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Contact

Melissa Weber, Director of Communications
Phone: 320-589-6414, weberm@morris.umn.edu

Jenna Ray, Editor/Writer
Phone: 320-589-6068, jrray@morris.umn.edu

Ed Brands awarded Faculty Research Program Grant

Summary: Ed Brands, assistant professor of Environmental Studies, received funding for his project <i>Mapping Manure in West Central Minnesota Watersheds</i> through a Faculty Interactive Research Program (FIRP) grant.

(May 31, 2012)-Ed Brands, assistant professor of Environmental Studies, received funding for his project *Mapping Manure in West Central Minnesota Watersheds* through a Faculty Interactive Research Program (FIRP) grant. Awarded through the Center for Urban and Regional Affairs, FIRP's purpose is to encourage University of Minnesota faculty to carry out research projects that involve significant issues of public policy for the state and that include interaction with community groups, agencies, or organizations in Minnesota.

In March 2012, the Minnesota Pollution Control Agency (MPCA) began requiring that all large animal feeding operations (AFOs)—those with more than 300 animal units—submit annual manure records. Brands's work will use the manure records from approximately 450 AFOs from Big Stone, Chippewa, Douglas, Grant, Kandiyohi, Otter Tail, Pope, Stevens, and Swift counties to create a database and maps of AFO manure generation, transfer, and application to land in the Chippewa River Watershed and the Pomme de Terre River Watershed.

Maps will be created at county, watershed, and sub-watershed levels and will help facilitate the fecal coliform total maximum daily load (TMDL) plans by local watershed groups and projects. TMDL plans are put in place when a water body does not meet federal and/or state requirements for pollutants. For example, in parts of the Pomme de Terre River, there are more fecal coliform bacteria than the EPA standard allows. The TMDL plan for the Pomme de Terre River is a process in which sources of the pollutants are identified and corrective action is taken to alleviate the problem. AFOs have been identified by the MPCA as one of the major sources of fecal coliform bacteria in the Pomme de Terre and Chippewa River watersheds.

The outcomes of the project will include a better understanding of the distribution of manure generation, when and where it is applied to land, and the relationship (or lack thereof) between the amount, timing, and methods of manure application and fecal coliform bacteria in nearby water bodies.

Brands is working with the Detroit Lakes and Willmar MPCA offices to obtain data, and is also working with the Pomme de Terre River Association and the Chippewa River Watershed Project. He will share the project results with these organizations and any others that are interested.

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