

**Environment and Natural Resources Trust Fund  
2011-2012 Request for Proposals (RFP)**

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**LCCMR ID: 096-C3+4**

**Project Title:** Working Together With Nature to Pilot Watershed Management

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**Category:** C3+4. Technical Assistance and Community-Based Planning

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**Total Project Budget:** \$ \$1,382,000

**Proposed Project Time Period for the Funding Requested:** 3 yrs, July 2011 - June 2014

**Other Non-State Funds:** \$ 0

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**Summary:**

This project will create online guides and tools to manage healthy watersheds across Minnesota. Efforts support local decision makers to address complex management challenges with sustainable solutions.

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**Sponsoring Organization:** DNR

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**Location**

**Region:** SE

**Ecological Section:** Paleozoic Plateau (222L), Minnesota and NE Iowa Morainal (222M)

**County Name:** Dakota, Fillmore, Goodhue, Houston, Olmsted, Wabasha, Winona

**City / Township:**

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_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity Readiness	_____ Leverage	_____ Employment	_____ TOTAL _____%

# 2011-2012 MAIN PROPOSAL

## PROJECT TITLE: Working Together With Nature to Pilot Effective Watershed Management

### I. PROJECT STATEMENT

We are part of an exciting and challenging chapter of Minnesota's history to manage natural resources. Unprecedented demands require us to be more integrated, intelligent, and strategic than ever before. Today's decisions will determine tomorrow's options for future generations. Because our social and economic lives are embedded in the natural world and rely on nature's essential benefits and services, our management decisions need to better reflect this reality. As we grasp the complex relationships among human and natural systems, we have a responsibility to implement more sophisticated conservation approaches for the long-term protection of Minnesota's valuable natural resources. We are at a critical crossroads, relying on "point-source" regulations and practices when "non-point source" solutions are needed. Conventional economics fail to capture the value the ecosystem provides to us. Citizens don't understand how their individual actions affect watershed condition. The DNR is uniquely positioned to help address these needs and lead the path we take. In partnership with key decision makers, creating integrated frameworks and online management tools will position us to implement practices that work with, not against, nature for long-term ecosystem health.

Southeast Minnesota offers some of the most complicated hydrogeology in Minnesota, ecologically unique rare natural features, the state's highest number of species in greatest conservation need, and a robust network of water management and conservation organizations to partner with in designing and delivering ecosystem products. The "swiss cheese" quality of leaky karst geology in this region is especially conducive for connecting multiple components: groundwater, surface water, land use, urban design, rural economies, recreation, biodiversity, soils, rare features, habitats, and much more. The transferable results of this pilot project will engage decision makers across the state to manage for more vibrant human and natural habitats.

Project goal is to implement more effective, sustainable natural resource management. Working closely with Southeast Minnesota partners in a pilot watershed effort, we will:

- assess watersheds to diagnose problems and identify system-level solutions
- integrate isolated activities within a watershed to see cause-effect relationships
- connect water plans with land use plans to create a comprehensive picture
- engage decision makers, managers, and stakeholders in public and private sectors
- coordinate separate jurisdictions for more efficient governance
- synthesize online information systems for easier access and utility
- develop powerful ecosystem management guides and decision support tools
- identify funding sources and other incentives to accomplish the work
- change our reflex of quick-fixes of symptoms to reflective long-term solutions
- shift a culture of blame to a community of shared purpose

### II. DESCRIPTION OF PROJECT ACTIVITIES

#### **Activity 1: Construct a natural and social framework for watershed management Budget: \$ 377,000**

Many models, tools, and spatial resources are emerging to provide watershed-level information, but are not yet packaged for decision makers in an easily accessible interface. Working in partnership with key decision makers, social scientists, and ecological economists, this result will synthesize critical attributes for effective conservation solutions. They will reduce unintended consequences and working at cross purposes, such as flood protection projects that result in increased sedimentation, or sediment reduction practices that exacerbate flooding. Farmers will be working hand-in-hand with fish biologists and city planners to manage for healthy trout streams.

Outcome	Completion Date
1. Pivotal watershed decision-makers, their needs, current use of data and information, and barriers and benefits for effective management are identified.	
2. Natural system drivers, attributes, structure, function, responses and processes have been identified and system-level natural resources information has been selected	
3. Human system drivers around production, consumption, values, decisions, and actions have	

<i>been identified and system-level social information has been selected</i>	<i>December 2012</i>
<i>4. An effective and logical framework has been constructed that couples human and natural system variables in ways that are credible, replicable, scalable, and relevant</i>	

**Activity 2: Produce online Watershed Management Product**

**Budget: \$ 655,000**

Based on the framework (Activity 1) and information from the pilot watershed, produce an authoritative online reference for multi-scale watershed management. Product will help align conservation and development patterns, design land use with sustainability as an anchor principle, and provide practical information to a spectrum of individual, organizational, business, and public land and water managers. Earlier prototypes to help envision the product potential include DNR's online Rare Species Guide, Watershed Assessment Tool, and the Restore your Shore interactive CD-ROM.

<b>Outcome</b>	<b>Completion Date</b>
<i>1. Production phase conforms to project design parameters and agency standards and is directed by partnership team to fulfill project objectives</i>	<i>December 2013</i>
<i>2. Source databases have been developed to populate content in desired applications; Desired functionality for interactive queries, searches, and content presentation has been attained through customized programs; product features intuitive navigation, creative design elements, helpful audiovisual assets, and related links.</i>	

**Activity 3: Deliver, Test, and Publish Final Product**

**Budget: \$ 350,000**

Deliver product to the select watershed in southeast Minnesota in beta testing mode to public and private resource managers, key decision makers, business leaders, landowners, conservation organizations, and other project audiences for product improvement and refinement. Publish final version on DNR website.

<b>Outcome</b>	<b>Completion Date</b>
<i>1. Above results have been applied in the selected watershed for a wide range of situations, initiating the implementation of system-level management</i>	<i>June 2014</i>
<i>2. Feedback from managers and decision makers has been obtained to improve the utility, veracity, and timeliness of the product, informing final publication on DNR website</i>	

**III. PROJECT STRATEGY**

**A. Project Team/Partners**

The project team for this project will include BALMM, SEMNWRB and other regional and local partners in SE MN, a DNR project manager, ecological analyst, information technology specialist, web specialist, social scientist, ecological economist, and community assistance coordinator. Primary proposal contacts are: DNR Division of Waters: 1-Dave Leuthe, [dave.leuthe@dnr.state.mn.us](mailto:dave.leuthe@dnr.state.mn.us), 651/259-5709; DNR Division of Ecological Resources: 2-Jan Shaw Wolff, [jan.wolff@state.mn.us](mailto:jan.wolff@state.mn.us), 651/259-5153; 3-Ann Pierce, [ann.pierce@state.mn.us](mailto:ann.pierce@state.mn.us); 651/259-5119 4-Terri Yearwood, [terri.yearwood@state.mn.us](mailto:terri.yearwood@state.mn.us), 651/259-5133; 5-Ian Chisholm, [ian.chisholm@state.mn.us](mailto:ian.chisholm@state.mn.us) 651/259-5080; and 6-Brian Stenquist, [brian.stenquist@state.mn.us](mailto:brian.stenquist@state.mn.us), 651/259-5144.

**B. Timeline Requirements**

The timeline for this project is estimated to be 36 months. Work for all objectives and deliverables will be scheduled in an overlapping manner.

**C. Long-Term Strategy and Future Funding Needs**

This project will begin to couple interactions between and within human and natural systems in fundamental and tractable ways. It represents a critical next step to more intelligently manage these dynamic, complex, and interconnected relationships for long-term health. Subsequent steps for adaptive management include evaluating and monitoring practices, identifying incentives and disincentives, and assessing effectiveness. Continuing to invest in refining the product in subsequent years will advance multiple fronts in ecosystem management, economics, valuation, policy, regulation, education, and appreciation.

## 2011-2012 Detailed Project Budget

### IV. TOTAL TRUST FUND REQUEST BUDGET 3 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
<b>Personnel:</b> All FTEs are for 1, 2, or 3 years depending on outcome; paid with project funds.	
Unclassified project manager & contract coordinator (1FTE/3yrs)	\$ 300,000
Unclassified ITS programmer & Web specialist (2FTE/3yrs)	\$ 600,000
Unclassified Community Assistance Coordinator (1FTE/2yrs)	\$ 180,000
Unclassified Ecological Analyst (.5FTE/2yrs)	\$ 100,000
<b>Contracts:</b> Professional/technical contractors (to be selected through state bid process) for deliverables including Human System Drivers, Ecological Economic Information, Graphic and Animation assets	\$ 120,000
<b>Equipment/Tools/Supplies:</b> visual assets, specialized software, printing, meeting supplies	\$ 10,000
<b>Travel:</b> In state travel related to work with key decision makers & project partners during the 3 year project period	\$ 12,000
<b>Additional Budget Items:</b> DNR MIS Service Level Agreements for agency information system support; DNR creative services for videography, graphics, and audio production	\$ 60,000
<b>TOTAL ENVIRONMENT &amp; NATURAL RESOURCES TRUST FUND \$ REQUEST</b>	<b>\$1,382,000</b>

### V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
<b>Other Non-State \$ Being Applied to Project During Project Period:</b> <i>Indicate any additional non-state cash \$ to be spent on the project during the funding period. For each individual sum, list out the source of the funds, the amount, and indicate whether the funds are secured or pending approval.</i>	n/a	
<b>Other State \$ Being Applied to Project During Project Period:</b> Estimated Department Shared Services - \$ 62,177		see **footnote below
Estimated Division Support Costs - 6% of \$1.382M = \$82,920	\$ 145,631	
<b>In-kind Services During Project Period: DNR only:</b> 3.0 FTE for 3 years Technical expertise and process support from interdisciplinary DNR professionals in central, regional, and southeastern area offices	\$ 562,500	
<b>Remaining \$ from Current ENRTF Appropriation (if applicable):</b>	n/a	
<b>Funding History:</b>	n/a	
** Division funds from which support costs can be paid that are appropriate for the activities covered by the project. Pending approval of the FY12-13 biennial budget.		

**2011-12 LCCMR Proposal – Minnesota Department of Natural Resources  
Working Together With Nature to Pilot Effective Watershed Management**

**PROJECT MANAGER QUALIFICATIONS**

**Project will be directed by a team of DNR managers in the new division integrating Waters and Ecological Resources:**

Project Manager: Jan Shaw Wolff, Ecological Resources Central Region Manager  
Jan has been leading watershed and ecosystem-based management efforts for over 13 years in the Division of Ecological Resources. She has directed several products and activities to connect ecological, economic, and social values for building sustainable communities. Example products include the department's online *Rare Species Guide*; the online resource "*Healthy Rivers: A Water Course, An interactive tool to understand the ecology and management of river systems*"; the CD-ROM *Restore your Shore: A guide to protecting and restoring the natural beauty of your shoreland*; and the video program *Living in the Landscape: Leaving Boundaries Behind*. Jan has demonstrated proficiency and success in bringing together diverse specialists across professions and organizations to produce online interactive tools, management guides, curriculum, and activities in support of managing Minnesota's natural resources for long-term health and vitality.

Terri Yearwood, Ecological Resources Programs Manager

Dave Leuthe, Waters, Technical Resources Section Administrator

Ann Pierce, Ecological Resources, Conservation Management and Rare Resources Unit Supervisor

Ian Chisholm, Ecological Resources, Stream Habitat Program Supervisor

**ORGANIZATION DESCRIPTION**

The Minnesota DNR mission is to work with citizens to conserve and manage the state's natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.

This project will support one of the new division's initial watershed management efforts to better align the Department of Natural Resources to address urgent and growing demands on the state's water and land resources. It will position the agency to provide integrated technical assistance more efficiently, and to support a variety of management practices that are sustainable and cost effective.

