

JAMES M. THOMAS

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EDUCATION

- 1996 Ph.D. Hydrology/Hydrogeology, University of Nevada-Reno, Reno, Nevada
- 1980 M.A. Geology, Indiana University, Bloomington, Indiana
- 1975 B.A. Geology, University of Vermont, Burlington, Vermont

EXPERIENCE

2007-present: Research Professor, Desert Research Institute, Division of Hydrologic Sciences.

As a research professor and Senior Director of DRI's Center for Watersheds Environmental Sustainability I am the program manager of the Walker Basin Project, a 10.5 million dollar research program comprised of 13 individual projects, and of DRI's Lake Tahoe research program. These large interdisciplinary research programs conduct research at the watershed scale to obtain information needed to inform land management and regulatory agencies for setting water policy. My research is primarily in the areas hydrology, water chemistry, and application of isotopes to solving hydrologic problems. A major focus of this research involves flow and transport of contaminants, such as radionuclides from the Nevada Test and Yucca Mountain in southern Nevada, effectiveness of erosion control projects on removing fine sediment and nutrients from stormwater runoff, and developing safe drinking water supplies in rural villages of West Africa.

2005-present Senior Director of Center for Watersheds Environmental Sustainability

The Director of CWES is responsible for developing an interdisciplinary and interdivisional research program on watersheds. The primary focus of the director is developing an integrated science program that will be used for science based decision making by land managers in the Lake Tahoe and Walker Lake basins. As time allows, the director is also responsible for developing interdisciplinary and interdivisional research in other watersheds in Nevada and internationally.

1999-2007: Associate Research Professor, Desert Research Institute, Division of Hydrologic Sciences.

My research is primarily in hydrology and water chemistry and involves using hydrologic, geochemical, and isotopic data to help understand geochemical, hydrologic, and biological processes in groundwater and surface water systems. Main areas of current research include (1) northern Nevada watershed, with emphasis on nutrient and suspended sediment loading in the Lake Tahoe and Walker Lake basins and the effectiveness of best management practices, (2) eastern and southern Nevada, with emphasis on the evaluation of groundwater resources in regional flow systems including the Nevada Test Site and Yucca Mountain areas, and (3) West Africa, with emphasis developing safe water supplies in rural villages of west Africa and evaluating the sustainability of those water resources.

Faculty member of the Hydrologic Sciences Graduate Program at the University of Nevada-Reno. Duties include teaching courses in the program, funding and working with graduate students as research assistants, and faculty advisor to international student association.

1980-1999: Research Hydrologist, U.S. Geological Survey, Carson City, Nevada.

Research primarily involved water chemistry with emphasis on modeling geochemistry of groundwaters to determine their age, geochemical processes affecting water chemistry, identifying sources or processes that produce observed water chemistry, and evaluating surface water chemistry and processes producing water chemistry in watersheds.

1997-1999: Adjunct Professor, Hydrologic Sciences Graduate Program, University of Nevada-Reno, Reno, Nevada.

Taught Isotope Hydrology, which covers the theory of isotopes used in hydrologic studies and emphasizes the application of isotopes for solving geochemical and hydrologic problems.

1978-1980: Research Assistant, Indiana University, Bloomington, Indiana.

Collected, analyzed, and interpreted hydrologic, geologic, and geochemical data to determine the effects of coal mining on groundwater water chemistry and to evaluate for flow-system interpretations in karst terrain.

1978: Environmental Scientist, Amax Coal Company, Indianapolis, Indiana.

Hydrologic and geochemical monitoring for evaluating reclaimed open-pit coal mining sites.

COLLABORATIVE RESEARCH

Battelle Pacific Northwest Laboratories
Lamont-Doherty Earth Observatory of Columbia University
Lawrence Livermore National Laboratory
Southern Nevada Water Authority
University of Arizona Accelerator Facility
University of Nevada-Reno
University of South Carolina
U.S. Geological Survey

PROFESSIONAL ACTIVITIES

Presented research and chaired theme sessions at international, national, and local conferences, including the American Geophysical Union, American Water Resources Association, Canadian/ American Conference on Hydrology, Geological Society of America, International Symposium on Water-Rock Interaction, Rocky Mountain Conference on Analytical Chemistry, and the Nevada Water Conference. Committee member on the Department of Energy geochemistry technical working group subcommittee.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union
Geological Society of America
International Association of Geochemistry and Cosmochemistry
International Association of Hydrology Geochemistry and Cosmochemistry
Nevada Water Resources Association
Phi Kappa Phi National Honor Society
The Geochemical Society

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- Thomas, J.M. and W. B. Apambire, 2003, A Deuterium Mass Balance Model Approach for Evaluating a Groundwater Budget of a Regional Flow System in Southeastern Nevada. *Geological Society of America Abstracts with Programs*, 252-4.
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