

Dale M. Robertson

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Education

1984–1989 Ph.D. Oceanography and Limnology Graduate Program, University of Wisconsin, Madison, Wisconsin. Thesis: "The Use of Lake Water Temperature and Ice Cover as Climatic Indicators".

1981–1984 M.S. Oceanography and Limnology Graduate Program, University of Wisconsin, Madison, Wisconsin. Thesis: "Interbasin Separation and Its Impact on the Annual Heat Budgets of the Individual Basins in Trout Lake, Wisconsin".

1976–1981 B.S. St. Norbert College, DePere, Wisconsin. Majors in Biology, Chemistry, and Mathematics. (Cum Laude).

Research and Teaching Experience

Research Hydrologist, U.S. Geological Survey, Wisconsin Water Science Center. Research dealing with large-scale regional watershed modeling; understanding the influence of environmental factors, watershed management strategies, and in-lake management alternatives on river and lake water quality. 1991–Present.

Post-doctorate Research Fellow, University of Western Australia. Centre for Water Research. Research dealt with modeling the physical dynamics of lakes, developing an indicator of the dynamic stability of a lake for water quality management, and developing practical means to destratify reservoirs using dynamical simulation models. 1989–1991.

Research Assistant, University of Wisconsin-Madison. Oceanography and Limnology Graduate Program. M.S. and Ph.D. research in the areas of physical limnology and climatology. 1981–1989.

Research Assistant/Teaching Assistant/Laboratory Assistant, St. Norbert College. Departs. of Biology and Chemistry. Research in biological limnology and microbiology. Teaching assistant in Organic Chemistry and Limnology. 1980–1981.

University Affiliations

Adjunct Professor, University of Wisconsin-Green Bay and Michigan Technological University
Honorary Research Scientist, Center for Limnology, University of Wisconsin-Madison

Major Research and Professional Interests

Watershed modeling; watershed management strategies; nutrient criteria for streams and lakes; modeling eutrophication in lakes and rivers; modeling watershed-lake interactions; and in-lake management alternatives on the water quality of lakes and rivers; and ice as climatic indicators.

Professional Societies

North American Lake Management Society
International Association of Great Lakes Research

American Water Resources Association

Awards and Scholarships

St. Norbert College Presidential Scholarship, 1976–1981
Schuette Family Scholarship, 1976–1980

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Selected Recent Publications

Robertson, D.M., Saad, D.A., Schwarz, G.E., 2014, Spatial Variability in Nutrient Transport by HUC8, State, and Subbasin Based on Mississippi/Atchafalaya River Basin SPARROW Models: Journal of the American Water Resources Association. DOI: 10.1111/jawr.12153.

LaBeau, M.B., Robertson, D.M., Mayer, A.S., and Pijanowski, B.C., 2014, Effects of future urban and biofuel crop expansions on the riverine export of phosphorus to the Laurentian Great Lakes: Ecological Modelling. v. 277, p. 27-37. DOI: 10.1016/j.ecolmodel_2014.01.016.

McLellan, E., Robertson, D., Schilling, K., Tomer, M., Kostel, J., Smith, D., and King, K. 2014 (In Press). Reducing nitrogen export from the corn belt to the Gulf of Mexico: Agricultural strategies for remediating hypoxia. Journal of the American Water Resources Association.

Robertson, D.M. and Saad, D.A., 2013, SPARROW models used to understand nutrient sources in the Mississippi/Atchafalaya River Basin: Journal of Environmental Quality. v. 42, no. 5, p. 1422-1440, DOI: 10.2134/jeq2013.02.0066.

Robertson, D.M., and Saad, D.A., 2013. Reply to Discussion — “Nutrient Inputs to the Laurentian Great Lakes by Source and Watershed Estimated Using SPARROW Watershed Models” by R. Peter Richards, Ibrahim Alameddine, J. David Allan, David B. Baker, Nathan S. Bosch, Remegio Confesor, Joseph V. DePinto, David M. Dolan, Jeffrey M. Reutter, and Donald Scavia. Journal of the American Water Resources Association (JAWRA). v. 49, no. 3, p. 725–734, DOI: 10.1111/jawr.12060.

Baldwin, A.K., Robertson, D.M., Saad, D.A., and Magruder, Christopher, 2013, Refinement of regression models to estimate real-time concentrations of contaminants in the Menomonee River drainage basin, southeast Wisconsin, 2008–11: U.S. Geological Survey Scientific Investigations Report 2013–5174, 113 p., seven appendixes, <http://pubs.usgs.gov/sir/2013/5174/>.

Juckem, P.J., and Robertson, D.M., 2013, Hydrology and water quality of Shell Lake, Washburn County, Wisconsin, with special emphasis on the effects of diversion and changes in water level on the water quality of a shallow terminal lake: U.S. Geological Survey Scientific Investigations Report 2013-5181, 77 p.

Powers, S.M., Robertson, D.M., and Stanley, E.H., 2013, Effects of lakes and reservoirs on annual river nitrogen, phosphorus, and sediment export in agricultural and forested landscapes: Hydrological Processes, DOI: 10.1002/hyp.10083.

Robertson, D.M., Garn, H.S., Rose, W.J., Juckem, P.J., and Reneau, P.C., 2012, Hydrology, water quality, and response to simulated changes in phosphorus loading of Mercer Lake, Iron County, Wisconsin, with emphasis on effects of wastewater discharges on water quality: U.S. Geological Survey Scientific Investigations Report 2012-5134, 58 p.

Juckem, P.F., Reneau, P.C., and Robertson, D.M., 2012, Estimation of natural historical flows for the Manitowish River near Manitowish Waters, Wisconsin: U.S. Geological Survey Scientific Invest. Report 2012–5135. 42 p.

Robertson, D.M. and Saad, D.A., 2011, Nutrient inputs to the Laurentian Great Lakes by source and watershed estimated using SPARROW watershed models: *Journal of the American Water Resources Association*. v. 47, p. 1011-1033, DOI: 10.1111/j.1752-1688.2011.00574.x.

Robertson, D.M. and Rose, W.J., 2011, Response in the trophic state of stratified lakes to changes in hydrology and water level: potential effects of climate change: *Journal of Water and Climate Change*, vol. 2. No. 1, p. 1–18.

Garn, H.S., Robertson, D.M., Rose, W.J., and Saad, D.A., 2010, Hydrology, water quality, and response to simulated changes in phosphorus loading of Minocqua and Kawaguesaga Lakes, Oneida County, Wisconsin, with special emphasis on effects of urbanization U.S. Geol. Survey Scientific Invest. Report 2010-5196.

Lorenz, D.L., Robertson, D.M., Hall, D.W., and Saad, D.A., 2009, Trends in streamflow and nutrient and suspended-sediment concentrations and loads in the Upper Mississippi, Ohio, Red, and Great Lakes River Basins, 1975–2004: U.S. Geological Survey Scientific Invest. Report 2008–5213, 81 p.

Robertson, D.M., Schwarz, G.E., Saad, D.A., and Alexander, R.A., 2009, Incorporating uncertainty into the ranking of SPARROW model nutrient yields from Mississippi/Atchafalaya River Basin watersheds: *Journal of the American Water Resources Association*, v. 45, p. 534–549.

Robertson, D.M., Weigel, B.M., and Graczyk, 2008, Nutrient Concentrations and their relations to the biotic integrity of nonwadeable rivers in Wisconsin: U.S. Geological Survey Professional Paper 1754, 81 p.

Robertson, D.M., and Schladow, S.G., 2008, Response in the water quality in the Salton Sea to changes in phosphorus loading: An empirical modeling approach: *Hydrobiologia*, v. 604, p. 5–19.

Robertson, D.M., Schladow, S.G., and & Holdren, G.C., 2008, Long-term changes in the phosphorus loading to and trophic state of the Salton Sea: *Hydrobiologia*, v. 604, p. 21–36.

Robertson, D.M., Garn, H.S., and Rose, W.J., 2007, Response of calcareous Nagawicka Lake, Wisconsin, to changes in phosphorus loading. *Lake and Reservoir Management*, v. 23, p. 298-312.

Robertson, D.M., Saad, D.A., and Heisey, D.M., 2006, Regional patterns in present and estimated reference suspended sediment concentrations and yields in streams in the Great Lakes Region and adjacent areas: U.S. Geological Survey Scientific Investigations Report: 2006–5066, 35 p.

Robertson, D.M., Graczyk, D.J., Garrison, P.J., Wang, L., LaLiberte, G., and Bannerman, R. 2006, Nutrient concentrations and their relations to the biotic integrity of wadeable streams in Wisconsin: U.S. Geological Survey Professional Paper 1722, 139 p.