**PUBLICATIONS: NATIONAL/INTERNATIONAL PEER-REVIEWED JOURNAL ARTICLES/BOOK CHAPTERS**

Sweeney, M.R., McDonald, E.V., Chabela, L.P. and Hanson, P.R., 2020. The role of eolian-fluvial interactions and dune dams in landscape change, late Pleistocene− Holocene, Mojave Desert, USA. Geological Society of America Bulletin.

Regmi, N. R., McDonald, E. V., and Rasmussen, C., 2019, Hillslope response under variable microclimate. Earth Surf. Process. Landforms, https://doi.org/10.1002/esp.4686.

Tiner, R.J., Negrini, R.M., Antinao, J.L., McDonald, E. and Maldonado, A., 2018. Geophysical and geochemical constraints on the age and paleoclimate implications of Holocene lacustrine cores from the Andes of central Chile. Journal of Quaternary Science, 33(2), pp.150-165.

Sweeney, M. R., McDonald, E. V., & Gaylord, D. R., 2017, Generation of the Palouse loess: Exploring the linkages between glaciation, outburst megafloods, and eolian deposition in Washington State. From the Puget Lowland to East of the Cascade Range: Geologic Excursions in the Pacific Northwest, 49, 207.

Lewis, C.J., Sancho, C., McDonald, E.V., Peña-Monné, J.L., Pueyo, E.L., Rhodes, E., Calle, M. and Soto, R., 2017, Post-tectonic landscape evolution in NE Iberia using staircase terraces: Combined effects of uplift and climate. Geomorphology, 292, pp.85-103.

Antinao, J.L., McDonald, E., Rhodes, E.J., Brown, N., Barrera, W., Gosse, J.C. and Zimmermann, S., 2016, Late Pleistocene-Holocene alluvial stratigraphy of southern Baja California, Mexico. Quaternary Science Reviews, 146, pp.161-181.

McDonald, E.V., Bacon, S.N., Bassett, S.D., Amit, R., Enzel, Y., Minor, T.B., McGwire, K., Crouvi, O. and Nahmias, Y., 2016, Integrated terrain forecasting for military operations in deserts: geologic basis for rapid predictive mapping of soils and terrain features. In Military Geosciences and Desert Warfare (pp. 353-375). Springer, New York, NY.

McDonald, E.V. and Schumer, R., 2016, Use of ground-based LiDAR for detection of IED command wires on typical desert surfaces. In Military Geosciences and Desert Warfare (pp. 297-309). Springer, New York, NY.

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 Military Geosciences and Desert Warfare (pp. 311-337). Springer, New York, NY.

Fleming, S., McDonald, E.V. and Bacon, S.N., 2016, Military test site characterization and training future officers—an integrated terrain analysis approach. In Military Geosciences and Desert Warfare (pp. 273-295). Springer, New York, NY.

Sabol, D.E. and McDonald, E.V., 2016, From Army Outpost to Military Training Installations for Worldwide Operations: How WWII Transformed the Military Presence in the Southwestern United States. In Military Geosciences and Desert Warfare (pp. 19-35). Springer, New York, NY.

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 Military Geosciences and Desert Warfare (pp. 237-256). Springer, New York, NY.

Brown, N.D., Rhodes, E.J., Antinao, J.L. and McDonald, E.V., 2015, Single-grain post-IR IRSL signals of K-feldspars from alluvial fan deposits in Baja California Sur, Mexico. Quaternary International, 362, pp.132-138.

Regmi, N.R., Giardino, J.R., McDonald, E.V. and Vitek, J.D., 2015, A Review of Mass Movement Processes and Risk in the Critical Zone of Earth. In Developments in Earth Surface Processes (Vol. 19, pp. 319-362). Elsevier.

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 US Army materiel testing. Reviews in Engineering Geology, 22, pp.83-100.

Regmi, N.R., McDonald, E.V. and Bacon, S.N., 2014, Mapping Quaternary alluvial fans in the southwestern United States based on multiparameter surface roughness of LiDAR topographic data. *Journal of Geophysical Research*: Earth Surface, 119(1), pp.12-27.

Caldwell, T.G., Wöhling,T., M.H. Young, M.H., Boyle, D.P., and McDonald, E.V., 2015, Characterizing disturbed desert soils using multi objective inverse parameter optimization. *Vadose Zone Journal* (in press).

Regmi, N.R., Giardino, J.R., McDonald, E.V. and Vitek, J.D., 2014, A comparison of logistic regression-based models of susceptibility to landslides in western Colorado, USA. *Landslides*, 11(2), pp.247-262.

Harmon, R.S., and McDonald, E.V., 2014, Editors' introduction: Military geoscience in the twenty-first century__ A historical perspective and overview. *In* Harmon, R. S., Baker, S. E., & McDonald, E. V. (Eds.). (2014). Military Geosciences in the Twenty-first Century. Geological Society of America.

Gilewitch, D. A., King, W. C., Palka, E. J., Harmon, R. S., McDonald, E. V., & Doe, W. W. (2014). Characterizing the desert environment for Army operations. Reviews in Engineering Geology, 22, 57-68.

Markus B, Caldwell, T.G., McDonald, E.V., and Gilewitch, D.A., 2014, Modeling desert pavement deterioration due to heavy vehicle traffic, *Journal of Terramechanics* (in press).

Caldwell, T.G., Young, M.H., McDonald, E.V, and J. Zhu, J., 2014, Biotic and abiotic controls on soil heterogeneity in arid shrublands, *Water Resource Research*, (in press).

McAlpine, J.D., Koracin, D., Boyle, D., and McDonald, E.V., 2014, Rotorcraft field program over desert: wake observations and computational fluid dynamics simulation. *Journal of the American Helicopter Society* (in press).

Rittase, W.M., Kirby, E., McDonald E.V., Walker, D.J., Gosse, J., Spencer J.Q.C., and Herrs, A.J., 2014, Temporal variations in Holocene slip rate along the central Garlock fault, Pilot Knob Valley, California, *Lithosphere*, 6(1): 48-58.

Gómez-Paccard, M., Larrasoaña, J.C., Sancho C., Muñoz, A., McDonald, E., Rhodes, E., Osácar, M.C., E., Costa, Beamud, E., 2013, Environmental response of a fragile, semiarid landscape (Bardenas Reales Natural Park, NE Spain) to Early Holocene climate variability: A paleo- and environmental-magnetic approach., Catena, 103:30-43.

Sweeney, M. R., McDonald, E.V., and Markley, C.E., 2013, Alluvial sediment or playas: what is the dominant source of sand and silt in desert soil Av horizons, southwest USA? *Journal of Geophysical Research*, 118:257-275.

Caldwell, T.G., Wöhling, T., Young, M.H., Boyle, D.P. and McDonald, E.V., 2013, Characterizing disturbed desert soils using multiobjective parameter optimization. Vadose Zone Journal, 12(1).

Antinao, J.L., McDonald, E., 2013, An enhanced role for the Tropical Pacific on the humid Pleistocene–Holocene transition in southwestern North America, *Quaternary Science Reviews* 78, 319-341.

Antinao, J.L. and McDonald, E.V., 2013, A reduced relevance of vegetation change for alluvial aggradation in arid zones. *Geology,* 41:11-14.

McDonald, E.V., Sweeny, M., and Busacca, A.J., 2012, Glacial outburst floods and loess sedimentation documented during oxygen isotope stage 4 on the Columbia Plateau, Washington State. *Quaternary Science Reviews*, 45: 18-30.

Sancho, C., Peña, J.L., Calle, M., Lewis, C.J., McDonald, E.V., Pueyo, E., Gosse, J. and Soto, R., 2012, Incisión fluvial cuaternaria en los Pirineos centrales y la cuenca del Ebro a partir de la secuencia de terrazas del río Cinca (Pleistocene fluvial incision in the central Pyrenees and Ebro basin (NE Spain) from the Cinca River terrace sequence). In Geotemas, 13 (p. 239). VIII Congreso Geológico de España Oviedo.

Sweeney, M. R., McDonald, E. V., and Etyemezian,V., 2011, Quantifying dust emissions from desert landforms, eastern Mojave Desert, USA. *Geomorphology*. 135: 21–34.

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*, 116, F03019.

Sweeney, M. R., McDonald, E. V., and Etyemezian,V., 2011, Quantifying dust emissions from desert landforms, eastern Mojave Desert, USA. *Geomorphology.* 135: 21–34.

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*, 116, F03019.

Amit, R., Enzel, Y., Crouvil, O., Simhail., O., Matmon, A., Porat, N., McDonald, E., Gillespie, A., 2011, The role of the Nile in initiating a massive dust influx to the Negev late in the middle Pleistocene. *Geological Society of America Bulletin*, v. 123 no. 5-6 p. 873-88.

Amit, R., Simhai, O., Ayalon, A., Enzel, Y., Matmon, A., Crouvi, O., Porat, N. and McDonald, E., 2011, Transition from arid to hyper-arid environment in the southern Levant deserts as recorded by early Pleistocene cummulic Aridisols. Quaternary Science Reviews, 30(3-4), pp.312-323.

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 the 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 Boeettinger, J., Howell, D., Moore, A., Hartemink, A., Kienast-Brown, S., eds., *Digital soil mapping: bridging research, production, and environmental application*, Springer, Netherlands, pp. 409-419.

McAlpine, J.D., Koracin, D.K., Boyle, D.P., Gillies, J.A., and McDonald, E.V., 2010, Development of a rotorcraft dust-emission parameterization using a CFD model. *Environmental Fluid Mechanics*, V 10 (6), 691-710.

Stevenson, B.A., Kelly, E.F, McDonald, E.V., Busacca, A.J. and Welker J.M., 2010, Oxygen isotope ratios in Holocene carbonates across a climatic gradient eastern Washington State, USA: Evidence for seasonal effects on pedogenic mineral isotopic composition. *The Holocene*, 20:575-583.

Crouvi, O., R. Amit, N. Porat, A. R. Gillespie, E. V. McDonald, and Y. Enzel, 2009, Significance of primary hilltop loess in reconstructing dust chronology, accretion rates, and sources: An example from the Negev Desert, Israel, *Journal of Geophysical Research*, 114, F02017, doi:10.1029/2008JF001083.

Markus Berli, T. G. Caldwell, E. V. McDonald, and D. A. Gilewitch. 2009. Modeling Desert Pavement Deterioration due to Heavy Vehicle Traffic, Journal of *Terramechanics* (in press).

Lewis, C.L., McDonald E.V. Sancho, C., Peña, J.L., and Rhodes, E., 2009, Climatic implications of correlated Upper Pleistocene glacial and fluvial deposits on the Cinca and Gállego Rivers (NE Spain) based on OSL dating and soil stratigraphy. *Global and Planetary Chang*e, 67(3-4) 141-152.

McDonald, E.V., and Caldwell. T.G., 2009, Geochemical characteristics of Iraqi dust and soil samples and related impacts to weapon malfunctions. In C.P. Nathanail, R.J. Abrahart, and R.P. Bradshaw (eds), *Military Geography and Geology: History and Technology*, Land Quality Press, Nottingham, pp. 258-265.

Caldwell, T.G., McDonald, E.V. and Young, M.H., 2009, The seedbed microclimate and active revegetation of disturbed lands in the Mojave Desert. Journal of arid environments, 73(4-5), pp.563-573.

Miller, D.M., Bedford, D.R., Hughson, D.L., McDonald, E.V., Robinson, S.E. and Schmidt, K.M., 2009, Mapping Mojave Desert ecosystem properties with surficial geology. The Mojave Desert, ecosystem processes and sustainability. University of Nevada Press, Reno, pp.225-251.

Stevenson, B.A., E.V. McDonald, and T.G. Caldwell, 2009, Root patterns for Larrea tridentata in relation to soil morphology and hydrology in Mojave Desert soils of different ages. In, *The Mojave Desert: Ecosystem Processes and Sustainability*. (Eds) R.H. Webb, L.F. Fenstermaker, J.S. Heaton, D.L. Hughson, E.V. McDonald, D.M. Miller, pp. 312-338.

Webb, R.H., Fenstermaker, L.F., Heaton, J.S., Hughson, D.L., McDonald, E.V., and Miller, D.M., 2009, The Mojave Desert: Ecosystem processes and sustainability revisited. In, *The Mojave Desert: Ecosystem Processes and Sustainability*. (Eds) R.H. Webb, L.F. Fenstermaker, J.S. Heaton, D.L. Hughson, E.V. McDonald, D.M. Miller, pp. 457-464.

Matmon, A., Simhai, O., Amit, R., Haviv, I., Porat, N., McDonald, E., Benedetti, L. and Finkel, R., 2009, Desert pavement–coated surfaces in extreme deserts present the longest-lived landforms on Earth. Geological Society of America Bulletin, 121(5-6), pp.688-697.

McDonald, E.V. and Caldwell, T.G., 2008, Geochemical characteristics of Iraqi dust and soil samples and related impacts to weapon malfunctions. Military geography and geology: history and technology. Land Quality Press, Nottingham, pp.258-265.

Baker, S.E., Gosse, J. C., McDonald, E.V., Evenson, E.B., and Martinez, O., 2008, Quaternary history of the piedmont reach of Río Diamante, Argentina. *Journal of South American Earth Sciences*. 28(1) 54-73.

Sancho, C., Peña J.L., Muñoz, A., Benito G., McDonald, E., Rhodes, E.J., and Longares, L.A., 2008, Holocene alluvial morphopedosedimentary record and environmental 3 changes in the Bardenas Reales Natural Park (NE Spain), *Catena*. 73(3) 225-238.

Engelbrecht, J. P; McDonald, E V; Gillies, J A; Gertler, A W., 2008, Characterizing mineral dusts and other aerosols from the Middle East - Part I: Ambient sampling. *Inhalation Toxicology*. 21, p. 297-326

Engelbrecht, J. P; McDonald, E V; Gillies, J A; Gertler, A W., 2008, Characterizing mineral dusts and other aerosols from the Middle East – Part II: Grab samples and re-suspensions. *Inhalation Toxicology*. 21, p. 327-336.

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*. doi:10.1016/j.jterra.2008.10.002.

Caldwell, T.G.,Young, M.H., Jiating, Z., and E.V. McDonald. E.V., 2008, Spatial structure of hydraulic properties from canopy to interspace in the Mojave Desert, *Geophysical Research Letters*, 35 L19406, doi:10.1029/2008GL035095.

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*, doi:10.1016/j.jterra.2008.09.005.

Caldwell, T.G., McDonald, E.V., and Young, M.H., 2008, soil disturbance and unsaturated hydraulic response at the US Army National Training Center, Ft. Irwin, California, *Journal of Arid Environments* 67: 456-472.

Sweeney, M., Etyemezian, V., Macpherson, T., Nickling, W., Gillies, J., Nikolich, G., and McDonald, E., 2008, Comparison of PI-SWERL with dust emission measurements from a straight-line field wind tunnel. *Journal of Geophysical Research*, 113: F0102.

Jacoby, Y; Grodek, T; Enzel, Y; Porat, N; McDonald, E V; Dahan, O., 2008, Late Holocene upper bounds of flood magnitudes and twentieth century large floods in the ungauged, hyperarid alluvial Nahal Arava, Israel. *Geomorphology* 95(3-4) 274-294.

Marion, G.M., Verburg, P.S.J., McDonald, E.V., and Arnone, J.A., 2008, Modeling salt movement through a Mojave Desert soil. *Journal of Arid Environments* 72(6) 1012-1033.

Caldwell, T.G., McDonald, E.V., and Young, M.H., 2008, The seedbed microclimate and active revegetation of disturbed lands in the Mojave Desert. *Journal of Arid Environments* 73 (4-5): 563-573.

Meadows, D.G., Young, M.H., and McDonald, E.V., 2007, Influence of relative surface age on hydraulic properties and infiltration on soils associated with desert pavements. *Catena*. 72:169-178.

Shafer, D.S., Young, M.H., Zitzer, S.F., Caldwell, T.G., and McDonald, E.V., 2007, Impacts of coupled pedogenic, hydraulic, biotic and abiotic processes during the past 125,000 years of landscape evolution in the northern Mojave Desert, Nevada, U.S.A. *J. Arid Environments* (JAE05-457).

C. Sancho, C., Benito, G., Muñoz,A., Peña, J.L., Longares,L.A., McDonald, E.V., Rhodes, E, y Saz, M.A., 2007, Actividad aluvial durante la Pequeña Edad del Hielo en Bardenas Reales de Navarra (Alluvial activity during Little Ice Age in Bardenas Reales of Navarra), *Geogaceta.* V. 42: 111-114.

Sancho, C., Peña, J. L., Lewis, C., McDonald, E.V., Rhodes, E., Pueyo, E.L., and Gosse, J., 2007, Cronologia del sistema de terrazas cuaternarias en la cuenca del rRo Cinca (Pirineos y depression del Ebro). *In Contribuciones Al Estudio Del Periodo Cuaternario*, J.L. Gomez and G.S. Barroso (Eds.), p30-32.

McAlpine, J.D., Koracin, D., Veropoulos, K., Boyle, D., McDonald, E.V., and Lamorey, G., 2007, Determining atmospheric dust concentrations during strong flow perturbations using a digital-optical technique. Lecture Notes in Computer Science: *Advances in Visual Computing*, 4841, 393-402.

Meadows, D.G., Young, M.H., and McDonald, E.V., 2006, Estimating clay content and saturated hydraulic conductivity on clay-rich surfaces using GPR. *Vadose Zone Journal* 5:720-730.

Albright, W., Benson, C., Gee, G., Abichou, T., McDonald, E., Tyler, S., and Rock, S., 2006, Field Performance of a Compacted Clay Landfill Final Cover at a Humid Site: *Journal of Geotechnical and Geoenvironmental Engineering*, 132:11, 1393-1403

Shafer, D.S., Young, M.H., Zitzer, S.F., McDonald, E.V., and Caldwell, T.G., 2006. Coupled Environmental Processes in the Mojave Desert and Implications for ET Covers as Stable Landforms, April 2006 in Unsaturated Soils 2006, pp. 718-729. Geotechnical Special Publication 147 (eds., Miller, G.A., Zapata, C.E., Houston, S.L., and D.G. Fredlund), *American Society of Civil Engineers*. ISBN: 0-7844-0802-5.

Sabol, D.E., Gillespie, A.R., McDonald, E. and Danillina, I., 2006, Differential thermal inertia of geological surfaces. In submitted 2nd Annual International Symposium of Recent Advances in Quantitative Remote Sensing, Torrent, Spain, 6pp (pp. 25-29).

McAuliffe, J.R., and McDonald E.V., 2006, Persistent plant scars on desert pavements: long-term records of environmental change in the Sonoran Desert, *Quaternary Research*, v65, 293-307.

Caldwell, T.G., McDonald, E.V., and Young, M.H., 2006, Soil disturbance and hydrologic response at the National Training Center, Ft. Irwin, California. *J. Arid Environments*., 67,456-472.

Shafer, D.S., Young, M.H., Zitzer, S.F., Caldwell, T.G., and McDonald, E.V. 2006, Impacts of interrelated biotic and abiotic processes during the past 125 000 years of landscape evolution in the Northern Mojave Desert, Nevada, USA. *Journal of Arid Environments*, 69: 633-657.

Beaty, D.W.; Buxbaum, K.L.; Meyer, M.A.; Barlow, N.G.; Boynton, W.V.; Clark, B.C.; Deming, J.W.; Doran, P.T.; Edgett, K.S.; Hancock, S.L.; Head, J.W.; Hecht, M.H.; Hipkin, V.; Kieft, T.L.; Mancinelli, R.L.; McDonald, E.V.; McKay, C.P.; Mellon, M.T.; Newsom, H.; Ori, G.G.; Paige, D.A.; Schuerger, A.C.; Sogin, M.L.; Spry, J.A.; Steele, A.; Tanaka, K.L.; Voytek, M.A., 2006, Findings of the Special Regions Science Analysis Group, *Astrobiology*, Vol. 6, Number 5, 677-732.

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 Proceedings*.

Meadows, D.G., Young, M.H., and McDonald, E.V., 2005, A laboratory method for determining the unsaturated hydraulic properties of soil peds. *Soil Science Society America Journal*, 69:807-815.

Stevenson, B.A., Kelly, E.F, McDonald, E.V., Busacca, A.J., 2005, The stable carbon isotope composition of soil organic carbon and pedogenic carbonates along a bioclimatic gradient in the Palouse region, Washington State, USA. *Geoderma*, v.124, Issues 1-2, 2005, p. 37-47.

E.V, McDonald, Bullard, T., Britt, J., and Ruiz, M.O., 2004, Identification of soil and geomorphic variables in development of an archeological predictive model for management of military lands in desert, In Harmon et al.(eds.), *Perspectives on Military Geology and Geography*, Kluwer Press, pp. 259-270.

Young, M.H., McDonald, E.V., Caldwell, T.C., Benner, S.G., Meadows, D., 2004, Hydraulic properties of desert pavements in the Mojave Desert, U.S.A., *Vadose Zone Journal, Soil Science Society of America* (3:956-963).

Drakos, D.L., Katzman, P.Z., Malmon, D., McDonald, E.V., and Ryti, R., 2004, Geomorphic controls on contaminant distribution along an ephemeral stream, *Earth Surface Processes and Landforms*, 29, 1209–1223.

Peña, P.L., Lewis, C., McDonald, E.V., Rhodes, E., and Sancho, C., 2004, Ensayo cronologio del Pleistoceno Medioduperior en la Cuenca Del Rio Cinca (Pirineos y Depresion del Ebro), In: G. Benito & A. Díez Herrero (eds.). Contribuciones *Recientes sobre Geomorfología*, p. 165-172.

Sweeney, M.R., Busacca, A.J., Richardson, C.A., Blinnikov, M.S., and McDonald, E.V., 2004, Glacial anticyclone recorded in Palouse loess of northwestern USA. *Geology*, v. 32, p. 705-708.

McDonald, E.V, McFadden, L.D., and Wells, S.G., 2003, Regional response of alluvial fans to the Pleistocene-Holocene transition and alluvial fan deposition in Providence Mountains. *Geological Society of America Special Paper* No. 368: 189-205.

Dahan, O., McDonald, E.V., and Young, M.H., 2003, Development of a flexible TDR probe for deep vadose zone monitoring, *Vadose Zone Journal* 2:270-275.

Eppes, M.C., McDonald, E.V., and McFadden, L.D., 2003, Soil geomorphological studies in the Mojave Desert: Impacts of Quaternary tectonics, climate, and rock type on soils, landscapes, and plant community ecology, In Easterbrook, D. (ed.) Quaternary Geology of the United States, *INQUA 2003 Field Guide* Volume, p. 105-123.

Pazzaglia F.J., Brandon, M.T., Wegmann, K.W., Gosse, J., McDonald, E., Garcia, A.F., Prothero, D., 2003, Tectonic geomorphology and the record of Quaternary plate boundary deformation in the Olympics Mountains, *Geological Society of America*, Field Guide 4, 31pp.

McDonald, E.V., 2002, Numerical simulations of soil water balance in support of revegetation of damaged military lands in arid regions, *Arid Land Research and Management: 16(3) 277-291.*

Lashlee, D., Briuer, F., Murphy, W., and McDonald, EV., 2002, Geomorphic mapping enhances cultural resource management at the US Army Yuma Proving Ground, *Arid Land Research and Management 16(3) 213-231.*

Hamerlynck, E.P, McAuliffe, J.R., McDonald, E.V, and Smith, S.D, 2002, Impacts of desert soil processes and drought on contrasting Mojave Desert shrubs. *Ecology*: 83: 768-779.

Kieft ,T. L., Murphy, E.M. , Haldeman, D. L. ,Amy, P. S., Bjornstad, B. N., McDonald, E. V., Ringelberg, D. B., White, D. C., Stair, J., Griffiths, R. P., Gsell, T. C., Holben, W. E., and Boone D. R., 1999, Microbial transport, survival and succession in a sequence of buried soils: *Microbial Ecology,* v. 36, p. 336-348.

Richardson, C.A., McDonald, E.V., and Busacca, A.J., 1998, Luminescence chronology for loess deposits in Washington State and Oregon, USA: *Zeitschrift fur Geomorphologie, Suppl.-Bd. 116, 77-95.*

Phillips, W.M., McDonald, E.V., Reneau, S.L., and Poths, J., 1998, Dating soils and alluvium with cosmogenic 21Ne depth profiles: case studies from the Pajarito Plateau, New Mexico, USA: *Earth and Planetary Science Letters*, p. 209-223.

McFadden, L.D., McDonald, E.V., Wells, S.G., Anderson, K., Quade, J., and Forman, S.L., 1998, The vesicular layer of desert soils: Genesis and relationship to climate change and desert pavements based on numerical modeling, carbonate translocation behavior, and stable isotope and optical dating studies, *Geomorphology*, p. 101-145.

McDonald, E.V., and Busacca, A.J., 1998, Unusual timing of regional loess sedimentation of triggered by glacial outburst flooding in the Pacific Northwest of the United States. *In* Busacca, A.J. (ed.), *Dust aerosols, loess soils and global change. Conference Proceedings*, Washington State University, College of Agriculture and Home Economics Misc Publication No. MISC0190, 1998. p. 163-168.

Richardson, C.A., McDonald, E.V., and Busacca, A.J., 1997, Luminescence dating of loess from the northwest United States: *Quaternary Science Reviews*, 16:403-415.

McDonald, E. V., Reneau, S. L., and Gardner, J. N., 1996, Soil-forming processes on the Pajarito Plateau: Investigation of a soil chronosequence in Rendija Canyon: *New Mexico Geological Society*,

Guidebook, p. 367-374.

McDonald, E. V., Longmire, P., Watt, P. M., Randall, R., and Reneau, S. L., 1996, Natural major and trace element background geochemistry of selected soils, Los Alamos, New Mexico: *New Mexico Geological Society*, Guidebook, p. 375-382.

Reneau, S. L., McDonald, E. V., Gardner, J., N., Kolbe, T. R., Carney, J. S., Watt, P. M., and Longmire, P. A., 1996, Erosion and deposition on the Pajarito Plateau, New Mexico, and implications for geomorphic responses to late Quaternary climatic changes: *New Mexico Geological Society*, Guidebook, p. 391-390.

McDonald, E.V., Pierson, F.B., Fleschinger, G.N. and McFadden, L.D., 1996, Application of a process-based soil-water balance model to evaluate the influence of Late Quaternary climate change on soil-water movement in calcic soils: *Geoderma*, 74:167-192.

Wang, Y., McDonald, E.V., Amundson, R., McFadden, L.D., and Chadwick, O., 1996, An isotopic study of soils in chronological sequences of alluvial deposits, Providence Mountains, California: *Geological Society of America Bulletin* 108(4):379-391.

McDonald, E.V., McFadden, L.D., and Wells, S.G., 1995, The relative influences of climate change, desert dust, and lithologic control on soil-geomorphic processes on alluvial fans, Mojave Desert, California: Summary of results: In: R.E. Reynolds and J. Reynolds (eds.), Ancient surfaces of the east Mojave Desert, *San Bernardino County Museum Association Quarterly*, 42(3): 35-42.

McAuliffe, J.A., and McDonald, E.V, 1995, Soil-vegetation relations for calcic soils, East Mojave Desert: In: R.E. Reynolds and J. Reynolds (eds.), Ancient surfaces of the east Mojave Desert, *San Bernardino County Museum Association Quarterly*, 42(3):53-68.

McDonald, E.V., and McFadden, L.D., 1994, Quaternary stratigraphy of the Providence Mountains piedmont and preliminary age estimates and regional stratigraphic correlation of Quaternary deposits in the eastern Mojave Desert, California. In Wells, S.G., Tinsley, J., McFadden, L.D., and Lancaster, N. (eds.), Quaternary stratigraphy and dating methods: understanding geologic processes and landscape evolution within Southern California. In GSA *Cordilleran Section Guidebook: Geological Investigations of an Active Margin*, p. 205-210.

Busacca, A.J., and McDonald, E.V., 1994, Regional sedimentation of Late Quaternary loess on the Columbia Plateau: Source areas and wind distribution patterns. *In* E.S. Cheney and R. Lasmanis (eds.), *Regional Geology of Washington*, Washington Division of Geology and Earth Resources Bulletin No. 80, p. 181-190.

Amundson, R., Wang, Y., Chadwick, O., Trumbore, S., McFadden, L., McDonald, E.V., Wells, S., DeNiro, M., 1994, Factors and processes governing the carbon-14 content of carbonate in desert soils: *Earth and Planetary Science Letters*, 125:385-405.

McDonald, E.V. and Busacca, A.J., 1992, Late Quaternary stratigraphy of loess in the Channeled Scabland and Palouse of Washington State: *Quaternary Research*, 38:141-156.

Busacca, A.J., Nelstead, K., McDonald, E.V., and Purser, M., 1992, Correlation of distal tephra layers in loess in the Channeled Scabland and Palouse of Washington State: *Quaternary Research*, 37:281-303.

Crowe, B., Morley, R., Wells, S., Geissman, J., McDonald, E.V., McFadden L.D., Perry, F., Murrrell, M., Poths, J., and Forman, S., 1992, The Lathrop Wells volcanic center: Status of field and Geochronology studies: *In* proceedings of the 3rd Annual International Conference, *High Level Radioactive Waste Management*, American Nuclear Society, 2:1997-2013.

McDonald, E.V. and Busacca, A.J., 1990, Interaction between aggrading geomorphic surfaces and the formation of a Late Pleistocene paleosol in the Palouse loess of eastern Washington state: *Geomorphology* 3:449-470.

McDonald, E.V. and Busacca, A.J., 1989, Record of pre-late Wisconsin floods and of late Wisconsin flood features in the Cheney-Palouse Scabland: In Reed, K., (ed)., Geologic Field Trip Guidebook, Washington and Adjacent Areas: Washington Division of Geology and Earth Resources, Information Circular 86, Olympia, WA. pp. 337-346,

Busacca, A.J., McDonald, E.V., and Baker, V.R., 1989, Chapter 8. Record of pre-late Wisconsin floods and flood features in the Cheney-Palouse Scabland: In Breckenridge, R.M., (ed.), Glacial Lake Missoula and the Channeled Scablands. Guidebook for Field Trip 310, American Geophysical Union, Washington D.C. pp. 57-62

McDonald, E.V. and Busacca, A.J., 1988, Record of pre-late Wisconsin giant floods in the Channeled Scabland interpreted from loess deposits: *Geology*, 16:728-731.

**SELECTED PROFESSIONAL PRESENTATIONS: AUTHOR/CO-AUTHOR (2002-2019 with published abstracts)**

McDonald, Eric V. and Sion, Bradley D.,2019, Influence of parent material lithology on dust accumulation in alluvial fan soils, Mojave Desert, California, Geological Society of America Annual Meeting, Phoenix, AZ.

Sion B., McDonald E.V., Hartshorn E., Sabol D., Shoop S.A., 2019, The utility of soil-landform relationships in terrain mobility models based on soil-strength characteristics in different environmental and geologic settings, International Conference on Military Geosciences, Padova, Italy

Hartshorn E., McDonald E.V., Page D., Sabol D., Minor T, 2019, Evaluation of military vehicle mobility through UAS photogrammetry and digital terrain modeling, International Conference on Military Geosciences, Padova, Italy

Sabol, D., Minor T., Page D., Hartshorn E., McDonald E., 2019, Investigating remote measurement of sub-surface soil moisture for military operations, International Conference on Military Geosciences, Padova, Italy

McDonald, E. V., Sweeney, M. R., Hanson, P. R., 2018, When Did Vesicular A (Av) Horizons Form in the Desert SW U.S.: Elucidating Between Soil Processes and Luminescence Ages, Geological Society of America Annual Meeting, Indianapolis, IN.

McDonald, E.V., Sancho Marcén, C., Pena-Monne, J.L., Rhodes, E., and Gosse, J., 2018, Pedogenesis and properties of soils formed on an 800 ka sequence of quaternary river terraces in the Spanish Pyrenees, European Geosciences Union General Assembly, Vienna, Austria.

McDonald, E.V., and Sweeney, M.R., 2017, Blowing dust and a dangerous highway: evaluating the sources of dust along Interstate 10 between Phoenix and Tucson, Arizona, Geological Society of America Annual Meeting, Seattle, WA.

Sweeney, M.R., and McDonald, E.V., 2017, Dust emission potential along the Interstate 8 corridor, Southern California and Arizona, Arizona, Geological Society of America Annual Meeting, Seattle, WA.

McDonald, E.V. and Schumer, R., 2017, Geologic investigation of cleared circle features at the U.S. Army Yuma Proving Ground: Balancing protection of cultural resources and supporting military activities in the desert southwest of the United States. 12$^{th}$ International Conference on Military Geoscience, Stellenbosch, South Africa.

McDonald, E.V., Harrison, JBJ, Baldwin, J., Page, W., Rood, D., 2017, Denudational slope processes on weathered basalt in northern California: 130 ka history of soil development, periods of slope stability and colluviation, and climate change, European Geosciences Union General Assembly, Vienna, Austria.

McDonald, E.V., and Harrison, J.B.J., 2016, Use of a soil chronofunction developed for volcanic soils to date and evaluate hillslope dynamics on soil rates of soil formation. International Union for Quaternary Research (INQUA) conference on Quaternary Soils and Palaeosols, Mexico City.

Sabol, D., and McDonald, E.V., 2015, Soil Geotechnical Characterization of Desert Surfaces for Testing Ground Robotics, 11th International Conference on Military Geoscience, U.S. Naval Academy, Annapolis, MD.

McDonald, E.V., Predicting Local to Regional Dust Emission in Deserts Using Soil-Landscape Models in Support of Military Activities, 2015, 11th International Conference on Military Geoscience, U.S. Naval Academy, Annapolis, MD.

McDonlad, E.V., 2015, Predicting Dust Emission Impacts to Military Activities Using Soil-Landscape Models: The Batsheva de Rothschild Seminar on Atmospheric Dust, Dust Deposits (Loess) and Soils in Deserts and the Desert Fringe, Jerusalem & Negev, Israel, October 2015

McDonald, Eric V., Harrison, JBJ, Baldwin, John, Page, William, Rood, Dylan H., Gray, Brian, Bloszies, Christopher, Givler, Robert W., and Williams, Patrick, 2015, Use of soil stratigraphy to decipher the 30 ka history of hillslope colluvium derived from weathered basalt in northern California. Geological Society of America Annual Meeting, Baltimore, MD.

Sweeney, M.R., and McDonald, E.V., Hanson, P., Lucas, C., 2015, Sand dunes exert control on alluvial base level and soil formation, eastern Mojave Desert, USA, Geological Society of America Annual Meeting, Baltimore, MD.

McDonald, E., Antinao, J.L., Rhodes, E.J., Brown, N. and Gosse, J., 2015, April. The role of tropical cyclones on landscape dynamics in southern Baja California, Mexico based on Late Pleistocene-Holocene alluvial stratigraphy. In EGU General Assembly Conference Abstracts (Vol. 17).

McDonald, E.V., 2014, Comparing rates and processes of soil development between subtropical and arid regions using well-dated chronosequences. Geological Society of America Annual Meeting in Vancouver, British Columbia.

Gaylord, D.R., Sweeney, M., Foit Jr, F.F., Mcdonald, E.V. and Roberts, H.M., 2014, Overview of The geomorphic, sedimentary, stratigraphic and paleoclimatic history of sand-dominated Quaternary eolian deposits on the Columbia Plateau, WA. Geological Society of America Annual Meeting in Vancouver, British Columbia.

Antinao, José Luis, McDonald, Eric, Rhodes, Edward J., Barrera, Wendy, Brown, Nathan D., Gosse, John C., and Zimmerman, Susan H., 2014, Late Pleistocene-Holocene alluvial stratigraphy of southern Baja California, Mexico. Geological Society of America Annual Meeting in Vancouver, British Columbia.

Regalla, Christine, Kirby, Eric, Mcdonald, Eric V., 2014, Holocene rupture history of the Ash Hill fault, eastern California shear zone. Geological Society of America Annual Meeting in Vancouver, British Columbia.

McDonald, E.V., Bullard, T.F., and Antinao, J. L., 2013, Linking Holocene hydrologic events with episodic fluvial deposition alluvial history and soil formation, Santa Catalina Island, California: 26th Pacific Climate Workshop (PACLIM), Monterrey, CA.

Caldwell, T.G., Young, M.H., McDonald E.V., 2012, Hydropedology and ecosystem response on an arid soil chronosequence, 2nd International Conference on Hydropedology, Leipzig Germany, July, 2012.

McDonald, E.V., 2012, Recent Trends is pedeogenic development of soils in the desert SW US: Dust, water, and geochologic dating. 2012. Current Rates of soil forming processes – achievements, challenges, research gaps November, Charlotte (North Carolina, USA), International Union for Quaternary Science Workshop.

McDonald, E.V., COL Fleming, S., Duarte, N., Bacon, S., Caldwell, T., and Mihvec, T., 2012, Characterization of Complex Geographic Terrain to Support Testing of Autonomous Systems, 2012 International Symposium on Resilient Control Systems, Salt Lake City.

Caldwell, T.G., M.H. Young, J. Zhu, and E.V. McDonald, 2011, Soil heterogeneity in arid shrublands: biotic and abiotic controls on soil moisture variability, W2188 Soil Physics Group Annual Meeting, Las Vegas, NV, January.

Caldwell, T.G., E.V. McDonald, S.N. Bacon, R. Schumer, and T.F. Bullard, 2011, Cleared circles: anthropogenic or biogenic? Use of non-invasive geophysical techniques to determine origin, Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP), Charleston, SC, April 10-14.

Caldwell, T.G., T. Wohling, G.N. Flerchinger, M.H. Young, E.V. McDonald, S.P. Hardegree., 2011, Inverse Modeling water contents of semiarid soils using multi-objective parameter optimization, ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX, Oct. 16-19, 2011.McDonald, E.V., Terrain Analysis Program: Rapid Earth Surface Mapping and Predictions. Invited presentation to USAID, Washington DC.

McDonald, E.V., Kirby, E., Gosse, J., Rittase., W., Hoffman, W., and Walker, D.J., ,2011, On the utility of integrating soil stratigraphy with radiometric dating in the study of active faults in desert regions: An example from eastern California, U.S.A., XXIII IINQUA 2011 a-Congress, Abstract with Programs, July 21-27, 2011, Bern, Switzerland.

McDonald, E.V., and Caldwell, T.C., 2011, Energy balance monitoring and soil characterization in support of improvised explosive device (IED) and countermine detection and defeat, 14th Landmine & Buried Explosive Object Detection Research Review Meeting, 2-3 February, Washington DC.

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 IINQUA 2011 a-Congress, Abstract with Programs, July 21-27, 2011, Bern, Switzerland.

Caldwell, T.G., M.H. Young, J. Zhu, and E.V. McDonald, 2011, Soil heterogeneity in arid shrublands: biotic and abiotic controls on soil moisture variability, W2188 Soil Physics Group Annual Meeting, Las Vegas, NV, 3-5 January.

Caldwell, T.G., E.V. McDonald, S.N. Bacon, R. Schumer, and T.F. Bullard, 2011, Cleared circles: anthropogenic or biogenic? Use of non-invasive geophysical techniques to determine origin,

Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP), Charleston, SC, April 10-14.

Caldwell, T.G., T. Wohling, G.N. Flerchinger, M.H. Young, E.V. McDonald, S.P. Hardegree, 2011, Inverse Modeling water contents of semiarid soils using multi-objective parameter optimization, ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX, Oct. 16-19, 2011.

McDonald, E.V., 2011, The question of the origin of cleared circles as cultural resource features: weary humans or energetic rodents? 9th International Conference on Military Geosciences, Las Vegas, NV 19-24 June.

McDonald, E.V., S.E. Baker, S.N. Bacon, and T.G. Caldwell (2011), What is desert dust? Defining dust with respect to testing of military equipment for the U.S. Army, 9th International Conference on Military Geosciences, Las Vegas, NV 19-24 June.

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.

Caldwell, T.G., T. Wohling, G.N. Flerchinger, M.H. Young, E.V. McDonald, S.P. Hardegree., 2011, Inverse Modeling water contents of semiarid soils using multiobjective parameter optimization, ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX, Oct. 16-19, 2011.

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.

Gosse, J., and E., McDonald, 2010, The OIS-4 glacial-alluvial dichotomy, Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 74

Kirby, E., McDonald, E., Gosse, J., Rittase, W., Hoffman, W., Walker, D., 2010, On the utility of integrating soil characteristics with radiometric dating in the study of active faults: An example from eastern California, Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 522.

Hoffman, W., McDonald, E., Walker, D., Kirby, E., Gosse, J., Spencer, J., 2010, Combining absolute dating of alluvial fans with soil characteristics to investigate spatial and temporal variability of slip along the central Garlock fault – the Pilot Knob Valley, CA. Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 522.

Sweeney, M., and McDonald, E., 2010, Using luminescence dating to decipher timing and origin of eolian Av soil horizons, SW US. Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 416.

McDonald, E., and Sweeney, M., 2010, Extensive eolian activity during the OIS4-3 as recorded by paleoflood evidence and regional sedimentation patterns of loess on the Columbia Plateau, Washington state. Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 73.

Bacon S. N., E.V. McDonald, Caldwell, T.G., and Daldorf, G., 2009, Alluvial fan response to strengthening of late Holocene ENSO variability in the Sonoran Desert, SW Arizona. Geological Society of America Abstracts with Programs, 41(7) p. 647.

Caldwell, T.G., E.V. McDonald, S.N. Bacon, M.H. Young, and R. Schumer, Paleoclimate simulations and solute nitrate accumulation in a hyper-arid desert soil, ASA-CSA-SSSA Annual Conference, Pittsburgh, PA, November 2-6, 2009.

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.

Sun, D., J. Zhu, M. Young, T. Caldwell, E. McDonald, Effect of Canopy Patterns on Large Scale Water Budgets in Arid Environments, AGU Fall Meeting, December 14–18, 2009, San Francisco, California.

Wells, S.G., E.V. McDonald, T.G. Caldwell, M.H. Young, and K. Al-Quda. Role of Desert Pavement/Soil Development and Hydrology on Long-term Landscape Evolution in Arid Regions, International Union of Quaternary Research Conference on Paleohydrology. Hebrew University, Jerusalem, October 28-November 3, 2009.

Amit, R., Enzel, Y., Crouvi, O., Shimhai, AMIT, Matmon, A., Porat, N., McDonald, E., Gillispie, A. 2009, Farok El-Baz Award for Desert Research: How old is the Negev loess and causes for its sudden appearance in the late middle Pleistocene. Geological Society of America Abstracts with Programs, 41(7) p. 172.

Bacon S. N., E.V. McDonald, Caldwell, T.G., and Daldorf, G. 2009. Alluvial fan response to strengthening of late Holocene ENSO variability in the Sonoran Desert, SW Arizona. Geological Society of America Abstracts with Programs, 41(7) p. 647.

Rittase, W., Walker, D., Kirby, E., and McDonald, E.V. 2009. How steady is the Garlock Fault? Geological Society of America Abstracts with Programs, 41(7) p. 185.

Sweeney, M. R., McDonald, E.V., Etyemezian, V. 2009. Quantification of dust emissions from desert landforms using the PI-SWERL, southern CA. Geological Society of America Abstracts with Programs, 41(7) p. 620.

Hoffman, W., Kirby, E., McDonald, E.V., Walker, D., and Gosse, J. 2009. Late Pleistocene slip rates along the Panamint Valley fault system. Geological Society of America Abstracts with Programs, 41(7) p. 649.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., 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.

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.

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.

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.

Sweeney, M. R., McDonald, E.V., Etyemezian, V. 2009. Quantification of dust emissions from desert landforms using the PI-SWERL, southern CA. Geological Society of America Abstracts with Programs, 41(7) p. 620.

Caldwell, T., Young, M., Zhu, Jianting, and McDonald, E. 2008. Hydropedology of canopy-interspace ecosystems in the Mojave Desert: Biotic and abiotic processes. 93rd ESA Annual Meeting, Milwaukee, WI.

Bullard, T., McDonald, E., Britt, Ruiz, M., 2008, Identification of geologic variables in development of an archeological predictive model for management of military lands in desert terrains. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

McDonald, E., Koracin, D., McAlpine, J D., Boyle, D., and Gillies, J., 2008, integrated terrain modeling for predicting dust emission hazards for military operations in deserts. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Dalldorf, G., McDonald, E., Bacon, S., and Nikolich, G., 2008, Testing and evaluation of a synthetic polymer for dust suppression in military applications. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Markley, C., Sweeny, M., and McDonald, E.V., 2008, Compositional Variability of Dust-Producing Landforms in the Mojave Desert of Southern California. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Berli, M., Caldwell, T., Bacon, S., and McDonald, E.V., 2008, Trafficability of fine-textured arid soils – a model evaluation. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Sabol, D. and McDonald, E. V., 2008, Surface and Spectral Characteristics of Desert Fans of Different Ages. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Young, M., Caldwell, T., and McDonald, E.V., 2008, Relating mass and energy fluxes to arid soil development. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Caldwell, T., McDonald, E., Young, M., Bacon, S., and Marion, G., 2008, numerical simulations of salt accumulation in a hyper-arid soil chronosequence in the Sonoran Desert. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

McDonald, E. and Gosse, J., 2008, Soil Formation in the Mojave Desert: New TCN Information Suggests Rates of Soil Formation May Exceed Previously Established Rates. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Deng, Y., McDonald, E., Caldwell, T., and Baker, S., 2008, Pedogenic Palygorksite of a Desert Soil Chronosequence In Southwestern Arizona, USA. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

Young, M., Caldwell, T., Zhu, Jianting, Fenstermaker, L., and McDonald, E., 2008, Multi-Scale Variability of Soil and Hydraulic Properties and Impacts to Arid Water Balance. 2008 Joint ASA-CSSA-GSA Annual Meeting Abstracts.

McDonald, E., and Bullard, T. 2008. Holocene alluvial history derived from soil-stratigraphy, Santa Catalina Island, California. Cordilleran Section (104th Annual) and Rocky Mountain Section (60th Annual) Joint Meeting (19–21 March 2008); Las Vegas, Nevada

McDonald, E.V., 2007, Ecohydrology along first-order channels along intermountane piedmonts, Sonoran Desert, AZ. ARO Soil Moisture and Arid Lands Research Conference, March, 2007.

McDonald, E.V. and Caldwell., T.G., 2006, Ecohydrology along first-order channels along inter-mountane piedmonts, Sonoran Desert, Arizona., American Geophysical Union, Fall Meeting, December 11-15, 2006, San Francisco, CA.

McDonald, E.V., 2006, Soil Crust: Terrestrial soil analogs for Martian soils. NASA Special Regions Science Analysis Group, Mars Exploration Program Analysis Group Workshop, Long Beach, CA, 1/25/06.

McDonald, E.V., and Caldwell, T.G., 2007, Sustainable management of military lands in deserts: Use and Abuse of the desert soil and maybe what to do about it, ASA-SSSA-CSA Annual Meeting, New Orleans, LA, November 5-9, 2007.

McDonald, E.V., Bullard, T.F., Caldwell, T.G., 2007, Soil landscape relations on Santa Catalina Island: Modern soil features and past erosion: Oak Ecosystem Restoration Workshop II, February 2-4, 2007, Catalina Island.

Caldwell, T.G., E.V. McDonald, and G. McCurdy, 2007, Hillslope soils, microclimate and hydrology: influence of slope and aspect: Oak Ecosystem Restoration Workshop II, February 2-4, 2007, Catalina Island.

McDonald, E.V., 2007, Ecohydrology along first-order channels along intermountane piedmonts, Sonoran Desert, AZ. ARO Soil Moisture and Arid Lands Research Conference, March, 2007.

McDonald, E.V. and T.G. Caldwell. , 2006, Ecohydrology along first-order channels along inter-mountane piedmonts, Sonoran Desert, Arizona American Geophysical Union, Fall Meeting, December 11-15, 2006, San Francisco, CA.

McDonald, E.V., Bullard, T.F, Caldwell, T.G., 2007, Limited response of ephemeral stream dynamics to extreme vegetation change related to historic overgrazing, Catalina Island, California, U.S. American Geophysical Union Annual Meeting, San Francisco, CA, December 10-14, 2007.

Deng, Y., McDonald, E.V., 2007, Mineral occurrence, translocation, and weathering in soils developed on four types of carbonate and non-carbonate alluvial fan deposits in Mojave Desert, southeastern California. American Geophysical Union Annual Meeting, San Francisco, CA, December 10-14, 2007.

Bacon S. N., E.V. McDonald, Daldorf, G., and Caldwell, T.G., 2007, Late Holocene soil stratigraphy and geochronology of alluvial sedimentation in the Sonoran Desert, Arizona. American Geophysical Union, Fall Meeting, December 2007, San Francisco, CA.

Caldwell, T., Young, M., Zhu, J., and McDonald, E. V., 2007, Small-scale heterogeneity of soil hydraulic properties on large-scale water balance simulations. ASA-CSSA-SSSA International Annual Meeting, November, New Orleans, LA.

Deng, Y. and McDonald, E.V., 2007, Mineral occurrence, translocation, and weathering in soils developed on four types of alluvial fan deposits in Mojave Desert, southeastern California. 44th Annual Meeting of The Clay Minerals Society, Santa Fe, New Mexico, USA, June 2-7, 2007

Caldwell, T.G., E.V. McDonald, D.P. Boyle and M.H. Young, 2007, Numerical models for the active restoration of arid lands: parameterization, optimization and sensitivity analysis, ARO Terrestrial Sciences Soil Moisture/Arid Lands Research Review Meeting, Colorado Springs, CO, 5-6 March 2007.

Caldwell, T.G., E.V. McDonald, M.H. Young and B.A. Stevenson, 2006, Coupling hydropedology and root distributions in arid soils: numerical simulations, W-1188 Soil Physics Multi-State Research Group Annual Meeting, Las Vegas, NV, January 3-4, 2006.

Young, M.H., T.G. Caldwell, D.M. Meadows, V. Etyemezian G. Nikolic, E.V. McDonald, J. Miller, and J. Goreham, 2006, Impacts of Applying an organic emulsion on soil hydrology and dust emissions from an arid soil. 18th World Congress of Soil Science, July 9-15, 2006, Philadelphia, PA.

Caldwell, T.G., E.V. McDonald, and R.P. Sparks, 2006, The Integration of Soils and Hydrology for Restoration Planning on Military Lands, ASA-CSSA-SSSA International Annual Meeting, November 12-16, 2006, Indianapolis IN.

McDonald, E.V., T.G. Caldwell, E. Hamerlynck, and V. Morrill, 2006, Developing effective ecosystem monitoring strategies for military activities in deserts: results from the US Army Yuma Proving Ground, ASA-CSSA-SSSA International Annual Meeting, November 12-16, 2006, Indianapolis IN.

Young, M.H., T.G. Caldwell, E.V. McDonald, D.S. Shafer, D.M Meadows, J. Goreham, J. Miller, and V. Etyemezian, 2006, Field and laboratory evaluation of a soil-applied, organic emulsion, ASA-CSSA-SSSA International Annual Meeting, November 12-16, 2006, Indianapolis IN.

Caldwell, T.G., E.V. McDonald, M.H. Young, E.P. Hamerlynck and S. N. Bacon., 2006, Ecohydrology of an Arid Soil Chronosequence in the Sonoran Desert, Yuma Proving Ground, USA. American Geophysical Union, Fall Meeting, December 11-15, 2006, San Francisco, CA.

Sweeney, M.R., and McDonald, E.V., 2005, Fingerprinting sediment sources and eolian processes in the formation of desert Av horizons. Geological Society of America Abstracts with Programs, v. 37, no. 7, p. 425.

Giffin, J. and E.V. McDonald, 2005, Production, storage, and transport of sediment in arid basins during periods of Holocene climate change. Geological Society of America Abstracts with Programs, v. 37, no. 7, p. 425.

Jacoby, Y., Grodek, T., Enzel, Y., McDonald, E., Dahan, O., Porat, N., 2005, Impact of twentieth century floods on hyperarid ephemeral stream, Arava Valley, Israel. Geological Society of America Abstracts with Programs, Vol. 37, No. 7, p. 428.

Caldwell, T.G., E.V. McDonald, M.H. Young, and B.A. Stevenson, 2005, Modeling the interdependence of hydropedology and root distributions of larrea tridentata in the Mojave Desert. American Geophysical Union Fall Meeting, San Francisco, CA.

Shafer, D.S., M.H. Young, S.F. Zitzer, E.V. McDonald and T.G.Caldwell, 2005, Coupled environmental processes in the Mojave Desert and implications et covers as stable Landforms. American Society of Civil Engineers, Los Angeles, CA.

Young. M.H., T.G. Caldwell, J. Goreham, D.G. Meadows, D.S. Shafer, J.J. Miller, and E.V. McDonald, 2005, Hydrologic impacts of a surface-applied, organic emulsion on arid soils, American Geophysical Union Fall Meeting, San Francisco, CA.

McDonald, E.V, Late Quaternary climate change and landscape response: floods, dust, and alluvial Fans. Los Alamos Nation Laboratory, IGCP Invited Lecturer Symposium, December, 2004.

McDonald, E.V., Lewis, C., Sancho, C., Pena, J.L., Rhodes, E., and Gosse, J., 2004. incorporation of soil stratigraphy and geochronology of regional terraces in the Ebro Basin, Spain, for differentiating climatic from tectonic controls on landscape evolution. Geological Society Of America Abstracts With Programs, Vol. 36, No. 5, P. 306.

McDonald, E.V., T.G. Caldwell, B. Stevenson, and R. Sparks, 2004, Integrated Site Design: the integration of soils and hydrology for restoration planning, Mojave Science Symposium, Redlands, CA.

Caldwell, T.G., E.V. McDonald, and M.H. Young, 2004, Soil disturbance and hydrologic response at the National Training Center, Ft. Irwin, California, Desert Surficial Processes and Landscape Dynamics on Military Lands, Zzyzx, CA.

Caldwell, T.G., E.V. McDonald, and M.H. Young, 2004, Seedbed microclimate: modeling and monitoring soil moisture in support of the restoration of military lands, Mojave Science Symposium, Redlands, CA.

Young, M.H., E.V. McDonald, T.G. Caldwell, S.G. Benner, and D.G. Meadows, 2004, Hydraulic properties of a desert soil chronosequence in the Mojave Desert, USA, Desert Surficial Processes and Landscape Dynamics on Military Lands, Zzyzx, CA

McDonald, E., Mouat, D, 2004, A Strategy Using Soil Surface Information to Assess Risk to Desertification and Social Security, NATO Conference on Desertification and Security, Valencia, Spain, Dec. 2003.

Caldwell, T.G., E. McDonald, and M. Young, 2003, Modeling soil moisture in support of revegetation of military lands in arid regions, American Geophysical Union Fall Meeting 2003, San Francisco, CA.

Meadows, D.G., M.Y. Young, T.G. Caldwell, and E.V. McDonald, 2003, Hydraulic property determination of vesiculated soil peds in desert pavement environments. American Geophysical Union Fall Meeting, San Francisco, CA.

Young, M.H., E.V. McDonald, T.G. Caldwell, S.G. Benner, 2003, Infiltration through desert pavements, Mojave Desert, CA, USA. EGS-AGU-EUG Joint Assembly, Nice, France.

Caldwell. T.G., McDonald, E.V., Young, M.H., 2003, Modeling soil moisture in support of revegetation of military lands in arid regions, AGU Fall Meeting.

McDonald, E.V., 2003, Record of late Quaternary climate change in calcic soils: interpretation of soil geomorphology and hydrologic modeling, XVI INQUA Congress programs with abstracts, p. 194.

Bullard, T. and McDonald, E.V., 2003, Limited response of ephemeral stream dynamics to extreme vegetation change-late Holocene alluvial history of ephemeral streams, Catalina Island, California, XVI INQUA Congress programs with abstracts, p. 120.

Dahan, O., McDonald, E.V., Young, M., 2002, Water content measurements in the deep vadose zone using a new design and installation technique of TDR probes, AGU.

Caldwell, T, McDonald, E.V., Young, M., 2002, Soil degradation and hydrologic response at the National Training Center, Ft. Irwin, CA. AGU Chapman Conference, Taos, New Mexico.