

Vitae - John Andrew Welhan

Born: August 24, 1950 **Citizenship:** Canadian

Home Address: 966 Cahina Way, Pocatello ID

Business Address: Idaho Geological Survey, Department of Geology,
Idaho State University, Pocatello, ID

Education:

B.S., Geology, 1972, University of Manitoba
M.S., Earth Sciences, 1974, University of Waterloo
Ph.D., Earth Sciences, 1981, University of California, San Diego

Professional Experience:

Research Geologist, 1990-present, Idaho Geological Survey
Affiliate Faculty, 1990-present, Department of Geology, Idaho State University
Associate Professor of Geochemistry, 1988-90, Assistant Professor of Geochemistry, 1984-88,
Department of Earth Sciences, Memorial University of Newfoundland
Assistant Research Geologist, 1983-84, Scripps Institution of Oceanography

Research Activities:

- geostatistical analysis and stochastic modeling of hydraulic and lithologic heterogeneity in the Snake Plain aquifer
- development of GIS databases for aquifer vulnerability analysis and modeling applications
- the use of gravity surveying to define the subsurface geology of Basin/Range alluvial aquifers
- recharge mechanisms, water balance and isotope hydrology of an alpine watershed in a semiarid climate
- single-well tracer dilution tests in open boreholes at the Idaho National Engineering and Environmental Laboratory
- hydrostratigraphy and contaminant distribution in ground waters at the INEEL
- modeling of chemical and isotopic reaction path history in ground water and geothermal flow systems

Research Grants and Contracts Received (last three years):

Source Water Assessment Capture Zone Delineations, Division of Environmental Quality, \$10,460 (4 months)
Portneuf Valley GIS Data Project - Phase II, co-PI, City of Pocatello, \$65,100 (1 year)
Portneuf Valley GIS Data Project - Phase I, co-PI, City of Pocatello, \$30,100 (1 year)
Earth System Science Digital Atlas of Southern Idaho, co-PI, Idaho State Board of Education, \$250,250 (2 years)
Advanced Application of Geographic Information Systems Technology through Cooperative Teaching in the
Geoscience Departments of BSU and ISU, co-PI, Idaho State Board of Education, \$174,400 (two years)
Hydrologic and chemical monitoring of an engineered wetland for urban water runoff treatment, PI, City of
Pocatello / EPA, \$20,450 (two years)
Equipment purchase for GIS research laboratory expansion, Co-PI, ISU University Research
Committee, \$30,080 (one year)
Spatial correlation analysis of aquifer lithology and permeability, and development of a
stochastic ground water flow and transport model, Co-PI, Department of Energy
Remediation Technologies grant, 1996, \$100,000/yr (three years)
Transport and dispersion of pollutants in the subsurface environment: natural isotope tracers,
NSF-EPSCoR, 1993, \$54,000/yr (three years)

Graduate Students Supervised:

Advisor: J. Kaser, C. Johannesen, D. Whitmire, J. Glover, T. Reid, G. Gerber, S. Van Hoff, C. Meehan, J. Fromm,
W. Pudney, N. Sargent, W. Millar (M.S.)

Advisory Committee: M. Pontac, B. Cervi, J. Nelson, L. Morse, M. Estes, J. Keith, G. Kindel, J. Kaminsky,
R. MacLeod (M.S.); S. Schillereff, D. Van Everdingen, B. Sherwood, M. Harrigan (Ph.D.)