

Report as of FY2009 for 2007MN204B: "The Role of Local Stakeholders in Water Resource Management: Characterization and Diffusion of Minnesota Lake Improvement Districts"

Publications

- Articles in Refereed Scientific Journals:
 - ◆ Steiger-Meister, K., D. R. Becker. 2009. Connecting Environmental Policy with Citizen Engagement: A Comparative Study Between Minnesota's Lake Improvement Districts and Wisconsin's Lake Districts. Manuscript in preparation for Journal of the American Water Resources Association.
 - ◆ Steiger-Meister, K., D. R. Becker. 2009. Citizen Stewardship of Water Resources: A Look at How Water Policy can Create and Coordinate Citizen Action in Minnesota for Environmental Change. Manuscript in preparation for Water Policy.
- Conference Proceedings:
 - ◆ Steiger-Meister, K. 2009. The Drama of the Commons and Its Impact on Adaptive Management. American Water Resource Association Specialty Conference: Adaptive Management of Water Resources II, Snowbird, UT. In review

Report Follows

The Annual Program Report 2010

The role of local stakeholders in water resource management: Characterization and diffusion of Minnesota Lake Improvement Districts

Principal Investigator: Dr. Dennis Becker

Research Assistant: Kaitlin Steiger-Meister

Funding Source: USGS-WRRI 104B Competitive Grants Program

Project Duration: 3/1/2007 – 2/28/2010

Research:

According to the Minnesota Pollution Control Agency, as of 2006 there were 1,013 lakes listed as impaired waters, up from 920 in 2004. A large number are impacted by human development, recreation, and pollution leading to unsafe conditions for swimming or fishing, excessive algal blooms, and high levels of mercury transferred throughout the food chain. Despite progress since passage of the Clean Water Act of 1972, more MN lakes are contaminated than at any time in history. Because they are an integral part of community economies and lifestyle of Minnesota's citizens, alternative methods of management solutions are required that capitalize on existing planning efforts and initiatives. The development of policy tools to enable and facilitate management actions at the local level is paramount. The research seeks to assess the effectiveness of existing MN programs that empower citizens to affect water quality solutions in the places they live. In particular, the research will assess use and diffusion of Lake Improvement Districts (LIDs), where local units of government organized to enhance water quality by securing grants and taxing landowners to support mitigation activities within a lake district. Diffusion of the LID program has been slow in MN. Currently, 32 have been created since 1976, compared to more than 200 in Wisconsin.

In order to characterize existing LIDs including funds secured, staff resources, partnerships formed, and accomplishments relative to state priorities, all LIDs in the state were contacted in the summer of 2007. This resulted in in-depth semi-structured interviews with representatives from 14 of the 24 LIDs in the state that existed at the time of research. These interviews were coded to identify barriers to the diffusion of the LID program and then codes were compared across interviews to identify overarching themes. Researchers also met with the LID coordinator from Minnesota's Department of Natural Resources to learn about the agency's role in the program and collect education and outreach materials focused on LIDs. The project's research assistant also attended the annual meetings of three LIDs and through participant observation studied how the public meetings operated. In the fall of 2007 follow-up letters were sent to all the stakeholders involved in the research thanking them for their involvement.

In conjunction with the larger research project, the research assistant received additional competitive funding to carry out a comparative study between Minnesota's LIDs and Wisconsin's Lake Districts (LD) in the summer of 2008. She examined the institutional arrangement surrounding LDs, specifically the Wisconsin Lakes Partnership (WLP), to better

understand their impact on Wisconsin's adoption and diffusion rates of the LD statute. Through targeted in-depth semi-structured interviews with members of the WLP, including representatives from the University of Wisconsin Extensions in Stevens Point, Wisconsin Association of Lakes, and the Wisconsin Department of Natural Resources, the RA identified key institutional differences that are potentially contributing to the two states' differing implementation rates. This research was complemented with a side-by-side comparison of the LID statute and the LD statute to identify major internal policy characteristics that could potentially contribute to implementation rates.

Research concluded in the summer of 2009 with the release of the project's funders report available at: <http://www.forestry.umn.edu/publications/staffpapers/index.html>

Publications:

Steiger-Meister, K. and Becker, D.R. 2009. The Role of Local Stakeholders in Water Resource Management: Characterization and Diffusion of Minnesota Lake Improvement Districts. University of Minnesota, Department of Forest Resources Staff Paper 202.

Steiger-Meister, K. The drama of the commons and its impact on adaptive management, conference proceeding paper, American Water Resource Association Specialty Conference: Adaptive Management of Water Resources II, Snowbird, UT. (6/09)

In Preparation

Steiger-Meister, K.; Becker, D.R. Connecting Citizens with Water Policy: An Examination of Minnesota's Lake Improvement Districts from the Citizen Perspective. Manuscript in preparation for *National Civic Review*.

Steiger-Meister, K.; Becker, D.R. Exploring the Temporal Dimension of Institutions: A Critique of Minnesota's Lake Improvement District Statute's Diffusion and Implementation. Manuscript in preparation for *Policy Studies Journal*.

Student Support:

These funds supported one full-time Natural Resource Science and Management Ph.D. candidate, Kaitlin Steiger-Meister, in the Department of Forest Resources at the University of Minnesota. The following sections, Presentations, Invited Talks, and Awards catalog Steiger-Meister's activities during the two year funding period. She is on track to graduate in the summer of 2010, with a May 10 final defense date.

Additional Funds:

See "Awards" section.

Presentations:

Connecting Environmental Policy with Citizen Engagement: A Comparative Study Between Minnesota's Lake Improvement Districts and Wisconsin's Lake Districts, Minnesota Water Resources Conference, University of Minnesota in Saint Paul, MN. (10/09)

The Drama of the Commons and its Impact on Adaptive Management: A social science perspective on the slippery nature of water policy, American Water Resource Association Specialty Conference: Adaptive Management of Water Resources II, Snowbird, UT. (6/09)

Minnesota's Lake Improvement Districts, presenter and panelist, Lakes and Rivers Conference hosted by Minnesota Waters, Rochester, MN. (5/09)

When ripples become waves: building synergy among local stakeholders to affect top-down water policy, International Symposium on Society and Resource Management, Community Involvement in Resource Planning session, University of Vermont in Burlington, VT. (6/08)

Invited Talks:

Minnesota's Lake Improvement District: The Citizen Perspective. Presenter at Otter Tail's Coalition of Lake Associations meeting, Otter Tail, MN. September 26, 2009

LID Workshop. Main speaker for a workshop on Lake Improvement Districts hosted by Minnesota Waters, Ideal Township Hall, Pequot Lakes, MN. September 24, 2009

Awards:

Graduate School Block Grant Fellowship, Natural Resources Science and Management Graduate Program, Department of Forest Resources, University of Minnesota (9/09-12/09)

Graduate School Block Grant Fellowship, Natural Resources Science and Management Graduate Program, Department of Forest Resources, University of Minnesota (5/09)

Consortium Student Scholar Competitive Grant Recipient, Consortium on Law and Values in Health, Environment, and the Life Sciences, University of Minnesota (5/08)

Upon recommendations from the reviewers of the original Water Resources Research grant to expand the project to include a comparative study of Minnesota's Lake Improvement Districts with Wisconsin's Lake Districts, Steiger-Meister successfully pursued additional funding through competitive internal grant competitions. She is one of the 2008 recipients of the University's Consortium on Law and Values in Health, Environment & the Life Sciences small grants. As a Consortium Student Scholar she received \$5,654 for her project, "Building Clean Water Communities: Understanding How Environmental Policies Can Promote and Coordinate Community Participation in the Long-Term Management of Local Freshwater Resources." This grant was used to fund research occurring in the summer of 2008 that examined Wisconsin Lake Districts and the Wisconsin Lakes Partnership. Additionally, Steiger-Meister was a recipient of the 2008 International Symposium on Society and Resource Management Registration

Scholarship, where she subsequently presented her research. To complete here analysis and write-up of research findings, Steiger-Meister was selected for two Graduate School Block Grant Fellowships for \$1,000 and \$5,000, respectively.