

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

LCCMR ID: 206-G

Project Title: Northern Minnesota Site-Based Watershed Education

Category: G. Environmental Education

Total Project Budget: \$ \$540,698

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

Other Non-State Funds: \$ 0

Summary:

This project would enable teachers across districts in Itasca County to develop and deliver rigorous place-based, watershed science lessons to elementary students in the Mississippi River-Grand Rapids watershed.

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Sponsoring Organization: Itasca Area Schools Collaborative

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Location

Region: NE

Ecological Section: No. Minnesota Drift and Lake Plains (212N)

County Name: Itasca

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"/> %

MAIN PROPOSAL

PROJECT TITLE: NORTHERN MINNESOTA SITE-BASED WATERSHED EDUCATION

I. PROJECT STATEMENT

Minnesota school children are less connected with the natural world than ever. As our state faces a future where nearly 40 percent of its water could be listed as impaired, it is these young Minnesota citizens who need to be prepared to deal with the consequences. If taught young, they can also be an active part of the solution. This project proposes to start at the top of the Upper Mississippi Basin to develop and deliver rigorous place-based, watershed science lessons to elementary students in the Mississippi River-Grand Rapids watershed. Itasca County has witnessed an increase in citizen interest in water quality issues as a result of the Itasca Water Legacy Partnership's (IWLP) surface water assessment program, which is in the process of monitoring nearly 200 lakes in the Mississippi River-Grand Rapids and adjacent watersheds. This project would build on this local enthusiasm and engage the basin's young people in these water quality protection efforts by providing funding: 1) To train and coach teachers on how to incorporate Minnesota standards-based watershed science lessons into their classrooms; 2) To provide science supplies for students, which will help them explore their place in the watershed and how their actions impact the waters within it; 3) To provide rigorous, science-based outdoor field experiences to synthesize and apply what they have learned. The chief goal is to create informed, engaged citizens with an appreciation for how individual and community actions impact water and related natural resources. The project achieves this goal by providing much-needed financial assistance for outstate districts to implement an innovative, site-based watershed science curriculum. Lessons will borrow from the best of existing natural resources curricula like Minnesota's Project WET (Water Education for Teachers) and MinnAqua (fishing education). Many areas identified in the 2010 Trust Fund RFP—including non-native and invasive species; surface and ground-water management and stewardship; pollution and contaminant sources; and aquatic habitat protection—will be addressed as well. A key component will be student-initiated service learning projects (e.g., shoreland restoration or other community projects) to encourage the active engagement of youth in real-world solutions to local water issues. By clearly incorporating Minnesota science standards into this curriculum, elementary students and teachers will apply the core concepts of observation and scientific inquiry as they begin to grasp their own formative role in the health and resilience of the Mississippi River watershed.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Curriculum Development

Budget: \$ 161,000

Develop a site-specific curriculum for watershed science in northern Minnesota's Mississippi-Grand Rapids watershed that can be adapted to other northern Minnesota watersheds.

Deliverables	Completion Date
1. Watershed science curriculum guide (Grade 4)	June 2012
2. Adaptations designed for 5 th and 3 rd grades	June 2013, June 2014
3. Coordination of curriculum implementation	June 2013

Activity 2: Science Supplies for Students

Budget: \$ 60,000

Twenty classrooms each year are provided with \$1,000 of watershed science equipment and supplies. Coordinated purchase of supplies reduces costs for all districts involved.

Deliverables	Completion Date
1. 20 classroom sets of science supplies each year	June 2012, 2013, 2014

Activity 3: Teacher Workshops

Budget: \$ 17,700

Twenty teachers are trained in Project WET and MinnAqua each year. Budget includes full costs of workshops, including materials, and \$50 teacher stipends for each training session attended.

Deliverables	Completion Date
1. 30 teachers trained in MinnAqua & Project WET each year	June 2012, 2013, 2014

Activity 4: Teacher Coaching & Coaches

Budget: \$ 268,500

Watershed teaching specialists come into classrooms to show teachers how to conduct lessons.

Deliverables	Completion Date
1. 5-15 demonstration lessons each year/classroom	June 2014
2. Ongoing consultation/coaching from curriculum specialists	June 2014

Activity 5: Student Field Experiences

Budget: \$ 29,250

Students participate in outdoor-classroom observations and experiments and a science-intensive field day to synthesize the year-long focus on their watershed. Budget includes busing, local experts' stipends, water sampling boat rental, and field-science supplies.

Deliverables	Completion Date
1. Field experiences at a local lake/river in the watershed	June 2012, 2013, 2014

III. PROJECT STRATEGY

A. Project Team/Partners

The Itasca Area Schools Collaborative (IASC) is an organization consisting of seven school districts in or near Itasca County and Itasca Community College. IASC has a history of effective collaboration in the areas of staff development and the sharing of resources. The IASC school districts will commit staff time and will designate teachers to work with the watershed teaching specialists (licensed teachers) to incorporate watershed lessons into their school science curriculum. IASC would also serve as the fiscal agent for the grant.

IWLP supports the development and implementation of educational programs, projects and policies that ensure the quality, protection, and improvement of all Itasca County waters. For this project, IWLP will partner with elementary teachers in the independent school districts within the Mississippi-Grand Rapids watershed and with IASC to develop and deliver a site-based, watershed science curriculum for grades 3-5.

The Department of Natural Resources has also committed to being involved in the delivery of instruction to teachers and students during the course of the grant, utilizing the capacity and expertise of local employees to increase awareness and improve understanding.

B. Timeline Requirements

This will be a three-stage project beginning in July 2011 and ending in June 2014. The first year will focus on developing and testing the 4th grade curriculum, training 4th grade teachers to carry out the lessons in the classroom, and supplying those classrooms with watershed science equipment and supplies. The second and third years will adapt and deepen the curriculum to include 5th and 3rd grade students and will train and supply those teachers and classrooms. Developing the program by this strategy will balance grade-level curriculum development with widespread student exposure.

C. Long-Term Strategy

Materials developed through this project will be shared openly through the Minnesota SEEK (Sharing Environmental Education Knowledge) website for other watersheds in Minnesota and other glacial lakes states where the lessons can be adapted for other local contexts. As funding for elementary schools diminishes, continued investment from outside sources is absolutely essential to adequately fund student access to science education on natural resources. Northern Minnesota Site-Based Watershed Education will help students achieve greater success in the science component of the Minnesota Comprehensive Assessments and prepare them to be more informed stewards of our natural resources.

2011-2014 Detailed Project Budget

IV. TOTAL PROJECT REQUEST BUDGET (3 years)

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel:	
1-Curriculum Coordinator/Lead Teacher Trainer (Year 1, 1.0 FTE; Years 2-3, 0.75 FTE) 85% salary, 15% benefits	\$ 150,000
2-Teacher Trainers (0.5 FTE per teacher, Years 1-3) 85% salary, 15% benefits	\$ 180,000
14-Annual Lead Teacher Stipends (one teacher per elementary school per year at \$1,000 each)	\$ 42,000
Contracts:	
Contracts with curriculum trainers to deliver workshops and materials for MinnAqua and Project WET teacher workshops (one of each kind of workshop per year 1-2 @	\$ 13,200
Equipment/Tools/Supplies:	
Computer, printer and office supplies for coordinator	\$ 8,000
Classroom demonstration materials for teacher trainers	\$ 10,500
Classroom science supplies for students at \$1,000/classroom/year	\$ 60,000
Field supplies for students	\$ 5,000
Travel:	
Travel for teacher trainers to schools for demonstration lessons (\$2000/staff/yr)	\$ 18,000
Busing for field days	\$ 12,000
Boat rentals/fuel for water monitoring & experiments on field days	\$ 6,000
Additional Budget Items:	
75 (25 each year)-\$150/day stipends for local field day experts for student science exploration	\$ 11,250
180 (60 each year)-\$50 stipends for teachers to attend local Project WET and MinnAqua training sessions	\$ 9,000
Fee to fiscal agent (3%)	15748
TOTAL ENVIRONMENT & NATURAL RESOURCES TRUST FUND \$ REQUEST	
	540698

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period: 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.	0	
Other State \$ Being Applied to Project During Project Period: Indicate any additional state cash \$ (e.g. bonding, other grants) 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.	0	
In-kind Services During Project Period: Indicate any in-kind services to be provided during the funding period. List type of service(s) and estimated value. In-kind services listed must be specific to the project.	\$ 112,800	
Remaining \$ from Current ENRTF Appropriation (if applicable): Specify \$ and year of appropriation from any current ENRTF appropriation for any directly related project of the project manager or organization that remains unspent or not yet legally obligated at the time of proposal submission. Be as specific as possible. Describe the status of \$ in the right-most column.	0	
Funding History: Indicate funding secured prior to July 1, 2011 for activities directly relevant to this specific funding request. State specific source(s) of funds.	0	

Project Manager Qualifications and Organization Description

The Itasca Area Schools Collaborative (IASC) is a joint-powers governed collaboration between Deer River ISD #317, Floodwood ISD #698, Grand Rapids ISD #318, Greenway ISD #316, Hill City ISD #2, Nashwauk-Keewatin ISD #319, Northland-Remer ISD #118, and Itasca Community College. The mission of IASC is “To provide an opportunity for districts to collaborate to most effectively educate all students throughout the region”.

IASC schools collaborate in staff development, special education, staff, transportation, scheduling, community education, early childhood programming, technology, activities, and numerous other endeavors. A high level of trust between and among leadership keeps the focus on what is best for students.

Deer River ISD #317 serves as the fiscal host for IASC’s budget of approximately \$2 Million a year. IASC has an independent audit and is governed by a board of directors made up of school board members from member districts, two superintendents, and the provost of Itasca Community College.

