Mark D. Rowe, Ph.D.

Assistant Research Scientist
University of Michigan
Cooperative Institute for Limnology and Ecosystems Research
NOAA Great Lakes Environmental Research Laboratory

4840 S. State Rd.
Ann Arbor, MI 48108
Phone: 734-741-2172
Email: mark.rowe@noaa.gov

Education

Ph.D. Environmental Engineering, Michigan Technological University, 2009
M.S. Environmental Engineering, Michigan Technological University, 2009
M.S. Metallurgical and Materials Engineering, Colorado School of Mines, 1999
B.S. Welding Engineering, The Ohio State University, 1997

Appointments

Oct. 2015-present: Asst. Research Scientist, U. of Michigan CILER, NOAA GLERL, Ann Arbor, MI
Oct. 2014-Sept. 2015: Research Fellow, U. of Michigan CILER, NOAA GLERL, Ann Arbor, MI
Oct. 2012-Sept. 2014: NRC Research Associate, NOAA GLERL, Ann Arbor, MI
Feb. 2010-Sept. 2012: Research Fellow, US EPA Large Lakes Research Station, Grosse Ile, MI
July 2004-Dec. 2009: Graduate Research/Teaching Asst., Michigan Tech University, Houghton, MI
Jan. 2000-May 2004: Senior Engineer, Haynes International Inc., Kokomo, IN
July 1997-December 1999: Graduate Research Asst., Colorado School of Mines, Golden, CO

Publications

M.D. Rowe, E.J. Anderson, T. T. Wynne, R. P. Stumpf, D. L. Fanslow, K. Kijanka, H. A. Vanderploeg, T. W. Davis. Vertical distribution of buoyant *Microcystis* blooms in a Lagrangian particle tracking model for short-term forecasts in Lake Erie. *Journal of Geophysical Research - Oceans, submitted*

M.D. Rowe, D.R. Obenour, T.F. Nalepa, H.A. Vanderploeg, F. Yousef, W.C. Kerfoot. 2015. Mapping the spatial distribution of invasive dreissenid mussel biomass and filter-feeding impact in Lake Michigan. *Freshwater Biology, 60(11), 2270-2285*.

M.D. Rowe, E.J. Anderson, J. Wang, H.A. Vanderploeg. 2015. Modeling the effect of invasive quagga mussels on the spring phytoplankton bloom in Lake Michigan. *Journal of Great Lakes Research*, 41(Supplement 3):49-65, doi:10.1016/j.jglr.2014.12.018.

H.A. Bootsma, **M.D. Rowe**, C.N. Brooks, H.A. Vanderploeg. 2015. Commentary: The need for model development related to *Cladophora* and nutrient management in Lake Michigan. *Journal of Great Lakes Research*, 41(Supplement 3):7-15, doi:10.1016/j.jglr.2015.03.023.

X. Zhang, K.R. Rygwelski, **M.D. Rowe**, R. Rossmann, R.G. Kreis Jr. 2015. Global and regional contributions to total mercury concentrations in Lake Michigan water. *Journal of Great Lakes Research*, 42(1):62-69, doi:10.1016/j.jglr.2015.10.010.

M.D. Rowe, R.G. Kreis Jr, D.M. Dolan. 2013. A reactive nitrogen budget for Lake Michigan. *Journal of Great Lakes Research*, 40(1):192-201, doi: 10.1016/j.jglr.2013.11.005.

M. D. Rowe and J. A. Perlinger. 2012. Micrometeorological measurement of hexachlorobenzene and polychlorinated biphenyl compound air-water gas exchange in Lake Superior and comparison to model predictions. *Atmospheric Chemistry and Physics*, 12, 4607-4617, http://www.atmos-chem-phys.net/12/4607/2012/acp-12-4607-2012.html.

M. D. Rowe, J.A. Perlinger, C.W. Fairall. 2011. Chemical sensor resolution requirements for near-surface measurements of turbulent fluxes. *Atmospheric Chemistry and Physics*. 11: 5263–5275. www.atmos-chem-phys.net/11/5263/2011/.

M. D. Rowe, J.A. Perlinger, C.W. Fairall. 2011. A Lagrangian model to predict modification of near-surface scalar mixing ratios and air-water exchange fluxes in offshore flow. *Boundary Layer Meteorology*, 140(1): 87-103, doi: 10.1007/s10546-011-9598-0.

M. D. Rowe, J. A. Perlinger. 2010. Performance of a high flow rate, thermally extractable multicapillary denuder for atmospheric semivolatile organic compound concentration measurement. *Environmental Science & Technology*, 44(6), 2098-2104.

M. D. Rowe, J.A. Perlinger, N.R. Urban. 2009. Modeling contaminant behavior in Lake Superior: A comparison of PCBs, PBDEs, and mercury, *In:* State of Lake Superior, Ecovision World Monograph Series, M. Munawar and I.F. Munawar (Eds.), Aquatic Ecosystem Health and Management Society. 239-286.

Professional Activities

Reviewer: Environmental Science & Technology, Fisheries Research, Harmful Algae, Hydrobiologia, Inland Waters, Journal of Great Lakes Research, Ocean Modeling

Member: International Association of Great Lakes Research, American Geophysical Union

Skills

Software: R (open source statistical programming language), Fortran, Linux cluster high performance computing, Finite Volume Community Ocean Model, Matlab, Arc GIS, Microsoft Office.

Languages: English (native), Spanish (intermediate level conversational).

Instrumental analysis: Agilent 6890 and 5890 gas chromatographs, Campbell Scientific eddy covariance system, LI-COR LI7500 open path CO2/H2O gas analyzer, aerosol particle measurement, electron microscopy.