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EDUCATION, UNIVERSITY, AND DEGREES:

University of California, Berkeley, Ph.D. 1977
Geology

Stanford University, M.S. 1972
Geophysics

Stanford University, B.S. 1970
Geophysics

PROFESSIONAL EXPERIENCE:

December 2013-Current. Principal Water Resources Engineer, AECOM. Conducting studies, developing designs, implementing and evaluating the success of river restoration programs.

October 2009-Current. Principal, Tenaya Water Resources, LLC. Conducting investigations on hydrology, sediment transport, and river mechanics, especially river channel changes in response to variations in flow and sediment supply due climate change, land use, and water resources development that have altered aquatic and riparian ecosystems.

September 2013-Current. Research Professor Emeritus, Institute for Arctic and Alpine Research, University of Colorado. Conducting research on the hydrology of polar and alpine regions, especially the effects of climate variability on the water budget of snowmelt dominated drainage basins.

October 2009-2013. Research Professor and Fellow, Institute for Arctic and Alpine Research, University of Colorado. Conducting research on the hydrology and climate of polar and alpine regions.

November 1980-July 2009. Chief, River Mechanics Project, National Research Program, US Geological Survey. Conducting research on river mechanics, especially river channel change in response to variations in flow and sediment supply due to climate change, land use, and water resources development.

January 1986-December 1990 and January 1997–January 2002 Research Advisor, Geomorphology and Sediment Transport Group, National Research Program, USGS. Responsible for staffing, budget, and scientific excellence for a group of approximately 45 research scientists.

July 1976-November 1980. Project Chief, Colorado District Office, USGS, WRD. Conducted research on sedimentation and reclamation of stream channels in surface mined areas.

March 1975-July 1976. Western Region Staff, USGS, WRD. Conducted research on channel scour and fill, and hydraulic adjustment of a channel to an altered sediment load.

SELECTED ASSIGNMENTS AND ACTIVITIES:

International Poplar River Water-Quality Board, International Joint Commission, 1978-1980.

Fellow, Institute for Arctic and Alpine Research, University of Colorado, 2009-Current.

Investigator, Joint Japan-United States Project on River Meanders, National Science Foundation, 1985-88.

U.S. Geological Survey Representative, National Academy of Sciences Review Panel for Glen Canyon Environmental Studies, 1985-88.

Expert Witness for the U.S. Government in application for federal reserved water rights for: the four National Forests of Colorado, 1989-91; Zion National Park, 1992-1996, Idaho Wild and Scenic Rivers, 1998-2006.

Expert Witness for the U.S. Government concerning river channel management and regulation under the Clean Water Act (1972), 2011-2014.

Expert Witness for The Republic of India before the Court of Arbitration concerning the operation of a hydroelectric power project located on an Indus River tributary in the western Himalaya, 2013.

Expert Witness for the Republic of Nicaragua before the International Court of Justice concerning the Rio San Juan on the border between Nicaragua and Costa Rica, 2013-2015.

Principal Investigator, Experimental Colorado River Flood through Grand Canyon National Park, 1994-1998.

Science Advisory Committee, U.S. Geological Survey, 1995-1998.
Scientific Advisor, Trinity River Restoration Program, U.S. Bureau of Reclamation, 2003-2008.
Independent Scientific Advisory Committee, Platte River Recovery Implementation Program, 2013-Current.

PROFESSIONAL SOCIETIES:

Geological Society of America
American Geophysical Union
American Alpine Club

AWARDS AND HONORS:

Certificate of Commendation, Dept. of Justice
Certificate of Merit, U.S. Forest Service
Meritorious Service Award, Department of the Interior

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---------- 1977, Hydraulic adjustment of an alluvial stream channel to the supply of sediment: unpublished Ph.D. Dissertation, University of California, Berkeley, 152 p.

---------- 1978, Present and potential sediment yields in the Yampa River basin, Colorado and Wyoming: U.S. Geological Survey Water-Resources Investigations 78-105, 33 p.

---------- 1979a, Scour and fill in an alluvial stream channel: U.S. Geological Survey Professional Paper 1117, 49 p.

---------- 1979b, Hydraulic adjustment of the East Fork River to the supply of sediment, in Adjustments of the Fluvial System, Rhodes, D. D. and Williams, G. P. (eds.): Proceedings, Tenth Annual Geomorphology Symposium, Binghamton, N.Y., p. 69-94.

---------- 1979c, Effects of reduced streamflows on the hydraulic and geomorphic characteristics of channels in the Poplar River Basin, Montana, in Final Report of the Biological Resources Committee-Environmental Impact Assessment and Recommendations: International Poplar River Water-Quality Board, United States - Canada International Joint Commission, p. 93-110.

---------- 1980, Effective and bankfull discharges of streams in the Yampa River basin, Colorado and Wyoming: Journal of Hydrology, v. 46, p. 311-330.

Andrews, E. D., and Steele, T. D., 1980, A preliminary assessment of water-quality effects of emerging energy technologies on selected impact areas of the Upper Colorado River Basin: U.S. Water Resources Council, 116 p.

Andrews, Edmund D., 1981a, Measurement and computation of bed material discharge in a shallow sandbed stream, Muddy Creek, Wyoming: Water Resources Research, v. 17(1), p. 131-141.

---------- 1981b, Assessment of stream channel response to altered streamflow and sediment load, in Proceedings Workshop on Downstream river channel changes resulting from diversions or reservoir construction; Simons, D. B., Li, R. M., Lagasse, P., and Milhous, R. T. (eds.): U.S. Fish and Wildlife Service, Washington, D.C., p. 102-108.

---------- 1982a, Bank stability and channel width adjustment, East Fork River, Wyoming: Water Resources Research, v. 18(4), p. 1184-1192.

---------- 1982b, Adjustment of the East Fork River to bedload sediment contributed by Muddy Creek: Field Guide, First Annual Meeting, Pinedale, Wyoming, American Geomorphological Field Group, p. 57-68.

---------- 1983a, Entrainment of gravel from naturally sorted riverbed material: Bulletin, Geological Society of America, v. 94, p. 1225-1231.

---------- 1983b, Denudation of the Piceance Creek Basin, Colorado: Proceedings of the Hamburg Symposium, August 1983, on Dissolved Loads of Rivers and Surface Water Quantity/Quality Relationships, IAHS Publication no. 141, p. 205-215.

---------- 1984, Bed-material entrainment and hydraulic geometry of gravel-bed rivers in Colorado: Bulletin, Geological Society of America, v. 95, p. 371-378.

Parker, Gary, and Andrews, E. D., 1985, Sorting of bedload sediment by flow in meander bends: Water Resources Research, v. 21(9), p. 1361-1373.

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