiliate Faculty, 2011-2015
Humboldt State University, Adjunct Faculty, 2009-date
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
USDA Forest Service, Cave Exploration Team, Prince of Wales and Dall Islands, Alaska, 1993

REPRESENTATIVE EXPERIENCE

My work is focused on earthquake geology, paleoseismology, Quaternary geology, geomorphology, and engineering geology. I use a variety of techniques including interpretation of topographic imagery, Quaternary geologic and geomorphic mapping, soil stratigraphy, trenching, and geochronology to assess geohazards in a wide variety of terrains. I have conducted paleoseismic studies throughout the western U.S. including faults in California, New Mexico, Washington, Alaska, and Nevada. My international experience includes projects in Turkey, Taiwan, Guatemala, Jamaica, and Haiti. I have conducted geologic studies as part of interdisciplinary teams in support of large infrastructure projects including water storage dams, nuclear power plants, natural gas and crude oil pipelines, LNG plants, hydroelectric penstocks, and bridges. In my current position, I am primarily involved with researching active faults and Quaternary geology in the western Great Basin to better characterize seismic hazards. However, I continue to conduct research on active faults in Alaska and elsewhere.

TEACHING EXPERIENCE

Introductory Field Geology (GEOL 260), University of Nevada, Reno, Spring 2016
Lecturer, Osher Lifelong Learning (OLLI), University of Alaska, Fairbanks, "Alaska's 1964 Earthquake" class: Fall (2013)
Instructor (U. of West Indies): Spring 2009, One day field Neotectonics course, Jamaica
Field Trip Leader (HSU): Spring 2008, Quaternary Tectonics of Nevada
Teaching Assistant (HSU): Summer 2007, Field Camp, Quaternary Section
Teaching Assistant (UNR): Spring 2007, Introductory Geology
Teaching Assistant (HSU): Summer 2006, Field Camp, Quaternary Section
Teaching Assistant (UNR): Spring 2006 and Spring 2007 Photo Geology
Teaching Assistant (UNR): Fall 2006, Quaternary Field Mapping
Instructor (UNR): Spring 2005, Introductory Geology
Teaching Assistant (HSU): Fall 1996, Geomorphology
Teaching Assistant (HSU): Summer 1996, Field Camp
Teaching Assistant (HSU): Summer 1995, Field Camp

AWARDS

Top Student Presenter, Seismological Society of America, annual meeting, 2009
Outstanding Student Paper Award, American Geophysical Union, Geodesy Section, 2008.
Student poster competition winner, Geological Society of Nevada, 2007.
Jonathan O. Davis Scholarship, Desert Research Institute (DRI), 2006.
Outstanding student research award, Geological Society of America, Structural Geology and Tectonics Division, 2005.

GRANTS AND CONTRACTS

Co-leader of Earthquake Geology and Seismic Hazards (EGSHaz) project sponsored by INQUA (2016-2019)
Geologic hazards, ASAP natural gas pipeline, Alaska, Phases 4 and 5, 2014/2015 (\$170K)
Technical review of fault crossings Donlin Gold Gas line, 2014 (\$25k)
Geologic hazards, ASAP natural gas pipeline, Alaska, Phase 3, 2013 (\$400k)
Technical Review of Lake Clark fault zone for the Pebble Partnership, 2013 (\$15k)
Geologic hazards, ASAP natural gas pipeline, Alaska, Phase 2, 2012 (\$202 k)
Technical Review of Susitna-Watana hydroelectric Project, Alaska, 2011 (\$30 k)
Geologic hazards, ASAP natural gas pipeline and lidar, Phase 1, 2011 (\$556 k)
Geological Society of America (GSA), student research grant, 2005.
US Geological Survey, NEHRP grant, San Gregorio fault study, 2004
US Geological Survey, NEHRP grant, San Andreas fault study, 2003
California Department of Forestry and Fire Protection, Noyo River sediment study, 2002
US Geological Survey, NEHRP grant, Pillar Point Marsh paleoseismic study, 2002

AFFILIATIONS AND REGISTRATION

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

STUDENT ADVISMENT

Kyle Smith- Ph.D. committee, University of Alaska, Fairbanks (beginning 2014)

Beau Whitney- Ph.D. thesis examiner, University of Western Australia (2015)
Zebulon Maharrey- M.S. thesis committee, University of Alaska, Fairbanks (expected, 2015)
Eric Hutton- M.S. thesis, University of Alaska, Fairbanks (unofficial, 2014)
Rachel Frohman- M.S. thesis committee, University of Alaska, Fairbanks (2014)
Paul Sundberg- B.S thesis committee, Humboldt State University (2009)

APPOINTMENTS

Western States Seismic Policy Council (WSSPC), Nevada Representative (2015-date)
Member, Geotechnical Extreme Events Reconnaissance (GEER) (2015-date)
Member, Alaska Tsunami Mapping Team, National Tsunami Hazard Mitigation Program (2010-2015)
Appointed Editorial Board, *Frontiers in Quaternary Science* (2014)
Western States Seismic Policy Council (WSSPC), Alaska representative (2013-date)
Western States Seismic Policy Council Tsunami Hazards Mitigation Committee (2013-date)
Alaska Seismic Hazards Safety Commission (2010-2015), Commission member and vice-chair.

SERVICE

Search committee member, Nevada Bureau of Mines & Geology, tectonics position (2015-2016)
Alaska's Next Big Earthquake, workshop Nov. 12-13, 2015, Round table discussion chair.
Session convener (two sessions), Seismological Society of America annual meeting, Reno, NV (2016)
Testimony in the Alaska Senate State Affairs Committee for HB 35 (3/24/15)
Invited testimony for House Bill 35 to establish Great Alaska Earthquake Remembrance Day (2/12/2015)
Editor for field trip guidebook for the 50th anniversary of the Mw9.2 Alaska earthquake, IGCP 588 (2014)
Program committee, Seismological Society of America annual meeting (2014)
Program Committee member, Seismological Society of America annual meeting (2014)
Local organizing committee, 10th National Conference on earthquake Engineering, Anchorage, AK (2014)
USGS NEHRP, Pacific Northwest/Alaska external grants review panel (August 22-23, 2013)
Global Earthquake Model, (GEM) Faulted Earth workshop participant (2009)
Geodetic and geologic datasets in the Northern Walker Lane, workshop participant, Reno, NV (2009)
Nevada Quaternary Faults Working Group participant, Reno, NV (2007)
Bay Area Fault Working Group participant, at WLA, Walnut Creek, CA (2004)
Seismic Hazards Analysis Workshop participant, Association of Engineering Geologists (2003)

MANUSCRIPT REVIEW

Tectonics (2016)
California Seismic Safety Commission volume (2015)
Remote Sensing (2015)
International Journal of Earth Sciences (2015)
Quaternary Science Reviews (2014)
Tectonics (2014)
Journal of Geophysical Research – Solid Earth (2014, 2 papers)
Frontiers in Quaternary Science, Geomorphology, and Paleoenvironment (2014)
U.S. Geological Survey, Open File Report (2013)
Geological Society of America Bulletin (2013)
Bulletin of the Seismological Society of America (2012)
Bulletin of the Seismological Society of America, 2 papers (2011)
Journal of Cold Regions Engineering (2011)
Bulletin of the Seismological Society of America (2010)
Bulletin of the Seismological Society of America (2008)

POST EARTHQUAKE INVESTIGATIONS

January 2010, NSF rapid response team, Documented geologic effects of the January 12, 2010 M7 earthquake on the Enriquillo fault, Port-au-Prince, Haiti, Supported by NSF.

February 2008, Immediate scientific response team to the M6 Wells Nevada earthquake, Supported by the Nevada Bureau of Mines and Geology, Utah Geological Survey, and U. Nevada.

June 2000, Reconnaissance investigation of surface rupture associated with the 1999 Chi-Chi, Taiwan earthquake along the Chelungpu fault, supported by Pacific Gas & Electric co. and NEHRP.

June 1992, Reconnaissance surveys of surface rupture associated with the 1992 M7.3 Landers, California earthquake, with University of California, Santa Cruz.

PUBLICATIONS

Suleimani, E.N., Nicolsky, D.J., and **Koehler, R.D.**, (in review), Regional tsunami hazards assessment for Andreanof Islands, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-X.

Nicolsky, D.J., Freymueller, J.T., Witter, R.C., Suleimani, E.N., Koehler, R.D., (in review), Estimation of the coseismic slip distribution near Unalaska Island during the 1957 Andreanof Island earthquake.

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.

Newell, J.T., Maurits, S.A., Suleimani, E.N., Koehler, R.D., and Nicolsky, D.J., 2015, Tsunami inundation maps for Alaska communities: Alaska Division of Geological & Geophysical Surveys Digital Data Series 10, <http://maps.dggs.alaska.gov/tsunami/>. Doi:10.14509/29523

Suleimani, E.N, Nicolsky, D.J., and **Koehler, R.D.**, (in review), Regional tsunami hazard assessment for Shemya Station, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-X.

Suleimani, E.N, Nicolsky, D.J., and **Koehler, R.D.**, (in review), Regional tsunami hazard assessment for communities on Kodiak Island, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-X.

Suleimani, E.N, Nicolsky, D.J., and **Koehler, R.D.**, (in review), Regional tsunami hazard assessment for False Pass and Perryville, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-X.

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. doi 10.14509/29471

Nicolsky, D.J., Suleimani, E.N., and **Koehler, R.D.**, 2015, Tsunami inundation map of the village of Nikolski, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-X.

Suleimani, E.N., Nicolsky, D.J., Freymueller, F.T., and **Koehler, R.D.**, 2015, Tsunami inundation maps of King Cove and cold Bay communities, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2015-X.

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*.

- Suleimani, E.N., Nicolsky, 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.
- Nicolsky, 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.
- Koehler, R.D.**, Reger, R.D., and Spangler, E., and Gould, A.I., (2015), 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.
- Suleimani, E.N., Nicolsky, D.J., and **Koehler, R.D.**, (in review), Tsunami inundation maps of Yakutat, Alaska, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2014-X.
- Reger, RD., Hubbard, T.D., and **Koehler, R.D.**, (in review), Surficial geology and geohazards in the Alaska Highway Corridor, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigations 2014-X.
- 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.
- Nicolsky, D.J., Suleimani, E.N., Freymueller, J.T., and Koehler, R.D., (in review), Tsunami inundation maps of the city of Sand Point, Alaska, Alaska Division of Geological & Geophysical Surveys, Report of Investigation 2014-x
- 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, 41, doi:10.1002/2014GL059393.
- Nicolsky, 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.
- Nicolsky, 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 2014-3.
- 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 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.
- 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 2013-1, 77 p., 1 sheet, scale 1:12,500.
- Suleimani, E.N., Nicolsky, 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.

- Koehler, R.D.**, Mann, P., Prentice, C.S., Grandison-Wiggins, M., Bedford, B., and Brown, L., 2012, The Enriquillo-Plantain Garden fault in Jamaica: paleoseismology and seismic hazard, *Bulletin of the Seismological Society of America*, v. 103, issue 2a.
- 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, <http://www.dggs.dnr.state.ak.us/pubs/id/22722>
- 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, doi: 10.1130/GES00695.1, 6 figures, 1 table.
- 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, <http://www.dggs.dnr.state.ak.us/pubs/id/22221>
- 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, <http://www.dggs.dnr.state.ak.us/pubs/id/22462>
- 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, <http://www.nbmng.unr.edu/Pubs/sp/sp36/index.html>
- 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, <http://www.dggs.dnr.state.ak.us/pubs/id/22361>
- 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, <http://www.dggs.dnr.state.ak.us/pubs/id/21941>
- 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*, doi: 10.1038/ngeo991.
- 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, doi: 10.1130/B30111.1.
- 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, <http://serc.carleton.edu/vignettes/index.html>

- 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 website: http://www.conservation.ca.gov/CGS/rghm/rgm/preliminary_geologic_maps.htm
- 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 website: http://www.conservation.ca.gov/CGS/rghm/rgm/preliminary_geologic_maps.htm
- 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, Vol. 98, No. 4.
- 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 Paleoeearthquakes 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.
- 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.
- 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.
- 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.
- 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.
- 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, Digital Database by: Mascorro, M.T and Ford, E.W.

- 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, 2 plates and 37 p. text, download at <http://pubs.usgs.gov/of/2002/ofr-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.

FIELD TRIP GUIDEBOOKS

- 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, 5th International Conference of IGCP 588: Alaska Division of Geological & Geophysical Surveys Guidebook 12, 165 p. doi:[10.14509/29179](https://doi.org/10.14509/29179)
- 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.
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NEHRP FINAL TECHNICAL REPORTS

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- Far-field plate boundary deformation: paleoseismic perspectives from Nevada and Alaska, Chico State University, February 16, 2016
- Tsunami hazards in southeast Alaska from local and distant sources, 2014, Presented at meetings to dissemination tsunami inundation maps to emergency managers in the communities of Hoonah and Gastavus, December 1 and 2, 2014.
- Seismic hazards field investigations in Alaska, Western State Seismic Policy Council, annual awards luncheon, July, 21, 2014.
- Tsunami hazards in Alaska 50 years after the 1964 Great Alaska Earthquake, 2014, Tsunami Operations Workshop, Alaska Division of Homeland Security and Emergency Management, February 11-12, 2014, Kodiak, AK.
- Local and distant tsunami hazards and paleotsunami reconnaissance, Sitka, Alaska, Presented at meeting to dissemination tsunami inundation map of Sitka to community members and emergency managers, November 2, 2013.
- Application of LiDAR to geohazard characterization in Alaska, lecture series of the Institute of Electrical and Electronics Engineers, University of Alaska, Fairbanks, October 24, 2013.
- Subduction zone paleoseismology and tsunami studies in Alaska (50 years after 1964), Osher Lifelong Learning Institute, University of Alaska, Fairbanks, September 30, 2013
- Paleoseismology of the Castle Mountain, Denali, and Pass Creek faults, Alaska, seminar series, University of Alaska Fairbanks, March 22, 2013.
- Paleotsunami research in the Aleutians, Tsunami Operations Workshop, Federal Emergency management Agency, Cordova, Alaska, October 30, 2012.
- The Fairweather fault and recently glaciated terrain: Potential sources for local tsunamis in Southeast Alaska, Tsunami Operations Workshop, Federal Emergency Management Agency, Sitka, Alaska, Westmark Hotel, September 13, 2011.
- The 2010 Port au Prince, Haiti earthquake: preventable consequences and lasting effects, AEG student chapter meeting, University of Alaska, Fairbanks, February 24, 2011.

Neotectonic adventures in Alaska: The moletrack from yo-yo's to pingos, presented at the University of Alaska, Fairbanks seminar series, November 12, 2010.

Seismic hazards in Alaska: Lessons learned from recent destructive earthquakes in Haiti and Chile, presented at the Alaska Mining Association breakfast meeting, Fairbanks, AK, March 26, 2010.

Field observations of the 12 January 2010 Port Au Prince Haiti earthquake and implications for seismic hazards in Alaska, presented at the Alaska Geological Society, April 16, 2010.

The Enriquillo-Plantain garden fault, Haiti: Implications for seismic hazards in Alaska, presented at Presented at the 22nd Biennial Fairbanks Alaska Mining conference, Arctic International Mining Symposium, March 11, 2010

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RADIO INTERVIEWS, NEWSPAPER, AND MAGAZINE ARTICLES

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ABSTRACTS

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- 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.
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SENIOR TECHNICAL REVIEW AND LEGAL REGULATORY COUNCIL

- 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).
- 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).
- 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).
- 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).

SELECTED GEOLOGIC, SEISMIC, AND FAULT HAZARD INVESTIGATIONS

- Worley Parsons, ExxonMobil Alaska LNG LCC and Partners – AK LNG Project. The AKLNG 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 (2014-date).
- 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).