

BIOGRAPHICAL SKETCH

Steven N. Bacon

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Registration

California Certified Engineering Geologist (C.E.G.), No. 2559
California Professional Geologist (P.G.), No. 8581

Education

Ph.D.	2020	University of Nevada, Reno	Hydrology
M.S.	2003	Humboldt State University	Environmental Systems – Geology
B.S.	1996	Humboldt State University	Geology

Research Interest and Experience

Dr. Bacon is a geologist with 25 years of experience specializing in field investigations associated with the application of basic and applied research in Quaternary geology, geomorphology, and engineering geology related to terrain and geotechnical-site characterizations, landscape evolution, paleoclimate and archaeological studies, geologic hazard assessments, and hydrogeologic investigations. Recent basic research has focused on the characterization of alluvial, fluvial, and lacustrine depositional environments using geomorphic mapping, sequence stratigraphy, soils, and ¹⁴C and luminescence analyses, plus coupled watershed-lake hydrologic modeling to infer late Pleistocene and Holocene hydroclimate variability in the southwestern United States. Applied research has included geomorphic-based predictive terrain modeling of mobility and dust emission hazards for military operations in desert regions, as well as geologic and tectonic studies to support flood and seismic hazards, plus groundwater resource assessments. Past field areas that involved studying landscape evolution in alpine to desert environments related to geologic hazards or paleoclimate research include the western U.S., Alaska, Israel, Egypt, New Zealand, and Mongolia.

Professional Experience

2020-present	Associate Research Professor – Geology: Desert Research Institute, Division of Hydrologic Sciences, Reno, NV
2011-2020	Associate Research Scientist – Geomorphology: Desert Research Institute, Division of Earth and Ecosystem Sciences, Reno, NV
2007-2011	Assistant Research Geomorphologist: Desert Research Institute, Division of Earth and Ecosystem Sciences, Reno, NV
2005-2007	Staff Geomorphologist: Desert Research Institute, Division of Earth and Ecosystem Sciences, Reno, NV
2004-2005	Research Geologist: U.S. Geological Survey, Bishop, CA
2003-2005	Senior Staff Geologist: Piedmont GeoSciences, Inc., Reno, NV
1998-2003	Staff Engineering Geologist: Busch Geotechnical Consultants, Arcata, CA
2000	Field Assistant: William Lettis & Associates, Inc., Walnut Creek, CA
2000	Field Research Assistant: Humboldt State University & University of Washington
1999-2000	Field Research Assistant: New Zealand Institute of Geological & Nuclear Sciences, Lower Hutt, New Zealand
1998-1999	Field Geologist: ENGEIO Incorporated, San Ramon, CA
1997	Geologist: U.S. Geological Survey / Ground Deformation Program, Hawaiian Volcano Observatory
1998; 1999; 1996-1997	Geologist: U.S. Geological Survey / Earthquake Hazards Team, Mammoth Lakes, CA

Peer-Reviewed Publications

- Bacon, S.N., and Pezzopane, S.K. (2007). A 25,000-year record of earthquakes on the Owens Valley fault near Lone Pine, California: Implications for recurrence intervals, slip rates, and segmentation models. *Geological Society of America Bulletin*, **119**/7, 823-847.
- Bacon, S.N., and McDonald, E.V. (2016). Regional distribution of salt-rich dust across southwest Asia based on predictive soil-geomorphic mapping techniques, in McDonald, E.V., Bullard, T.F., eds., *Military Geosciences and Desert Warfare, Past Lessons and Modern Challenges*, Springer: New York, NY, 237-256.
- Bacon, S.N., Chinn, T.C., Van Dissen, R.J., Tillinghast, S.F., Goldstein, H.L., and Burke, R.M. (2001). Paleo-equilibrium line altitude estimates from late Quaternary glacial features in the Inland Kaikoura Range, South Island, New Zealand. *New Zealand Journal of Geology and Geophysics*. **44**, 55-67.
- Bacon, S.N., Jayko, A.S., and McGeehin, J.P. (2005). Holocene and latest Pleistocene oblique dextral faulting on the southern Inyo Mountains fault, Owens Lake basin, California. *Bulletin Seismological Society of America*. **95**, 2472-2485.
- Bacon, S.N., Burke, R.M., Pezzopane, S.K., and Jayko, A.S. (2006). Last glacial maximum and Holocene lake levels of Owens Lake, eastern California, USA. *Quaternary Science Reviews*. **25**/11-12, 1264-1282.
- Bacon, S.N., McDonald, E.V., Baker, S.E., Caldwell, T.G., and Stullenbarger, G. (2008). Desert terrain characterization of landforms and surface materials within vehicle test courses at U.S. Army Yuma Proving Ground, USA. *Journal of Terramechanics* 45, 167-183.
- Bacon, S.N., McDonald, E.V., Caldwell, T.G., and Dalldorf, G.K. (2010). Timing and distribution of alluvial fan sedimentation in response to strengthening of late Holocene ENSO variability in the Sonoran Desert, southwestern Arizona, USA. *Quaternary Research* 73, 425-438.
- Bacon, S.N., McDonald, E.V., Dalldorf, G.K., Baker, S.E., Sabol Jr., D.E., Minor, T.B., Bassett, S.D., MacCabe, S.R., Bullard, T.F. (2010). Chapter 32 - Predictive soil maps based on geomorphic mapping, remote sensing, and soil databases in the desert southwest, in Boettinger, J., Howell, D., Moore, A., Hartemink, A., Kienast-Brown, S., eds., *Digital soil mapping: bridging research, production, and environmental application*, Springer, Netherlands, p. 409-419.
- Bacon, S.N., McDonald, E.V., Amit, R., Enzel, Y., and Crouvi, O. (2011). Total suspended particulate matter emissions at high friction velocities from desert landforms, *Journal of Geophysical Research: Earth Surface* 116, F03019.
- Bacon, S.N., McDonald, E.V., Dalldorf, G.K., Lucas, W., and Nikolich, G. (2014). Recommendations for the development of a dust-suppressant test operations procedure (TOP) for U.S. Army materiel testing, in Harmon, R.S., Baker, S.E., and McDonald, E.V., eds., *Military Geosciences in the Twenty-First Century: Geological Society of America Reviews in Engineering Geology*, v. XXII, 83-100.
- Bacon, S.N., Lancaster, N., Stine, S., Rhodes, E.J., and Holder, G.A.M., (2018). A continuous 4000-year lake-level record of Owens Lake, south-central Sierra Nevada, California, USA, *Quaternary Research* 90, 276–302.
- Bacon, S. N., Bullard, T. F., Keen-Zebert, A. K., Jayko, A. S., Decker, D. L. (2020). Spatiotemporal patterns of distributed slip in southern Owens Valley indicated by deformation of late Pleistocene shorelines, eastern California, *Geological Society of America Bulletin*, 132 (7/8), 1681-1703, 10.1130/B35247.1.
- Bacon, S. N., Jayko, A. S., Owen, L. A., Lindvall, S. C., Rhodes, E. J., Schumer, R., Decker, D. L. (2020). A 50,000-year record of lake-level variations and overflow from Owens Lake, eastern California, USA, *Quaternary Science Reviews*, 238, 106312, 10.1016/j.quascirev.2020.106312.
- Bullard, T.F., **Bacon, S.N.**, Canonne, P., Smith, J.N., Queen, C.R., Ruehlen, L., Ormond, J. (2011). Geology, geomorphology and the vertical dimension of the World War II battlefield, in Häusler, H. and Mang, R., eds., *International Handbook Military Geography Volume 2: Arbeitsgemeinschaft Truppendienst*, Ministry of Defence and Sports, Vienna, 99-106.
- Caldwell, T.G., McDonald, E.V., **Bacon, S.N.**, and Stullenbarger, G. (2008). The performance and sustainability of vehicle dust courses for military testing. *Journal of Terramechanics* 45, 213-221.
- Dawson, T., DuRoss, C.B., Gold, R., Scharer, K., Ponti, D., Ladinsky, T., Langenheim, V.E., McPhillips, D., Morelan, A., Milliner, C., Kendrick, K., Hernandez, J., Hudnut, K., Akciz, S., Angster, S., Avouac, J-P., **Bacon, S.**, et al. (in review). Field-based Observations of Surface Ruptures Associated with the 2019 Ridgecrest Earthquake Sequence. *Bulletin Seismological Society of America*.
- DuRoss, C.B., R.D. Gold, T.E. Dawson, K.M. Scharer, K.J. Kendrick, S.O. Akciz, S.J. Angster, J. Bachhuber, **S. Bacon**, E. K. Bennett, et al., (2020). Surface Displacement Distributions for the July 2019 Ridgecrest, California, Earthquake Ruptures. *Bulletin Seismological Society of America*, 110(4), 1400–1418. doi: 10.1785/0120200058.
- Flemming, S., McDonald, E.V., and **Bacon, S.N.** (2016). Military test site characterization and training future officers—An integrated terrain analysis approach, in McDonald, E.V., Bullard, T.F., eds., *Military Geosciences and Desert Warfare, Past Lessons and Modern Challenges*, Springer: New York, NY, 273-295.

- Jayko, A.S. and **Bacon, S.N.** (2008). Late Quaternary MIS 6-8 shoreline features of pluvial Owens Lake, Owens Valley, eastern California, in Reheis, M.C., Hershler, R., and Miller, D.M., eds., Late Cenozoic Drainage History of the Southwestern Great Basin and Lower Colorado River Region: Geologic and Biotic Perspectives: Geological Society of America Special Paper 439, p. 185-206.
- Lancaster, N., **Bacon, S.N.**, Bullard, T.F., Nuedorf, C.M., Keen-Zebert, A.K., Decker, D.L., and Boggs, M.L. (in review). Tectonic, hydrogeologic, and climate controls on Late Holocene dune formation, Indian Wells Valley, California, USA. *Quaternary Research*.
- Lancaster, N., **Bacon, S.N.**, Baker, S., and Holder, G.A.M. (2015). Owens Lake dune fields: composition, sources of sand, and transport pathways. *Catena* 134, 41–49.
- McDonald, E.V., **Bacon, S.N.**, Bassett, S., Amit, R., Enzel, Y., Minor, T.B., McGwire, K.C., Crouvi, O., Nahmias, Y. (2016). Integrated terrain forecasting for military operations in deserts: Geologic basis for rapid predictive mapping of soils and terrain features, in McDonald, E.V., Bullard, T.F., eds., Military Geosciences and Desert Warfare, Past Lessons and Modern Challenges, Springer: New York, NY, 353-375.
- Norton, R., Cablk, M.E., Ramsey, B.A., Smith, K.L., **Bacon, S.N.**, Ostrowski, S.R., Wright, J., Rodning, S., (2018). Defending against agroterrorism: Modeling Pathogen Dispersion Pathways, *Homeland Defense & Security Information Analysis Journal*, 5 (1), 23-27.
- 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*, 91(5), 2942–2959. doi: 10.1785/0220190322.
- Regmi, N.R., McDonald, E.V., and **Bacon, S.N.** (2014). Mapping Quaternary alluvial fans in the southwestern United States based on multi-parameter surface roughness of LiDAR topographic data. *Journal of Geophysical Research: Earth Surface*, 119, doi: 10.1002/2012JF002711.
- Reheis, M.C., Adams, K.D., Oviatt, C.G., and **Bacon, S.N.** (2014). Pluvial lakes in the Great Basin of the western United States – A view from the outcrop. *Quaternary Science Reviews*, 97, 33-57.
- Sabol, D.E., Minor, T.B., McDonald, E.V., and **Bacon, S. N.** (2016). Parent material mapping of geologic surfaces using ASTER in support of integrated terrain forecasting for military operations, in McDonald, E.V., Bullard, T.F., eds., Military Geosciences and Desert Warfare, Past Lessons and Modern Challenges, Springer: New York, NY, 311-338.
- Slemmons, D.B., Vittori, E., Jayko, A.S., Carver, G.A., and **Bacon, S.N.** (2008). Quaternary fault and lineament map of Owens Valley, Inyo County, eastern California. Geological Society of America Map and Chart 96, 25 p.

Other Publications

- Bacon, S.N., Pezzopane, S.K., and Burke, R.M. (2003). NEHRP Final Technical Report: Paleoseismology on the Owens Valley fault and latest Quaternary stratigraphy in Owens Valley near Lone Pine, eastern California, 42 p. <http://erpweb.er.usgs.gov/reports/abstract/2002/ni/02hqgr0003.pdf>
- Bacon, S., Burke, B., Pezzopane, S., and Jayko, A. (2005). Geologic and geomorphic record of late Pleistocene and Holocene lake levels of Owens Lake, eastern California. In “Geologic and biotic perspectives on the late Cenozoic drainage history of the southwestern Great Basin and lower Colorado River region: Conference abstracts” (M.C. Reheis, Ed.), pp. 15-16. *U.S. Geological Survey Open-File Report 2005-1404*. <http://pubs.usgs.gov/of/2005/1404/pdf/OFR-2005-1404.pdf>
- Van Dissen, R. J., T. A. Little, R. M. Burke, P. J. Tonkin, K. P. Norton, **S. N. Bacon**, R. Bowers, H. L. Goldstein, J. R. Redwine, and D. G. Sutherland (2016). Late Quaternary dextral slip rate of the Kekerengu fault: New Zealand’s third fastest on-land fault, New Zealand GeoSciences Society Conference, Wanaka, New Zealand, *GeoSciences Society of New Zealand, Miscellaneous Publication 142A*, 89 pp.
- Van Dissen, R. J., R. M. Burke, P. J. Tonkin, **S. Bacon**, R. Bowers, H. Goldstein, J. Redwine, D. Sutherland, and S. Tillinghast (2005). Kekerengu Fault assessment of late Quaternary slip rate using alluvial terrace and soil stratigraphy. *Geological Society of New Zealand miscellaneous publication 119B*, p. 100-108.

Abstracts

- Adams, K.D., **Bacon, S.N.**, Lancaster, N., Rhodes, E.J., and Negrini, R.M. (2014). How wet can it get? Defining future climate extremes based on late Holocene lake-level records: *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 46, n. 6, Paper No. 310-5.
- Bacon, S.N., and Jayko, A.S. (2004). Holocene and latest Pleistocene surface ruptures on the southern Inyo Mountains Fault, southern Owens Valley, *Basin and Range Seismic Hazard Summit, II, Reno, NV, May 2004*.
- Bacon, S.N., and Jayko, A.S. (2004). Holocene(?) and latest Pleistocene surface ruptures on the southern Inyo Mountains Fault, southern Owens Valley, Eastern California shear zone: *Geological Society of America, Abstracts with Programs*. **36**, 16.

- Bacon, S.N., Balzer, V., Batton, C., and Gere, T.M. (1996). Quaternary Volcanic and Glacial Stratigraphy in the central High Cascades, outside Sisters, Oregon. *Geological Society of America, Abstracts with Programs*. **28**, 5.
- Bacon, S.N., Van Dissen, R.J., Goldstein, H.L., Tillinghast, S.F., and Burke, R.M. (2000). Late Pleistocene Equilibrium Altitude Estimates from Glacial Features in the Inland Kaikoura Range, New Zealand. *Geological Society of America, Abstract with Programs*. **32**, 7.
- Bacon, S.N., Chinn, T.C., Van Dissen, R.J., Goldstein, H.L., Tillinghast, S.F., and Burke, R.M. (2000). Late Pleistocene Equilibrium Altitude Estimates from Glacial Features in the Inland Kaikoura Range, New Zealand (Abstract). 9th Australian and New Zealand Geomorphological Group Conference.
- Bacon, S.N., and Burke, R.M. (2000). Preliminary Paleoseismic Investigations on the Owens Valley Fault Zone and Latest Quaternary Stratigraphy in Owens Valley near Lone Pine, eastern California. *American Geophysical Union, 2000 Fall Meeting, Program and Abstract*. **81**, 48.
- Bacon, S.N., Pezzopane, S.K., and Burke, R.M. (2002). Stratigraphic evidence for only one Holocene paleoearthquake since ca. 12 ka on the Owens Valley fault, near Lone Pine, eastern California: *Geological Society of America, Abstract with Programs*. **33**, 4.
- Bacon, S.N., Pezzopane, S.K., and Burke, R.M. (2002). Paleoseismology on the Owens Valley fault and Holocene stratigraphy of pluvial Owens Lake near Lone Pine, eastern California: *Geological Society of America, Abstract with Programs*. **34**, 6.
- Bacon, S.N., Bayasgalan, A., Gillespie, A., and Burke, R.M. (2003). Paleoseismic displacement measurements from landforms subjected to periglacial processes: Observations along the Jarai Gol fault near the Tamyn Am Hills, Darhad Depression, northern Mongolia. *XVI Inqua Congress, Abstract with Programs*. 103.
- Bacon, S.N., McDonald, E.V., and Bassett, S.D. (2007). Catalogue of analogs: Identifying terrain similarities between the World's deserts and the US Army Desert/Hot Weather test site, Yuma Proving Ground (YPG), southwestern Arizona: *7th International Conference on Military Geology and Geography*, June 18-21, Quebec, Canada, Session 4 Spatial Analysis, abstract and talk, p. 8.
- Bacon, S.N., McDonald, E.V., Baker, S.E., Caldwell, T.G., and Stullenbarger, G. (2007). Desert terrain characterization of landforms and surface cover within vehicle test courses at U.S. Army Yuma Proving Ground, USA: *Proceedings of the Joint North American, Asia-Pacific ISTVS Conference and Annual Meeting of Japanese Society for Terramechanics*, Fairbanks, Alaska, USA, June 23-26, 2007, Session 41 Terrain Impacts, talk and short paper.
- Bacon, S.N., McDonald, E.V., Dalldorf, G.K., and Caldwell, T.G. (2007). Late Holocene soil stratigraphy and geochronology of alluvial sedimentation in the Sonoran Desert, Arizona, *EOS Trans., AGU*, 88 (52), Fall Meet. Suppl., Abstract H53C-1390.
- Bacon, S.N., McDonald, E.V., Dalldorf, G.K., Baker, S.E., Sabol Jr., D.E., Minor, T.B., Bassett, S.D., MacCabe, S.R., Bullard, T.F. (2008). An expert based system to predict soil attributes using geomorphic mapping, remote sensing, and soil databases in the desert southwest USA: *European Geological Union, EGU2008-A-10709; SSS25-1FR5P-0669*, Abstract XY0669.
- Bacon, S.N., McDonald, E.V., Dalldorf, G.K., Baker, S.E., Sabol Jr., D.E., Minor, T.B., Bassett, S.D., MacCabe, S.R., Bullard, T.F. (2009). Predictive terrain hazard maps for military operations in the desert based on geomorphic mapping, remote sensing, and soil databases: *8th International Conference on Military Geosciences, Abstracts with Programs*, June 15-19, 2009, Vienna, Austria, p 14.
- Bacon, S.N., McDonald, E.V., Caldwell, T.G., and Dalldorf, G.K. (2009). Alluvial fan response to strengthening of late Holocene ENSO variability in the Sonoran Desert, southwest Arizona: *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 41, n. 7, p. 647.
- Bacon, S.N., McDonald, E.V., and Green, H.L. (2011). Development of geomorphic-based dust source emissions data in support of forecasting dust storm activity in southwest Asia: *9th International Conference on Military Geosciences, Abstracts with Programs*, June 19-24, 2011, Las Vegas, Nevada, p 18.
- Bacon, S.N., McDonald, E.V., Sweeney, M.R., Amit, R., Enzel, Y., and Crouvi, O. (2011). Emission of PM₁₀ and total suspended particulate matter from desert landforms across the southwestern U.S. and Israel: Implications for near-surface and atmospheric dust loading models: *XXIII Inqua-Congress, Abstract with Programs*, July 21-27, 2011, Bern, Switzerland, ID 3015.
- Bacon, S.N., Lancaster, N., Stine, S., Rhodes, E.J., and Holder, G.A.M., (2013). Refined late Holocene lake-level history of Owens Lake, east-central California: *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 45, n. 7, Paper No. 231-2.
- Bacon, S.N., Adams, K.D., Bullard, T.F., Keen-Zebert, A., and Decker, D.L. (2014). Sill failure and catastrophic outburst floods from Owens Lake, California: implications for latest Pleistocene and Holocene paleohydrology of the Owens River basin: *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 46, n. 6, Paper No. 310-7.

- Bullard, T.F., Canonne, P., **Bacon, S.**, Queen, C.R., Ormond, J. (2009). Geology, geomorphology, and the vertical dimension of the battlefield: First ever surrender of major ground force unit to an air force – Chateauroux Region, France, August – September 1944: *8th International Conference on Military Geosciences, Abstracts with Programs*, June 15-19, 2009, Vienna, Austria, p 28.
- Berli, M., Caldwell, T., **Bacon, S.**, McDonald, E. (2008). Trafficability of fine-textured arid soils – a model evaluation: *Geological Society of America Joint Annual Meeting, Abstracts with Programs*, 58-6.
- Caldwell, T.G., McDonald, E.V., Young, M.H., Hamerlynck, E.P., and **Bacon, S.N.** (2006). Ecohydrology of an arid soil chronosequence in the Sonoran Desert, Yuma Proving Ground, USA, *EOS Trans., AGU*, 87 (52), Fall Meet. Suppl., Abstract H13A-1355.
- Caldwell, T.G., McDonald, E.V., and **Bacon, S.N.** (2007). Vehicle dust courses and military testing at the U.S. Army’s Yuma Proving Ground: *Proceedings of the Joint North American, Asia-Pacific ISTVS Conference and Annual Meeting of Japanese Society for Terramechanics*, Fairbanks, Alaska, USA, June 23-26, Session 41 Terrain Impacts, poster and short paper.
- Caldwell, T.G., McDonald E.V., Young, M., **Bacon, S.N.**, Marion, G.M. (2008). Numerical simulations of salt accumulation in a hyper-arid soil chronosequence in the Sonoran Desert: *Geological Society of America Joint Annual Meeting, Abstracts with Programs*, 335-9.
- Caldwell, T.G., Sweeney, M., **Bacon, S.N.**, and McDonald, E., (2009). Hydraulic gradient and dust emissivity along a playa to distal fan transect, *EOS Trans., AGU*, 90 (52), Fall Meet. Suppl., Abstract EP24A-05.
- Caldwell, T., McDonald, E., **Bacon, S.**, Schumer, R., and Bullard, T. (2011). Cleared circles: Anthropogenic or Biogenic? Use of non-invasive geophysical techniques to determine origin, *The Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Abstracts with Program*, April 10-14, 2011.
- Caldwell, T., McDonald, E., **Bacon, S.**, Young, M., and Lin, H. (2012). Hydopedology and ecosystem response on an arid soil chronosequence: *2nd International Conference on Hydopedology, Abstract with Programs*, July 22-27, Leipzig, Germany.
- Dalldorf, G.K., McDonald, E.V., **Bacon, S.N.**, Nikolich, G. (2008). Testing and evaluation of a synthetic polymer for dust suppression in military applications: *Geological Society of America Joint Annual Meeting, Abstracts with Programs*, 135-14.
- Dalldorf, G.K., **Bacon, S.N.**, McDonald, E.V., Baker, S.E., Sabol Jr., D.E., Minor, T.B., Bassett, S.D., MacCabe, S.R., Bullard, T.B. (2008). Predictive soil maps based on geomorphic mapping, remote sensing, and soil databases in the desert southwest: *3rd Global Workshop on Digital Soil Mapping*, Paper in Session 6, 10 p.
- Dalldorf, G.K., Caldwell, T.C., **Bacon, S.N.**, Young, M.H., Miller, J.J., McDonald, E.V. (2009). Rapid characterization of runoff potential on arid alluvial fans using terrain prediction and geomorphic mapping. American Association of Geographers annual meeting, Las Vegas, Nevada, Session 5603, March 26, 2009.
- Lancaster, N., **Bacon, S.N.**, Baker, S., and Holder, G.A.M., (2014). Owens Lake dune fields: composition, sources of sand, and transport pathways: *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 46, n. 6, Paper No. 121-3.
- McAlpine, J.D., Koracin, D., **Bacon, S.**, Baker, S., and McDonald, E. (2012). Development of an operational predictive tool for visibility degradation and brownout caused by rotorcraft dust entrainment: *Weather Impacts Decision Aids (WIDA) Workshop, Abstract with Programs*, March 13-15, Reno, Nevada.
- McDonald, E.V., Bassett, S.D., **Bacon, S.N.**, Minor, T.B., Bullard, T.F. (2006). Integrated desert terrain forecasting for military operations: 25th Army Science Conference, November 27-30, Orlando, FL, Session O Environmental and Engineering Geosciences; OP-14, poster & short paper, 6 p.
- McDonald, E.V., and Bassett, S.D., **Bacon, S.N.**, Minor, T.B., and Bullard, T.B. (2007). Integrated terrain forecasting for military operations: Predicting the location of critical soil conditions using geomorphic image analysis: *7th International Conference on Military Geology and Geography*, June 18-21, Quebec, Canada, Session 9 Soil and Technology, abstract and talk, p. 22.
- McDonald, E.V., **Bacon, S.N.**, Dalldorf, G.K., Bullard, T.F., Minor, T.B. (2009). Integrated desert terrain forecasting for military operations: Geologic basis for rapid predictive mapping of soils and terrain features: *8th International Conference on Military Geosciences, Abstracts with Programs*, June 15-19, 2009, Vienna, Austria, p 92.
- McDonald, E.V., **Bacon, S.N.** (2010). Rapid measurement of dust emission from semi-arid to hyperarid landforms: Implications for assessing impacts of global climate change on wind erosion and dust emission. *International Dryland Development Commission (IDDC), Tenth International Conference on Development of Drylands, Cairo, Egypt, Abstracts with Program*, December 12-15, 2010.
- McDonald, E.V., **Bacon, S.N.**, Schumer, R., Jenkins, S., and Caldwell, T. (2011). The question of the origin of cleared circles as cultural resource features: weary humans or energetic rodents?: *9th International Conference on Military Geosciences, Abstracts with Programs*, June 19-24, 2011, Las Vegas, Nevada, p 80.

- McDonald, E.V., Spears, L., Fleming, S.D., and **Bacon, S.N.** (2012). Developing science-based testing – characterizing the physical environment with enough detail to support test procedures: *28th Annual National Test & Evaluation Conference, Abstract with Programs*, March 12-15, 2012, Hilton Head, South Carolina, #13755.
- Miller, J. J., **Bacon, S. N.**, French, R. H. (2015). Borrego Springs alluvial fan active and inactive area mapping, County of San Diego, California: *Floodplain Management Association Conference*, September 8-11, 2015, Rancho Mirage, CA.
- Regmi, N., McDonald, E.V., and **Bacon, S.N.** (2012). Mapping Quaternary Alluvial Fans in the southwestern United States based on multi-parameter surface roughness of LIDAR topographic data. *American Geophysical Union Fall Meeting, Abstracts with Programs*, EP41E-0846.
- Van Dissen R.J., Little T.A., Burke R.M., Tonkin P.J., Norton K.P., **Bacon, S.N.**, Bowers R., Goldstein H.L., Redwine J.L., Sutherland D.G., Tillinghast S.F., Kearse J., Whattam J., Townsend D.B., Benson A.M., and Wang N. (2016). Late Quaternary dextral slip rate of the Kekerengu Fault: New Zealand's third fastest on-land fault. *Geoscience Society of New Zealand, GeoSciences 2016 Fall Meeting*, November 28 – December 1, 2016.

Awards

- U.S. Geological Survey (USGS) / National Association of Geology Teachers (NAGT) 1996 internship.
http://www.nagt.org/nagt/programs/usgs_field.html
- U.C. White Mountain Research Center (WMRC), Graduate Student Research Minigrant Program. Research grants awarded in 1999, 2000, and 2001.

Affiliations

- Geological Society of America
American Geophysical Union
Association of Environmental and Engineering Geologists

Discipline/Professional Services

- 2010 nominee for the panel of the Geological Society of America, Quaternary Geology and Geomorphology Division.

Peer-Reviewer – Journals and Maps

- Arid Land Research and Management
Bulletin of the Seismological Society of America
Geological Society of America Bulletin
Geological Society of America Special Paper
Geology
Geophysical Research Letters
Journal of Arid Lands Management
Journal of Hydrology
Journal of Geophysical Research: Earth Surface
Journal of Mountain Science
Journal of South American Earth Sciences
Lithosphere
Quaternary International
Quaternary Research
Quaternary Science Reviews
Sedimentary Geology
U.S. Geological Survey 7.5-minute quadrangle geologic and surficial map

Peer-Reviewer – Proposals

- Desert Research Institute, Jonathan O. Davis Research Scholarship
National Science Foundation – Earth Science Program