**PROJECT MANAGER QUALIFICATIONS**

***James E. Almendinger, Ph.D.***

Education

1988 Ph.D., Ecology. University of Minnesota, Minneapolis, MN 55455

1978 B.A., Botany. Ohio Wesleyan University, Delaware, OH 43015

Positions

2017- Director, St. Croix Watershed Research Station, Science Museum of Minnesota

1995-2017 Senior Scientist, St. Croix Watershed Research Station, Science Museum of Minnesota

2000- Adjunct Associate Professor, Univ. of Minn.: Water Resources Science Program; Dept. of Earth Sciences; and Dept. of Fisheries, Wildlife and Conservation Biology

1990-95 Hydrologist, U.S. Geological Survey, Mounds View, MN.

Research Expertise

My research interests focus on land-water interactions, including the hydrology of lakes, streams, and wetlands; the impact of humans on watersheds; and the hydrologic effects of climate change. I have experience with a variety of hydrologic computer models, including groundwater, watershed, and geochemical models. Research projects have included inferring past climate from lake and groundwater levels; quantifying the anthropogenic flux of sediment and nutrients exported from the upper Mississippi Basin; investigating the effects of urbanization on trout streams; and uncovering the way lakes change naturally over time.

Recent Publications

Edlund, M.B., **J.E. Almendinger**, X. Fang, J.M. Ramstack Hobbs, D.D. VanderMeulen, R.L. Key, and D.R. Engstrom. 2017. Effects of climate change on lake thermal structure and biotic response in northern wilderness lakes. Water 9, 678. doi: 10.3390/w9090678.

**Almendinger, J.E.**, and J.S. Ulrich. 2017. Use of SWAT to estimate spatial scaling of phosphorus export coefficients and load reductions due to agricultural BMPs. Journal of the American Water Resources Association (JAWRA). DOI: 10.1111/1752-1688.12523.

**Almendinger, J.E.**, M.S. Murphy, and J.S. Ulrich. 2014. Use of the Soil and Water Assessment Tool to scale sediment delivery from field to watershed in an agricultural landscape with topographic depressions. Journal of Environmental Quality 43: 9-17. DOI: 10.2134/jeq2011.0340.

Schottler, S.P., J. Ulrich, P. Belmont, R. Moore, J. Lauer, D.R. Engstrom, and **J.E. Almendinger**. 2013. Twentieth century agricultural drainage creates more erosive rivers. Hydrological Processes: 1-11.

**ORGANIZATION DESCRIPTION**

The ***Science Museum of Minnesota*** (SMM) is a private, non-profit 501(c)3 institution dedicated to encouraging public understanding of science through research and education. Its mission is to inspire learners, inform policy, and improve lives through science. The ***St. Croix Watershed Research Station*** (SCWRS) the environmental research center of the SMM with the mission to foster, through research and outreach, “a better understanding of the ecological systems of the St. Croix River basin and watersheds worldwide.” The SCWRS supports an active year-round program in environmental research and graduate-student training, guided by a dedicated in-house research staff with direct ties to area universities and colleges. It collaborates closely with federal, state, and local agencies with responsibility for managing the St. Croix and upper Mississippi rivers and is a full partner with the National Park Service for resource management in parks of the western Great Lakes region. Its research has played a central role in setting management policy for the St. Croix and Mississippi rivers, for establishing water-quality standards for Minnesota lakes and for developing long-term monitoring plans for the National Park Service.