

Richard M. Yager

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Education:

Cornell University, Ithaca, New York (1969-73)
B.S (1973) Major: Civil and Environmental Engineering
Cornell University, Ithaca, New York (1980-83)
M.S. (1983) Major: Soil and Water Engineering

Professional Experience (Research while employed by U.S. Geological Survey, 1981-present):

Groundwater-flow simulation: basin-fill aquifer, Carson Valley, NV, 2010-present
Groundwater-flow simulation: fractured sedimentary rock, Rockland Cty, NY, 2007-2009
Simulation of brine migration from a flooded salt mine, Livingston County NY, 2005-2008
Groundwater-flow simulation: folded sedimentary bedrock, Shenandoah Valley, VA, 2003-2007
Simulation of groundwater flow and brine migration near Syracuse NY, 2002-2006
Groundwater-flow simulation: fractured crystalline bedrock, Bethesda MD, 2002-2004
Simulation of effects of lake augmentation on leakage to Floridan Aquifer, Tampa FL 2000-2002
Simulation of pumping effects on groundwater and saline water intrusion, El Paso TX 1997-2001
Estimating natural attenuation rates of chlorinated ethenes Niagara Falls NY, 1997-2000
Groundwater-flow simulation: effects of flooding a salt mine, Livingston County NY, 1995-1998
Hydrogeology and water quality of a glacial-drift aquifer, Johnson City NY, 1995-97
Infiltration and hydraulic connections near the Niagara River, Niagara Falls NY, 1995-96
Delineation of recharge areas to municipal wells, Erie County NY 1995-96
Groundwater-flow simulation: Lockport dolomite, Niagara Falls NY 1987-91
Estimation of riverbed hydraulic conductivity near Susquehanna River, Kirkwood NY 1986-87
Modeling nitrogen transport in a glacial-drift aquifer, Olean NY 1984-86
Simulation of river infiltration to a glacial-drift aquifer, Kirkwood NY 1983-85
Groundwater-flow simulation: nuclear fuels reprocessing plant, West Valley NY 1981-83
Watershed modeling: Irondequoit watershed, Rochester NY 1981-83

Professional Societies:

American Geophysical Union (Member since 1985)
National Ground Water Association (Member since 1985)

Technical reviews:

Environmental Information Documents concerning closure of the former nuclear fuels reprocessing center at West Valley, NY for the New York State Energy Research and Development Authority (1993)
U.S. Environmental Protection Agency:
Louisiana Army Ammunition Plant, Shreveport LA, Region 6 (2002)
Hyde Park Landfill, Niagara Falls NY, Region 2 (2001)

Technical training provided:

Applied parameter estimation for groundwater modeling:

U.S. Geological Survey, Denver CO, October, 1994

South Florida Water Management District, West Palm Beach FL, January, 1994

International Ground-Water Modeling Center, Golden CO, September, 1993 & 1994

Modeling and software skills:

MODFLOW, SEAWAT, SUTRA, MOC3D, MT3D, BIOMOC, TOUGH2

Arc-Info GIS

FORTRAN, C and Perl programming

Selected Publications:

- Yager, R.M., Misut, P.E., Langevin, C.D., and Parkhurst, D.L., 2009, Brine migration from a flooded salt mine in the Genesee Valley, Livingston County, New York: Geochemical modeling and simulation of variable-density flow, U. S. Geological Survey Professional Paper 1767, 51p. <http://pubs.usgs.gov/pp/pp1767/> & <http://ny.water.usgs.gov/projects/Coram/seawat/seawat.html>
- Yager, R.M., Voss, C.I., Southworth, Scott, 2009, Comparison of alternative representations of hydraulic-conductivity anisotropy in folded fractured-sedimentary rock: Modeling groundwater flow in the Shenandoah Valley (USA) , *Hydrogeology Journal*. v. 17, no. 5, p.1111-1131. <http://www.springerlink.com/content/42527x186nr51794/fulltext.pdf>
- Yager, R.M., Kappel, W..M., and Plummer, L.N., 2007, Origin of halite brine in the Onondaga Trough near Syracuse, New York State, USA: modeling geochemistry and variable-density flow, *Hydrogeology Journal*, v. 15, no. 7, p. 1321-1339. <http://www.springerlink.com/content/008m772313n73413/fulltext.pdf>
- Yager, R.M., 2004, Effects of model sensitivity and nonlinearity on nonlinear regression of ground water flow, *Ground Water*, v. 42, no. 3, p. 390-400. <http://www3.interscience.wiley.com/cgi-bin/fulltext/118752546/PDFSTART>
- Yager, R. M., and Fountain, J. C., 2001, Effect of natural gas exsolution on specific storage in a confined aquifer undergoing water-level decline, *Ground Water*, v. 39, no. 4, p. 517-525. <http://www3.interscience.wiley.com/cgi-bin/fulltext/119017106/PDFSTART>
- Yager, R. M., Miller, T. S., and Kappel, W. M., 2001, Simulated effects of salt-mine collapse on ground-water flow and land subsidence in a glacial aquifer system, Livingston County, N.Y., U. S. Geological Survey Professional Paper 1611, 85p. <http://pubs.er.usgs.gov/usgpsubs/pp/pp1611>
- Yager, R. M., 1998, Detecting influential observations in nonlinear regression modeling of ground-water flow, *Water Resources Research*, v.34, no.7, p. 1623-1633. <http://www.agu.org/journals/wr/v034/i007/98WR01010/>
- Yager, R. M., and Kappel, W. M., 1998, Infiltration and hydraulic connections from the Niagara River to a fractured dolomite aquifer in Niagara Falls, New York, *Journal of Hydrology*, v. 206, p. 84-97.
- Yager, R. M., Bilotta, S. E., Mann, C. L., and Madsen, E. L., 1997, Metabolic adaptation and in situ attenuation of chlorinated ethenes by naturally occurring microorganisms in a fractured dolomite aquifer near Niagara Falls, New York, *Environmental Science and Technology*, v. 31, no. 11, pp 3138-3147. <http://pubs.acs.org/doi/pdf/10.1021/es970105a>
- Yager, R. M., 1995, Simulated three-dimensional ground-water flow in a fractured dolomite aquifer of the Lockport Group near Niagara Falls, New York: U. S. Geological Survey Water Supply Paper 2487, 42 p. <http://pubs.er.usgs.gov/usgpsubs/wsp/wsp2487>

References:

- Chris Langevin (langevin@usgs.gov), U.S. Geological Survey, Reston VA, colleague and coauthor
- Neil Plummer (nplummer@usgs.gov), U.S. Geological Survey, Reston VA, colleague and coauthor
- Cliff Voss (cvoss@usgs.gov), U.S. Geological Survey, Menlo Park CA, colleague and coauthor