

**LCMR Project Abstract****ML 1999, {Chap. 231}, Sec. [16], Subd. 11(j)**

The Twin Cities Environmental Service-Learning project provided teacher training to urban teachers to carry out environmental service learning projects and provided minigrants to students to carry out those projects. 41 teachers at 20 schools in Minneapolis and St. Paul participated, involving 1,900 5-8<sup>th</sup> grade students. Over \$4,000 was distributed directly to schools for students to participate in environmental issue investigations in their neighborhoods that included community tours for site investigations, photo documentation of environmental successes and challenges in their neighborhoods, and data collection. Over \$11,000 was disbursed to students for their projects that addressed environmental issues at the local level. These issues included buckthorn removal in Battle Creek Regional Park; wetland restoration at Ames Lake; prevention of point source pollution into a school ground wetland; public awareness around the revitalization and redevelopment of St. Paul's Iris Park; native plantings at Ames Lake, on University Ave, at Battle Creek Middle School, and at Battle Creek Regional Park; public education about visual pollution; water quality and storm sewer runoff; and storm drain stenciling in Highland Park neighborhood. Over 50 organizations and individuals assisted students and teachers with their projects providing expertise and support.

This project helped fill a need where most environmental education programs do not go: a program that provides the necessary knowledge related to issues, tools to adequately analyze issues, and skills to help resolve issues. These ingredients are proven links to success in promoting environmental behavior.

This project will be continued in Twin Cities schools by Eco Education and continue to reach more schools. Most of the schools involved in these two years will sustain the effort, with some support from Eco Education. Presentations were made about this project at government agencies, Minnesota environmental education conferences, and a St. Paul service-learning conference.

**Date of Report:** July 1, 2001

**CMR Final Work Program Report**

**Date of Work Program Approval:** June 18, 1999

**Project Completion Date:** June 30, 2001

**LCMR Work Program 1999**

**I. PROJECT TITLE:** Twin Cities Environmental Service Learning - Continuation

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**Total Biennial Project Budget:**

<b>\$LCMR:</b>	\$40,000	<b>\$ Match:</b>	\$40,000
<b>- \$LCMR Amount Spent:</b>	\$40,000	<b>- \$Match Spent:</b>	\$40,000
<b>= \$LCMR Balance:</b>	\$0	<b>= \$Match Balance:</b>	\$0

**Legal citation:** ML 1999, {Chap. 231}, Sec. [16], Subd. 11(j)

**Appropriation Language:**

Twin Cities Environmental Service Learning - Continuation  
 \$20,000 the first year and \$20,000 the second year are from the trust fund to the commissioner of natural resources for an agreement with Eco Education to provide training and matching grants for student environmental service learning projects. This appropriation must be matched by at least \$40,000 of non-state money.

**B. Status of Match Requirement:**

Match committed

**II. and III. FINAL PROJECT SUMMARY:**

The Twin Cities Environmental Service-Learning project provided teacher training to urban teachers to carry out environmental service learning projects and provided minigrants to students to carry out those projects. 41 teachers at 20 schools in Minneapolis and St. Paul participated, involving 1,900 5-8<sup>th</sup> grade students. Over \$4,000 was distributed directly to schools for students to participate in environmental issue investigations in their neighborhoods that included community tours for site investigations, photo documentation of environmental successes and challenges in their neighborhoods, and data collection. Over \$11,000 was disbursed to students for their projects that addressed environmental issues at the local level. These issues included buckthorn removal in Battle Creek Regional Park; wetland restoration at Ames Lake; prevention of point source pollution into a school ground wetland; public awareness around the revitalization and redevelopment of St. Paul's Iris Park; native plantings at Ames Lake, on University Ave, at Battle Creek Middle School, and at Battle Creek Regional Park; public education about visual pollution; water quality and storm sewer runoff; and storm drain stenciling in Highland Park neighborhood. Over 50

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#### IV. OUTLINE OF PROJECT RESULTS:

• **Result 1:** Eco Education staff provided training for 41 teachers and conducted classroom visits as needed to facilitate activities and provide on-going consultation with students and teachers to help tie out of classroom experiences to curriculum goals and coordinate aspects of the minigrants. The process of service learning, which Eco Education used as a means for middle level youth to investigate and take action on environmental issues in their urban neighborhoods, impacted youth in the following ways:

- developed youth's awareness of and concern for their community
- inspired youth to continue making a positive impact
- improved youth's problem solving and critical thinking skills
- empowered youth to be active decision makers
- increased skills in peer work and adult interactions

In order to do that, it was critical that the adults guiding the process allowed for student initiation and decision-making. In this case, Eco Education worked with teachers in St Paul and Minneapolis Public Schools to carry out this guidance with their students. The program was as much about teachers learning and practicing the teaching methodology of service learning as it was about urban youth learning and practicing the process of community problem solving.

Providing classroom support to teachers was a project highlight. Eco Education staff discovered that this support was important to the success of the project. Teachers need encouragement and resources to implement environmental service-learning projects, especially during the first year that they are involved. This support included modeling the facilitation of activities, providing hands-on educational tools, setting up speakers from the community, and helping students conduct research on issues in their community. Teacher participants expressed that this support helped them stay involved and motivated about urban environmental education. The reflection workshop at the end of the year was a celebration to recognize the hard work and dedication of the teachers involved. Eco Education realized the level that teacher training and support needs to reach in order to maintain a commitment to environmental education. Time is a limiting factor for all teachers, and if the encouragement is not there, environmental education does not always find its place during the school day.

LCMR Budget:	\$24,398	Balance:	\$0
Match:	\$40,000	Match Balance:	\$0
Completion Date:	June 2001		

• **Result 2:** \$15,602 of the designated \$20,000 was dispersed in minigrants and minigrant preparation (conducting surveys, fieldtrips, bringing in speakers, collecting data, environmental monitoring) was disbursed to student groups to carry out environmental service learning projects during the grant period.

Over \$4,393 was distributed directly to schools for students to participate in environmental issue investigations in their neighborhoods that included community tours for site investigations, photo documentation of environmental successes and challenges in their neighborhoods, and data collection.

Over \$11,200 was disbursed to students for their projects that addressed environmental issues at the local level. These issues included buckthorn removal in Battle Creek Regional Park; wetland restoration at Ames Lake; prevention of point source pollution into a school ground wetland; public awareness around the revitalization and redevelopment of St. Paul's Iris Park; native plantings at Ames Lake, on University Ave, at Battle Creek Middle School, and at Battle Creek Regional Park; public education about visual pollution; water quality and storm sewer runoff; and storm drain stenciling in Highland Park neighborhood. Over 50 organizations and individuals assisted students and teachers with their projects providing expertise and support.

The project model contained structural experiences to provide students knowledge and skills related to community problem solving and the process required multiple experiences with skill development activities. For instance, Eco Education provided a framework for inviting community partners into the classroom and for establishing relationships that extend beyond the classroom. Throughout the year students gained valuable skills in identifying contacts, phone-calling, talking with adults, interviewing, letter-writing, making observations and other hands-on techniques for learning about community issues with the help of these neighborhood resources. Students broke through the barriers of making the "first" call and gone on to be coaches for each other in the gathering of information from community contacts. This team approach to building skills and providing mutual support helped students make significant strides in developing assertiveness in communication, strengthened their knowledge of networking potentials and increased their confidence in getting to the source of answers for questions they have raised about serious environmental problems in their community.

The results of this project have helped Eco Education understand that while a curriculum can teach basic ecological concepts to students it also needs to be fluid enough for students to take ownership and apply their own real life knowledge and experiences to understand those concepts. Community-based, local-based environmental education is extremely effective. This model provided the opportunity for students and teachers to become involved in issues affecting communities and for community agencies to tap into young people's perspectives and skills. Regionally, the project developed a model for other urban areas to replicate. A stewardship ethic is becoming increasingly more important in city environments. This need is represented by the fact that 90% of the United States population will live in cities in the near future. This statistic makes this project significant because our environmental education efforts need to be increased in urban areas.

It was intended for each class to be able to access approximately \$500 the first year and up to \$1,600 the second year of participation. We found that these guidelines helped some teachers but hindered others. And some teachers eligible for the increased funds were not able to access them due to different class dynamics, structure or administrative support from year to year. This structure provided a guideline and was helpful and manageable for teachers and thus still worth using. \$15,000 of the designated \$20,000 was dispersed to students for projects. The additional \$4,398 was rolled over in Result 1 for teacher training and used for Eco Education classroom and project facilitation, as stated in a January 2001 revision. A Reflection workshop was held at the end of the year for all participating teachers and those that will continue on with the project were able to get plans in place for changes and enhancements to be made for next year.

Eco Education staff helped coordinate the effort of giving feedback on proposals and logistics. However, we feel it is crucial to have the input of the community or any community representatives involved to also provide their viewpoints and feedback to students proposed projects. With their help, projects can be expanded or joined with already existing efforts. Without their help and vision, some projects lack a strong environmental impact or broad vision. We were not able to employ the help of the HYPE council; a team of students who evaluate grant proposals for the tax levy funds distributed for service learning to the Minneapolis Schools. This student council was not available during the times the grants were due and we found that when they were, it slowed the momentum of students and teachers down to wait for the comments of the council

LCMR Budget:	\$15,602	Balance:	\$rolled into Result 1
Match:	\$0	Match Balance:	\$0
Completion Date: Funds distributed by June 15, 2001..			

## V. Dissemination:

*The Eco Educator*, Eco Education's tri-yearly newsletter will disseminate information about the service learning program and student projects. It will be sent to approximately 800 educators, donors, partners, and others associated with Eco Education. Examples of partners could include state agencies such as the DNR and MPCA, St. Paul Neighborhood Energy Consortium, Science Museum, neighborhood associations, human and social service organization, business, Department of Children, Family and Learning, and other schools.

## VI. CONTEXT

### A. Significance:

Research shows that students are frequently dissatisfied with their education and unmotivated in class because they feel what they are learning is removed from, and not useful or valid in, the "real world" (Everhart, 1983, Howe, 1991). This project gives students responsibility to take positive action to improve the quality of their local environment through the teaching methodology of service learning. In doing so, it involves students in the planning of their education, places education in a more meaningful context, and provides opportunities to apply acquired knowledge and develop skills in problem solving (Stapp, Wals & Stankorb, 1996). These kinds of experiences work toward developing citizens with the belief that their actions make a difference and the motivation to act on behalf of their community and its environment.

Environmental service learning is a powerful teaching tool that puts students in the driver seat of protecting and enhancing their environment. The problem solving, critical thinking and citizenship skills developed by young people in the process make it an attractive way to satisfy learner outcomes recommended in the Green Print, the district and the state graduation rule.

Through an LCMR funded project in 1997, Eco Education will have trained 50 - 80 middle school teachers in Minneapolis to facilitate student-initiated environmental service learning projects. While that project has achieved success, it has also illustrated that over time, teachers improve their own skills and ability in facilitating the projects and projects become more sophisticated. Once these teachers are trained and continue to carry out the teaching methodology, they find few funding sources available to them for their classes to access to carry out any project that may require some monetary resource to accomplish. This project will ensure that these resources are available to them and that students learn the process of accessing them through writing their own grant, creating a budget and defending their plans.

This project accomplishes Green Print State Goals for Environmental Education listed on page 1 of the Green Print, and may accomplish several specific categories in the following areas depending on the project:

<b>Audience</b>	<b>meets Green Print Plan</b>	<b>Page</b>
Pre K-12 students	outcomes #2 and #3	13
	needs b and d	15
	4 out of 10 program	
	implementation actions	16 - 17
Business Community	1 out of 5 incentive	
	implementation actions	42
Citizen and Youth	outcome #4	49
	2 out of 6 incentive	
	implementation actions	50 - 51

### B. Time:

This project will be completed by June 30, 2001.

### C. Budget Context:

	<u>July '97-June 1999</u>	<u>July '99-June 2001</u>	<u>July 2001-June 2002</u>
	<u>Prior</u>	<u>Proposed</u>	<u>Anticipated future</u>
	<u>Expenditures</u>	<u>expenditures</u>	<u>expenditures</u>
	<u>on this project</u>	<u>on this project</u>	<u>on this project</u>
1. LCMR	\$30,000 *	\$40,000	0
2. Other State	0	0	\$
3. Non State	\$0	\$40,000	0
Cash			
<b>Total</b>	<b>\$30,000</b>	<b>\$80,000</b>	<b>0</b>

\* part of a \$171,995 effort in which \$30,000 was used to fund mini-grants

### BUDGET:

Personnel	10,000
Equipment	0
Acquisition	0
Development	0
Other	\$30,000

### (Sub Categories:)

Minigrants	\$15,602
Trainings	\$14,398
Sub-Total:	\$30,000

**Total: \$40,000**

### VII. COOPERATION

Cooperation and partnerships was essential to this project. Teachers trained by Eco Education helped foster the development of a team within each participating school consisting of teachers, curriculum specialists, support staff, administrators, and then into the community. In addition, classrooms had support and advice from many community organizations too numerous to list all. Here are a few examples:

Minneapolis City Council member  
Minneapolis Public Works  
Windom senior resident  
Environmental Management, City Of Minneapolis  
Windom Community Council  
MN Pollution Control Agency, Mobile Unit  
East Side Boys and Girls Club  
St. Paul City Council  
St. Paul Police Commander  
Elder's Lodge  
North East Neighborhood Development Corporation  
Ramsey Washington Metro Watershed District  
Ramsey Washington Metro Watershed District  
City of St. Paul Department of Public Works  
Greater St. Paul Retired and Senior Volunteer Program  
East Side Development Company  
Cub Foods  
Metro Transit  
Friends of the Mississippi River  
Walker Art Center  
Great River Greening  
Ramsey Parks and Recreation

### VII. LOCATION:

Eco Education worked with Minneapolis and St. Paul schools.

**IX. Reporting Requirements:**

Periodic work program progress reports will be submitted no later than January 15th, 2000, July 15th, 2000 and January 30th, 2001. A final work program report and associated products will be submitted by June 30, 2001, or by the completion date as set in the appropriation.