

CV of Mary Pikul Anderson

Degrees

Ph.D. (1973) Hydrology, Stanford Univ. *Numerical Studies of Linked Soil-Moisture and Groundwater Systems*.
M.S. (1971) Geology, Stanford Univ. *An Environmental Survey of San Gregorio Valley, San Mateo County, CA*.
B.A. (1970) Geology, State University of New York at Buffalo (now University at Buffalo).

Employment

July 2009- present: C.S. Slichter Professor Emerita, Dept. of Geoscience, University of Wisconsin-Madison
Aug. 1985 – June 2009: Professor of Geology and Geophysics (now Geoscience) with appointments in the Institute for Environmental Studies (IES) and the Water Resources Management Program, and affiliated with the Center for Limnology, and the Geological Engineering Program. **Chair of the IES Academic Programs (Sept. 1992 - Aug. 1995)**; Member, University Committee (June 1995 - May 1998); **Chair, Dept. of Geology & Geophysics (Aug. 1999- June 2002)**.
Aug. 1980 - July 1985: Associate Professor of Geology and Geophysics, UW-Madison
Aug. 1975 - July 1980: Assistant Professor of Geology and Geophysics, UW-Madison
Sept. 1973 - June 1975: Adjunct Assistant Professor of Geology, Southampton College of Long Island University and Visiting Lecturer in Geology at SUNY-Stony Brook (Spring 1974)

Honors

2014 University at Buffalo, College of Arts and Sciences Dean's Award
2011 G.B. Maxey Distinguished Service Award, Hydrogeology Division, Geological Society of America
2010 Life Member Award, National Ground Water Association
2009 Keith Anderson Award, Scientists and Engineers Division, National Ground Water Association
2008 Distinguished Service Award, Wisconsin Section of the American Water Resources Association
2007 C.S. Slichter Professor, University of Wisconsin-Madison
2007 Langbein Lecturer, Hydrology Section, American Geophysical Union
2006 Election to the National Academy of Engineering
2003 Farvolden Lecturer, University of Waterloo, Ontario, Canada
2000 C.V. Theis Award, American Institute of Hydrology
1999 Fellow, American Geophysical Union
Fellow, Geological Society of America
1998 O.E. Meinzer Award, Hydrogeology Division, Geological Society of America, in recognition of a body of papers of distinction advancing the science of hydrogeology.
1995 WARF Mid-Career Award, The Graduate School, UW-Madison.
1993 C.C. Furnas Award for outstanding contributions in science by an alumnus of SUNY-Buffalo, SUNY-Buffalo Alumni Association.
1992 M.K. Hubbert Award for outstanding contributions in groundwater science, the National Ground Water Association.
1986 Invited participant in a Dahlem Conference on Resources and World Development in West Berlin.
1981 Paper selected for inclusion in the Benchmark Papers in Geology Series.

Courses taught include: Hydrogeology, Groundwater Flow Modeling, Contaminant Transport Modeling, Seminar in Hydrogeology, Environmental Geology; also Sedimentation and Stratigraphy, Stratigraphy of North America, Introductory Geology, Historical Geology.

Editorial Boards

2002-10 Editor-in-Chief, *Ground Water*
1994-95 Deputy Editor, *Water Resources Research*
1992-93 Editorial Board, *Hydrological Processes*
1991-93 Assoc. Editor, *Water Resources Research*
1986-90 Assoc. Editor, *Jrnl. of Contaminant Hydrology*
1982-84 Associate Editor of Hydrology for *EOS*
1981-84 Editorial Board, *Geology*
1980-83 Editorial Board, *Ground Water*

National Committees

National Academy of Engineering: Awards Committee (2010-2012); Membership Policy Committee (2014-2017); Section 11 (Earth Resources Engineering) officer: secretary, vice chair, chair (2013-2014); Section 11 Peer Committee (2009-2011); Section 11 Grand Challenges Committee (2010).

National Research Council: Committee on Ground-Water in Relation to Coal Mining (1978-80); Panel on Groundwater Contamination, Geophysics Study Committee (1981-83); Member of the Water Science and Technology Board (1984-87); ad hoc Committee to advise the U.S. Army on groundwater modeling needs (1992); Committee on Hydrologic Science (1999-2003); Sustainability Roundtable and Linkages Committee (2010).

Office of Technology Assessment (U.S. Congress): Committee to assess the use of models for water resources management, planning and policy (1981).

EPA: Policy and Advisory Committee for the International Center for Groundwater Modeling (1979-82); Science Advisory Board for the National Center for Ground-Water Research (1980-84); Panel on the use of groundwater models for regulatory purposes (1982); Review panel for a Hazardous Substance Research Center for Regions 1 and 2 (Aug. 1988); Science Advisory Committee, Hazardous Substance Center, EPA Region Pair III/V (1989-90); Science Advisory Board Subcommittee to review CANSAZ (May 1989); Science Advisory Board Modeling Study Group (1989); Science Advisory Board Member (1989-91); Review panel for the Centers' Program (June 1991); Advisor to OSWER's study on groundwater modeling (1991-92).

NIEHS: Panel for review of proposals for basic research under the Superfund program (June 1988).

American Geophysical Union: Committee on Groundwater (1981-84). Horton Award Selection Committee (1985-87, chairman in 1987). Horton Award Research Grant Committee (1989-93). Search committee for new editor of *Water Resources Research* (1992). Horton Medal Committee (1992-94). Executive Committee of the Hydrology Section (1992-93; 1994-98). President-Elect of the Hydrology Section (1994-96). **President of the Hydrology Section (1996-98)**. AGU Council (1994-98). Member, Witherspoon Award Selection Committee (2016–2018).

National Ground Water Association: Board of Directors of the Technical Division (1980-82).

Geological Society of America: Meinzer Award Committee (1982). Committee on Committees (1994). GSA Council (2000-2002). Meinzer Award Committee (2000-2003); Penrose Medal Committee (2010-2012); Hydrogeology Maxey Award Committee (2011-2013).

Industry: Union Carbide Ag Products Division, Scientific Advisory Committee on TEMIK (1983-1986); Savannah River Site, Earth Science Advisory Committee (1989-93); Associate, Hydro-Search, Inc. (1990-95).

International Committees

International Union of Geodesy and Geophysics: Member of the U.S. National Committee (1984-88).

International Geoscience Programme (IGCP): Member of the Scientific Board (2012–present).

Southern University of Science and Technology (SUSTech), Shenzhen, China: Chair of the Advisory Board for the School of Environmental Science and Engineering (2016–present).

PUBLICATIONS

Pikul, M.F., R.L. Street, and Irwin Remson, 1974, A numerical model based on coupled one-dimensional Richards and Boussinesq Equations, *Water Resources Research*, 10(2), 295-302.

Aguado, E., I. Remson, M.F. Pikul, and W.A. Thomas, 1974, Optimal pumping for aquifer dewatering, *Journal of the Hydraulics Division, ASCE*, 100 (HY7), Proc. Paper 10639, 869-877.

Pikul, M.F., R.L. Street, and Irwin Remson, 1975, Reply to a comment by Vachaud and Vauclin, *Water Resources Research*, 11(3), 510.

- Berkebile, C.A., and M.P. Anderson, 1975, Town of Southampton, 1974-75, Ground Water Resources Monitoring Program, Report to the Town of Southampton, 110 p.
- Anderson, M.P., 1976, Unsteady groundwater flow beneath strip oceanic islands, *Water Resources Research* 12(4), 640-644.
- Anderson, M.P., 1976, Evidence of salt water intrusion in southeastern Long Island, *Ground Water* 14(5), 315-319.
- Wang, H.F., and M.P. Anderson, 1977, Finite differences and finite elements as weighted residual solutions to Laplace's equation, in: *Finite Elements in Water Resources*, Pentech Press), p. 2.167-2.178.
- Andrews, C.B., and M.P. Anderson, 1978, Impact of a power plant on the groundwater system of a wetland, *Ground Water* 16(2), 105-111.
- Anderson, M.P., 1978, Nonpoint source problems: Groundwater problems related to land use, in: *Planning and Managing Wisconsin's Water Resources*, Proceedings of the Amer. Water Resour. Assoc.- Wisc. Section meeting, 215-218.
- Karnauskas, R.J., and M.P. Anderson, 1978, Ground-water lake relationships and ground-water quality in the Sand Plain Province of Wisconsin - Nepco Lake, *Ground Water* 16(4), 273-281.
- Andrews, C.B. and M.P. Anderson, 1979, Thermal alteration of groundwater by seepage from a cooling lake, *Water Resources Research* 15(3), 595-602.
- Anderson, M.P., 1979, Using models to simulate the movement of contaminants through groundwater systems, *CRC Critical Reviews in Environmental Control* 9(2), 97-156.
- Eisen, C.E., and M.P. Anderson, 1979, Effects of urbanization on ground-water quality - A Case Study, *Ground Water* 17(5), 456-462.
- Anderson, M.P., C.E. Eisen, R.N. Hoffer, 1979, The IJC Menomonee River Watershed--Volume 7: Groundwater Hydrology, EPA-905/4-79-029-G, 166 p.
- Cichowicz, N.L., and M.P. Anderson, 1979, A model for estimating optimum rates of wastewater application for land treatment systems, Proceedings of the Conference on Land Disposal of Municipal and Industrial Waste, Madison, WI.
- Rinaldo-Lee, M.B., M.P. Anderson, D.A. Stephenson, and S.F. Huffman, 1979, Hydrogeology and Computer Model of the Bass Lake Area, St. Croix County, Wisconsin, Water Resources Center, Tech. Rept., WISWRC 79-01, 48 p.
- Rinaldo-Lee, M.B., and M.P. Anderson, 1980, High water levels in ground-water dominant lakes-- a case study from northwestern Wisconsin, *Ground Water* 18(4), 334-339.
- Andrews, C.B. and M.P. Anderson, 1980, Impacts of Coal-Fired Power Plants on Local Groundwater Systems-Wisconsin Power Plant Impact Study, EPA-600/3-80-079, 203p.
- Anderson, M.P., and J.A. Munter, 1981, Seasonal reversals in ground-water flow around lakes and the

- relevance to stagnation points and lake budgets, *Water Resources Research* 17(4), 1139-1150.
- Munter, J.A., and M.P. Anderson, 1981, The use of ground-water flow models for estimating lake seepage rates, *Ground Water* 19(6), 608-616.
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- Chesters, G., M.P. Anderson, B. Shaw, J.M. Harkin, M. Meyer, E. Rothschild, and R. Manser, 1982, Aldicarb in Groundwater, Water Resources Center, Special Report, 38 p.
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- Carsel, R.F., R.L. Jones, J.L. Hansen, R.L. Lamb and M.P. Anderson, 1988, A simulation procedure for groundwater quality assessments of pesticides, *Jrnl. of Contaminant Hydrology*, 2(1), p. 125-138.
- Zheng, C., K.R. Bradbury, and M.P. Anderson, 1988, Role of interceptor ditches in limiting the spread of contaminants in ground water, *Ground Water* 26(6), 734-742.
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- Anderson, M.P., 1991, Comment on "Universal scaling of hydraulic conductivities and dispersivities in geologic media" by S.P. Neuman, *Water Resources Research* 27(6), p. 1381-1382.
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- Woessner, W.W. and M.P. Anderson, 1992, Selecting calibration values and formulating calibration targets for ground water flow simulations, in: *Solving ground-water problems with models*, National Water Well Assoc., Columbus, Ohio, pp. 199-212.
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- Woessner, W.W., and M.P. Anderson, 1996, Good model-bad model, understanding the flow modeling process, in: *Subsurface fluid-flow (ground-water and vadose zone) modeling*, ASTM STP 1288, J.D. Ritchey, and J.O Rumbaugh, Eds., American Society for Testing and Materials., p. 14-23.
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- Anderson, M.P., 1997, Basic science required for decision making: geological setting, in: *Subsurface Restoration*, C.H. Ward, J.A. Cherry, M.R. Scalf eds, Ann Arbor Press, p. 17-25.
- Hunt, R.A., D. P. Krabbenhoft, and M.P. Anderson, 1997, Assessing hydrogeological heterogeneity in natural and created wetlands, *Biogeochemistry* 39, 271-293.
- Anderson, M.P., and X. Cheng, 1998, Sensitivity of groundwater/lake systems in the Upper Mississippi River Basin, Wisconsin, USA, to possible effects of climate change, in: *Hydrology, Water Resources and Ecology in Headwaters*, HeadWater'98 (K. Kovar, et al., eds.), IAHS Publication no. 248, pp. 3-8.
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- Hunt, R. J., V. A. Kelson, and M.P. Anderson, 1998, Linking an Analytic Element Flow code to MODFLOW – Implementation and Benefits, in: *MODFLOW '98 Proceedings* (E. Poeter, M.Hill, and C. Zheng, eds.), 497-504.
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- Anderson, M.P., 1999, Preparing for the 21st century: A new generation of groundwater models, In: *Proceedings of the International Symposium on Groundwater in Environmental Problems*, Y. Sakura and C. Tang, eds., Chiba, Japan, pp. 3-6.
- Kim, K., Anderson, M. P., & Bowser, C. J. , 1999, Model Calibration with Multiple Targets: A Case Study, *Ground Water* 37(3), 345-351.
- Anderson, M.P., Aiken, J.S., Webb, E.K., and D.M. Mickelson, 1999, Sedimentology and hydrogeology of two braided stream deposits, *Sedimentary Geology*, 129/3-4, p. 187-199, (invited).

- Kim, K., Anderson, M. P., & Bowser, C. J. , 2000, Enhanced dispersion in groundwater caused by temporal changes in recharge rate and lake levels, *Advances in Water Resources* 23, p. 625-635.
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- Anderson, M.P. and E.S. Bair, 2001, The power of spreadsheet models, In: *Proceedings of MODFLOW 2001 and Other Modeling Odysseys*, (H.S. Seo, E. Poeter, C. Zheng, O. Poeter, editors), IGWMC, Golden, CO, p. 815-822.
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