

**Environment and Natural Resources Trust Fund (ENRTF)  
2010 Work Program**

**Date of Report:** January 20, 2010  
**Date of Next Progress Report:**  
**Date of Work Program Approval:**  
**Project Completion Date:** June 30, 2013

**I. PROJECT TITLE: Engaging Students in Environmental Stewardship through Adventure Learning**

**Project Manager:** Nicole Rom  
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**Location:** Minnesota Statewide

<b>Total ENRTF Project Budget:</b>	<b>ENRTF Appropriation</b>	<b>\$ 250,000</b>
	<b>Minus Amount Spent:</b>	<b>\$ 0</b>
	<b>Equal Balance:</b>	<b>\$ 250,000</b>

**Legal Citation: M.L. 2010, Chp. 362, Sec. 2, Subd. 8b**

**Appropriation Language:**

\$250,000 is from the trust fund to the commissioner of natural resources for an agreement with the Will Steger Foundation to provide curriculum, teacher training, and online learning for schools on investigating the connection between Minnesota's changing climate and the impacts on ecosystems and natural resources. An outside evaluation of the project will also occur. This appropriation is available until June 30, 2013, by which time the project must be completed and final products delivered.

**II. PROJECT SUMMARY AND RESULTS:**

Engaging Students in Environmental Stewardship through Adventure Learning investigates connections between ecosystems, resources and climate, while weaving Will Steger's adventures into curriculum and training, and providing leadership opportunities and networking for schools across the state.

The overarching goal of Engaging Students in Environmental Stewardship through Adventure Learning is to build awareness and interest in Minnesota's natural environment and the impact of climate change, and to provide educators and students with the tools necessary for active and life-long stewardship.

In order to engage people in climate change solutions, we must start by fostering a sense of connection to Minnesota’s ecosystems and then build an understanding of the immediate and long-term impacts of climate change. The Will Steger Foundation, in partnership with academic and civic partners, will meet this need by developing, evaluating, and implementing an adventure learning climate change education program, which ties Will Steger’s adventures with engaging content on Minnesota’s natural environment and the impacts of climate change. The program includes: (a) Grades 3-12 curriculum that is reviewed by educators, aligned to Minnesota state standards, is interdisciplinary and experiential in nature; (b) professional development opportunities for over 300 Minnesota educators (i.e. Summer Institutes and workshops for Climate Change Education, 2010-2012); (c) an online classroom, including multi-media resources and social networking features; and (d) evaluation.

Through the program, students will explore Minnesota’s diverse ecosystems, observe and document Minnesota’s changing climate, investigate the implications of a changing climate from the local to global scale, and finally engage in protecting the resource through student-led action projects. The program will result in increased stewardship of Minnesota’s environment, an understanding of climate change impacts in Minnesota, and meaningful student and community engagement.

**III. PROGRESS SUMMARY AS OF January 20, 2010:**

**IV. OUTLINE OF PROJECT RESULTS:**

**RESULT/ACTIVITY 1: Minnesota’s Changing Climate Adventure Learning Curriculum for Grades 3-12**

**Description:** An age-appropriate climate change curriculum for grades 3-5; 6-8; 9-12 that is reviewed by Minnesota educators, the Union of Concerned Scientists and the National Education Association. The curriculum will be interdisciplinary and experiential in nature. The curriculum will foster an understanding of Minnesota’s diverse ecosystems and develop a sense of place, educate on the basics of climate change and implications for Minnesota, the Midwest and the globe, and ultimately empower student leadership and action on climate change solutions. The curriculum will include an adventure story from polar explorer Will Steger’s archives, units on Minnesota’s ecosystems and foster skills necessary to be a citizen naturalist – observing and documenting Minnesota’s changing climate and investigation implications of a changing climate. The curriculum will reach 10,000 students in grades 3-12 throughout Minnesota schools by 2013.

**Summary Budget Information for Result/Activity 1:**

<b>ENRTF Budget:</b>	<b>\$88,886.97</b>
<b>Amount Spent:</b>	<b>\$0</b>
<b>Balance:</b>	<b>\$88,886.97</b>

<b>Deliverable/Outcome</b>	<b>Completion Date</b>	<b>Budget</b>
1. Research, Development and Revision of Grades 3-12	June 2013	\$52,011.38

Minnesota's Changing Climate Curriculum <ul style="list-style-type: none"> <li>Multidisciplinary curriculum on Minnesota's diverse ecosystems (bogs and fens, prairie, deciduous, coniferous), the impacts of climate change, and lesson planning for student-led action projects</li> <li>Aligned to MN standards</li> </ul>		
2. Graphic design, and revision – final production of curriculum	June 2013	\$3,000
3. Archive research for curriculum components	June 2011	\$1,725
4. Printing and distribution of curriculum	June 2013	\$22,500
5. Web support for curriculum, software, evaluation	June 2013	\$5,749.50
6. Curriculum outreach	June 2013	\$675

**Result/Activity Completion Date:** June 2013

**RESULT/ACTIVITY 2:** Institutes for Educators on Climate Change Education

**Description:** The Institutes for Educators on Climate Change Education are professional development opportunities for Minnesota educators. They are a vehicle for empowering educators by seeking to build their comfort and confidence with the topic of climate change and the lesson plans included in Minnesota's Changing Climate. The Institutes are designed in collaboration with partners, including the Science Museum of Minnesota, Saint Paul Public Schools and academic institutions. Between 2010-2012, 300 Minnesota educators will be informed and/or trained in Minnesota's Changing Climate.

**Summary Budget Information for Result/Activity 2:**

**ENRTF Budget:** \$73,070.14  
**Amount Spent:** \$0  
**Balance:** \$73,070.14

Deliverable/Outcome	Completion Date	Budget
1. 2010 Summer Institute – Announce project opportunity	September 2010	\$14,356
2. 2011 Institute Workshops– Unveil curriculum and program, train educators	September 2012	\$34,356
3. 2012 Institute Workshops– Share successes and challenges, evaluation	June 2013	\$24,358.14

**Result/Activity Completion Date:** June 2013

**RESULT/ACTIVITY 3:** Online-interactive Adventure Learning Classroom

**Description:** The online-interactive Adventure Learning Classroom will include multimedia resources linked to specific lesson plans in Minnesota's Changing Climate, including expedition videos, audio and video journals and an extensive image gallery. The curriculum will be available on the Will Steger Foundation web site for purchase (hard copy) and free PDF download in the online classroom. The online classroom will

also include a social networking feature for educators and their classrooms to build a community of learners. The program will also reach an additional 25,000 visitors via the Will Steger Foundation Web site and through cross-promotion with partners and educational associations newsletters and websites.

**Summary Budget Information for Result/Activity 3:**

**ENRTF Budget: \$68,056.89**  
**Amount Spent: \$0**  
**Balance: \$68,056.89**

<b>Deliverable/Outcome</b>	<b>Completion Date</b>	<b>Budget</b>
1. Review Will Steger's archived journals and select up to 10 adventure stories including images, journals and videos	September 2011	\$13,692.34
2. Develop and maintain interactive, online program in conjunction with the curriculum and evaluation tools and digitize archives	June 2013	\$48,859.55
3. Monitor and support online classroom and social networking features	June 2013	\$5,505

**Result/Activity Completion Date:** June 2013

**RESULT/ACTIVITY 4:** Evaluation

**Description:** The overall evaluation will use both formative and summative approaches and will involve the use of an outside contract evaluator. We will solicit ongoing feedback from educators on the curriculum and Institutes, provide an online survey with curriculum download and in-person surveys at the Institutes. The overarching goal of the evaluation is to determine to what extent the curriculum empowered student leadership and action on climate change solutions. Evaluation will assess student motivation for learning, skill development and changes in stewardship behavior. We will include in the curriculum a final project that schools will select and share online; this will provide a concrete way for schools to demonstrate the impact of the curriculum on student learning.

**Summary Budget Information for Result/Activity 4:**

**ENRTF Budget: \$19,986**  
**Amount Spent: \$0**  
**Balance: \$19,986**

<b>Deliverable/Outcome</b>	<b>Completion Date</b>	<b>Budget</b>
1. Curriculum Evaluation	May 2013	\$10,402.28
2. Online Classroom Feedback and Evaluation	May 2013	\$7,133.72
3. Site visits/Travel to schools	May 2013	\$2,450

**Result Completion Date:** June 2013

## **Final Report Summary:**

### **V. TOTAL ENRTF PROJECT BUDGET:**

**Personnel:** \$93,620.49

The Education Program Manager (0.75 % of FTE) will be responsible for coordinating the entire LCCMR project over 3 years. This person will be responsible for the research and development of the grades 3-12 curricula; coordinating with contractors on program development, including the archives, evaluation and online classroom components and integration with the curriculum; Summer Institute program development and execution; and finally collaborating with relevant partners. This person will reach out to and present at state-based professional education conferences and develop relationships with educators, school districts, and professional education associations. Finally, the Education Program Manager will be responsible for working with schools as they implement the curriculum and online tools and conducting the evaluation.

**Contracts:** \$90,462.28

Contracts include the following support services:

Online/Web support: The Will Steger Foundation's contract Webmaster will develop social networking tools to support the online classroom available on the Will Steger Foundation Web site. The Webmaster will also be responsible for creating new features of displaying the lessons and Will Steger's archives to harness the power and methodology of Adventure Learning.

Archive/Multimedia Support: The Will Steger Foundation will work with an outside vendor for multimedia development. The vendor will be responsible for reviewing Will Steger's archives, working collaboratively with the project team (which includes WSF Exec. Director, Educ. Program Manager, and Webmaster) to integrate the archives into the curriculum and online classroom. The vendor will also be responsible for producing video stories to support the program and documenting the Institutes for future use and dissemination.

Digitalization: WSF will work with a third party digitalization service to transfer the archives into an appropriate digital format for use in the curriculum and online classroom.

Summer Institute Coordinator: This short-term contract position (May-August each year) will manage event logistics and on-site coordination, assist with recruiting participants and securing corporate support. This person will also handle communication with speakers and participants in the lead up to the Institute and handle registration. This person will plan Summer Institute committee meetings with relevant partners.

Graphic Design: This short-term contract position will be responsible for the design of the grades 3-5, 6-8 and 9-12 curriculum. This curriculum will match the look and feel of the Will Steger Foundation's existing climate change education resources.

Evaluator: This contract position will be responsible for designing and implementing an evaluation of the final curriculum.

Interns: The Will Steger Foundation will recruit three interns to support the project. Two interns will be responsible for supporting the logistics and coordination of the Institutes (2010-2012) and will be supervised by the Education Program Manager. The third intern will collaborate with the project team and directly support the multimedia vendor with reviewing and selecting the archives.

**Equipment/Tools/Supplies: \$15,277.23**

Supplies include educator packets to be distributed to teachers at the Summer Institute, and web-based tools to support the online classroom and evaluation tools. Additionally, this includes using external webinar support for the Summer Institute to recruit educators that are not able to participate in the Institute in-person.

**Travel: \$13,050**

A portion of the travel will allow the Education Program Manager to attend relevant education conferences in Minnesota to promote the program, to visit participating schools and to conduct the evaluation. This also includes travel reimbursement requests for educators that require it to attend the Institute, as well as Summer Institute speakers.

**Additional Budget Items (printing): \$37,590**

Printing: WSF will provide every educator that attends the Institute with a hard-copy version of the curriculum that is relevant to the grade they teach. This will support the printing and dissemination of a minimum of 300 curricula.

Summer Institute Facility Rental: WSF will cooperate with relevant facilities (Science Museum of Minnesota, University of Minnesota) to provide 100 educators with a one-day professional development opportunity. This covers the cost of the facility rental for the Institute result.

Educator Recruitment: The Education Program Manager will collaborate with education list-serves and associations to publicize the curriculum, online classroom and Institutes. This includes the production of flyers and materials to promote the program.

**TOTAL ENRTF PROJECT BUDGET: \$250,000**

**Explanation of Capital Expenditures Greater Than \$3,500: None**

**VI. PROJECT STRATEGY:**

**A. Project Partners:**

These partners may collaborate in the development, evaluation and implementation of the project through in-kind cooperation:

Curriculum Development: National Education Association/Education Minnesota, St. Paul Public Schools, Minnesota Historical Society True North: Mapping Minnesota's History, Science Museum of Minnesota, Union of Concerned Scientists

Professional Development: National Education Association/Education Minnesota, St. Paul Public Schools, University of Minnesota, Science Museum of Minnesota, Minnesota Alliance for Geographic Education, Minnesota Association of Secondary School Principals, and additional professional education associations.

Online interactive classroom: Minnesota Historical Society, Minnesota History Center, Science Museum of Minnesota

### **B. Project Impact and Long-term Strategy:**

Minnesota's Changing Climate is part of a suite of climate change education programming the Will Steger Foundation has pioneered and will continue to develop as a core component of the organization's ten-year strategic plan. This program fills a critical need, while also adding value to existing resources, and will be featured in perpetuity on the Foundation's website. Future financial support from diverse revenue sources will sustain this program. To date, the Foundation has created four climate change curricula, endorsed by the National Education Association, Union of Concerned Scientists and National Geographic, reaching thousands of educators nationwide. The Will Steger Foundation is committed to delivering relevant and factual climate change content and tools for action to empower student leadership in the mainstream classroom.

### **C. Other Funds Proposed to be Spent during the Project Period:**

Will Steger Foundation earned revenue from private foundations, corporations and individuals (which will be support staff and office support of this project): \$72,919.43

Saint Paul Public Schools (for Summer Institute program support): \$15,000

National Education Association Education Program Support: \$18,000

Summer Institute meals and snacks: \$5,300

St. Paul Public Schools Technology Support (for Summer Institute): \$6,000

Existing WSF climate change education resources/curricula: \$15,000

Media Development/multi-media videos and images: \$15,000

Total In-Kind: \$147,219.43

### **D. Spending History:**

The Will Steger Foundation has executed three Summer Institutes for Climate Change Education since 2006, supporting over 250 educators with 5-day, 3-day and 1-day professional development opportunities on climate change education. The Summer Institutes that will be developed to support the LCCMR project will be based on the lessons learned from hosting previous Institutes. WSF has collaborated with partner institutions and school districts to recruit and execute the Institute. WSF has also garnered significant in-kind resources to support the program, including food, snacks,

keynote speakers such as Dr. James Hansen, New York Times' Andrew Revkin and author Bill McKibben. The costs associated with the development, graphic layout and printing of the curriculum are based on past curricula produced by WSF.

To develop existing climate change education resources, WSF has received funding from private individuals, foundations, and the National Education Association. The Summer Institute receives support from school districts, universities and corporations. Budgets have been determined based on past expenditures for similar programming.

## **VII. DISSEMINATION:**

Educators will be recruited through educator list-serves, education associations (such as Education Minnesota, the MN Alliance for Geographic Education and the MN Association of Secondary School Principals, MSTA, etc), graduate programs in education, and at educator conferences. In addition, current educators engaged in WSF programs and those that attended previous Summer Institutes will be contacted to utilize this new program.

The entire project and all of its components will be available online at the Will Steger Foundation Web site: [www.willstegerfoundation.org](http://www.willstegerfoundation.org). Curriculum will be printed and distributed by project partners and through the Summer Institute for Educators for Climate Change Education beginning in August 2011. All project results will be archived on the Will Steger Foundation Web site and will be accessible after the project is completed. School-to-school engagement and evaluative feedback will be showcased on the Will Steger Foundation Web site, through education association outlets (Web site, newsletters) and local media.

**VIII. REPORTING REQUIREMENTS: Periodic work program progress reports will be submitted not later than December 2010, May 2011, September 2011, December 2011, May 2012, and September 2012. A final work program report and associated products will be submitted by October 2012 as requested by the LCCMR.**

## **IX. RESEARCH PROJECTS:**



Attachment A: Budget Detail for 2010 Projects - Summary and a Budget page for each partner (if applicable)															
Project Title: Minnesota's Changing Climate: Engaging Students through Adventure Learning															
Project Manager Name: Nicole Rom															
Trust Fund Appropriation: \$ 250,000															
2010 Trust Fund Budget	Result 1 Budget:	Amount Spent (date)	Balance (date)	Result 2 Budget:	Amount Spent (date)	Balance (date)	Result 3 Budget:	Amount Spent (date)	Balance (date)	Result 4 Budget:	Amount Spent (date)	Balance (date)	TOTAL BUDGET	TOTAL BALANCE	
	Curriculum			Summer Institute			Online Adventure Learning Classroom			Evaluation					
<b>BUDGET ITEM</b>															
<b>PERSONNEL: wages and benefits</b>															
	Education Program Manager .75 FTE	\$52,011.38		\$20,804.55			\$20,804.55						\$93,620.49		
<b>Contracts</b>															
	Online/Web Support	\$5,749.50		\$5,749.50			\$22,998.00			\$3,833.00			\$38,330.00		
	Archive/Multimedia Support	\$1,725.00		\$1,725.00			\$6,900.00			\$1,150.00			\$11,500.00		
	Digitalizing Service	\$934.50		\$934.50			\$3,738.00			\$623.00			\$6,230.00		
	Summer Institute Coordinator	\$0.00		\$15,000.00			\$0.00			\$0.00			\$15,000.00		
	Graphic Design for Curriculum	\$3,000.00		\$0.00			\$0.00			\$0.00			\$3,000.00		
	Evaluator	\$0.00		\$4,000.00			\$2,000.00			\$10,402.28			\$10,402.28		
	Interns	\$0.00		\$0.00			\$0.00			\$0.00			\$6,000.00		
	Printing (curriculum, educator packets)	\$22,500.00		\$0.00			\$0.00			\$0.00			\$22,500.00		
	Supplies (list specific categories)	\$2,291.58		\$2,291.58			\$9,166.34			\$1,527.72			\$15,277.23		
	Travel expenses in Minnesota (reimbursement for keynote speaker travel, program travel, site visits)	\$0.00		\$9,500.00			\$1,775.00			\$1,775.00			\$13,050.00		
	Summer Institute Facility Rental	\$0.00		\$12,390.00			\$0.00			\$0.00			\$12,390.00		
	Outreach / Educator Recruitment	\$675.00		\$675.00			\$675.00			\$675.00			\$2,700.00		
	<b>COLUMN TOTAL</b>	<b>\$88,886.97</b>	<b>\$0.00</b>	<b>\$88,886.97</b>	<b>\$73,070.14</b>	<b>\$0.00</b>	<b>\$73,070.14</b>	<b>\$68,056.89</b>	<b>\$0.00</b>	<b>\$68,056.89</b>	<b>\$19,986.00</b>	<b>\$0.00</b>	<b>\$19,986.00</b>	<b>\$250,000.00</b>	<b>\$0.00</b>