

JAMES F. HOGAN

SAHRA - Sustainability of semi-Arid Hydrology and Riparian Areas
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RESEARCH INTERESTS

Isotope hydrology, water quality, groundwater recharge, surface water and groundwater salinization, biogeochemistry of terrestrial and aquatic systems

EDUCATION

2001 Ph.D. Earth Sciences, Dartmouth College, Hanover, New Hampshire
1995 B.S. Geology and Chemistry, Bates College, Lewiston, Maine

EMPLOYMENT

2004 - present Staff Scientist, SAHRA, University of Arizona
2003 – present Adjunct. Asst. Professor, Hydrology and Water Resources, Univ. of Arizona
2001-2003 Research Asst., Dept. of Hydrology and Water Resource, University of Arizona
1999-2000 Lecturer in Geology, Dept. of Geology, Bates College
1995-2000 Research/Teaching Assistant, Dept. of Earth Sciences, Dartmouth College

AWARDS AND FELLOWSHIPS

2000 Gary Malone Award (outstanding graduate student), Dartmouth College
1999-1996 EPA STAR Fellowship, USEPA
1994 Outstanding Undergraduate Senior in Geology, Geological Society of America
1995-1994 Howard Hughes Undergraduate Research Fellowship, Bates College

SELECT PUBLICATIONS

- Hogan J. F.**, Phillips F.M., Mills S.K., Hendrickx J., Ruiz J., Chesley J.T., Asmerom Y. (in prep.) Salinization of semiarid river systems due to saline groundwater discharge, for submission to *Geology*
- Baillie, M. N., **Hogan, J. F.**, Ekwurzel, B., Wahi, A. K., Eastoe, C. J. (2006) Quantifying Water Sources to a semiarid riparian ecosystem, San Pedro River, Arizona, *Journal of Geophysical Research-Biogeoscience*, in review.
- Phillips, F.M., **Hogan J.F.**, and B.R. Scanlon (2004) Introduction and Overview, in *Groundwater Recharge in a Desert Environment: The Southwestern United States*, edited by J.F. Hogan, F.M. Phillips, and B.R. Scanlon, Water Science and Applications Series, vol. 9, American Geophysical Union, Washington, D.C., 1-14.
- Goodrich, D.C., D.G. Williams, C.L. Unkrich, **Hogan J.F.**, R.L. Scott, K.R. Hultine, D. Pool, A.L. Coes, and S. Miller (2004) Comparison of methods to estimate ephemeral channel recharge, Walnut Gulch, San Pedro River Basin, Arizona, in *Groundwater Recharge in a Desert Environment: The Southwestern United States*, edited by J.F. Hogan, F.M. Phillips, and B.R. Scanlon, Water Science and Applications Series, vol. 9, American Geophysical Union, Washington, D.C., 77-99.
- Hibbs, B., Phillips, F., **Hogan, J.**, Eastoe, C., Hawley, J., Granados, A., and Hutchison, B., (2003) Hydrogeologic and Isotopic Study of the Groundwater Resources of the Hueco Bolson Aquifer, El Paso, Texas/Juarez, Mexico Area, *Hydrological Science and Technology*, **19** (1-4) p. 109-119.

Hogan, J.F. and Blum, J.D. (2003) Strontium isotopes as a tracer of hydrologic flowpaths in a small forested catchment, *Water Resources Research*, **39**(10), doi:10.1029/2002WR001856.

Phillips, F.M., **Hogan, J.F.**, Mills, S.K., and Hendrickx, J.M.H. (2003) Environmental Tracers Applied to Quantifying Causes of Salinity in Arid-Region Rivers: Preliminary Results from the Rio Grande, Southwestern USA, *in: Water Resources Perspectives: Evaluation, Management and Policy* (Edited by A S Alsharhan and Warren W Wood) Elsevier Science, pp. 327-334.

Hogan, J.F. and Blum, J.D. (2003) Boron and lithium isotopes as groundwater tracers: a test at the Fresh Kills Landfill, Staten Island, NY, USA, *Applied Geochemistry*, **18**, 615-627.

Gibson, J., Aggarwal, P., **Hogan J.F.**, Kendall, C., Martinelli, L., Stichler, W., Rank, D., Goni, I., Choudhry, M., Gat, J., Bhattacharya, S., Sugimoto, A., Fekete, B., Pietroniro, A., Maurer, T., Panarello, H., Stone, D., Seyler, P., Bourgoin, L.M., and Herczeg, A., (2002) Isotope studies in large river basins: A new global research focus, *Eos*, **83**(52), 613-617.

Hogan, J.F., Blum, J.D., Siegel, D.I. and Glaser, P.H. (2000) $^{87}\text{Sr}/^{86}\text{Sr}$ as a tracer of groundwater discharge and precipitation recharge in the Glacial Lake Agassiz Peatlands, Northern Minnesota, USA, *Water Resources Research*, **36**, 3701-3710.

GRADUATE STUDENTS

• **Gretchen Oelsner** – *Ph.D. University of Arizona, anticipated spring of 2006*

Co-advisor: Paul Brooks

Thesis Title: Nutrient Sources and Cycling in the Middle Rio Grande

Awarded Sandia Graduate Fellowship

• **Jennifer Druhan** – *M.S. University of Arizona, anticipated spring of 2006*

Thesis Topic: Salinity Sources in the Hueco Bolson Aquifer

• **Heather Lacey** – *M.S. New Mexico Tech, anticipated fall 2005*

Co-advisor: Fred Phillips

Thesis Topic: A dynamic simulation model of the Rio Grande solute budget

• **Matthew Baillie** – *M.S. University of Arizona, May 2005*

Co-advisor: Brenda Ekwurzel

Thesis Title: Quantifying baseflow inputs to the San Pedro River: A geochemical approach

Awarded Arizona Water Sustainability Graduate Fellowship in 2004

• **Arun Wahi** – *M.S. University of Arizona, August 2005*

Co-advisor: Brenda Ekwurzel

Thesis Title: Quantifying mountain system recharge in the Upper San Pedro Basin, Arizona, using geochemical tracers

Employment: D.B Stephens and Associates, Albuquerque NM

• **Jacob Davis** – *M.S. University of Arizona, May 2005*

Co-advisor: Steve Stewart

Thesis Topic: Evaluation of Non-Treatment Arsenic Remediation Method

• **Jason Dadakis** – *M.S. University of Arizona, 2004*

Co-advisor: Brenda Ekwurzel

Thesis Topic: Water and Solute Sources in Rio Grande Alluvial Aquifer near El Paso, Texas

Employment: Orange County Water District, Fountain Valley CA