

21 September 2011

Tom Freeman
Washtenaw County Board of Commissioners
Washtenaw County Parks & Recreation Commission
P.O. Box 8645
Ann Arbor, MI 48107-8645

Dear Mr. Freeman and Board of Commissioners,

I am expressing my interest in one of the open positions on NATAC. I am an aquatic ecologist researcher at the University of Michigan, School of Natural Resources and Environment. I study aquatic ecosystems, particularly fluvial ecosystems but also lakes and wetlands. My current projects range from a large scale study of rivers across the U.S., a benthic survey of the Great Lakes, and watershed assessment. The assessment examines the stressor-response relationships between human altered landscape and ecosystem properties and valued attributes. All of these projects involve or have involved extensive field study, database management, statistical and causal modeling, grant writing and manuscript preparation. I also advise and direct students during both field work, data analysis and document preparation.

I currently work extensively with Mike Wiley who also served on NATAC as well as Paul Seelbach, whom I understand I might be replacing. Feel free to contact either person for references.

Prior to returning to U. of M. for my PhD, I was employed by JJR/Smith Group in Ann Arbor. In this position I primarily managed and prepared Environmental Assessments, Environmental Impact Statements and Wetland Mitigation projects. These projects required extensive evaluation and delineation of wetlands thus my knowledge of plants is good although not exceptional.

Sincerely,

Catherine Riseng, PhD
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Education

Ph.D., Natural Resources, Aquatic Resources, University of Michigan, 2001; M.S., Biology, Aquatic Ecology, University of Michigan, 1988; B.S., Botany, University of Michigan, 1975.

Research Experience

- 2009-present Assistant Research Scientist, University of Michigan: Great Lakes Biological Monitoring Program (USEPA Great Lakes National Program Office); The Development and Testing of Structural Equation Models for the National Water Quality Assessment Program (U.S. Department of Interior / USGS).
- 2001-2009 Research Associate II, University of Michigan: A collaborative approach to understanding the dynamics of the Muskegon River watershed (Great Lakes Fisheries Trust); The Development and Testing of Structural Equation Models for the National Water Quality Assessment Program (U.S. Department of Interior / USGS); Developing relationships among human activities, stressors and stream ecosystem responses and linkages in integrated regional, multi-stressor models (EPA Star).
- 1995-2001 Graduate Research Assistant, University of Michigan: Effects of hydrology and nutrients on stream ecosystems across regions (EPA Water and Watersheds); Aquatic community assemblage structure in relation to macro-habitat units in Lower Michigan (The Nature Conservancy).
- 1986-1988 Graduate Research Assistant, University of Michigan: Effects of acidification on algal species
- 1978-1981 The design and experimental results of operation of an experimental solar greenhouse, Environmental Research Institute of Michigan (Department of Energy)

Professional Affiliation and Activities

North American Benthological Society
Ecological Society of America

Selected Peer Reviewed Publications

Riseng, C.M., M.J., Wiley, R.J. Stevenson, P.J. Seelbach. 2010 – in press. An ecological assessment of Michigan rivers and streams. Journal of Great Lakes Research.

Ivan, L.N., Rutherford, E.S., **Riseng, C.**, and Tyler, J.A. 2010. Density, production and survival of walleye (*Sander vitreus*) eggs in the Muskegon River, Michigan. *Journal of Great Lakes Research* (36): 328-337.

Wiley, M.J., D.W. Hyndman, B.C. Pijanowski, A.D. Kendall, **C.M. Riseng**, E.S. Rutherford, S.T. Cheng, M.L. Carlson, J.A. Tyler, R.J. Stevenson, P.J. Steen, P.L. Richards, P.W. Seelbach, J.M. Koches, R. R. Rediske. 2010. A multi-modeling approach to evaluating climate and land use change impacts in a Great Lakes basin. *Hydrobiologia* DOI 10.1007/s10750-010-0239-2.

Stevenson, R.J., L. Novoveska, **C.M. Riseng**, and M.J. Wiley. 2009. Comparing responses of diatom species composition to natural and anthropogenic factors in streams of glaciated regions. *Nova Hedwigia* 135:1-13.

Riseng, C. M., L. Wang, M.J. Wiley, E. Rutherford, and T. Brendon. 2008. State-of-the-Art Approaches for Assessment of Great Lakes Nearshore and Large River Habitat. Final report to Great Lakes Fishery Trust, U.S. EPA, and Great Lakes Fishery Commission.

Stevenson, R.J., M.J. Wiley, V.L. Lougheed, **C. Riseng**, S.H. Gage, J. Qi, D.T. Long, D.W. Hyndman, B.C. Pijanowski, and R.A. Hough. 2008. Chapter 19: Watershed Science: Essential, Complex, Multidisciplinary and Collaboratory *In: W. Ji, ed., Wetland and Water Resource Modeling and Assessment: A Watershed Perspective*, Taylor & Francis, London.

Wiley, M., B. Pijanowski, R.J. Stevenson, P. Seelbach, P. Richards, **C. Riseng**, D. Hyndman and J. Koches. 2008. Integrated modeling of the Muskegon River: Tools for ecological risk assessment in a Great Lakes watershed. Chapter 20 *In: W. Ji, ed., Wetland and Water Resource Modeling and Assessment: A Watershed Perspective*, Taylor & Francis, London.

Stevenson, R.J., S.T. Rier, **C.M. Riseng**, R.E. Schultz, and M.J. Wiley. 2006. Comparing effects of nutrients on algal biomass in streams in two regions with different disturbance regimes and with applications for developing nutrient criteria. *Hydrobiologia* 561:149-165.

Riseng, C.M., M.J. Wiley, R.J. Stevenson, P.J. Seelbach. 2006. Comparison of coarse versus fine scale sampling on statistical modeling of landscape effects on fish communities of the Muskegon River. Pages 555-576 *in* R.M. Hughes, L. Wang and P.W. Seelbach, editors. *Landscape influences on stream habitats and biological assemblages*. American Fisheries Society, Symposium 48, Bethesda, Maryland.

M.J. Wiley, B.C. Pijanowski, P. Richards, **C.M. Riseng**, P.J. Seelbach, and R. J. Stevenson. 2004. Combining valley segment classification with neural net modeling of landscape change: a new approach to integrated risk assessment for river ecosystems. *In: Proceedings of WEF 2004 Specialty Conference Series: Watershed 2004*, pp. 454-468, Dearborn Michigan, Water Environment Federation.

Riseng, C.M., M.J. Wiley and R.J. Stevenson. 2004. Hydrologic disturbance and nutrient effects on benthic community structure in Midwestern US streams: a covariance structure analysis. *Journal of the North American Benthological Society* 23(2): 309-326.

Riseng, C.M. 2001. Patterns of hydrologic disturbance and benthic community structure in Midwestern streams. Ph.D. Dissertation. University of Michigan.

Riseng, C.M., R.W. Gensemer, and S.S. Kilham. 1991. The effect of pH, aluminum, and chelator manipulations on the growth of acidic and circumneutral species of *Asterionella*. *Water, Air, and Soil Pollution* 60: 249-261.

Selected Grants

[Co-PI]: Cooperative Research Agreement: National Nutrient Effects Team. \$320,000. USGS NAWQA-NEET Program 2007-present; [Co-PI]: Reviewing methods for Large-river Fisheries Habitat Assessment, \$95,000. Great Lakes Fisheries Commission/GLFT. 2004-2006; [Co-PI]: Developing relations among human activities, stressors, and stream ecosystem responses for integrated regional, multi-stressor models. \$750,000. EPA-STAR 2004-2007; [PI]: A Collaborative Approach to Understanding the Dynamics of the Muskegon Watershed: A Comprehensive Model, Risk Assessment and Tools for Use in Management. \$2.1 Million. Great Lakes Fisheries Trust 2001-2007.