

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

LCCMR ID: 200-G

Project Title: Waters to the Sea: Rivers of Minnesota

Category: G. Environmental Education

Total Project Budget: \$ \$451,494

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

Other Non-State Funds: \$ 0

Summary:

Waters to the Sea: Rivers of Minnesota is an environmental education project that will create awareness, and educate students and communities to think about, use, and manage water resources responsibly.

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Sponsoring Organization: Hamline University

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Location

Region: Statewide

Ecological Section: Statewide

County Name: Statewide

City / Township:

<input type="checkbox"/> Funding Priorities	<input type="checkbox"/> Multiple Benefits	<input type="checkbox"/> Outcomes	<input type="checkbox"/> Knowledge Base
<input type="checkbox"/> Extent of Impact	<input type="checkbox"/> Innovation	<input type="checkbox"/> Scientific/Tech Basis	<input type="checkbox"/> Urgency
<input type="checkbox"/> Capacity Readiness	<input type="checkbox"/> Leverage	<input type="checkbox"/> Employment	<input type="checkbox"/> TOTAL <input type="checkbox"/> %

2011-2012 MAIN PROPOSAL

PROJECT TITLE: *Waters to the Sea: Rivers of Minnesota*

I. PROJECT STATEMENT

Project Need The way Minnesotans use water has major implications for maintaining a healthy and biodiverse natural environment. To ensure Minnesotans understand water and watershed issues, and act to improve and maintain water quality, a comprehensive standards-based water education program is needed to cultivate an informed, environmentally literate public with positive attitudes and motivation to become effective stewards of Minnesota's watersheds.

Hamline University's Center for Global Environmental Education will address this situation by collaborating with school districts and organizations statewide to distribute and implement *Waters to the Sea: Rivers of Minnesota*, an environmental education and community outreach program. Together with school districts and our partners, we will create awareness and educate students, families and communities to think about, use and manage Minnesota's water resources responsibly. *Waters to the Sea: Rivers of Minnesota* will provide comprehensive water education messages that will prompt solutions to Minnesota's watershed challenges, consistent with the 2020 Water Sustainability Framework for Minnesota.

Goal The project will create awareness and educate K-12 and adult audiences about Minnesota's watersheds, water issues, and the impact people have in fostering and maintaining a healthy and biodiverse natural environment.

Outcomes

- **A Statewide education and community outreach program** that focuses on water issues, challenges and solutions.
- **A compelling, consistent water quality/sustainability message and Minnesota watershed exhibit** developed by WaterShed Partners, that reaches multiple audiences including those who visit the State Fair DNR Building (reaching over 300,000 people each year).
- **Measureable knowledge gains** among school and community audiences leading to an environmentally literate public with positive attitudes and motivation to change behavior.
- **Increased environmental stewardship** among students, families, schools, and communities, resulting in environmentally responsible individual choices and service learning projects that promote long-lasting, action-based conservation of Minnesota's watersheds.

How the Project Will Achieve its Goal

Leveraging *Water to the Sea's* successful implementation in key watersheds across the country, the *Waters to the Sea: Rivers of Minnesota* program will achieve its goal through three components:

- 1. Implementation of the Waters to the Sea: Rivers of Minnesota interactive curriculum and service learning component** in schools;
- 2. Professional Development for Teachers** that will help educators successfully incorporate water issues into their curriculum and provide access to the online River Education Network;
- 3. Outreach** to community-based organizations (including WaterShed Partners members) and State Fair audiences that will disseminate information about water issues to the public, leading to hands-on conservation and stewardship activities that address Minnesota's water challenges.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: *Waters to the Sea: Rivers of Minnesota Curriculum Implementation* Budget: **\$ 262,546**

We will implement a standards-based, comprehensive water education program that educates multiple audiences about water concepts and issues. This includes incorporating surface run-off management strategies with targeted school facilities through the Water Ecology Project.

Outcome	Completion Date
1. <i>Integration of Waters to the Sea: Rivers of Minnesota curriculum in 1000 classrooms</i>	December 2013
2. <i>Implementation Support</i>	December 2013
3. <i>Administration of the Assessment Tool</i>	December 2013
4. <i>Integration of Water Ecology Project with school Facilities managers</i>	December 2013

Activity 2: Professional Development for Educators

Budget: \$ 36,974

Professional development will be provided to 250 educators statewide to incorporate water education into their curricula. Participants will be mentored throughout the project period through their involvement with Institute professional learning communities, the River Education Network, and other online resources.

Outcome	Completion Date
1. <i>Rivers Institute serving 250 area educators (1 institute in 2011; 2 in 2012; 2 in 2013) and attendant Evaluation</i>	July 2013
2. <i>Rivers Education Network online resource</i>	Ongoing
3. <i>250 standards-based teacher-authored Lesson Plans focused on Minnesota watersheds</i>	December 2013

Activity 3: Public Outreach and Education

Budget: \$ 151,974

Water messages and a State Fair watershed exhibit will be created to encourage students and adults to think critically about water issues, and develop behavioral change strategies that result in informed energy choices. The exhibit will have a life span of 10 years reaching 3 million people.

Outcome	Completion Date
1. <i>Consistent, comprehensive state-wide water education messages developed in tandem with relevant stakeholders</i>	December 2011
2. <i>Development of a hands-on water education exhibit and assessment tool for State Fair audiences reaching 300,000 people annually.</i>	July 2012
3. <i>Delivery of a hands-on water education exhibit for State Fair audiences</i>	September 2013

III. PROJECT STRATEGY

A. Project Team/Partners (All partners are proposed to receive dollars from the Environment and Natural Resources Trust Fund)

Hamline University's Center for Global Environmental Education will develop curriculum, professional training, and outreach materials for *Waters to the Sea: Rivers of Minnesota*. Tracy Fredin, Director of the Center for fifteen years, will provide project management and assistance in all result areas. Watershed Partners will develop and manage the State Fair Watershed Exhibit and help disseminate water quality/sustainability messages among its 60 member organizations. Bruce Bomeier, Chair of the Environmental Resource Council, will serve as liaison with school facilities managers to incorporate water ecology strategies into their schools.

B. Timeline Requirements The project proposed will run through December 2013.

C. Long-Term Strategy and Future Funding Needs

The effort will continue beyond the project period by: (1) Aligning the curriculum to evolving science standards to ensure continuing relevancy in teachers' practice; (2) Reaching a broad public through the State Fair Exhibit and ongoing community events and service learning projects; (3) Integrating *Waters to the Sea: Rivers of Minnesota* with the national *Waters to the Sea* series exploring America's watersheds; (4) Working with utilities, government and private sources to implement a long-term funding strategy that supports ongoing curriculum refinement, professional development and community outreach.

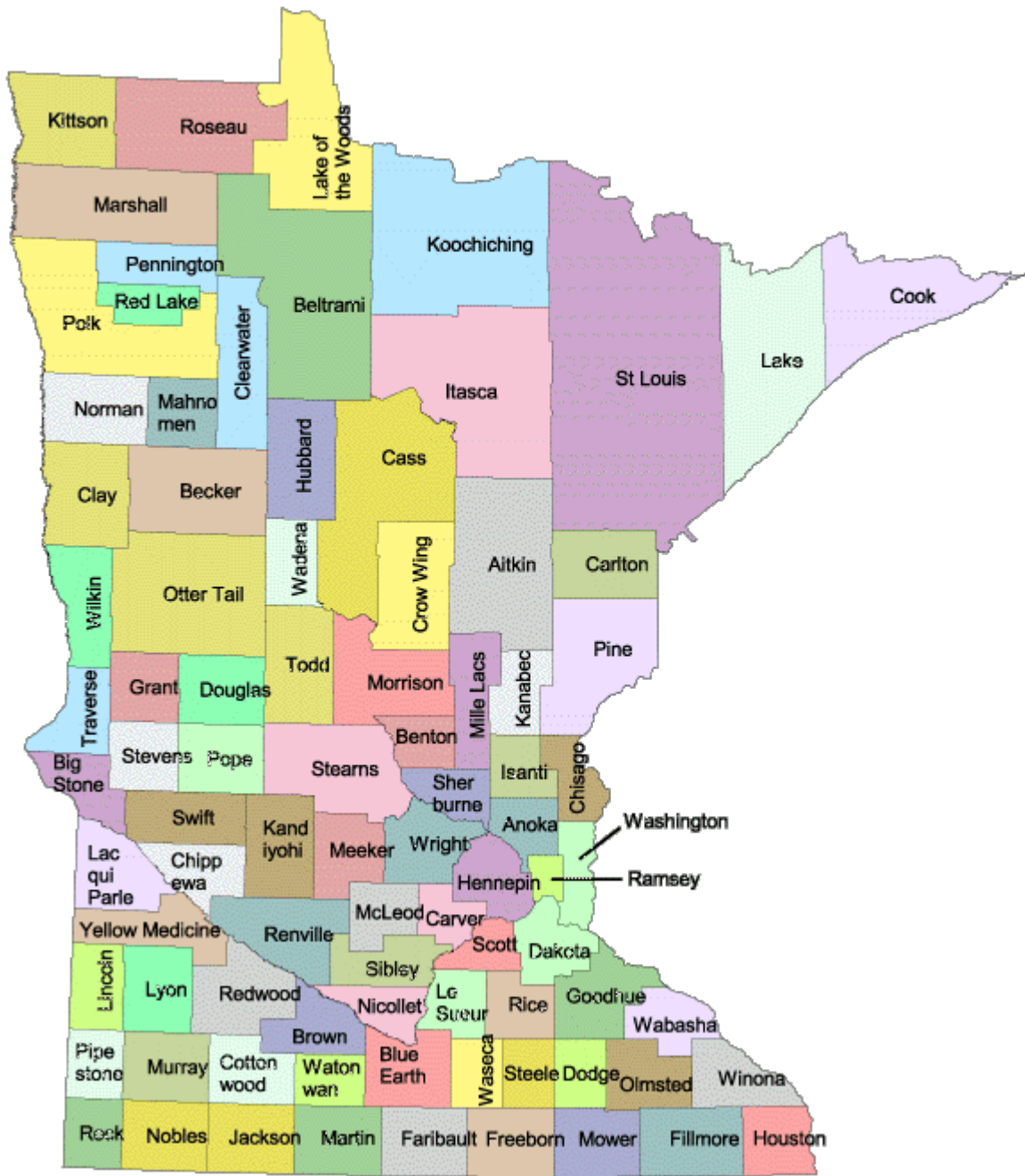
Project Budget

IV. TOTAL PROJECT REQUEST BUDGET

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: Tracy Fredin, Principal Investigator: .4 FTE @ 2.5 yrs: facilitate project implementation, manage curriculum and evaluation implementation and oversee watershed exhibit development and implementation. Brinkley Prescott, Program Administrator, .6 FTE @2.5 yrs: project administration, curriculum development, Institute coordination, in-school mentoring; Peggy Knapp, .2 FTE for 2.5 years: curriculum development, Directing Rivers institute, and evaluation. Sara Robertson, .5 FTE for 2.5 years: Program assistance management. Each person has a 25% percent of salary applied towards benefits.	\$ 246,494
Contracts: TBD We will solicit competitive bids to develop and produce the WaterShed exhibit for the State Fair.	\$ 100,000
Hamline University: \$10,000 per year for three years for a state wide site license for Waters to the Sea multimedia tool. \$20,000 per year for three years for an assessment tool license (for 500 classrooms).	\$ 90,000
WaterShed Partners A task force will be created to develop the watershed common message and the exhibit for the State Fair	\$ 13,500
Stipends for Advisory task force. We will provide a \$100 stipend to fifteen advisors to participate in a process that monitors project development.	\$ 1,500
TOTAL PROJECT BUDGET REQUEST TO LCCMR	\$ 451,494

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State Hamline has secured \$135,000 per year for the past five years to support the Rivers Institute and River Education Network. We have funding of \$125,000 to-date for the 2010 initiative. We are confident that we will be able to maintain this level of support through the summer of 2013. Current funders include 3M, Medtronic, Xcel Energy, Anderson Corporate Foundation and the Patrick and Aimee Butler Family Foundation.	\$ 405,000	Pending
In-kind Services: Hamline will provide the site license for Waters to the Sea : Rivers of Minnesota, as well as the license fee for the online assessment function and River Educator Network web portal.	\$ 90,000	Secured
In-kind Services: Watershed Partners will provide in-kind assistance to support the exhibit task force that develops and implements the State Fair watershed exhibit.	\$ 20,000	Secured
In-kind Services: Hamline University will provide the 10% indirect costs as an in-kind contribution.	\$ 45,149	Secured
In-kind Services: The Environmental Resource Council has funding to initiate the Water Ecology School Project in 2010 -2011 and will work with facilities managers at targeted school sites.	\$ 55,000	Secured



Project Manager Qualifications and Organization Description

Tracy Fredin, MA is a faculty member in Hamline University's School of Education and has served as Program Director of the Center for Global Environmental Education for fifteen years. The Center's mission is "To foster environmental literacy and stewardship in citizens of all ages," and achieves its goal as a national innovator in delivering environmental education, based on the Center's effectiveness in responding to educators' needs for replicable environmental and science programs for K-12 students.

Mr. Fredin's qualifications to oversee the *Waters to the Sea: Minnesota* project are demonstrated by the following accomplishments:

- Mr. Fredin currently serves on the Education Technical Work Team of the University of Minnesota's Water Sustainability Framework, a project that will result in a set of recommendations that will serve as a roadmap to protect and preserve Minnesota's lakes, stream, rivers and ground waters for the 21st century and beyond.
- As Executive Producer of CGEE's award-winning interactive multimedia products (including the CD-ROM *Waters to the Sea: The Chattahoochee River*, the second in a series of programs on American rivers), Mr. Fredin was honored with the top award at the Wildscreen Festival in Bristol, England: the world's largest and most prestigious environmental media festival.
- As Program Administrator for the \$2.3M State-funded Minnesota Science Teachers Education Project, he coordinates one of the three largest professional development projects in the country, according to the U.S. Department of Education.
- As Program Administrator for the \$668K Dallas Environmental Education Initiative, Mr. Fredin oversaw the development of a replicable K-12 standards-based learning model that has reached over 100,000 students focusing on water and conservation issues.
- As Principal Investigator for the LCMR-funded *1000 Friends of Frogs* Program, Mr. Fredin engaged citizen monitors and K-12 students in studying and gathering data on frog populations.
- Mr. Fredin is a founding member/facilitator of the Watershed Partners, a consortium of more than 60 conservation organizations and agencies in the Twin Cities area. In that role he has planned and coordinated extensive, award-winning community education initiatives focusing on non-point source pollution.
- As Program Director of Hamline University's Center for Global Environmental Education, Mr. Fredin has overseen the effective implantation of grant monies in excess of \$8M (1995-Present).

Organizational Description. Hamline University's Center for Global Environmental Education is a national leader in the development and implementation of award-winning curriculum that focuses on teaching scientific concepts and critical thinking skills that lead to positive behavior change. The Center achieves its mission through extensive education programs for formal and non-formal educators utilizing inquiry as a foundational teaching strategy; innovative K-12 learning initiatives for students, award-winning multimedia storytelling for all audiences, and community outreach projects that cross disciplines to connect with diverse audiences nationwide.