

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

Project Title:

ENRTF ID: 068-C

GreenStep Schools Program: School-based Environmental Education and Stewardship

Category: C. Environmental Education

Total Project Budget: \$ 900,000

Proposed Project Time Period for the Funding Requested: 3 Years, July 2014 - June 2017

Summary:

Develop and pilot a best-practices program for students and community to learn how to save energy and water, reduce waste, and provide natural habitat at their school building and grounds.

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Sponsoring Organization: MN Pollution Control Agency

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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 _____%



PROJECT TITLE: GreenStep Schools Program: School-based Environmental Education and Stewardship

I. PROJECT STATEMENT

This project will develop and pilot Minnesota GreenStep Schools, a program to get students and their school community of parents, teachers, administrators and facility managers all learning about the environment together as they improve their school buildings and grounds by saving energy and water, reducing waste and providing habitat. GreenStep Schools will research existing best practices in school operation and environmental education and build off of successful programs like Minnesota GreenStep Cites, the federal Green Ribbon School program, and Minnesota Schools Cutting Carbon. First, the team will determine the goals, needs and barriers to green schools and school-based environmental education in Minnesota by conducting a survey and holding focus groups with individuals and organizations representing students, teachers, parents, school facility managers, school administrators, design and consulting professionals. Second, this information will be used to design a program and support system of state and regional consultants to help schools get started and make progress in integrating environmental education and stewardship into K-12 curriculum as they improve school facilities. PCA will administer grants to 25 public schools to apply the program, provide feedback, document activities and outcomes, and assist with the cost of the environmental education and campus improvement activities. Finally, the project concludes with a continuation plan.

Why it is needed: Minnesota K-12 Schools have no mandate to provide environmental education or green their operations to improve environmental impacts. Consequently, schools' efforts in these areas are often limited and disjointed. However, there is great potential for integrating existing environmental education curriculum and proven building and campus improvement strategies into schools. Existing green school programs, despite their strengths, only address a fraction of this potential. GreenStep Schools will fill the gap by addressing several areas of need and opportunity. **Need for a pathway to sustainability:** Existing green school programs in Minnesota recognize top leaders but don't provide enough tools or guidance for the average school to build a green campus. **Need for a Common Framework:** Despite an abundance of green school resources and programs, there is no central place to document and compare progress and recognize success across these programs. **Need for support of grass-roots, start up efforts:** The transformation of a school or district can begin with one motivated teacher, student, administrator, or facility manager, but without support, these efforts can remain isolated or fizzle out. GreenStep will support even small efforts and build on them over time.

Opportunity to spur sustainable behavior outcomes: Research shows the power of social norms and supportive peer networks as critical to achieving sustainable behavior and decisions. Existing programs use some of these strategies, but there is far more potential to stimulate widespread improvement.

GOALS and OUTCOMES: The Minnesota GreenStep Schools program will:

- Develop and pilot a program that provides a pathway for schools across Minnesota to integrate environmental education and stewardship into their regular curriculum and operations and track progress.
- Achieve measurable environmental education outcomes in the areas of: interdisciplinary education, school-based environmental learning; E-STEM (environment science, technology, engineering, and math) skills, civic engagement; and green career pathways.
- Achieve measurable results in energy and water savings, waste reduction, and new or enhanced school ground habitat as well as improved stormwater practices to protect downstream habitat

II. DESCRIPTION OF PROJECT ACTIVITIES

Activity 1: Develop GreenStep Program

Budget: \$130,000

Tasks/Goals: Design and develop GreenStep program informed by conducting a survey, meeting with focus groups, and evaluating existing green school programs. Recruit participating pilot schools. Complete Activity 1 Evaluation and Activities Reports.



Environment and Natural Resources Trust Fund (ENRTF)

2014 Main Proposal

Title: GreenStep Schools Program: School-based Environmental Education and Stewardship

Outcome	Completion Date
1. Program Design Report summarizing needs, research, and program structure	1/1/2015
2. Minnesota GreenStep Schools Program Website Built	4/1/2015
3. Grant agreements with 25 Pilot Schools for GreenStep pilot	5/30/2015

Activity 2: GreenStep Pilot with 25 Schools & Refine Program

Budget: \$355,000

Tasks/Goals: Guide and assist 25 pilot schools to develop their initial GreenStep program performance, Refine program requirements based on feedback, Review/finalize schools' proposals for Activity 3, Complete Activity 2 evaluation and activities reports.

Outcome	Completion Date
1. 25 pilot schools complete initial GreenStep performance requirements: (program commitment, select and document specific green practices and document baseline performance, establish teams, and set improvement goals.)	4/1/16
2. Refined/Updated program based on pilot feedback	5/30/16

Activity 3: Advanced Implementation of 25-School GreenStep Pilot & Continuation Plan

Budget: \$415,000

Tasks/Goals: Guide/assist the 25 pilot schools through advanced performance (See #1 below), Refine program requirements and website based on feedback, Finalize a plan for GreenStep continuation after the LCCMR funded launch project, Complete final evaluation and activities report.

Outcome	Completion Date
1. 25 pilot schools complete advanced performance requirements (Target outcomes are 10% reduction in: energy and water consumption, waste generation, stormwater runoff; school ground habitat demonstration area installed; and students in at least one grade engaged in achieving, quantifying, and communicating environmental outcomes.	4/30/17
2. Refined and Updated program content and website based on pilot feedback	5/30/17
3. Minnesota GreenStep Schools Continuation Plan	5/30/17
4. Activity 3 Final Evaluation and Activities Report	6/30/17

III. PROJECT STRATEGY

A. Project Team/Partners

Contributed Resources: Management & Pilot School Implementation Coordination: Bill Sierks, Pollution Control Agency (PCA) with PCA expert staff support. **ENRTF Resources Request:** Technical Research and Coordination: Jonee Kulman Brigham, Center for Sustainable Building Research, U of MN, with topic experts; Pilot School Implementation Support: Regional collaborators in school training and implementation managed by PCA with energy implementation support by Melissa Pawlisch and Joel Haskard, Clean Energy Resource Teams (CERTS) Program; Needs Analysis and Web Development: Sheri Brezinka and Stephanie Leonard, Minnesota Green Schools Coalition program of the US Green Building Council, Minnesota Chapter.

B. Timeline Requirements

GreenStep Schools will be completed in 3 years which allows for a well-researched program design, and enough pilot testing to confirm and refine the program as well as supply it with a starting set of examples and results.

C. Long-Term Strategy and Future Funding Needs

The program will support, recognize, and educate about schools' ongoing continuous improvement in environmental education and green operations. Year Three ends with PCA staff and the Green Schools Coalition permanently continuing the program. No further requests to ENRTF for GreenStep Schools are planned.

2014 Detailed Project Budget

Project Title: GreenStep Schools Program: School-based Environmental Education and Stewardship

IV. TOTAL ENRTF REQUEST BUDGET - 3 years

BUDGET ITEM	AMOUNT
Personnel:	N/A
Contracts:	
1. Center for Sustainable Building Research, University of Minnesota and subcontracted content specialists to be determined- CSBR Leads Technical Research and Coordination of Technical Content Development including: Evaluation of existing green school programs and existing environmental education curriculum for use with school facilities and grounds; Development of the program content and structure, identifying performance metrics and best practices and incorporating research and stakeholder input; Revisions and refinement of the program content and structure based on pilot feedback; and Coordination of subcontracted topic specialists. In addition, CSBR will assist with project planning, needs analysis, website development, pilot school implementation planning, outcome evaluation and reporting, and program continuation planning.	\$ 140,000
2. US Green Building Council - Minnesota Chapter - Leads Needs Analysis and Web Development through the chapter's Minnesota Green Schools Coalition Program including conducting survey and holding focus groups with individuals and organizations representing students, teachers, parents, school administrators, facility managers, environmental educators, school suppliers and vendors, school design professionals and consultants, and selected state agencies.	\$ 60,000
3. Regional Schools Collaborator (To be determined) - Assists PCA in pilot school training, and implementation support including regional training classes, technical consulting and bulk purchasing.	\$ 65,000
4. Clean Energy Resource Team (CERTS) - Assists with energy aspects of pilot school implementation based on experience with Minnesota Schools Cutting Carbon.	\$ 15,000
5. PCA Administered Grants to 25 Pilot Schools - for substitutes, materials, and consultants to test and implement GreenStep program actions and document outcomes.	\$ 620,000
Equipment/Tools/Supplies: Included in School pilot grant budgets, with break outs of materials versus substitutes and consultants to be determined in specific grant contracts.	\$ -
Acquisition (Fee Title or Permanent Easements):	N/A
Travel: Included in contracts above.	\$ -
Additional Budget Items:	N/A
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 900,000

V. OTHER FUNDS

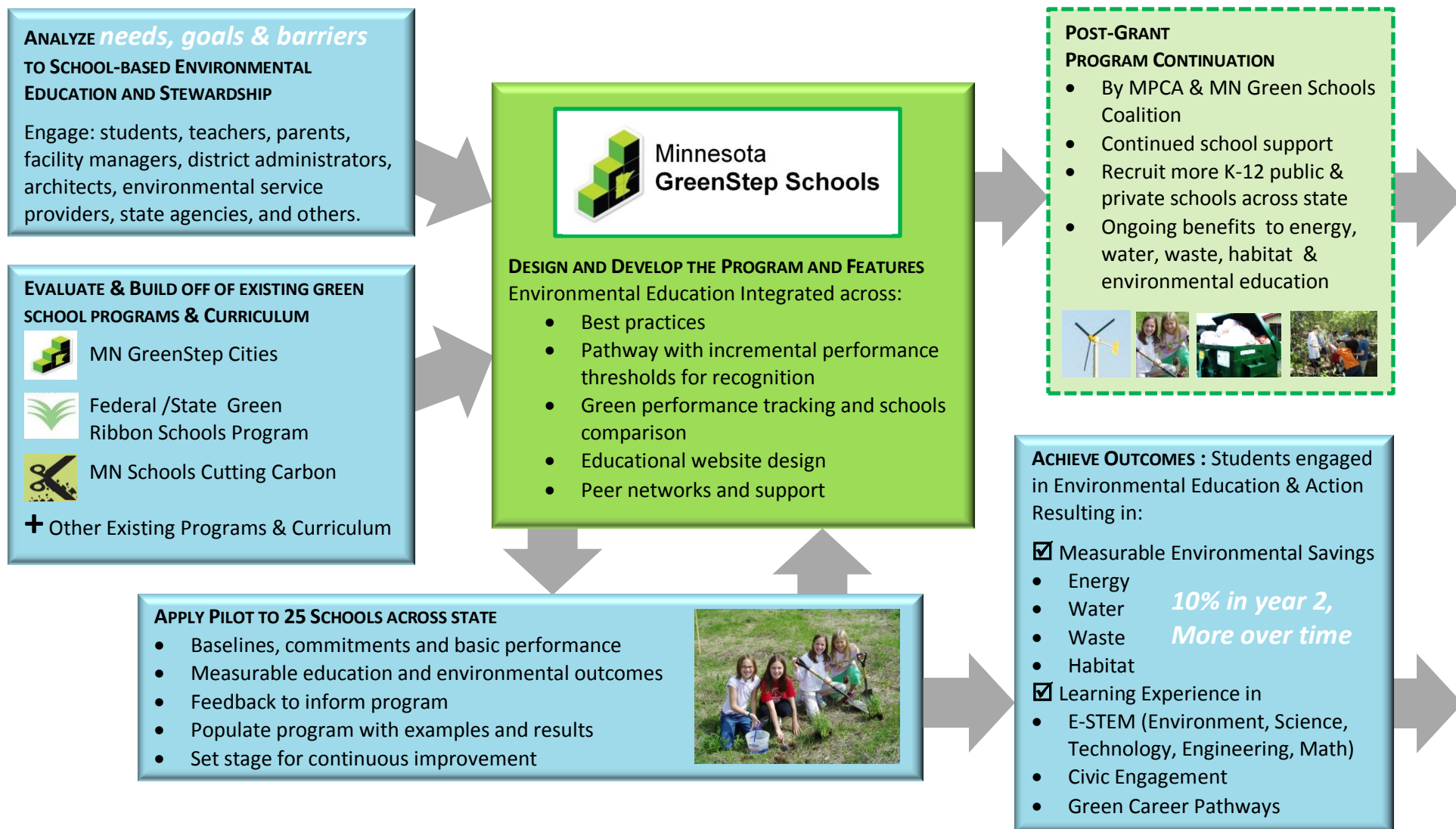
SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ Being Applied to Project During Project Period:	N/A	
Other State \$ Being Applied to Project During Project Period: Pollution Control Agency committed staff time for Project Management, School Grant Administration, and Technical Support	\$ 234,000	<i>Secured</i>
In-kind Services During Project Period:	N/A	
Remaining \$ from Current ENRTF Appropriation (if applicable):	N/A	
Funding History: Minnesota Schools Cutting Carbon (LCCMR-funded project)	\$750,000	Completed in 2011

Visual Illustration **GreenStep Schools Program: School-based Environmental Education and Stewardship**

Team: Minnesota Pollution Control Agency
 University of Minnesota Center for Sustainable Building Research
 US Green Building Council-Minnesota Chapter's Green Schools Coalition Program
 Clean Energy Resource Teams (CERTs)

A Green School :

- Protects the Environment
- Teaches about the Environment
- Enhances Student Learning
- Saves Money



Proposal Title: GreenStep Schools Program: School-based Environmental Education and Stewardship

PROJECT MANAGER QUALIFICATIONS AND ORGANIZATION DESCRIPTION

Project Manager Qualifications. William Sierks is a manager in the Resource Management and Assistance Division of the MPCA responsible for directing the division's clean energy and climate change activities. Mr. Sierks' qualifications to manage this project include:

- Project manager for *Minnesota Schools Cutting Carbon*, a three-year project funded by a \$750,000 LCCMR grant that worked with 100 public high schools, colleges, and universities in the state to save energy and reduce greenhouse gas emissions. The project was well-received by schools and documented energy and cost savings.
- Responsible for coordination of energy and environmental issues between the MPCA and the Department of Commerce Office of Energy Security. Participates in federal, state and local partnerships, including the U.S. EPA Blue Skyways Initiative, the U.S. EPA–DOE Clean Energy Environmental State Partnership; and the Urban Land Institute's 36-city Regional Council of Mayors collaborative. Mr. Sierks also assists in preparation of joint OES-PCA legislative reports on energy and greenhouse gas emissions.
- Project/grant manager of a \$120,000 three-year grant from the U.S. EPA to MPCA and OES to help the state address energy and environmental issues through collaborative efforts by the state's energy and environmental agencies.

Organizational Description. The mission of the MPCA is to work with Minnesotans to protect, conserve and improve our environment and enhance our quality of life. The agency plays a key role in addressing greenhouse gas emissions in the state and protecting Minnesota's air, water and land resources through partnerships with other public and private entities at the regional, state and local levels. The MPCA is active in national, regional, and state efforts to address greenhouse gas emissions and in providing information to educate and engage citizens and students on these issues.

Contracted Task Leader Organizations and Personnel:

The **Center for Sustainable Building Research (CSBR)** at the University of Minnesota provides research, outreach and education to transform the built environment in ways that provide for the ecological, economic, and social needs of the present without compromising those of the future. Jonee Kulman Brigham, AIA, LEED AP, co-managed and co-edited the B3 State of Minnesota Sustainable Building Guidelines (B3-MSBG), leads the center's green schools and environmental education work, practiced as a school architect, energy simulation analyst, environmental consultant, and co-authored Sustainable Design, a 100-page primer for architects, published by the National Council of Architecture Registration Boards.

The **Minnesota Chapter of the US Green Building Council (USGBC)** is a volunteer-driven organization dedicated to educating and promoting the benefits of sustainable, energy-efficient buildings. The Chapter's **Green Schools Coalition** Program brings together the state's strongest advocates to create an infrastructure of healthy, high-performance schools that are conducive to learning while saving energy, resources and money. Sheri Brezinka is the Executive Director of the US Green Building Council – Minnesota Chapter with a background in the construction industry and marketing. Stephanie Leonard coordinates community engagement for the chapter's Green Schools Coalition program.

The **Clean Energy Resource Team** is a public-private partnership involving the community, university, government, and non-profits. CERTs connects people with the technical resources needed to identify and implement community-scale energy efficiency and clean energy projects. Melissa Pawlisch is the CERTs Director and has spent over 15 years working on energy-related issues with community organizations looking for alternatives to centralized power production. Joel Haskard is the Clean Energy Resource Teams (CERTs) Co-Director and has over twelve years' experience coordinating and managing community and economic development activities in the U.S. and abroad.