THOMAS F. BULLARD

Division of Earth & Ecosystem Sciences
Desert Research Institute
Reno, Nevada 89512
http://www.dri.edu/directory/4804-tom-bullard

Phone: (775) 673-7420
Fax: (775) 673-7485
E-mail: tom.bullard@dri.edu

Dr. Bullard has nearly 40 years of academic and professional experience in basic and applied research in geology and geomorphology related to landscape evolution, fluvial system behavior, landscape restoration, geologic hazards and hazardous waste disposal that includes: soils-geomorphic applications to landscape evolution in arid, semi-arid, alpine, and tropical regions; fluvial geomorphology; applied tectonic geomorphology research on blind thrust faults for earthquake hazard assessment and seismic source characterization; landslide investigations; geoarchaeology and cultural resources management. *Project Field Areas* have included: southeast, southwest and western United States; Colorado Plateau; Mojave and Sonoran deserts; Great Basin; coastal California; Middle Snake River, Idaho; Alaska; Ungava Peninsula; northern Quebec, Canada; western Argentina; Belize; Bolivia; Colombia; Costa Rica; Panama; Suriname; and Philippines.

EDUCATION

1995	Ph.D.	University of New Mexico, Albuquerque, New Mexico	[Geomorphology and Soils]
1985	M.S.	University of New Mexico, Albuquerque, New Mexico	[Geology]
1972	B.A.	The Colorado College, Colorado Springs, Colorado	[Anthropology]

SUMMARY OF RECENT PROFESSIONAL EMPLOYMENT

11/20 – present	Desert Research Institute **Associate Research Professor, emeritus**
8/17 –11/20	Desert Research Institute **Hourly Associate Research Professor of Geomorphology**
7/08 – 8/17	Desert Research Institute, Division of Earth & Ecosystem Sciences **Associate Research Professor** (Rank III)
3/97 –6/08	Desert Research Institute, Division of Earth & Ecosystem Sciences **Assistant Research Professor** (Rank II)
3/97 – present	University of Nevada Reno, Graduate Program in Hydrologic Sciences **Adjunct Faculty**
6/97 – present	University of Nevada Reno, Department of Geosciences **Adjunct Faculty**
3/97 – present	University of Nevada Reno, Center for Neotectonics Studies **Cooperating Faculty**
5/89 to 3/97	Geomatrix Consultants, San Francisco, California **Senior Geologist**

PROFESSIONAL AFFILIATIONS

Geological Society of America (Member, 1980), Quaternary Geology and Geomorphology Division
American Geophysical Union
Society of American Archaeology
European Geosciences Union

PUBLICATIONS, TECHNICAL REPORTS, PRESENTED PAPERS, AND ABSTRACTS

Published Papers and Book Chapters

Lancaster, N., Bacon, S.N., Bullard, T.F., Neudorf, C.M., Keen-Zebert, A.K., Decker, D.L., and Boggs, M.L., (*in review*). Geomorphology of the China Lake Basin and tectonic, hydrogeologic, and climatic controls on Late Holocene dune formation, Indian Wellsl Valley, California, USA (*submitted to Quaternary Research*).

DuRoss, C.B., Gold, R.D., Dawson, T. E., Scharer, K. M., Kendrick, K. J., Akciz, S. O., Angster, S. J., Bachhuber, J., Bacon, S., Bennett, S, E. K., Blair, L., Brooks, B. A., **Bullard, T.**, Burgess, W. P., Chupik, C., DeFrisco, M., Delano, J., Dolan, J. F., Frost, E., Graehl, N., Haddon, E. K., Hatem, A.E., Hernandez, J.L., Hitchcock, C., Hudnut, K., Thompson Jobe, J., Koehler, R., Kozaci, O., Ladinsky, T., Madugo, C., McPhillips, D. S., Milliner, C., Morelan, A., Olson, B., Patton, J., Philibosian, B., Pickering, A.J., Pierce, I., Ponti, D., Seitz, G., Spangler, E., Swanson, B., Thomas, K., Treiman, J., Valencia, F., Williams, A., Zinke, R., 2020. Surface displacement distributions for the July 2019 Ridgecrest, California, earthquake ruptures. *Bulletin Seismological Society of America*, v. 110, p. 1400-1418. doi: 10.1785/0120200058.

DuRoss, C.B., Gold R., Dawson, T., Scharer, K.., Kendrick, K., Akciz, S., Angster, S., Bachhuber, J., Bacon, S., Bennett, S., Blair, L., Brooks, B., **Bullard, T.**, Burgess, W.P., Chupik, C., DeFrisco, M., Delano, J., Dolan, J., Frost, E., Graehl, N., Haddon, E., Hatem, A., Hernandez, J., Hitchcock, C., Hudnut, K., Jobe, J.T., Koehler, R., Kozaci, O., Ladinsky, T., Madugo, C., McPhillips, D., Milliner, C., Morelan, A., Olson, B., Patton, J., Philibosian, B., Pickering, A.J., Pierce, I., Ponti, D., Seitz, G., Spangler, E., Swanson, B., Thomas, T., Treiman, J., Valencia, F., Williams, A., and Zinke, R., 2020. Surface Displacement Observations of the 2019 Ridgecrest, California Earthquake Sequence: *U.S. Geological Survey data release*, https://doi.org/10.5066/P986ILE2.

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., Barth, N., Bennett, S., Blake, K., Bork, S., Brooks, F., **Bullard, T.**, Burgess, P. Chupik, C., Dawson, T., DeFrisco, M., Delano, J., DeLong, S., Dolan, J., Donnellan, A., DuRoss, C., Ericksen, T. Frost, E., Funning, G., Gold, R., Graehl, N., Gutierrez, C., Haddon, E., Hatem, A., Helms, J., Hernandez, J., Hitchcock, C., Holland, P., Hudnut, K., Kendrick, K., Koehler, R., Kozaci, O., Ladinsky, T., Leeper, R., Madugo, C., Mareschal, M., McDonald, J., McPhillips, D., Milliner, C., Mongovin, D., Morelan, A., Nale, S., Nevitt, J., O'Neal, M., Olson, B., Oskin, M., Padillal, S., Patton, J., Philibosian, B., Pierce, I., Pridmore, C., Roth, N., Sandwell, D., Scharer, K., Seitz, G., Singleton, D., Smith-Konter, B., Spangler, E., Swanson, B., Thompson Jobe, J., Treiman, J., Valencia, F., Vanderwal, J., Williams, A., Xiaohua Xu, Zachariasen, J., and Zinke, R., 2020. Documentation of surface fault rupture and ground deformation features produced by the Ridgecrest M6.4 and M7.1 earthquake sequence of July 4 and 5, 2019. *Seismological Research Letters*, v. 91, p. 2942-2959. doi: 10.1785/0220190322.

Bacon, S.N., **Bullard, T.F.**, Keen-Zebert, A.K., Jayko, A.S., and 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* Associate, v. 132, p. 1681-1703. doi 10.1130/B35247.1

McDonald, E. and **Bullard, T.F.**, (Editors.), 2016, Military Geosciences and Desert Warfare – Past Lessons and Modern Challenges. Proceedings of the 9th International Conference on Military Geosciences, *Springer International*, 250 p. ISBN: 978-1-4939-3427-0 (Print) 978-1-4939-3429-4

Bullard, T.F. and McDonald, E.V., 2016, Preface: Military Geosciences: Past Lessons and Modern Challenges, *in* E.V, McDonald and T.F. Bullard (Eds.), Military Geosciences and Desert Warfare: Past Lessons and Modern Challenges. Springer, New York, p. v-viii.

Bullard, T.F., Cannonne, P, Bacon, S.N., Ruehlen, L., Queen, C.R., and Ormond, J., 2011, Geology, geomorphology, and the vertical dimension of the World War II battlefield, *in* H. Häusler, and R. Mang, (eds.), International Handbook of Military Geography, v.2. Vienna, Arbeitsgemeinschaft TRUPPENDIENST, Ministry of Defence and Sports , p. 99-107.

Giambastiani, M. and **Bullard, T.F.**, 2010, Terminal Pleistocene-Early Holocene adaptations on the eastern shore of China Lake, California *in* Kaldenberg, R.L., editor, Archaeology of Naval Air Weapons Station, China Lake, California. Pacific Coast Archaeological Society Quarterly, v. 43, p. 50-70.

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

Maholland, B. and **Bullard, T.F**., 2005, Sediment-related road effects on stream channel networks in an Eastern Sierra Nevada watershed: *Journal of Nevada Water Resources Association*, v. 2, p. 57-70.

Bullard, T.F., Hanson, K., AbramsonWard, H. Angell, M., and Wesling, J., 2005. Updated assessments of the activity and slip rate for the Stanford Fault Zone and Pulgas Fault, Palo Alto Region, California, *in* C. Stevens and J. Cooper, eds., Cenozoic Deformation in the Central Coast Ranges, California: *Book 97, Fieldtrip Guidebook and Volume - Joint Meeting of the Cordilleran Section-GSA and Pacific Sections of AAPG and SEPM*, p. 41-49.

Bullard, T., Hanson, K.L., AbramsonWard, H., Angell, M., and Wesling, J., 2005, Updated assessments of the activity and slip rate for the Stanford Fault Zone and Pulgas faults, Palo Alto Region, California, *in*, D.G. Kennedy et al, eds., Seismic Hazard of the Range Front Thrust Faults, Santa Cruz Mountains, p. 39-49. (in Cenozoic Deformation in the Central Coast Ranges, California, Fieldtrip Guidebook and Volume for the Joint Meeting of the Cordilleran Section of Geological Society of America and the Pacific Section of American Association of Petroleum Geologists, Book 97, edited by C. Stevens and J. Cooper)

Johnson, W.G., **Bullard, T.F.**, Sharpe, S.E., and Holz, B.A., 2005, Characterizing a first occurrence of *Bison bison* deposits in southeastern Nevada: *Great Basin Naturalist*, v. 65, p. 35.

McDonald, E., **Bullard, T**., Britt, T., and Ruiz, M., 2004, Development of an archaeological predictive model for management of military lands – Identification of geological variables in desert terrain, *in* D.R. Caldwell, J. Ehlen, and R.S. Harmon, (Eds.), *Studies in Military Geography and Geology*. Kluwer Academic Publishers, Boston, p. 259-270.

Bullard, T.F., 2002, Geomorphic history and fluvial responses to active tectonics and climate change in an uplifted forearc region: Río Térraba, southern Costa Rica, Central America: *Zeitschrift für Geomorphologie*, Supplementbände, v. 129, p. 1-29.

Bullard, T.F., 1999, Geomorphic history and responses to active tectonics in an uplifted forearc region: Río Térraba, southern Costa Rica: *Boletim Goiano de Geografia*, v. 19 (1), p. 11-23.

Bullard, T.F., 1997, El impacto ambiental de la minera: unas experiencías en el Oeste de Los Estados Unidos, *1^0 Jornadas de Impacto Ambiental Minero, Volume of Conference Proceedings, Dirección General de Hidrocarburos y Minera*, Mendoza, Argentina.

Hanson, K.L., **Bullard, T.F.**, de Wit, M.W., and Stieve, A.L., 1993, Applications of Quaternary stratigraphic, soil-geomorphic, and quantitative geomorphic analyses to the evaluation of tectonic activity and landscape evolution in the Upper Coastal Plain, South Carolina: *4^{th} Natural Phenomena Hazards Mitigation Conference, U.S. Department of Energy*, Conf. Proc., 9 p.

Bullard, T.F. and Lettis, W.R., 1993, Quaternary fold deformation associated with blind thrust faulting, Los Angeles Basin, California: *Journal of Geophysical Research***,** v. 98, no. B5, p. 8349-8369**.**

Bullard, T.F. and Lettis, W.R., 1992, Quaternary geologic and tectonic geomorphic investigations in the Whittier Narrows area, Los Angeles Basin, California: *Association of Engineering Geologists 35^{th} Annual Meeting, Conference Proceedings***,** p. 659-678. *[INVITED PAPER]*

Gardner, T.W., Verdonck, D., Pinter, N., Slingerland, R., Furlong, K., **Bullard, T.F**., and Wells, S.G., 1992, Quaternary uplift astride the aseismic Cocos Ridge, Pacific coast, Costa Rica: *Geological Society of America Bulletin*, v. 104, p. 219-232.

Bullard, T.F. and Wells, S.G., 1991, Hydrology of the Middle Rio Grande from Velarde to Elephant Butte Reservoir, NM*: U.S. Department of the Interior, Fish and Wildlife Service, Resource Pub 179*, 56 p.

Bullard, T.F. and Lettis, W.R., 1990, Characterization of Quaternary deformation associated with concealed

thrust faulting: *Summaries of Technical Reports Volume XXXI***,** U.S. Geological Survey Open-File Report 90-680, p. 125-129.

Johnston, A.C. and **Bullard, T.F.**, 1990, The Ungava, Quebec earthquake: Eastern North America's first modern surface rupture: *Seismological Research Letters*, v. 61, p. 152-153.

Wells, S.G., **Bullard, T.F.**, Menges, C.M., Drake, P.G., Karas, P.A., Kelson, K.I., Ritter, J.B., and Wesling, J.R., 1988, Regional variations in tectonic geomorphology along a segmented convergent plate boundary, Pacific coast of Costa Rica: *Geomorphology*, v. 1, p. 239-265.

Menges, C.M., Wells, S.G., and **Bullard, T.F.**, 1987, Morphometry of tectonic landscapes along a convergent plate boundary, Pacific coast of Costa Rica, *in* W. Graf, (Ed.), Geomorphic Systems of North America: *Geological Society of America, Decade of North American Geology, Centennial Special Volume, CSV-2*, p. 373-384.

Anderholm, S.K. and **Bullard, T.F.**, 1987, Description of piezometer nests and water levels in the Rio Grande Valley near Albuquerque, Bernalillo County, NM: *U.S. Geological Survey OFR 87-122***,** 51p.

Bullard, T.F., 1985, Influence of bedrock geology on complex geomorphic responses and late Quaternary geomorphic evolution of Kim-me-ni-oli Wash drainage basin, northwestern New Mexico *[M.S. Thesis]:* Albuquerque, University of New Mexico, 203 p.

Ingersoll, R.V., **Bullard, T.F.**, Ford, R.L., and Pickle, J.D., 1985, The effect of grain size on detrital modes: a test of the Gazzi-Dickinson point-counting method --- Reply (to comment by L.J. Suttner and A. Basu): *Journal of Sedimentary Petrology*, v. 55, p. 617-618.

Ingersoll, R.V., **Bullard, T.F.**, Ford, R.L., and Pickle, J.D., 1985, The effect of grain size on detrital modes: a test of the Gazzi-Dickinson point-counting method --- Reply (to comment by J. Decker and K. Helmhold): *Journal of Sedimentary Petrology*, v. 55, p. 620-621.

Ingersoll, R.V., **Bullard, T.F.**, Ford, R.L., Grimm, J.P., Pickle, J.D., and Sares, S.W., 1984, The effect of grain size on detrital modes: a test of the Gazzi-Dickinson point-counting method: *Journal of Sedimentary Petrology*, v. 54, p. 103-116.

Wells, S.G., McFadden, L.D., Dohrenwend, J.C., **Bullard, T.F.**, Feilberg, B.F., Ford, R.L., Grimm, J.P., Miller, J.R., Orbock, S.M., and Pickle, J.D., 1984, Late Quaternary geomorphic history of Silver Lake, eastern Mojave Desert, California: an example of the influence of climatic change on desert piedmonts, *in* J.C. Dohrenwend, (Editor), Surficial geology of the eastern Mojave Desert, California: *Geological Society of America Field Trip 14 Guidebook*, p. 69-87.

Wells, S.G., **Bullard, T.F.**, Condit, C.D., Jercinovic, M., Jercinovic, D., and Lozinsky, R.P., 1983, Geomorphic processes on the valley floor of the Rio Puerco, *in* S.G. Wells, D.W. Love, and T.W. Gardner, (Eds.), Chaco Canyon Country: *American Geomorphological Field Group Guidebook*, p. 37-40.

Wells, S.G., **Bullard, T.F.**, Miller, J.R., and Gardner, T.W., 1983, Applications of geomorphology to uranium tailings siting and groundwater management: research overview, *in* S.G. Wells, D.W. Love, and T.W. Gardner, (Eds.), Chaco Canyon Country: *American Geomorphological Field Group Guidebook*, p. 51-56.

Bullard, T.F., 1983, Bedrock influences on the late Quaternary alluvial history and evolution of the Kim-me-ni-oli Wash drainage basin, *in* S.G. Wells, D.W. Love, and T.W. Gardner, (Eds.), Chaco Canyon Country: *American Geomorphological Field Group Guidebook*, p. 79-92.

Mahrer, K.D. and **Bullard, T.F.**, 1983, Seismic refraction studies of the alluvial-valley fills in the San Juan Basin, New Mexico, *in* S.G. Wells, D.W. Love, and T.W. Gardner, (Eds.), Chaco Canyon Country: *American Geomorphological Field Group Guidebook*, p. 93-98.

Wells, S.G., **Bullard, T.F.**, Smith, L.N., and Gardner, T.W., 1983, Chronology, rates, and magnitudes of late Quaternary landscape changes in the southeastern Colorado Plateau, *in* S.G. Wells, D.W. Love, and T.W. Gardner, (Eds.), Chaco Canyon Country: *American Geomorphological Field Group Guidebook*, p. 177-186.

Bullard, T.F., 1983, Appendix I: Cross sections and descriptions of stratigraphy exposed in backhoe trenches, Mining Area III of the Navajo Mine, northwestern New Mexico, *in* P. Hogan and J.C. Winter, (Eds.), Economy and Interaction Along the Lower Chaco River: The Navajo Mine

archaeological program, Mining Area III, San Juan County, New Mexico: *Office of Contract Archaeology, University of New Mexico*, p. 577-581.

Wells, S.G., McFadden, L.D., and **Bullard, T.F.**, 1983, Quaternary geology, geomorphology, and soils of the Tpotla and Cottonwood drainages, northwestern New Mexico, *in* P. Hogan and J.C. Winter, (Eds.), Economy and Interaction Along the Lower Chaco River: The Navajo Mine archaeological program, Mining Area III, San Juan County, New Mexico: *Office of Contract Archaeology, University of New Mexico*, p. 15-35.

Smith, L.N., **Bullard, T.F.**, and Wells, S.G., 1982, Quaternary geology and geomorphology of Tijeras Canyon, New Mexico, *in* S.G. Wells and J.A. Grambling, (Eds.), *Albuquerque Country II: New Mexico Geological Society Guidebook 33*, p. 5-7.

Wells, S.G., **Bullard, T.F.**, Condit, C.D., Jercinovic, M., Lozinsky, R.P., and Rose, D.E., 1982, Geomorphic processes on the valley floor of the Rio Puerco, *in* S.G. Wells and J.A. Grambling, (Eds.), *Albuquerque Country II: New Mexico Geological Society Guidebook 33*, p. 45-47.

Wells, S.G., **Bullard, T.F.**, and Smith, L.N., 1982, Origin and evolution of deserts in the Basin and Range and the Colorado Plateau provinces of western North America, *in* T.L. Smiley, (Ed.), The geological story of the World's deserts: *Striae*, v. 17, p. 101-111.

Miller, C.H., Ramirez, A.L., and **Bullard, T.F.**, 1980, Seismic properties investigation of the Springer Ranch landslide, Powder River Basin, Wyoming: *U.S. Geological Survey Prof. Paper 1170-C*, 12 p.

Technical and Research Reports

2020. Geomorphic research at the Idaho Power Company, Bancroft Springs Cultural Resources Research Locale, Snake River, Idaho: Phase III: Numerical Age Dating. *Technical Report to Idaho Power Company*, Boise, Idaho, 20 p. (Bullard, T.F. and Bacon, S.N.)

2020. Review of Chapter 4, Natural Resources, of the American River Parkway National Resources Management Plan submitted by Wildscape Engineering, Inc., South Lake Tahoe, California

2020. Field Review, recommendations, and technical review of the Carson River Draft Geomorphology Study Report prepared for R.O. Anderson Engineering, Inc., prepared by Wildscape Engineering, Inc., South Lake Tahoe, California

2019. Evaluation of Fault Rupture on the LTF Campus and vicinity from the July 2019 Ridgecrest earthquake sequence. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 5002x, 15 p. + 19 Figures (Bacon, S.N., Bullard, T.F., Decker, D.L.)

2019. Geomorphic map of China lake basin below 700 m elevation, Inyo, Kern, and San Bernardino Counties, California. Prepared by Naval Earth Sciences and Engineering Program, Desert Research Institute for Naval Air Warfare Center, Weapons Division, China Lake. NAWCWD TP 8839, 1:50,000-scale. (Bacon, S.N., Bullard, T.F., Adams, K.D., Decker, D.L.)

2019. Geomorphic map of the China lake basin below 700 m inSupport of Cultural Resource Management at Naval Air Weapons Station China Lake. Prepared by Naval Earth Sciences and Engineering Program, Desert Research Institute for Naval Air Warfare Center, Weapons Division, China Lake, NAWCWD TP 8839, p. 24 (pp. including appendices). (Bullard, T.F., Bacon, S.N., Adams, K.D., Decker, D.L.)

2017. Phase 2. Geomorphic mapping in Long Canyon Project Area, Goshute Valley, Nevada. Final Technical Report to Western Cultural Resources Management, Inc., 44 p. + 2 Tables, 19 Figures, 4 maps (T.F. Bullard)

2017. Verification testing of as-built LTC EBAB arrestment media. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50022, 12 p +12 Tables, 13 Figures, 7 Appendices.

2017. LTC EBAB arrestment media specification testing during production at Dudley Siding, Alabama. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50020, 10 p. +3 Tables, 12 Figures, 3 Appendices (Bullard, T.F., Bacon, S.N., and Decker, D.L.)

2017. Aeolian hazard assessment for the SNORT facility. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50019, 40 p. +9 Tables, 48 Figures, 2 Appendices. (Lancaster, N., Bacon, S.N., Bullard, T.F., Baker, S.E., and Decker, D.L.)

2016. Gravel assessment of stockpile #4 Pea Gravel (ALRR) at Unimin Corporation Tuscaloosa Plant as potential arrestment media. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50017, 7 p. + 4 Tables, 9 Figures (Bacon, S.N., Bullard, T.F., and Decker, D.L.)

2016. Phase 1. Description of map units for the preliminary landform map of Long Canyon Project Area. Final Technical Report to Western Cultural Resources Management, Inc., 7 p. + map.

2016. Preliminary landform map of China Lake basin. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50016, 8 p. + map (Bullard, T.F., Bacon, S.N., and Decker, D.L.)

2015. Gravel assessment of stockpiled Pea Gravel (ALRR) at Unimin Corporation Tuscaloosa Plant as potential arrestment media. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50013, 10 p. + 7 Tables, 13 Figures, 6 (Bacon, S.N., Bullard, T.F., and Decker, D.L.)

2015. Final Report: Geomorphic Map of China Lake below 700 m, in Support of Cultural Resource Management at Naval Air Weapons Station China Lake. Technical Report, DRI Division of Hydrologic Sciences, NESEP Publication 50011, 58 p. + 2 appendices and Map (Bullard, T.F., Bacon, S., Adams, K.D., and Decker, D.)

2015. Final Report: Geomorphic research at the Idaho Power Company, Bancroft Springs Cultural Resources Research Locale, Snake River, Idaho. Phase II: Stratigraphy, soils, and numerical age dating. *Technical Report to Idaho Power Company*, Boise, Idaho, 71 p. (Bullard, T.F. and Bacon, S.N.)

2015. Geomorphic Map of China Lake Basin below 700 m elevation, Inyo, Kern, and San Bernardino Counties, California. (Bacon, S.N., Bullard, T.F., Adams, K.D., and Decker, D.L.)

2015. Final Report: Development and Documentation of Geomorphic Characteristics in Support of a Cultural Resources/Archaeological Favorability Model for Death Valley National Park. National Park Service, Great Rivers Cooperative Ecosystem Studies Unit Task Agreement Number P13AC000904 under Cooperative Agreement Number P13AC00763, 51 p. (Bullard, T.F., Bacon, S.N., and Green, H.L.)

2014. Interim Progress Report: Development and Documentation of Geomorphic Characteristics in Support of a Cultural Resources/Archaeological Probability Model for Death Valley National Park, 17 p. (Bullard, T.F., Bacon, S., Green, H.)

2014. Summary of Geomorphic Assessment – CrNV-22-3775, Allied Gold Hycroft Mine Project Area, Nevada. Technical report to Western Cultural Resources management, Inc., 95 p. (Bullard, T.F.)

2014. A Historical Evaluation of the U16a Tunnel, Nevada National Security Site, Nye County, Nevada. DRI Cultural Resources Technical Report No. 107, DOE/NV/26383-19, 195 p. (Jones, R.C., Drollinger, H., Bullard, T.F., Ashbaugh, L.J., and Griffin, W.R.)

2014. A Historical Evaluation of the U15 Complex, Nevada National Security Site, Nye County, Nevada. DRI Cultural Resources Technical Report No. 109, DOE/NV/0000939-12, 341 p. (Drollinger, H., Holz, B.A., Bullard, T.F., Goldenberg, N.G., Ashbaugh, L.J., and Griffin, W.R.)

2014. Interim/Final Progress Report: Development and Documentation of Geomorphic Characteristics in Support of a Cultural Resources/Archaeological Probability Model for Death Valley National Park, (Bullard, T.F., Bacon, S.N., Green, H.L.)

2014. Phase I: Reconnaissance-level geomorphic assessment of the Bancroft Springs Cultural Resources Research Locale, Elmore County, Idaho. Final Technical Report to Idaho Power Company, Boise, Idaho, 48 p. (T. Bullard and S. Bacon)

2014. Summary of Geomorphic Assessment – CrNV-22-3872 for Hycroft Dune Field Project Area, Nevada. Technical report to Western Cultural Resources management, Inc., 56 p. (Bullard, T.F.)

2013. Results of historic research and archaeological investigations at U15e Tunnel, Nevada National Security Site, Nye County, Nevada. DRI Cultural Resources Technical Report No. 103, DOE/NV26383-02. 188 p. (R.C. Jones and T.F. Bullard)

2013. Geomorphic assessment of sand transport for the modified project (Palen Solar Electric Generating System). Interim report, contract No. 700-11-027, Aspen Environmental Group and California Energy Commission, 22 p. (N. Lancaster, T. Bullard, J. Gillies)

2013. "A Historical Evaluation of the U15 Complex, Nevada National Security Site, Nye County,

Nevada": DRI Cultural Resources Technical Report No. 109 (Drollinger, H., Holz, B., Bullard, T., Goldenberg, N., Ashbaugh, L., and Griffin, W.)

2013. Geomorphic assessment of the sand transport for the modified project - Palen Solar Electric Generating System; to California Energy Commission, 3 p. (Lancaster, N. and Bullard, T.F.)

2013. Geomorphic assessment for archaeological potential, Gold Quarry project area, near Carlin, Nevada. *Technical Report to WCRM Inc.*, 27 p. plus digital map. (Bullard, T.F.)

2013. Geomorphology and soils assessment for archaeological potential, Allied Gold, Hycroft mine, Humboldt and Pershing counties, NV, *Technical Report to WCRM Inc.* (Bullard, T.F.)

2013. Landscape change in the U15 Area, Nevada National Security Site, Nye County, Nevada, 44 p. (internal DRI report) (Bullard, T.F.)

2012. Erosion assessment of the L-Bar disposal Site, New Mexico. Technical Report to Stoller, Inc., contractor to Office of Legacy Management, U.S. Department of Energy, Grand Junction, CO, 101 p. (Miller, J., French, R., Bullard, T., Bacon, S., and Chapman, J.)

2012. Preliminary Observations at sites BS 1, 2, 3 and BCS 1, 2, 3, Eldorado Dry Lake, NV, *Technical Report to NewFields Environmental Inc., Las Vegas, NV.* (Bullard, T.F.)

2012. Stratigraphy and soils exposed in Trench 5365 and archaeological excavations in loci 2, 39, and 154, in the McGinness Hill geothermal area, north-central Nevada near Austin, Nevada, *Technical Report to WCRM Inc.*,21 p.

2012. Discussion of soils and stratigraphy described in trenches AR-4, AR-5, and AR-6, Archaeological District 62-5389, Fire Creek, near Crescent Valley Nevada: field report WCRM, Inc., 12 p.

2012. Field reconnaissance of geoarchaeology at Round Mountain Gold, northern Toquima Range near Carvers, Nevada, and recommendations for future archaeological investigations: field report to WCRM, Inc. 13 p.

2011. Results of historic research and archaeological investigations at Tippipah Spring, Nevada National Security Site, Nye County, Nevada. *Desert Research Institute Cultural Resources Technical Report 103*, 188 p. (Jones, R.C. and Bullard, T.F.)

2011. Summary of geoarchaeological field reconnaissance investigations in the McGinness Hills geothermal area, north central Nevada: field report to WCRM, Inc., 11 p.

2010. Geomorphic assessment of the area containing archaeological sites 26NY 12909 and 26NY 12910, Pahrump Valley, Nevada. Field Report to Western Cultural Resources, Inc., 11 p.

2010. Development of a geomorphic-based archaeological sensitivity model for the U.S. Army Yuma Proving Ground, Arizona. Final Technical Report to Yuma Proving Ground Cultural Resources Department, 40 p. (T. Bullard, E. McDonald, G. Dalldorf, J. Trammell).

2010. Discussion of soils described in Trenches AR-1, AR-2, AR-3, S-1, Y-1, Archaeological District 62-5389, Fire Creek, near Crescent Valley, Nevada: field report to WCRM, Inc., 15p.

2010. Chapter 5: Geomorphological Investigations at San Mateo Creek, *in* M. Becker and J. Daniels, Hidden Landforms: A geomorphological and archaeological study of the Sierra Training Area on Marine Corps Base Camp Pendleton, San Diego County, California; ASM Affiliates, 97 p.

2010. Geomorphic mapping in support of an archaeological predictive model, Marine Corps Ground Air Combat Center, 29 Palms, California. Technical Report to ASM Affiliates, 12 p. plus maps.

2010. Chapter 4: Field and Lab Methods: *in* M. Becker and J. Daniels., Hidden Landforms: A Geomorphological and archaeological study of the Sierra Training Area on Marine Corps Base Camp Pendleton, San Diego County, California, prepared for ASM Affiliates, 10 p.

2010. LanDPro: Army Landscape Dynamics Support Program., FY 2010 Interim Progress Report, Scientific progress and accomplishments. Proposal No. 52972-EV 22 p.

2009. Final Report: Integration of new methods in soils and geomorphology applied to cultural resources management on military lands; *Desert Research Institute Geoarchaeology workshop held October 20-22, 2008, San Diego, CA*. Technical Report to Army Research Office, 31 p. (T. Bullard, E. McDonald, and S. Baker)

2009. FY 2009 Project Summary: LanDPro: Army Dynamics Support Program, Report Number 52972EV, Funding No. W911NF0710394, 21 p. (T. Bullard and E. McDonald)

2008. Geomorphic assessment in the area of Archaeological District 62-5389, Fire Creek, near Crescent Valley, Nevada: field report to WCRM, Inc., 17 p.
2008. Geomorphic assessment in the Dry Valley area of the North Valleys Water Right of Way archaeological sites Cr-NV-03-6040 and Cr-NV-03-1752, Dry Valley Creek, Nevada: field report to ASM Affiliates, Inc., 20 p.
2008. FY 2008 Project Summary: LanDPro: Army Dynamics Support Program, Report Number 52972EV, Funding No. W911NF0710394, 15 p. (T. Bullard and E. McDonald)
2008. Geomorphic assessment in the area of site AZ X: 9:13 Lower Colorado River at Hunters Hole, Arizona: field report to ASM Affiliates, Inc., 16 p.
2008. Evaluating controls on channel formation in the desert southwest: implication for river restoration approaches. Final Report to US Army Corps of Engineers, UDFP project, 38 p. (Adams and Bullard)
2007. Geomorphology & backhoe trench stratigraphy of archaeological sites, China Lake Navy Air Weapons Station, California. Technical Report to ASM Affiliates, Inc., 31 p.
2007. Cultural Resources Technical Report No. 104: A historical evaluation of the U12e Tunnel, Nevada Test Site, Nye County, Nevada, 79 p. + 109 figs. (Drollinger, Bullard, Ashbaugh, and Griffin)
2007. Landscape Change in the U12t Tunnel Area, Summary of Field Reconnaissance, Conducted July 11-12, 2006, 51 p. Internal DRI report.
2007. Evaluating channel-forming flows in the Desert Southwest: background and problem approach; interim report to US Army Corps of Engineers, UDFP project, 7 p. (Adams and Bullard)
2006. Geomorphology and backhoe trench stratigraphy of archaeological sites along Sierra Pacific Power Company's Valmy to Winnemucca 120 kV transmission line: Summary of trench investigations. Report to Summit Envirosolutions, Carson City, NV, 54 p.
2006. Landscape change in the U12b Tunnel Area, Nevada Test Site, Nye County, Nevada, summary of field reconnaissance conducted June 27-28, 2006: 33 p. Internal DRI report.
2006. Landscape change in the U12e Tunnel Area, Nevada Test Site, Nye County, Nevada, summary of field reconnaissance conducted August 8-9, 2006: 64 p. Internal DRI report.
2006. Historical evaluation of U12b Tunnel complex in Area 12, Nevada Test Site, Nye County, Nevada: Desert Research Institute Historical Evaluation Short Report HE050106, Project #061412, National Nuclear Security Administration, Nevada Site Office, DOE/NV26383-01 (Jones, R.C, Bullard, T.F., and Beck, C.M.)
2006. Results of historic research and archaeological investigations at Tippipah Spring, Nevada Test Site, Nye County, Nevada: Desert Research Institute Technical Report No. 103, Las Vegas, Nevada (Jones, R.C, Bullard, T.F.)
2006. An historical evaluation of the U12e Tunnel, Nevada Test Site, Nye County, Nevada: Cultural Resources Technical Report No. 104, Desert Research Institute, Las Vegas, Nevada. DRAFT (Drollinger, H. and Bullard, T.F.)
2005. Geomorphic Assessment of Stream Environment Zones First, Second, and Wood Creeks and Three Ephemeral Streams Incline Village, Nevada, September 13-16, 2005; final report to Nichols Consulting Engineers for SEZ assessment for North Tahoe Conservation District
2005. Geomorphic Mapping at the U.S. Army National Training Center, Fort Irwin, California. Nelson Lake, West of Drinkwater Lake, Tiefort Mountains, and West of Red Pass Lake Quadrangles, 61p.+ 12 maps (7.5' quadrangles) Prepared for: Integrated Training Area Management (ITAM) Office Fort Irwin National Training Center and US Navy SW Division.
2005. Technical Report: Assessment and improvement of hydraulic characterization of alluvial fans to support estimates of recharge and initial abstraction. Desert Research Institute, Division of Hydrologic Sciences Publication 41218, 42p (M. Young, K. Adams, S. Mizell, Chen, L., Bullard, T., Grant, S); prepared for U.S. Army Corps of Engineers, Engineer Research and Development Center.
2004. Chapter 23, Fluvial geomorphology of the upper Sibun River drainage. Part V: History and Dynamics of the Sibun Valley Environment, *in* P. McAnany (ed), Xibun Archaeology Research Project, 2003 report to the Government of Belize: Boston University Publication in Archaeology.

2004. Final Technical Report: Quaternary investigations to evaluate seismic source characteristics of the frontal thrust belt, Palo Alto Region, California. U.S. Geological Survey National Earthquake Hazards Reduction Program, 26 p. (T. Bullard, K. Hanson, H. Abramson-Ward)

2004. Geomorphic assessment of the Yermo to Fort Irwin rail spur and staging areas, Fort Irwin National Training Center, California, 31 p., prepared for Geo-Marine, Inc.

2004. Report on Trench Investigations at Site 5384 "The Whale", Fort Irwin, CA, 14 p., prepared for Geo-Marine, Inc.

2003. Preliminary report of field activities: testing recommendations for the Fort Irwin, California Fiber Optic Network archaeological survey, 11 p. plus maps, prepared for Geo-Marine, Inc.

2003. Cultural resources inventory and evaluation, including geomorphic and paleontological characterization, of the 210-km (130.5-mi) Central Corridor, Fiber Optic network for Fort Irwin, National Training Center, California: report prepared by Geo-Marine, Inc. for U.S. Army Corps of Engineers, Engineer Research and Development Center (D.E. Peter, M.W. Hintzman, E. Burson, R. Bowers, A. Natoli, H. Miljour, T. Bullard, M. Palacios-Fest), 349 p.

2003. Summary of soil-geomorphic variables for predicting the location of surface and buried cultural resource features, National Training Center and expansion areas: Land and Heritage Conservation Branch, U.S. Army Corps of Engineers, ERDC-CERL, Champaign, IL (E. McDonald & T. Bullard).

2003. Chapter 32 – Fluvial geomorphology of the Sibun drainage, Belize. Part VII: History and Dynamics of the Sibun Valley Environment, *in* P.A. McAnany and B.S. Thomas, (eds), Between the Gorge and the Estuary: Archaeological Investigations of the 2001 Season of the Xibun Archaeological Research Project, 2002 interim report to the Belize Department of Archaeology, Belmopan. Boston University publication in archaeology

2003. Landscape dynamics and ecologic restoration in the Middle Ranch Hayfields region, Catalina Island, California: a soil geomorphic approach to understanding landscape responses to restoration activities: Final Technical Report to the Catalina Island Conservancy, 53 p. (T. Bullard, E. McDonald).

2002. Identification of geomorphic variables in development of an archaeological predictive model for the National Training Center, Ft. Irwin, CA: U.S. Army Corps of Engineers, Construction Engineering Research Laboratory, Champaign, ILL. (E.V. McDonald & T.F. Bullard)

2002. Sediment source assessment: Squaw Creek watershed, Placer County, California: Draft Technical Report submitted to Lahontan Regional Water Quality Control Board, State of California (T. Bullard [PI], T. Minor, B. Maholland).

2002. Geology and geomorphology of Cathedral Gorge State Park bison bone deposit site area: technical report to Cathedral Gorge State Park (W. Johnson, B. Holz, S. Sharpe, T. Bullard).

2002. Quaternary investigations to evaluate seismic source characteristics of the Frontal Thrust Belt System, Palo Alto Region, CA: Final Technical Report to U.S. Geological Survey, National Earthquake Hazards Reduction Program, Award #01HQGR0015 (T. Bullard [P.I.] & K. Hanson [PI], J. Wesling, T. Crampton, H. Abramson).

2001. Regarding the age of islands in the Snake River sector of the Deer Flat National Wildlife Refuge – Expert Opinion Report in State of Idaho v. United States of America, Case No. CIV97-0426-S0BLW: U.S. Department of Justice, 52 p. + 98 p. of appendices. (E.V. McDonald, & T.F. Bullard)

2001. Water quality assessment and modeling of the California portion of the Truckee River Basin: Desert Research Institute Division of Hydrologic Sciences Publication No. 41170, Town of Truckee, CA, Lahontan Regional Water Quality Control Board, 151 p. (D. McGraw, A. McKay, G. Duan, T. Bullard, T. Minor, J. Kuchnicki).

2000. Results of historic research and archaeological investigations at Cane Spring, Nevada Tests Site, Nye County: Desert Research Institute Cultural Resources Technical Report No. 98, DOE/NV 1360901, 156 p. Nevada (R. Jones, B. Holz, T. Bullard, N. Goldberg).

1999. Archaeological data recovery at site 26NY10133, Nevada Test Site, Nye Country, Nevada: Desert Research Institute Cultural Resources Technical Report No. 95, DOE/NV 11508-39, 226 p.

1999. A technical analysis of Hawai'i and Puerto Rico for Tropical Testing of Army materiel and systems:

Mechanical & Environmental Sciences Division, Engineering Sciences Directorate, US Army Research Office, 74 p. [Col. W.C. King, R. Harmon, T. Bullard, J. Evans, Maj. R. Johnson, J. Juvik, M. Larson].

1999. Informe Final: Termas Villavicencio, Evaluación del Recurso de Agua, Mendoza, Argentina, 80 p. (R. Jacobson, B. Lyles, T. Mihevc, T. Bullard)

1998. Termas Villavicencio Hotel Water Resource Evaluation, report to Termas Villavicencio, S.A., Mendoza, Argentina, 75 p. (R. Jacobson, B. Lyles, T. Mihevc, T. Bullard)

1998. A technical analysis to identify ideal geographic locations for Tropical Testing of Army materiel and systems. Environmental Sciences Branch, Engineering and Environmental Sciences Division, US Army Research Office, 37 p. [contributors: Col. W.C. King, R. Harmon, T. Bullard, W. Dement, W. Doe, J. Evans, M. Larson, W. Lawrence, Maj. K. McDonald, V. Morrill].

1998. Stratigraphic evidence for late Quaternary temporal clustering of large earthquakes on the Puente Hills segment of the Elysian Park Thrust, Eastern Los Angeles Basin, California: Final report to National Science foundation. (S.G. Wells [P.I.], T. Bullard [Co-P.I.])

1998. Quaternary geology, geomorphology, and soil geomorphology of the Proposed Kistler Rocket Launch Site, Nevada Test Site (T. F. Bullard, E.V. McDonald, S.G. Wells, K. Anderson).

1997. Final Technical Report: Quaternary deformation and structural geology of fault normal compression along the San Andreas Fault, Palo Alto region, CA: U.S. Geological Survey, National Earthquake Hazards Reduction Program, Award #14-08-0001-G1875. (M.M. Angell, T.F. Bullard, N.T. Hall)

1996. Assessment of earthquake-related surface fault rupture and ground shaking hazards, Central Processing Facility, Piedemonte Phase I Development Project, Eastern Cordillera of Colombia, BP Exploration Company (Colombia) Ltd., Santafé de Bogotá, Colombia, and Brown & Root, Inc., Houston, 88 p. [separate volumes in English and Spanish]

1996. Baguio-Bontoc-Banaue Road (Halsema Road) Pre-design investigations; Part II -- Geologic Study: Department of Public Works and Highways, Republic of the Philippines, 146 p. (July)

1996. Baguio-Bontoc-Banaue Road (Halsema Road) Pre-design investigations; Part II -- Geologic Study; Appendixes A and B: Dept. Public Works and Highways, Republic of the Philippines, 134 p. (July)

1996. Baguio-Bontoc-Banaue Road (Halsema Road) Pre-design investigations; Part I -Aerial Photography and Topographic Mapping: Dept. Public Works and Highways, Republic of the Philippines, 58 p.

1996. Baguio-Bontoc-Banaue Road (Halsema Road) Pre-design investigations; Part III -- Seismic Study: Dept. Public Works and Highways, Republic of the Philippines, 190 p.

1995. Seismic source characterization, Sual Power Station, Pangasinan Province, Central Luzon, Republic of the Philippines: Ove Arup & Partners Ltd., Hong Kong, 46 p.

1995. Fault rupture hazard investigation, Sual Power Station, Pangasinan Province, Central Luzon, Republic of the Philippines: CEPA Tileman Power Systems, Ltd., Hong Kong, 27 p.

1995. Final Report: Assessment of earthquake-related surface fault rupture and ground shaking hazards, Cupiagua Central Processing Facility, Cusiana/Cupiagua Full Field Development Project: BP Exploration Company (Colombia) Ltd., Santafé de Bogotá, Colombia, and Brown & Root, Inc., Houston, 81 p. [separate volumes in English and Spanish]

1995. Final Report: Onshore facilities, Cusiana/Cupiagua Full Field Development: Volume V, Evaluation of active faulting, ground motions, and liquefaction: BP Exploration Company (Colombia) Ltd., Santafé de Bogotá, Colombia, and Brown & Root, Inc., Houston, Part A, 184 p., Part B, 222 p. [separate volumes in English and Spanish]

1994. Informe Final: Acueducto de Orosi, sub-estudio de la vulnerabilidad sísmica de la conducción: El Llano a Tres Rios, Provincia de Cartago, Costa Rica: Organización Pan Americano de la Salud, Washington, D.C., 210 p. + 4 appendices

1993. Final Report: Evaluation of active-fault crossings - La Belleza to Vasconia pipeline route, Boyaca and Santander, Colombia: BP Exploration Co. (Colombia) Ltd., Santafé de Bogotá, Colombia, 47 p.

1993. Summary of Quaternary geologic investigations, Round Valley Dam, Butte County, California: Pacific Gas & Electric Hydrogeneration Division, 12 p.

1993. Soil profile descriptions and stratigraphy, Blue Oaks Research Trench R-1: Appendix A (18 p.) *In*

Geologic and seismic conditions and geotechnical design criteria for mitigations measures, for Blue Oaks Subdivision, Portola Valley, California: Harlan Tait & Associates, 51 p.

1993. Consultant's report on soil profile development in the Olive Hill Lane fault trenches, Woodside, California: Upp Geotechnology, San Jose, California, 14 p.

1993. Preliminary Quaternary and neotectonic studies, Savannah River Site South Carolina: Final Report: Lawrence Livermore National Laboratory (PO No. B160449) and Westinghouse Savannah River Company, Aiken, South Carolina, 156 p.

1992. Preliminary Quaternary and neotectonic studies, Savannah River Site South Carolina: Draft of final report: Lawrence Livermore National Laboratory (PO No. B160449) and Westinghouse Savannah River Company, Aiken, South Carolina, 131 p.

1992. Field Guide preparation for the Earth Sciences Advisory Committee Field Trip Overview of Quaternary and neotectonic studies at the Savannah River Site, May 22, Augusta, Georgia.

1992. Final Technical Report: Characterization of Quaternary deformation associated with concealed thrust faulting, Los Angeles Basin, California - II: U.S. Geological Survey, National Earthquake Hazards Reduction Program, Award #14-08-0001-G1680, Principal Investigator, T.F. Bullard, 47 p.

1992. Yucca Mountain Site Characterization Project: preliminary mapping of surficial geology of Midway Valley, Yucca Mountain Project, Nye County, Nevada, Interim Data Report: Sandia National Laboratories, Sandia Report SAND91-0607, UC-814; 110 p. (Wesling, J.R., Bullard, T.F., Swan, F.H., Perman, R.C., Angell, M.M., and Gibson, J.D.)

1992. Yucca Mountain Site Characterization Project, Summary and evaluation of existing geological and geophysical data near prospective surface facilities in Midway Valley, Yucca Mountain Project, Nye County, Nevada: Sandia National Laboratories, Sandia Report SAND90-2491, UC-814, 192 p. (Gibson, J.D., Swan, F.H., Wesling, J.R., Bullard, T.F., Perman, R.C., Angell, M.M., and DiSilvestro, L.A.)

1991. Final Technical Report: Characterization of Quaternary deformation associated with concealed thrust faulting, Los Angeles Basin, California - I: U.S. Geological Survey, National Earthquake Hazards Reduction Program, Award #14-08-0001-G1875, 69 p. (T.F. Bullard {P.I.] & W.A. Lettis [P.I.])

1991. Hydrology of the Middle Rio Grande from Velarde to Elephant Butte Reservoir, New Mexico: U.S. Department of the Interior, Fish and Wildlife Service, Resource Publication 179, 56 p.

1989. Characterization of Quaternary deformation associated with concealed thrust faulting: National Earthquake Hazards Reduction Program Summaries of Technical Reports Volume XXIX, M. Jacobson, Compiler, *USGS OFR 90-54,* p. 112-118. (T.F. Bullard and W.R. Lettis)

1984. New Mexico Museum of Natural History, Albuquerque, New Mexico, solicited manuscripts for exhibit development and museum catalog of exhibits: (1) Development of lava-tube ice caves and limestone dissolution caves with reference to Ice Cave, New Mexico and caves of the Guadalupe Mountains of southeast New Mexico (Carlsbad Caverns type); (2) Eolian processes of modern sand dune formation with reference to New Mexico dune fields and application to ancient (Jurassic) eolian sediments; (3) geomorphic processes of mesa evolution on the Colorado Plateau.

1984. Geomorphic criteria for selecting stable uranium tailings disposal areas: New Mexico Energy Institute and Energy and Minerals Department, Project #EMD-2-69-112. (S.G. Wells [P.I.], Dept. Geology, University of New Mexico and T.W. Gardner [P.I.], Dept. Geosciences, Pennsylvania State University)

1981. Laboratory Manual for Geomorphology and Surficial Processes, Geology 481L: Dept. Geology, University of New Mexico. (S.G. Wells, A.A. Gutierrez, L.N. Smith. T.F. Bullard)

1981. Geomorphology and Surface Hydrology Applied to Landscape Reclamation in the Strippable Coal Belts of Northwestern New Mexico: New Mexico Energy Institute and Energy and Minerals Department, Project #EMD-68R-3111. (S.G. Wells [P.I.], Dept. Geology, University of New Mexico)

1976. A preliminary inventory, description, and statistical evaluation of landslides in a region of projected urban development, Sheridan, Wyoming: U.S. Geological Survey Open-File Report 76-571. (A.F. Chleborad [P.I.], T.C. Nichols Jr., W.F. Ebaugh, T.F. Bullard)

Published Abstracts and Presented Papers (Professional and Academic)

2016. Cunnar, G., Stoner, E., and **Bullard, T.** Reconstructing a Paleoarchaic afternoon 12,000 years ago at Fire Creek, Nevada. *35th Biennial Great Basin Anthropological Conference, Reno, NV.*

2015. **Bullard, T.F.**, Bacon, S.N., and Kimball, V.R. Geomorphic parameters for developing a hydrologic model to infer Holocene climate variability, middle Snake River near Bliss, Idaho. *American Geophysical Union, Fall Meeting, Poster Session EP41A, Abstract 0920.*

2015. McDonald, E.V., **Bullard, T.F.**, and Antinao, J.L., Linking Holocene hydrologic events with episodic periods of fluvial deposition and soil formation, Santa Catalina Island, California. *Quaternary International, v. 387, p. 139. Abstracts of the 2015 PACLIM conference.*

2014. Bacon, S.N., Adams, K.D., **Bullard, T.F.**, Keen-Zebert, A., Decker, D.L. "Sill Failure and Catastrophic Outburst Floods from Owens Lake, California: Implications for Latest Pleistocene and Holocene Paleohydrology of the Owens River Drainage Basin" *Geological Society of America Annual Meeting* [Abstract/Poster]

2014. Britt, T., Ruiz, M.O., Brown, W.D., **Bullard, T.F.**, Bacon, S.N., Green, H.L., and Cochran, L., Archaeological Location Probability Modeling and Long-term Management Strategies for Death Valley National Park, CA and NV, *National Park Service, Science for Parks, Parks for Science: The Next Century*. [Oral session]

2014. **Bullard, T.F.**. Geology and geomorphology of Lake Tahoe, California. University of California-Davis, *Lake Tahoe Environmental Research Center*, Docent training.

2013. **Bullard, T.F.**, The role of geomorphology and geology in cultural resources management. *Nevada Rock Art Foundation, 10th Annual Meeting, Reno, NV*. [Invited Oral Paper]

2013. **Bullard, T.F.,** The role of geomorphology in developing archaeological site context. *Workshop presented to Nevada Archaeological Association.*

2012. Stoner, E.J., **Bullard, T.F.,** Cunnar, G., and Estes, M.B., Open site archaeology in the Great Basin: buried soils at Fire Creek, Crescent Valley, Lander County, Nevada [Abstract]. *33rd Great Basin Anthropological Conference.*

2011. **Bullard, T.F**., Interpreting alluvial chronologies and geomorphic responses to environmental change in a region complicated by contrasting bedrock lithologies, northwest New Mexico, USA. *XVIII INQUA Congress, Bern, Switzerland*, session 64 "Reconciling modern and Quaternary rates of landscape evolution."

2011. **Bullard, T.F.** and McDonald, E.V. Human or natural impacts? Comparing prehistoric and modern geomorphic response to extreme change in a Mediterranean ecosystem from excessive grazing, southern California, USA. *XVIII INQUA Congress, Bern, Switzerland*, session 58 "Quantifying and modeling human and climatic impacts on hillslope and fluvial sediment dynamics during the Holocene."

2011. Caldwell, T., McDonald, E., Shumer, R., Bacon, S., Jenkins, S., and **Bullard, T.**, Cleared circles: anthropogenic or biogenic? Use of non-invasive geophysical techniques to determine origin. *Environmental & Engineering Geophysical Society*, Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP) 2011, Session S27, Advances in Archaeological Applications of Near-Surface Geophysics, Charleston, South Carolina.

2011. **Bullard, T.F.** and McDonald, E.V., 9th International Conference on Military Geosciences, Las Vegas, Nevada USA, 20-24 June, 2011, Program and Abstracts, 146 p. (edited volume, T. Bullard and E. McDonald)

2011. **Bullard, T.F.** and McDonald, E.V., Soil-geomorphic based archaeological predictive modeling in management of cultural resources on military training and testing installations. *9th International Conference on Military Geosciences*, June, 2011, Las Vegas, Nevada, p. 28-29.

2010. Daniels, J.T., Becker, M., **Bullard, T.F.**, and Dalldorf, G., Targeting cultural deposits using geomorphology and geophysics at a multicomponent site in southern California. *Society for American Archaeology, Abstracts of the SAA Annual Meeting*, St. Louis, Missouri, April

2010. **Bullard, T.F.** and McDonald, E.M., Geomorphic evolution of Middle and Cottonwood Canyons and applications to archaeology and prehistory of Santa Catalina Island, CA. Oral presentation at *UCLA international field archaeology summer program, Catalina Island, CA*, July 2010

2009. Bacon, S., McDonald, E., Dalldorf, G., Baker, S., Sabol Jr., D., Minor, T., Bassett, S., McCabe, S. and **Bullard, T.**, 2009, Predictive terrain hazard maps for military operations in the desert based on geomorphic mapping remote sensing and soil data-bases. *Proceedings, 8th International Conf. Military Geosciences, Vienna, Austria*, June 15-19, 2009. [Abstract and oral presentation]

2008. **Bullard, T.**, McDonald, E., T. Britt, M. Ruiz, Identification of geologic variables in development of an archeological predictive model for management of military lands in desert terrains: invited paper for technical session "Military Geology in the 21st Century", *Geological Society of America Annual Meeting*, Houston, Texas. [Abstract and oral presentation]

2008. **Bullard, T.F.**, and McDonald, E.V., Identifying geologic variables in development of an archaeological predictive model, *in* **Bullard, T.F.**, McDonald, E.V., and Baker, S.E., Final Report: Geoarchaeology Workshop, Integration of new methods in soils and geomorphology applied to cultural resources management on military lands. *Desert Research Institute Geoarchaeology Workshop, San Diego, CA*, October 20-22, 2008, p. 11-12.

2008. **Bullard, T.F** and Wells, S.G., Bedrock influences on the geomorphic and alluvial history of a semi-arid watershed, northwest New Mexico – simple or complex evolution?: *Geological Society of America Annual Meeting*, Houston, Texas. [Abstract and poster]

2008. **Bullard, T.** and McDonald, E., LanDPro: Landscape dynamics program in support of natural and cultural resources management and range maintenance: *26th Army Science Conference*, Orlando, FL. [Abstract and poster]

2008. McDonald, E. and **Bullard, T.,** Geomorphic response to extreme change in a Mediterranean ecosystem: Holocene alluvial history of Santa Catalina Island, CA, USA. *Geophysical Research Abstracts, v. 10, European Geosciences Union 2008*-A-0803, Vienna, Austria. [Abstract and oral presentation]

2008. **Bullard, T.**, Late Holocene alluvial history and geomorphic evolution of a semi-arid watershed complicated by contrasting bedrock lithologies, northwest New Mexico. *Geophysical Research Abstracts, v. 10, European Geosciences Union 2008*-A-11610, Vienna. [Abstract and poster]

2008. Bacon, S., McDonald, E., Dalldorf, G., Baker, S., Sabol, D., Minor, T., Bassett, S., MacCabe, S., and **Bullard, T.,** An expert based system to predict soil attributes using geomorphic mapping, remote sensing, and soil databases in the desert southwest, USA. *Geophysical Research Abstracts, v. 10, European Geosciences Union 2008*-A-10709, Vienna. [Abstract and poster]

2008. McDonald, E.V. and **Bullard, T.F.,** Holocene alluvial history derived from soil-stratigraphy, Santa Catalina Island, CA. *Geological Soc. of America, Cordilleran & Rocky Mountain Sections*, Abstracts with Programs, v. 40 (1), p. 89. [Abstract and oral presentation (invited paper)

2008. Giambastiani, M.A. and **Bullard, T.F.**, Terminal Pleistocene-Early Holocene adaptations on the eastern shore of China Lake, California. 31st Great Basin Anthropological Conference, Portland, Oregon. [Abstract and oral presentation]

2007. **Bullard, T.F.**, McDonald, E.V., Bassett, S., and Burke, J., Maintenance of military training lands: soil-geomorphic applications: *7th International Conference on Military Geology and Geography*, Quebec City, Quebec, Abstracts, p. 20. [Abstract and oral presentation]

2007. McDonald, E.V., Bassett, S., Bacon, S.N., Minor, T.B., and **Bullard, T.F.**, 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*, Quebec City, Quebec, Abstracts, p. 22. [Abstract and oral presentation]

2007. Bacon, S.N., McDonald, E.V., and Bassett, S.D., Catalog of analogs: identifying terrain similarities between the World's deserts and the US Army's desert/hot weather test site, Yuma Proving Ground (YPG), southwestern Arizona: *7th International Conference on Military Geology and Geography*, Quebec City, Quebec, Abstracts, p. 8. [Abstract and oral presentation]

2007. **Bullard, T.**, McDonald, E., Bassett, S., and Burke, J., Developing a Soil-Geomorphic Tool to

Support the ITAM Program at US Army National Training Center, Fort Irwin, in the Mojave Desert, California: *2007 Sustaining Military Readiness*, Orlando, FL. [Abstract and poster]

2007. McDonald, E.V., **Bullard, T.F.**, Britt, J.T., and Ruiz, M.O., Identification of geologic variables in developing and archeological predictive model for cultural resources management on military lands in desert terrain: *2007 Sustaining Military Readiness*, Orlando, FL. [Abstract and poster]

2007. McDonald, E.V. and **Bullard, T.F.**, Limited response of ephemeral stream dynamics to extreme vegetation change – Late Holocene alluvial history of ephemeral streams, Catalina Island, California, USA, *EOS Transactions,* American Geophysical Union, v. 88 (52), Fall Meeting, Supplemental, Abstract p. H51E-0822. [Abstract and poster]

2006. McDonald, E.V., Bassett, S.D., Bacon, S.N., Minor, T.B., Bullard, T.F., Integrated desert terrain forecasting for military operations: *25th Army Science Conference*, November 27-30, 2006, Orlando, Fl, Session O, Environmental and Engineering Geosciences; OP-14, poster & paper, 6 p.

2004. Bullard, T.F., Hanson, K.L., AbrahamsonWard, H., Wesling, J.R., Crampton, T., and Angell, M.M., Quaternary geologic and geomorphic investigations to evaluate seismic source characteristics of the Frontal Thrust Belt adjacent to the San Andreas Fault, Palo Alto region, California: *International Geological Congress*, Florence, Italy, August, 2004.

2004. Bullard, T.F., Farrell, P., Buck, D.G., and Jones, J.G., Landscape dynamics and fluvial geomorphology in the Sibun River Valley, Belize: influence on Maya settlements: *Society for American Archeology*, 69th Annual Meeting, p. 69.

2004. Farrell, P. and Bullard, T.F., Soil landscapes of the Sibun River valley: *Society for American Archaeology*, 69th Annual Meeting, p. 116.

2004. Bullard, T., Hanson, K.L., Abrahamson-Ward, H., and Wesling, J.R., Quaternary Investigations to Evaluate Seismic Source Characteristics of the Frontal Thrust Belt, Palo Alto Region, California: Collaborative Research, Desert Research Institute and Geomatrix Consultants: *US Geological Survey Open-File Report*, First Annual Northern California Earthquake Hazards Workshop.

2003. Guerrieri, L., Bullard, T., and Wells, S.G., Active deformation of the northern Elsinore fault zone: implications for the Quaternary evolution of Santa Ana River, southern California: *XVI INQUA Congress*, July 2003, Reno, Nevada. [Abstract and poster]

2003. Bullard, T. and McDonald, E., Limited response of ephemeral stream dynamics to extreme vegetation change – late Holocene alluvial history of ephemeral streams, Catalina Island, California: *XVI INQUA Congress*, August 2003, Reno, Nevada. [Abstract and poster]

2003. McDonald, E. Bullard, T., Britt, T., and Ruiz, M, Identification of geologic variables in development of an archaeological predictive model for management of military lands in desert terrains: *International Conference on Military Geology and Geography*, US Army Military Academy, West Point, NY, June 2003. [Abstract, poster, and paper]

2001. Hanson, K.L, Bullard, T.F., Wesling, J.R., and Angell, M.M., Quaternary investigations to evaluate seismic source characteristics of the Frontal Thrust Belt, Palo Alto Region, CA – status report of ongoing morphometric and geochronology studies: *96th Annual meeting, Seismological Society of America, Seismological Research Letters.*

2000. Kuchnicki, J., McGraw, Bullard, T., and Minor, T., Truckee river Watershed Assessment: Sediment source analysis in support of a TMDL delineation: *8th Biennial Watershed Management Council Conference*, November 27-30, Monterey, California [Poster]

2000. Bullard, T.F and Maholland, B., Sediment source assessment for Squaw Creek, California: presentation of Study Plan: Nevada Water Resources Association. [Oral presentation]

1999 Bullard, T.F., Geomorphic history and responses to active tectonics in an uplifted forearc region: Río Térraba, southern Costa Rica: *International Symposium on Geomorphology and Paleohydrology of Large Rivers, GLOCOPH -IAG,* Goiania, Brazil: Boletim Goiano de Geografia, v. 19 (1), p. 11-23.

1998. Angell, M., Hanson, K., Crampton, T., and Bullard, T.F., Characterization of Quaternary contractional deformation adjacent to the San Andreas Fault, Palo Alto, California: *AGU Fall Meeting, EOS Transactions,* v. 79 (45), p. F613. [Abstract and Poster]

1998. Bullard, T.F., Fluvial adjustments and tectonic geomorphic assessments along a convergent plate margin impacted by subduction of the Cocos Ridge, southern Costa Rica, Central America: *3rd International INQUA-GLOCOPH '98, Global Continental Paleohydrology, Kumagaya, Japan, Abstracts of Conference Papers***,** p. 81. [Abstract and poster]

1997. Bullard, T.F., El impacto ambiental de la minera: unas experiencías en el Oeste de Los Estados Unidos, *1^0 Jornadas de Impacto Ambiental Minero, Mendoza, Argentina*. [presented in Spanish]

1996. Wells, D.L., Chiou, S.J., Rosidi, D., Swan, F.H., Angell, M., Bullard, T.F., Egan, J.A., Seismic source characterization and ground motion hazard mapping for northern and central Luzon, Philippines: Seismological Research Letters, v. 67 (2), p. 60. [Abstract]

1996. Wells, D.L., Chiou, S.J., Rosidi, D., Swan, F H, Angell, M., Bullard, T.F., and Egan, J A, Probabilistic seismic hazard analysis and ground motion hazard mapping for northern and central Luzon, Philippines: *Eos, Transactions, American Geophysical Union*, v. 77 (46), p. 494. [Abstract]

1995. Bullard, T.F. and Wells, S.G., Quaternary geologic and tectonic geomorphic assessment of tectonic style and activity along an active convergent plate margin impacted by subduction of the Cocos Ridge, southern Costa Rica, Central America: *GEOCON '95, Geological Society of the Philippines 8^{th} Annual Meeting, Abstracts and Oral Presentations*, Quezon City, Philippines. [Oral presentation]

1994. Fisher, G.R., Clahan, K.B., Wright, R.H., Angell, M.M., and Bullard, T.F., Earthquake Induced landsliding on Coal Mine Ridge, Portola Valley, San Mateo County, California: *Geological Society of America Annual Meeting*, Seattle, WN, Abstracts with Program, v. 26, (7), p. A-217.

1994. Bullard, T.F., Angell, M., and Lettis, W.R., Characterization of blind thrust faults using Quaternary geologic, geomorphic, and structural analysis: Proceedings, 89th meeting of the Seismological Society of America, Pasadena CA [Poster #39], *Seismological Research Letters*, v. 65 (3-4), p.248. [Abstract]

1994. Angell, M., Bullard, T.F., Swan, F.H., Hall, N.T., and Egan, J.A., Post-earthquake geologic investigations of the Northridge Mw6.7 earthquake, northern San Fernando and Santa Clarita Valleys, California: Proceedings of the 89th annual meeting of the Seismological Society of America, Pasadena, CA [Poster #33]: *Seismological Research Letters*, v. 65 (3-4), p. 247.

1994. Hanson, K.L, Bullard, T.F., and DeWitt, 1994, Applications of Quaternary stratigraphic, soil-geomorphic, and quantitative geomorphic analyses to the evaluation of tectonic activity, Upper Coastal Plain, South Carolina: *Eastern Section - Seismological Society of America 66^{th} Annual Meeting*, Columbia, South Carolina. [Oral presentation]

1993. Bullard, T.F. and Wells, S.G., Quaternary geologic and tectonic geomorphic assessment of tectonic style and activity along the active convergent plate margin of southern Costa Rica, Central America: *88^{th} Annual Meeting of the Seismological Society of America*, April 14-16, Ixtapa-Zihuatenejo, Mexico. *Seismological Research Letters***,** v. 64 (1), p. 16. [Abstract and poster]

1993. Bullard, T.F. and Lettis, W.R., Quaternary deformation above an active blind thrust fault, Whittier Narrows area, Los Angeles Basin, California: *88^{th} Annual Meeting of Seismological Society of America*, Ixtapa-Zihuatenejo, Mexico, *Seismological Research Letters***,** v. 64 (1), p. 22. [Abstract and [poster]

1992. Bullard, T.F. and Wells, S.G., Fluvial and tectonic geomorphology of a forearc region impacted by partial subduction of the Cocos Ridge, southern Pacific coast, Costa Rica: *Geological Society of America Annual Meeting*, October 25-30, Cincinnati, Ohio.; *Geological Society of America Abstracts with Programs***,** v. 24 (7), p. A102. [Abstract and poster]

1992. Bullard, T.F. and Lettis, W.R., Quaternary geologic and tectonic geomorphic investigations in the Whittier Narrows area, Los Angeles Basin, California: *Association of Engineering Geologists 35^{th} Annual Meeting*, October 2-9, Long Beach, California. *[Oral presentation; INVITED PAPER]*

1992. Hanson, K.L., Bullard, T.F., and de Wit, M., Applications of Quaternary stratigraphic, soil-geomorphic, and quantitative morphometric analyses to the evaluation of tectonic activity and landscape evolution in the upper Coastal Plain, South Carolina, *AGU Chapman Conference on Tectonics and Topography, Abstracts***,** p. 21, August 30 to September 3, Snowbird, Utah. [Abstract and poster]

1992. Bullard, T.F. and Wells, S.G., Fluvial and tectonic geomorphology across a forearc region impacted

by the subduction of the aseismic Cocos Ridge, southern Pacific coast, Costa Rica, *AGU Chapman Conference on Tectonics and Topography, Abstracts***,** p. 17, August 30 to September 3, Snowbird, Utah. [Abstract and poster]

1991. Bullard, T.F. and Johnston, A.C., Clues to evaluating paleoseismicity in stable continental regions: an example from the December 1989 Ungava earthquake [Abs.]: *Geological Society of America Abstracts with Programs, Northeastern Section,* v. 23 (1), p. 12. *[Abstract and oral presentation; INVITED PAPER]*

1991. Wesling, J.R., Swan, F.H., Bullard, T.F., Angell, M.M., and Perman, R.C., Surficial mapping in Midway Valley: implications for future studies to assess surface faulting potential at prospective surface facilities for the potential Yucca Mountain Repository, Nevada [Abs.]: *Geological Society of America Abstracts with Programs***,** v. 23 (5), p. A118. [Abstract and oral presentation]

1991. Bullard, T.F., Blind thrust faulting and Quaternary deformation in the Montebello Hills and Monterey Park Hills area, Los Angeles Basin, California: *Southern California Earthquake Center (SCEC)* monthly workshop, November 21, California Institute of Technology. [oral presentation]

1990. Johnston, A.C. and Bullard, T.F., The Ungava, Quebec earthquake: Eastern North America's first modern surface rupture [Abs.]: *Seismological Research Letters,* v. 61 (3), p. 32. [Abstract and oral presentation]

1990. Bullard, T.F., Neotectonics of southern Península de Osa and lower Río Térraba, southern Costa Rica: *7th Geological Congress of Central America*, November 18-23, San José, Costa Rica, *Proceedings of the 7th Geological Congress of Central America*, p. 32. [Oral presentation]

1990. Bullard, T.F. and Wells, S.G., Late Quaternary tropical soil chronosequences and tectonic geomorphology along a convergent plate boundary, Península de Osa, Costa Rica: *7th Geological Congress of Central America*, November 18-23, San José, Costa Rica, *Proceedings of the 7th Geological Congress of Central America***,** p. 80. [Oral presentation]

1990. Bullard, T.F. and Wells, S.G., Late Quaternary tropical chronosequences and tectonic geomorphology along a convergent plate boundary, southern Costa Rica, Soils and Landscape Evolution, Program and Abstracts, *21st Annual Binghamton Geomorphology Symposium***,** October 6-7, State University of New York at Binghamton, Binghamton, New York, p. 39. [Abstract and poster]

1990. Bullard, T.F. and Lettis, W.R., Quaternary surface deformation in the vicinity of the 1987 Whittier Narrows earthquake: *Association of Engineering Geologists, Southern California Section* monthly colloquium, June 12, Montebello, California. *[Oral presentation; INVITED PAPER]*

1990. Bullard, T.F., Lessons learned from southern California on identifying concealed active faults (Characterization of Quaternary surface deformation in the vicinity of the 1987 Whittier Narrows earthquake***):*** *SABER (Society to Adapt Building to the Environment Reasonably)* monthly meeting, June 24, San Jose State University, San Jose, California. *[Oral presentation; INVITED PAPER]*

1990. Bullard, T.F. and Lettis, W.R., Characterization of Quaternary surface deformation in the vicinity of the 1987 Whittier Narrows earthquake, Los Angeles Basin, California: *Geological Society of America Cordilleran Section Meeting***,** Tucson, AZ, *Abstracts with Programs***,** v. 22 (3), p. 11. [Oral presentation]

1990. Bullard, T.F., Late Quaternary Fluvial Geomorphology of Río Grande de Térraba, Southern Costa Rica: geomorphic adjustments to tectonics along a convergent plate margin in a tropical region*: 28th International Geological Congress*, July 9-19, Washington, D.C. *[Poster; INVITED POSTER]*

1989. Bullard, T.F., Drake, P., and Wells, S.G., Applications of tectonic geomorphology to analysis of plate boundary zones: aseismic ridge subduction, Pacific coast of Costa Rica: *National Science Foundation Researcher's Poster Presentation, 28th International Geological Congress*, Washington, D.C. [poster]

1989. Bullard, T.F., Late Quaternary fluvial geomorphology of Río Grande de Térraba, southern Costa Rica: geomorphic adjustments to tectonics along a convergent plate margin in a tropical region: *28th International Geological Congress Abstracts***,** v.1, p. I-212-213. [Abstract and poster]

1988. Bullard, T.F., Wells, S.G., Gardner, T.W., Pinter, N., and Slingerland, R.L., Geomorphic and pedogenic evolution of an emergent coastal piedmont, Osa Peninsula, Costa Rica: implications for

latest Quaternary tectonism and fluvial adjustments: *Geological Society of America, 101st Annual Meeting,* October 31 to November 3, Denver, Colorado, *Geological Society of America Abstracts with Programs***,** v. 20, p. A55. [Abstract and oral presentation]]

1988. Bullard, T.F., Studies of tectonic geomorphology along the lower Río Térraba, southern Costa Rica: *Proceedings of the IV Seminario Nacional de Geotécnica, Asociación Costarricense de Mecánica de Suelos e Ingeniera de Fundaciones***,** 14 April, San José, Costa Rica. [Abstract and oral presentation]

1987. Pinter, N., Gardner, T.W., Slingerland, R., Wells, S.G., and Bullard, T.F., Late Quaternary uplift rates, Osa Peninsula, Costa Rica: *Geological Society of America 100th Annual Meeting,* October 26-29, Phoenix, AZ, *Geological Society of America Abstracts with Programs,* v. 19, p. 806. [Abstract]

1987. Wells, S.G., Bullard, T.F., Ritter, J.B., and Wesling, J.R., Lithologic controls and dynamics of Holocene drainage basin evolution in the semiarid southeastern Colorado Plateau, U.S.A.: *International Commission on Continental Erosion and Commission on Measurement, Theory, and Application in Geomorphology***,** workshop on Erosion, Transport, and Deposition Processes in Semi-Arid and Arid areas, Jerusalem, Israel, *Conference Proceedings,* p. 29-30. [Abstract]

1986. Wells, S.G., Menges, C.M., Bullard, T.F., Karas, P.A., Kelson, K.I., Ritter, J.B., and Wesling, J.R., Morphometry of tectonic landscapes along a convergent plate boundary, Pacific coast of Costa Rica: *Geological Society of America 99th Annual Meeting,* San Antonio, TX., *Abstracts with Programs***,** v. 18, p. 785. [Abstract and Poster]

1985. Wells, S.G., Bullard, T.F., and Smith, L.N., Long-term watershed evolution in the southeastern Colorado Plateau: adjustments of the fluvial system to bedrock geology: *International Conference on Geomorphology, British Geomorphological Research Group***,** Manchester, England. [Abstract]

1985. Bullard, T.F., Bedrock influence on semiarid drainage basin evolution in the southeastern Colorado Plateau, New Mexico -- implications for evaluation of stable landscapes: *New Mexico Geological Society Annual Spring Meeting,* April 26, Socorro, New Mexico. [Abstract and oral presentation]

1985. Bullard, T.F., Influence of bedrock geology on complex responses and late Quaternary evolution of a large ephemeral drainage basin: *Geological Society of America Penrose Conference,* April 6-10, Lake Havasu City, Arizona *[Poster, INVITED PAPER]*

1982. Wells, S.G., Bullard, T.F., Gardner, T.W., and Mills, A., Landscape stability and energy-related development: applications of Holocene geomorphic processes to reclamation and siting problems in semiarid southwestern United States: *Geological Society of America 95th Annual Meeting,* October 18-21, New Orleans, Louisiana, *Geological Society of America Abstracts with Programs,* v. 14, p. 644. [Abstract and oral presentation]

1982. Wells, S.G., Bullard, T.F., and Gardner, T.W., Chronology, rates, and magnitudes of Holocene landscape changes in southeastern Colorado Plateau: implications for paleoclimatic changes: *American Quaternary Association 7th Biennial Conference,* June 28-30, Seattle, Washington, *Abstracts with Program,* p. 178. [Abstract and poster]

1982. Wells, S.G., Bullard, T.F., Smith, L.N., Love, D.W., and Schultz, J.D., Quaternary landscapes and deposits of the Chaco River region, southeastern Colorado Plateau: *Geological Society of America Cordilleran Section Meeting, Symposium on Surficial Deposits of the Southwestern U.S.A.,* April 19-21, Anaheim, CA: *Geological Society of America Abstracts with Programs,* v. 14, p. 244. [Abstract]

1981. Wells, S.G., Smith, L.N., Bullard, T.F., and Schultz, J.D., Quaternary landscape evolution in the southeastern Colorado Plateau: *GSA Cordilleran Section***,** March 25-27, Hermosillo, Mexico: *Geological Society of America Abstracts with Programs***,** v. 13, p. 113. [Abstract]

PEER REVIEW and REFEREE DUTIES

Journals, Maps, Reports

- *Applied Earth Observation and Geoinformation*
- *Bolletino della Societa Geologica Italiana*
- *Catena*
- *Geological Society of America Bulletin*
- *Geological Society of America, GSA Today*
- *Geological Society of America, Reviews in Engineering Geology*
- *Geomorphology*
- *International Journal of River Research and Applications*
- *Journal of Environmental Monitoring and Assessment*
- *Journal of Geophysical Research*
- *Journal of American Water Resources Association*
- *Journal of Maps*
- *Kluwer Academic Publishers*
- *Kuwait Journal of Science & Engineering*
- Nevada Bureau of Mines and Geology map review
- *Physical Geography*
- *Quaternary International*
- U.S. Geological Survey open-file report reviews

Peer Review Panels, Proposals, Expert Witness

- DRI Jonathan O. Davis Research Scholarship, proposal reviewer
- National Science Foundation, Tectonics Program proposal reviewer
- Nevada Tahoe Conservation District proposal reviewer
- Petroleum Research Fund proposal reviewer
- Southern Nevada Public Land Management Act (SNPLMA), proposal reviewer
- U.S. Army Research Office peer review panels
- U.S. Army Tropical Testing Center Relocation, peer review panel
- U.S. Army Yuma Proving Ground and Army Research Office; Catalog of Analogs, Characterization of Deserts for Training and Testing, peer review panel
- U.S. DOD EPSCoR proposal reviewer
- U.S. DOJ Expert Witness: Snake River Islands, ID; Santa Cruz River, AZ; Soldier Creek Meadows, NV (Bureau of Land Management)
- U.S. Forest Service Draft Environmental Impact Statement, Jarbidge Canyon
- U.S. Geological Survey NEHRP, proposal reviewer

SPONSORS AND CLIENTS

Federal Government

U.S. Department of Energy
- Nevada National Security Site (Nevada Test Site)

U.S. Department of Defense
- U.S. Army Research Office/Army Research Lab
- U.S. Army Nat. Training Center, Fort Irwin, CA
  - -Cultural Resources Department
  - -ITAM Office
- U.S. Army Reserves, Fort Hunter Liggett, CA
- U.S. Army Yuma Proving Ground
  - -Natural Environments Testing Office
  - -Department of Public Works, Cultural Res.
- U.S. Marine Corps Base Camp Pendleton
  - -Office of Environmental Security, CRM
- U.S. Marine Corps Air Ground Combat Center, Twenty-nine Palms, CA
- Naval Air Weapons Station, China Lake
- Naval Engineering and Facilities Cmd., SW Div
- Army Corps of Engineers, ERDC-CERL

U.S. Forest Service
- Rocky Mountain Research Station

U.S. Geological Survey
- National Earthquake Hazards Reduction Program
- Water Resources Division

U.S. Department of Justice
Lawrence Livermore National Laboratory
Sandia National Laboratory
National Science Foundation

Universities & State Agencies

Boston University
California Energy Commission
Calif. Water Quality Control Board, Lahontan Region
Cathedral Gorge State Park, NV
Nevada Bureau of Mines and Geology
New Mexico Energy Research & Development Institute
New Mexico Bureau of Mines and Geology
University of New Mexico Office of Contract Arch.
University of Washington Office of Public Arch.

Private Sector - National

ASM Affiliates, Carlsbad, CA
ASM Affiliates, Reno, NV
Aspen Environmental Associates, CA
British Petroleum, Houston
Brown & Root, Houston
Catalina Island Conservancy, CA
EG&G Rocky Flats, Inc.
Fugro-McClelland, Houston
Geo-Marine, Inc., Plano, TX
Geomatrix Consultants, Oakland, CA
Harlan Tait & Associates, CA
Kautz Environmental, Inc., Reno, NV
NewFields Environmental, Las Vegas, NV
Nichols Consulting Engineers, Reno, NV
Pacific Gas and Electric Co., San Francisco, CA
Summit Envirosolutions, Carson City, NV
Upp Geotechnologies, San Jose, CA
Westinghouse Savannah River Company, Aiken, SC
Western Cultural Resources Management, Inc., Sparks, NV
Wildscape Engineering, South Lake Tahoe, CA
William Lettis & Associates, Concord, CA

Private Sector - International

British Petroleum Exploration, Bogotá, Colombia
CEPA Tileman Power Systems, Hong Kong
Certeza Inc., Quezon City, Philippines
Department of Public Works, Manila, Philippines
Gomez, Cajiao y Asociados, Bogotá, Colombia
Grupo IPE of Spanish Utilities
Ove Arup & Partners, Ltd., Hong Kong
Pan American Health Org., San José, Costa Rica
Termas Villavicencio, Mendoza, Argentina

ACADEMIC CAREER: AWARDS AND GRANTS

1982. **J. Hoover Mackin Award** in Geomorphology and Quaternary Geology, Geological Society of America, Quaternary Geology and Geomorphology Division.
1982. **Robert K. Fahnestock Memorial Research** Award in Geomorphology and Sediment Transport, Geological Society of America**.**
1987. **Explorer's Club, Field Research Grant;** "Fluvial adjustments to vertical and compressional tectonics along a Convergent Plate Boundary, Southwest Costa Rica".
1985. **Excellent Instructor Rating;** Beginning Field Geology, Graduate Teaching Assistant, University of New Mexico (Geology 319L).
1985. **Geological Society of America, Penrose Conference;** student presentation at Penrose Conference on "Geomorphic and Stratigraphic Indicators of Neogene- Quaternary Climatic Change in Arid and Semiarid Environments," Lake Havasu City, Arizona**.**
1984-85. **Graduate Tuition Fellowship,** Univ. New Mexico.
1983-84. **Mellon Inter-American Field Research Grant;** "Tectonic Geomorphology of the Western Coast of Costa Rica: A Comparison of Different Plate Tectonic Settings," Latin American Institute, University of New Mexico.
1983. **New Mexico Geological Society;** Grant-in-Aid, for M.S. field research.
1982. **Travel Grants, Department of Geology**, **University of New Mexico**: American Quaternary Association, Seattle, Washington; Geological Society of America, New Orleans, Louisiana.
1982. **Student Research Grant,** Graduate Student Association of the University of New Mexico, Student Research Allocations Committee**.**
1982-83. **Graduate Scholarship**, Univ. New Mexico**.**
1981-85. **Geology Scholarship and Research Fund;** Dept. Geology, Univ. New Mexico.
1981. **Estwing Outstanding Field Geologist;** Dept. Geology, Univ. New Mexico.
1981. **Vincent C. Kelley Outstanding Graduate Field Geologist;** Dept. Geology, Univ. New Mexico.
1981. **Los Alamos Geological Society Scholarship.**
1980. **Conoco Scholarship;** Dept. Geology, Univ. New Mexico.

SERVICE-RELATED ACTIVITIES

2017-present: Secretary of the Board, Nevada Opera Company, Reno, Nevada
2014-2017: Vice-President of the Board, Sierra Music Society, Reno, Nevada
2010-2019: invited speaker, U.C. Davis, Lake Tahoe Environmental Research Center, docent training instructor.
2009. Judge, International Science and Engineering Fair, Reno, NV
2006-present Recognition of Veterans of WWII: Organized Las Vegas museum tour for members of WWII veterans group with the 9th U.S. Army Air Forces, 36th Fighter Group (P-47 pilots) [Sept 2007]; Developed visual presentation recounting the history of the 36th Fighter Group; ran for 4 days continuous at final annual reunion of the 36th FG [Sept 2007]; contact phone calls to Veterans of WWII, Viet Nam, Iraq/Afghanistan; Assisted local WWII veteran establish contact with members of his USAAF China-Burma-India Theater Night Fighter Group; Assisted family member of WWII USAAF fighter pilot in discovering information about their relative's military service career; Assisted European WWII crash site researchers in quest for pilot information; Conducting translations (German) for family of WWII USAAF fighter pilot killed-in-action
2003-2007. Member, Curriculum Committee, Department of Geological Sciences, University of Nevada
2000-2002. Member, Faculty Senate, Desert Research Institute
2000-present. Member Nevada Opera Chorus; Reno Baroque Ensemble; Reno Philharmonic Chorus; University of Nevada Symphonic Chorus; Reno Chamber Singers; Reno Philharmonic Chorus; member Ravens & Roses Renaissance singing act, Champagne Singers, Great Basin Carolers & Vocal Art Works jazz ensemble company; Science fair judge, Reno, NV
1999-present. Scientific peer-review panels: DoD EPSCoR proposal review; ARO Tropical Test Center, Panama, analog study; ARO catalog of analogs
1999. Proposal Evaluation Panelist for Nevada DoD EPSCoR proposals

1998-2002. Co-Chairman, Jonathan O. Davis Scholarship Committee, DRI

1998-present. Professional journal peer reviewer: *Catena; Geological Society of America Bulletin; Geological Society of America GSA Today; Geomorphology; Journal of American Water Resources Association; International Journal of River Research and Applications; International Journal of Environment and Waste Management; Kuwait Journal of Science and Engineering; Bollettino della Societa Geologica Italiana; Quaternary International; American Geophysical Union Journal of Geophysical Research, Earth Surface; Journal of Environmental Monitoring and Assessment; Applied Earth Observation and Geoinformation*

1998. Guest Lecturer, UNLV Summer Archaeological Field Camp, Joshua Tree National Monument and 29 Palms Historical Society

1995-1996. Peer Reviewer: Bulletin of the Geological Society of Philippines

1994-1996. Peer Reviewer: U.S. Geological Survey NEHRP Proposals

1996. Lecturer: Philippines Board of Registered Geologists, Review Session for Board Exams (July).

1991. Guest Speaker, Stocklmeir Elementary School, Cupertino, California (May).

1990. Guest Lecturer, Departamento de Geología, Universidad de Costa Rica, San Pedro, Costa Rica

1987. Guest Lecturer, Colegio de Palmar Norte de Osa, Costa Rica (August; delivered in Spanish).

1987-88. Science Fair Judge, Northwest New Mexico Regional Science and Engineering Fair.

1985. Guest Speaker, Bailey Lake Elementary School, Clarkston, Michigan (October).

1983. Tour Host, International Science and Engineering Fair, Albuquerque, New Mexico, "Geology of the Albuquerque Basin and Sandia Mountains, and the Regional Geology of North-Central New Mexico," Field Trip Tour Guide to the Sandia Mountains (April).

Assistantships

Research Assistant; January 1987 to 1989; National Science Foundation Grant #EAR-8615277, "Collaborative Research on Aseismic Ridge Subduction in Costa Rica: Mechanisms and Geomorphic Evidence for Crustal Uplift", Principal Investigator, S.G. Wells, Dept. Geology, Univ. New Mexico.

Graduate Teaching Assistant; 1981 to 1986; Beginning Field Geology and Reports (Geology 319L, 1983, 1985), Quantitative Geomorphology Laboratory (Geology 483L, 1985), Natural Sciences 100 (1986), Geomorphology Laboratory (Geology 481L, 1982), Historical Geology Laboratory (Geology 106L, 1981), Physical Geology Laboratory (Geology 105L, 1981), Dept. Geology, Univ. New Mexico.

Research Assistant; 1980 to 1982; New Mexico Energy Institute and Energy and Minerals Department, Project EMD-68R-3111, "Geomorphology and Surface Hydrology Applied to Landscape Reclamation in the Strippable Coal Belts of Northwestern New Mexico" (1980-81), and Project EMD-2-69-112, "Geomorphic Criteria for Selecting Stable Uranium Tailings Disposal Areas" (1981-82), Principal Investigator, S.G. Wells, Dept. Geology, Univ. New Mexico.

Graduate Assistantship; 1983-84; Curator of Map Library, Air Photo Library, and Field Equipment, Dept. Geology, Univ. New Mexico.

EMPLOYMENT HISTORY

9/17 to present Hourly Associate Research Professor

7/08 to 9/17 Associate Research Professor (Rank III)

7/08 to 12/19 Private Consulting, Sole Proprietor, Thomas F. Bullard

3/97 to 6/08 Assistant Research Professor (Rank II)
Division of Earth and Ecosystem Sciences
Desert Research Institute, Reno, Nevada
Responsibilities: Develop research and applied research in geologic hazards, applied Quaternary geology and geomorphology, landscape evolution and landscape dynamics, application to cultural resources assessments, Department of Defense programs; committees and scientific peer panels

6/97 to Present Adjunct Faculty
Graduate Program of Hydrological Sciences, Department of Geological Sciences
University of Nevada, Reno
Responsibilities: *Teaching faculty for Hydrological and Geological Sciences; Fluvial Geomorphology, Geology 701j; Advanced Geomorphology 441/641; Graduate Student advisement and committee membership: 15 PhD committees, 2 MS students, 16 MS committees*

5/89 to 3/97 Senior Geologist
Geomatrix Consultants, San Francisco, California
Responsibilities: Project management; seismic source characterization studies, neotectonics, active faulting, tectonic geomorphology, Quaternary surface deformation research; Quaternary geologic mapping and soil geomorphic investigations; developed geomorphic methods for detecting blind thrust faults and tectonic deformation in regions of low seismic activity; geologic hazards assessment; applied Quaternary geology; proposal writing and reporting; business development

Relevant Project Experience: Geologic hazards mapping (landslides and active faults) along a 200-km-long Halsema Mountain Road (Philippines), landslide mapping for water treatment system (Calera Creek, CA), active fault studies for water treatment plants (Walnut Creek, California), aqueducts (Costa Rica), oil pipelines, flow lines, processing facilities, tank farms, and offshore tanker loading facilities (BP Exploration Company Ltd. (Colombia); Fugro-McClelland), critical facilities (DOE: Rocky Flats - Colorado, Savannah River Site - South Carolina, Yucca Mountain - Nevada, Diablo Canyon Nuclear Power Station (PG&E)), conventional power generating stations (Philippines); stable continental earthquakes and seismicity; fault trench investigations along the San Andreas Fault, Calaveras fault, Hayward fault; Seismic Source Characterizations for Nuclear Power Plants (IPEEE, Westinghouse Europe, Spain); U.S.G.S. NEHRP Research Projects: Blind Thrust Faulting (Whittier Narrows, Los Angeles; San Andreas Fault, Stanford University area; Chino Hills, Riverside); Post-Earthquake Investigations: **Ungava**, Quebec; **Loma Prieta**, CA; **Landers**, CA; **Northridge**, CA; Landslide Investigations: East Bay MUD Walnut Creek, CA, American Canyon, CA, Luzon, Philippines, Calera Creek, Pacifica, CA.

1/89 to 5/89 Graduate Teaching Assistant - University of New Mexico, Department of Geology
Geology 105L, Physical Geology Laboratory
Supervisor: Dr. L.A. Woodward
Duties: Undergraduate laboratory instruction, lecture, testing, and grading

10/88 to 6/89 Research Assistant - University of New Mexico, Department of Geology
Consultant to the U.S. Fish and Wildlife Service
Produced USFWS Technical Report on hydrologic data for the Middle Rio Grande, New Mexico

7/88 to 6/89	Instructor - University of New Mexico, Department of Continuing Education Geology 101C, Physical Geology Geology 102C, Historical Geology Supervisor: Dr. A. Oliver Duties: Instructor for remote learning correspondence courses
9/87 to 9/88	Research Assistant - University of New Mexico, Department of Geology National Science Foundation grant #EAR-8615277, "Collaborative research on aseismic ridge subduction in Costa Rica: mechanisms and geomorphic evidence for crustal uplift," Principal Investigators, S.G. Wells, University of New Mexico, and Dr. T.W. Gardner, Dr. R. Slingerland, and Dr. K. Furlong, Pennsylvania State University.
8/86 to 12/86	Graduate Teaching Assistant - University of New Mexico, Department of Geology Natural Sciences 100, Environmental Science Supervisor: Dr. T.L. Best, Department of Biology Duties: Lecture and laboratory preparation and presentation
5/85 to 8/86	Laboratory Analyst University of New Mexico, Department of New Mexico, Pedology Laboratory Supervisor: Dr. L.D. McFadden Duties: Laboratory analysis including wet chemistry for Fe, $CaCO_3$, pH, bulk density, PSDA
5/86 to 8/86	Geologic Consultant University of New Mexico, Department of Geology Laboratory soils analysis and drafting
4/85 to 12/85	Hydrologic Field Assistant U.S. Geologic Survey, Water Resources Division, Albuquerque, NM Supervisor: H.L. Case, S.K. Anderholm Duties: Data management, drafting, groundwater quality sampling and analyses
1/85 to 5/85	Graduate Teaching Assistant - University of New Mexico, Department of Geology Geology 319L, Beginning Field Geology Supervisor: Dr. S.G. Wells Duties: Classroom and field instruction of geologic field methods and techniques including: Brunton compass, measuring stratigraphic sections, air photo mapping, plane table and alidade for geologic and topographic mapping, grading, field equipment curation.
8/84 to 12/84	Graduate Assistant - University of New Mexico, Department of Geology Curator of Map Library and Field Equipment Supervisor: Dr. S.G. Wells Duties: Inventory and catalog of geologic and topographic maps, map library operation; field equipment inventory, catalog, maintenance, and issue.
6/84 to 8/84	Curating Assistant - University of New Mexico, Department of Geology Supervisor: Dr. S.G. Lucas, Dr. B.S. Kues Duties: Transfer paleontology and mineralogy collections to new facility, specimen catalog.
3/84 to 6/84	Geologic Consultant New Mexico Museum of Natural History, Albuquerque, NM Manuscript development, graphics, exhibit concept ideas for (1) limestone cave (Carlsbad Caverns type), ice caves (lava tubes), and collapse caves (Dry Cave), (2) modern and ancient (Jurassic) eolian processes, and (3) mesa evolution on the Colorado Plateau of New Mexico.
8/83 to 12/83	Graduate Teaching Assistant - University of New Mexico, Department of Geology Geology 319L, Beginning Field Geology Supervisor: Dr. S.G. Wells and Dr. R.V. Ingersoll Duties: Classroom and field instruction on geologic field methods and techniques including geologic use of Brunton compass, measurement of stratigraphic sections, field mapping on stereo pair air photos, use of plane table and alidade in geologic and topographic mapping, map and report grading. Curator of Map Library and Field Equipment.

7/83 to 10/83	Publication Production Staff Member University of New Mexico, Department of Geology Supervisor: E. Faust, Dr. S.G. Wells Duties: Guidebook preparation, editing, conference logistics for American Geomorphological Field Group 2nd Annual Field Conference (Chaco Canyon Country).
1/83 to 6/83	Graduate Assistant - University of New Mexico, Department of Geology Curator of Map Library, Air Photo Library, Field Equipment Supervisor: Dr. S.G. Wells Duties: Operation and maintenance of field equipment, and air photo and map libraries.
8/82 to 12/82	Graduate Teaching Assistant - University of New Mexico, Department of Geology Geology 481L, Geomorphology and Surficial Processes Laboratory Supervisor: Dr. S.G. Wells Duties: Laboratory preparation and instruction; field project logistics; grading
10/81 to 4/82	Geologic Consultant University of New Mexico, Office of Contract Archaeology Stratigraphic descriptions, soil profile description and sampling, geomorphic mapping, sedimentologic analysis, laboratory analysis of soils, drafting, report writing.
5/81 to 5/82	Research Assistant - University of New Mexico, Department of Geology New Mexico Energy Institute and Energy and Minerals Department, Project #EMD-2-69-112, "Geomorphic criteria for selecting stable uranium tailings disposal areas." Principal Investigator: Dr. S.G. Wells Duties: field mapping, stratigraphy and sedimentology, fluvial instrumentation, soil profile descriptions, lab analyses of soils and sediments, develop Holocene stratigraphy, reporting.
1/81 to 5/81	Graduate Teaching Assistant - University of New Mexico, Department of Geology Geology 105L, Physical Geology Laboratory Geology 106L, Historical Geology Laboratory Supervisors: Dr. L.A. Woodward (105L), Dr. R.V. Ingersoll (106L) Duties: Laboratory preparation, lecture, instruction in methods and techniques of rock and mineral identification, paleontology, map interpretation, stratigraphic analysis.
6/80 to 5/81	Research Assistant - University of New Mexico, Department of Geology New Mexico Energy Institute and Energy and Minerals Department, Project #EMD-68R-3111, "Geomorphology and surface hydrology applied to landscape reclamation in the strippable coal belts of Northwestern New Mexico." Principal Investigator: Dr. S.G. Wells Duties: geomorphic mapping, measured stratigraphic sections, stratigraphy and sedimentology, fluvial and hillslope instrumentation, soil profile descriptions, laboratory analyses of soils and sediment samples, report writing.
5/79 to 2/80	Survey Archaeologist U.S. Fish and Wildlife Service, Anchorage, AK Supervisor: Dr. M.R. Yarborough Duties: Remote archaeological survey and reconnaissance by boat and foot, topographic mapping of sites, test excavations on Unimak Island (Aleutian Islands) and Alaska Peninsula (Izembek Lagoon National Wildlife Refuge), drafting, figure preparation.
1/79 to 5/79	Theater Arts Technician University of New Mexico, Theater Arts Department Duties: Theater set construction and destruction, stage preparation, production
5/78 to 9/78	Survey Archaeologist U.S. Fish and Wildlife Service, Anchorage, AK Supervisor: Dr. M.R. Yarborough Duties: Remote archaeological survey and reconnaissance by boat and foot, topographic site mapping, test excavations, Kodiak NWR, Kodiak Island, Alaska.

9/77 to 12/77 Archaeologist
University of Washington, Seattle, Office of Public Archaeology
Supervisor: Dr. R. Minor, University of Oregon
Duties: Excavation and evaluation of the Skamokawa Site, lower Colombia River, Skamokawa, Washington.

5/77 to 9/77 Field Archaeologist
U.S. Fish and Wildlife Service, Anchorage, AK
Supervisors: Dr. M. Nowak, Dr. M.R. Yarborough
Duties: Archaeological survey and reconnaissance, site mapping and test excavations, topographic site mapping, coastal survey, Kodiak NWR, Kodiak Island, Alaska.

8/76 to 10/76 Teaching Assistant
The Colorado College, Colorado Springs, Department of Anthropology
Supervisor: Dr. M. Nowak
Duties: Instructed archaeological excavation and site mapping methods and techniques, Colorado College Archaeology Field Camp, Baca County, SE Colorado.

6/75 to 5/77 Geologic Field Assistant
U.S. Geological Survey, Branch of Engineering Geology, Denver, CO
Supervisors: A.F. Chleborad (landslides)
T.C. Nichols, Jr. (Rock mechanics)
C.H. Miller (geophysical investigations)
Project Experience: Hillslope stability studies, Powder River Basin, Wyoming; field mapping, hillslope morphometry, sampling, air photo mapping, report preparation (USGS Open-File Report 76-571); rock mechanics studies, Barre, Vermont, drilling and coring, core recovery with simultaneous instrumentation, controlled laboratory strain-release monitoring; geophysical investigations, Powder River Basin, Wyoming and Montana, topographic surveying, multichannel seismic refraction, resistivity surveys, gravity surveys, laboratory determinations of elastic constants, data reduction, report preparation (USGS Professional Paper 1170-C).

6/74 to 6/75 Underground Miner
Climax Molybdenum Company, Henderson Mine, Empire, CO
Supervisor: D.A. Gerstner
Duties: Operation of large, diesel-powered, rubber-tired mining equipment, pneumatic drilling equipment, handling and detonation of high explosives, training of new miners.

2/73 to 6/74 Competition Service Representative
Hanson Industries, Boulder, CO
Supervisor: A.B. Hanson, B. Brown, C. Rapp, W. Murray
Duties: Manufacture and service of ski boots, competition service representative on theWorld Professional Skiing -- North America Tour, racer equipment service; national public relations and sales promotion.

10/70 to 12/70 Curator (work-study)
The Colorado College, Colorado Springs, Department of Geology
Supervisor: Dr. R.M. “Crystal Dick” Pearl
Duties: Cataloging mineralogy and petrology collections; petrologic and petrographic equipment maintenance.