

**Environment and Natural Resources Trust Fund
2014 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 085-C

Waters to the Sea: Rivers of Minnesota

Category: C. Environmental Education

Total Project Budget: \$ 451,494

Proposed Project Time Period for the Funding Requested: 2.5 Years, July 2014 - December 2016

Summary:

Waters to the Sea: Rivers of Minnesota is an environmental education and community outreach project that will help Minnesotans understand water issues and act to improve and maintain water quality.

Name: Tracy Fredin

Sponsoring Organization: Hamline University - Center for Global Environmental Education

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Location

Region: Statewide

County Name: Statewide

City / Township:

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



Environment and Natural Resources Trust Fund (ENRTF)

2014 Main Proposal

Project Title: *Waters to the Sea: Rivers of Minnesota*

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I. PROJECT STATEMENT

1. Project Need

Minnesotans of all ages are responsible for using the state's water resources wisely to maintain and sustain a healthy and biodiverse natural environment. 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 collaborate with school districts and organizations statewide to distribute and implement the acclaimed ***Waters to the Sea: Rivers of Minnesota***, an environmental education and community outreach program that will help ensure Minnesotans understand water and watershed issues, and act to improve and maintain water quality. ***Waters to the Sea: Rivers of Minnesota*** can be integrated into schools' and community organizations' environmental education curricula to prompt real solutions to the state's watershed challenges, consistent with the 2020 Water Sustainability Framework.

2. Project Goal

Waters to the Sea: Rivers of Minnesota will create awareness and educate K-12 and adult audiences about Minnesota's watersheds, water issues, and the impact students, families and communities have in fostering and maintaining a healthy and biodiverse natural environment.

2-b. 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, in part, 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.

3. Project Components (*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 award-winning ***Waters to the Sea*** 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 (www.rivereducation.com);
3. Outreach to community-based organizations (including Metro 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



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strategies with targeted school facilities in tandem with the Environmental Resource Council’s Water Ecology Project.

Outcome	Completion Date
1. <i>Integration of Waters to the Sea: Rivers of Minnesota curriculum in 1000 classrooms</i>	<i>December 2015</i>
2. <i>Integration of Water Ecology Project with school Facilities managers</i>	<i>December 2015</i>
3. <i>Administration of the Assessment Tool</i>	<i>May 2016</i>
4. <i>Implementation Support</i>	<i>December 2016</i>

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 Institutes serving 250 area educators (1 institute in 2014; 2 in 2015 and attendant Evaluation</i>	<i>October 2015</i>
2. <i>Rivers Education Network online resource</i>	<i>Ongoing</i>
3. <i>250 standards-based teacher-authored Lesson Plans focused on Minnesota watersheds</i>	<i>December 2015</i>

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>	<i>December 2014</i>
2. <i>Development of a hands-on water education exhibit and assessment tool for State Fair audiences reaching 300,000 people annually.</i>	<i>May 2015</i>
3. <i>Delivery of a hands-on water education exhibit for State Fair audiences</i>	<i>June 2015</i>

III. PROJECT STRATEGY

A. Project Team/Partners

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 18 years, will provide project management to achieve expected project benchmarks and results. Watershed Partners will develop and manage the State Fair Watershed Exhibit and help disseminate water quality and sustainability messages among its 60 member organizations. Hamline University will coordinate with targeted school facilities managers to incorporate water ecology strategies into their schools.

B. Timeline Requirements

The project proposed will run through May 2016.

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 nationally awarded **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.

2014 Detailed Project Budget

Project Title: Waters to the Sea: Rivers of Minnesota

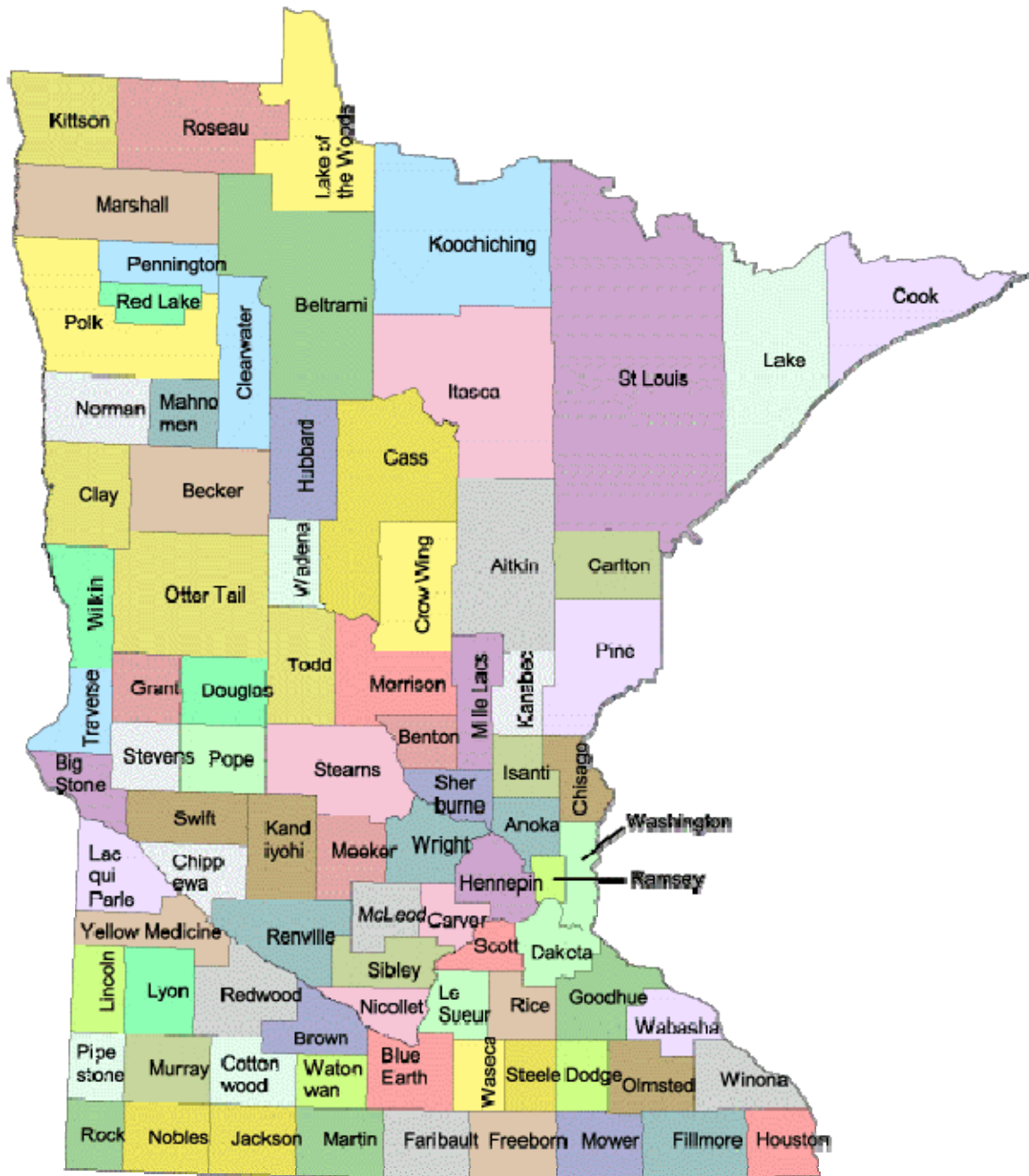
IV. TOTAL ENRTF REQUEST BUDGET 2.5 years

<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; Cara Rieckenberg, .2 FTE for 2.5 years: curriculum development, directing Rivers Institutes, and facilitating evaluation and assessment. Sara Robertson, .5 FTE for 2.5 years: Program assistance and administrative 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 Minnesota 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 watershed education messages and the Watershed 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 and benchmark achievement.	\$ 1,500
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 451,494

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period: Hamline has secured \$135,000 per year for the past five years to support the Rivers Institute and River Education Network. We are confident that we will be able to maintain this level of support through the project duration. Current funders include 3M, Medtronic, Xcel Energy, Andersen Corporate Foundation and the Patrick and Aimee Butler Family Foundation	\$ 300,000	Pending
In-kind Services During Project Period: 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 During Project Period: Metro 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 10% indirect costs as an in-kind contribution.	\$ 45,149	Secured
Funding History: Hamline has secured \$135,000 per year for the past five years to support the Rivers Institute and River Education Network. Current funders include 3M, Medtronic, Xcel Energy, Anderson Corporate Foundation and the Patrick and Aimee Butler Family Foundation; others are pending.	\$ -	

Waters to the Sea Environmental Education Areas of Impact Map



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 eighteen years. He also founded and continues to facilitate the 60 member Metro WaterShed Partners coalition. Mr. Fredin's qualifications to oversee the *Waters to the Sea: Rivers of Minnesota* project are demonstrated by the following (selected) accomplishments:

- Mr. Fredin served on the Education Technical Work Team of the University of Minnesota's Water Sustainability Framework, a project that resulted 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, Mr. Fredin coordinated "one of the three largest professional development projects in the country" (2007-2009), according to the U.S. Department of Education. Subsequent funding from 3M @ \$300K has been received to continue Chemistry and Physics professional development components.
- 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 \$9M (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 "To foster environmental literacy and stewardship in citizens of all ages" by being recognized as a national innovator in delivering environmental education based on the Center's effectiveness in responding to K-12 and informal science educators' needs for quality environmental and science programs. Through its role as facilitator of the 60 member WaterShed Partners organization, the Center's community outreach projects cross disciplines to educate diverse audiences of all ages about nonpoint source pollution challenges and solutions.