

**Environment and Natural Resources Trust Fund
2012-2013 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 108-F

Expanding River Watch Into Tribal Schools

Topic Area: F. Outreach/Education/Training

Total Project Budget: \$ 262,954

Proposed Project Time Period for the Funding Requested: 3 yrs. July 2013 - June 2016

Other Non-State Funds: \$ 0

Summary:

Water quality is critical to the economic, ecological, and cultural fabric of Native American communities. Involving students in River Watch water quality monitoring activities inspires stewardship of regional water resources.

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Sponsoring Organization: Fond du Lac Tribal and Community College

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Location

Region: NW, NE

County Name: Aitkin, Cass, Cook, Itasca, Koochiching, Mille Lacs, Pennington, Red Lake, St. Louis

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)

2012-2013 Main Proposal

PROJECT TITLE: Expanding River Watch into Tribal Schools

I. PROJECT STATEMENT

Water quality is critical to the economic, ecological, and cultural fabric of Native American communities. For northern Minnesota tribes water quality and its impact on cultural resources, such as wild rice, is a priority. Land uses such as mining, logging, and commercial development are putting tremendous pressure on the management of water resources throughout the region. With this pressure it is more important than ever to provide outstanding educational opportunities for our youth on water quality and other environmental issues in the watersheds in which they live. Fond du Lac Tribal & Community College has hosted the St. Louis River – River Watch program for over ten years This youth based, hands-on water quality monitoring program has over 800 students gathering biological, chemical, and physical data yearly from streams in the western Lake Superior basin. River Watch students acquire the knowledge, monitoring skills, and ability to apply critical thinking skills to local water quality issues. The goals of an expanded River Watch program are:

Goal 1: Create a network of River Watch programs among northern Minnesota tribal & Native American serving schools to share information and resources.

Goal 2: provide students with the opportunity to explore the importance of water quality in their watershed by participating in a scientific data collection and analysis effort.

Goal 3: Create a knowledgeable citizenry that can understand water quality issues and make informed water resource management decisions.

With LCCMR funding, FDLTCC will provide the research, resource, and logistical support necessary to help new schools implement the River Watch program. Our experience has proven that schools can successfully implement a River Watch program into their existing science curriculum if teachers are provided with equipment, training, transportation, and sampling coordination in the first few years of the program. Establishing a network of teachers and schools that participate in River Watch activities creates a supportive community of educators that can pool their resources to ensure the continuity of the River Watch program. The data gathered by the students is shared with other participating River Watch schools, their communities, and local state agencies. By involving students across the region and on our reservations we can inspire stewardship of these water resources and empower them to take an active role in their management. Student and teacher evaluation will be conducted after activities to determine changes in knowledge, skills, and attitudes towards water resources issues and management.

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Creation of River Watch Network **Budget:** \$ 110,237

FDLTCC River Watch Coordinator will establish a River Watch program in tribal and Native American Serving schools in the Red River Basin, Mississippi River Basin, Rainy River Basin and Northern Lake Superior Basin.

Outcome	Completion Date
1. Contact tribal and Native American serving schools about implementing River Watch project in their school.	July-Sept. 2013-2014
2. Teacher River Watch Training. Train teachers in River Watch sampling protocols and program management. Evaluate training and program satisfaction.	August 2013-2015
3. Supply equipment and provide sampling logistics for each school. FDLTCC Coordinator would help pick a sampling site and help arrange for transportation.	April & Sept. 2013-2015
4. Classroom & Stream side River Watch sampling preparation and demonstrations	April- May & Sept.- Oct. 2013-2015

Activity 2: Water Quality Monitoring & Data Submission

Budget: \$ 73,899

Expanding River Watch into Tribal Schools

Each school will have two major water quality sampling events per year. Students will take chemical, physical, and biological water data. The sampling protocols will match closely with state water monitoring protocols so that gathered data can be shared and submitted to local and state agencies.

Outcome	Completion Date
1. Fall & Spring Water Quality Sampling Trip	Oct & May 2013-16
2. Water quality data submission to River Watch database and MPCA EDA	Dec. 2013-2016

Activity 3: Create a knowledgeable citizenry around regional water quality issues **Budget:** \$ 78,818 *River Watch students will be required to use critical thinking skills to investigate water quality issues in their region. The students will share the information and knowledge that they have gained with their communities. Participants will be evaluated on understanding, skills, and changes in attitudes.*

Outcome	Completion Date
1. River Watch schools create posters and presentations of their River Watch activities to share at school functions, community events, and the River Watch Congress. Products will be used to evaluate understanding.	Nov-March. 2013-2015
2. Host River Watch Congress in each targeted basin. Students, community members, and natural resource professionals share information about resource issues during this one-day event. Evaluate program effect on participants.	March 2013-2016
3. Create quarterly newsletters that highlight water quality issues, River Watch activities, and where to find additional water quality information.	Sept., Dec., Mar., June 2013-2016
4. Create River Watch Facebook page that will highlight River Watch schools, water quality data, and student feedback.	July 2013, update weekly

III. PROJECT STRATEGY

A. Project Team/Partners

The Fond du Lac Tribal & Community College River Watch program will coordinate the expansion of River Watch into tribal and Native American serving schools. Grand Portage, Bois Forte, Leech Lake, Cass Lake, Red Lake, and Mille Lacs Reservation's tribal schools and surrounding schools will be included in the River Watch network.

B. Timeline Requirements

All phases of the expansion of River Watch into tribal and Native American serving schools can be accomplished in the three year time period.

	Jul.- Sept. 2013	Oct-Dec.2013	Jan- Mar. 2014	Apr- Jun. 2014	Jul- Sept. 2014	Oct. - Dec. 2014	Jan.- Mar. 2015	Apr.- Jun. 2015	Jul.- Sept. 2015	Oct. - Dec. 2015	Jan.- Mar. 2016	April- July.2016
School Recruitment	X	X	X	X	X	X	X	X	X	X		
Teacher Training	X				X				X			X
Program Support & Outreach	X	X	X	X	X	X	X	X	X	X	X	X
Monitoring & Data submission		X	X	X		X	X	X		X	X	X
Evaluation		X	X			X	X			X	X	X
River Watch Congress			X				X				X	

C. Long-Term Strategy and Future Funding Needs

The River Watch Network of schools and FDLTCC will seek support to help provide on-going funding for equipment and transportation. FDLTCC will be an informational resource for all River Watch schools.

2012-2013 Detailed Project Budget
Expanding River Watch Into Tribal Schools

IV. TOTAL ENRTF REQUEST BUDGET 3 years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: Program Coordinator - The Coordinator will paid at the rate of \$41,802/year salary plus \$21,560 benefits (total for 3 yrs \$190,086). Coordinator will be 100% time.	\$ 190,086
Contracts:	\$ -
Equipment/Tools/Supplies: It is estimated that it will cost approximately \$1315 to equip each of the 25 schools with appropriate water quality testing materials (\$32,875). Monitoring equipment includes: water quality test kits for nutrients, dissolved oxygen,& pH (\$290/school), 5 pair of waders per school at \$60 ea.(\$300/school), glass vials (\$100/school), chemicals (\$70/ school), macroinvertebrate sampling supplies (\$345/school), E.coli sampling equipment (\$100/school), AIS ID materials (\$50/school), water clarity secchi tube(\$60/school)	\$ 32,875
Travel: Transportation for Program Coordinator to provide training, presentations, and planning support to River Watch schools. Each of the 25 participating school will be visited 5 times per year over the 3 years of the project, approximately 25,000 miles at \$0.555 which will be \$13,875. Bus transportation for River Watch students to stream sampling sites twice a year for 3 years. Estimated cost of bus transportation per school 150 miles per year for 25 schools 11250 miles at \$.555/mile (\$6,300). Bus transportation for schools to attend one River Watch Congress per year for three years, 25 schools at an estimated combined 28500 miles at \$.555/mile (\$15,818).	\$ 35,993
Additional Budget Items: Publication and Printing Costs (\$1000): publish posters, River Watch newsletters for distribution to schools, communities, and local agencies (\$600). River Watch Congress programs (\$400). River Watch Congress supplies for participants and presenters. Includes such items such as tape, paper, poster board and other miscellaneous supplies (\$1500) Materials for paper and online program evaluation. (\$1500)	\$ 4,000
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 262,954

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Other Non-State \$ Being Applied to Project During Project Period: <i>approval.</i>	\$ -	
Other State \$ Being Applied to Project During Project Period:	\$ -	
In-kind Services During Project Period: Fond du Lac Tribal & Community College will provide institutional support for the River Watch project. Services such as River Watch webpage, River Watch online database, business office processing, program marketing, and River Watch Congress facility support. (value is \$21,000)	\$ 21,000	
Remaining \$ from Current ENRTF Appropriation (if applicable):	\$ -	
Funding History:	\$ -	

Project Manager Qualifications

Project Manager: Courtney Kowalczak

Courtney Kowalczak has over twenty years of experience in water resource research and educational outreach. Courtney was the St. Louis River – River Watch Director for five years and oversaw all aspects of planning, training, stream monitoring, and outreach for the program. Under the direction of Courtney Kowalczak the St. Louis River – River Watch program expanded to over 30 schools with 800 students participating yearly in water quality monitoring in the St. Louis River watershed, Nemadji River basin, and Lake Superior basin. Currently Courtney is Fond du Lac Tribal & Community College's Environmental Institute Director where she oversees coordination of research and extension projects between Fond du Lac Tribal & Community College and other partners including coordination of the St. Louis River – River Watch program.

Education

University of Minnesota – Duluth

Bachelor of Science – Biology, Minor Chemistry - 1991

University of Minnesota – Duluth

Masters of Environmental Education – In progress

Organization Description

Fond du Lac Tribal and Community College

Mission Statement

The mission of Fond du Lac Tribal and Community College is to provide higher education opportunities for its communities in a welcoming, culturally diverse environment.

Fond du Lac Tribal and Community College created the Environmental Institute concept on campus to actively promote the educational and cultural growth of the community in studies covering natural resources and the environment. Fond du Lac Tribal and Community College uses the Environmental Institute as the vehicle in environmental resource areas to follow all points of the College's mission and coordinate ongoing education, research, outreach, and other activities.

