

**Abstract:** Environmental Education Teacher Training 1995-1998 (M1-2)

If teachers are to teach environmental education, as now required by the graduation standards, they need to have the skills, knowledge and resources to do so. Most teacher education institutions in Minnesota have not had an environmental education teacher preparation program in place. This project brought together 10 such institutions to develop EE programs for both current teachers (inservice) and students working for their teacher education degrees (preservice). Institution faculty, working with teams of teachers and other environmental educators, planned, carried out and evaluated inservice courses and incorporated the course content into existing preservice classes. The institutions piloted 17 inservice courses for a total of 330 teachers. Seven of the ten institutions have permanently installed the inservice courses in their offerings. All ten have incorporated the course content into existing courses.

Because this is a national need, the project was requested to make presentations to the North American Association for Environmental Education, the National Environmental Education Advancement Project, the Pennsylvania Office of Environmental Education, and the Pew Charitable Trusts Education and Environment Roundtable. The National Environmental Education and Training Foundation was convinced enough of the project's value to support an amendment to the 1999 national k-12 legislation that would provide grants to states to carry out similar projects. Minnesota would be eligible to apply for such a grant.

Additional information available:

An overview of the entire project including concepts and methodology taught and two sample course outlines.

A summary of the evaluation of the course participants.

An introductory videotape on the project.

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# SUMMARY

## LCMR TEACHER PREPARATION PROJECT

Objective/Outcome	BUDGET (6/20/95)	ACTUAL (6/30/98)	DIFFERENCE
<b>A. Design a coordinated environmental education (EE) training program for preservice and inservice teachers.</b>			
A.1. Teams agree on overall goals & standards.	26,708.00	8,005.00	18,703.00
A.2. Distribute & monitor planning contracts to universities.	166,472.00	196,950.24	-30,478.24
A.3. Design EE courses with common goals.	48,000.00	31,372.00	16,628.00
A.4. Compare courses & correlate to state plan/graduation rule.	26,708.00	12,141.00	14,567.00
Subtotals:	267,888.00	248,468.24	19,419.76
<b>B. Higher education institutions &amp; their cooperating teams deliver 10 EE courses statewide to test out the content, format, &amp; new delivery options such as place &amp; technology.</b>			
B.1. Higher ed planning teams help instructors plan & carry out workshops.	24,000.00	8,763.38	15,236.62
B.2. Coordinating staff helps to set up, publicize, monitor & evaluate courses.	64,782.00	85,780.68	-20,998.68
B.3. 250 teachers from throughout the state take the courses.	97,000.00	62,608.00	34,392.00
B.4. University teams assess successes & problems of project, plan for continuation.	36,330.00	26,279.00	10,051.00
B.5. Produce a video tape to document the project.	10,000.00	9,981.00	19.00
<b>ADDED OBJECTIVES/OUTCOMES.</b>			
B.6. Design & implement one supplementary workshop.	0.00	13,053.00	-13,053.00
B.7. Write & publish a report summarizing the project.	0.00	2,847.00	-2,847.00
Subtotals:	232,112.00	209,312.06	22,799.94
PROJECT TOTALS:	500,000.00	457,780.30	42,219.70

**Date of Report:** June 1998 - Workplan Update  
**LCMR Work Program:** 1995

**1. Project title and Project Number:** Environmental Education Teacher Training  
(M1-2)

**Program Manager:** Pam Landers  
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**A. Legal Citation:** ML 95, Chp, 220 Art. Sec. 19 Subd.6(b)  
**Extension Language** ML 97, Chp. 216, Sec. 15  
**Total Biennial LCMR appropriation:** \$500,000  
**Balance:** \$42,219.70

**Appropriation Language:** This appropriation is from the trust fund to the Office of Environmental Assistance in cooperation with the Environmental Education Advisory Board to develop and deliver statewide environmental education training for preservice and inservice teachers.

**B. Status of Match Requirement:** N/A

**II. Project Summary:** This project will develop and put in place a statewide, coordinated, environmental education training program for both current teachers and students in teacher education programs. Universities and colleges will work together with others in the EE field to create courses that are relevant and easily accessible to teachers. Individuals completing the courses will be certified as environmental education teachers. Other groups working with the higher education institutions will be environmental education centers, teachers who are currently teaching environmental education, the School Nature Area Program and the Center for School Change.

Because environmental education is a new field of study, and because it is not required at present for teacher licensure, most higher education institutions with teacher education programs have been reluctant to spend the time and effort to develop these courses. Only a few have even one course in EE for teachers. In addition, until recently, Minnesota had no written documentation of the importance of teacher preparation in creating environmental literacy among Minnesota citizens, and no set of agreed-upon goals for environmental education that would allow a coordinated effort statewide. Teacher training in EE therefore has been carried out by other agencies such as the Department of Natural Resources. This training, while of good quality, has been very limited in scope, related to just a few environmental issues and reaching only a small percentage of the state's 44,000 teachers.

Now, however, the *GreenPrint for Minnesota: A State Plan for Environmental Education*, has been published following two intensive years of data collecting from the environmental education community and interested citizens in Minnesota. Teacher preparation is the first priority of that plan for the first priority target group, K-12 students. The Plan lists agreed-upon goals and recommended outcomes, as well as principles for teaching environmental education. It provides the framework for the development of these courses as well as documentation of the importance of the effort. The *GreenPrint* provides the structure and the motivation.

As a result of this project, 10-12 universities will create and deliver as part of their preservice and inservice on-going offerings, a statewide, coordinated environmental education program of four EE courses with common goals and standards. Completion of the courses would certify the participant an environmental education teacher. Major non-university EE deliverers (such as staff from RELC's and K-12 teachers) will be part of teams planning and delivering the programs. Courses can be delivered at sites beyond the university such as the school districts themselves, environmental learning centers, or regional centers; or the courses can be delivered using technologies such as interactive television. During the second year of the project, 250 teachers will take part in the initial testing of the courses. The integration process and model curriculum developed by eight of the state's school districts and funded by the legislature through LCMR will be incorporated into the EE teacher training programs. Each participating in the workshops will be prepared and required to communicate about the courses and their availability to teachers within their districts.

**III. Six Month Work Program Update Summary: January 1, 1996 -** Higher Ed cooperators have met three times to become familiar with the project and to determine the core goals for the statewide coordinated program. Ten universities chose to participate. They are Bemidji State University, Concordia College, Hamline University, Mankato State University, Moorhead State University, St. Cloud State University, University of Minnesota, Duluth, University of Minnesota, Morris, University of Minnesota, Twin Cities and Winona State University.

Four goals were agreed upon by the cooperators: 1) teachers should understand basic ecological concepts; 2) teachers should understand how natural and social systems are interrelated; 3) teachers should be able to use innovative teaching methodology, and 4) teachers should be able to find and use a variety of EE resources, including curriculum materials, technology, resource people and off-site learning opportunities.

The process of approving workplans and contracts fell behind schedule. This was due to two reasons. First, workplan approval required a letter of support for the project from the Dean or Chairperson of the Education Department of each institution. Often these letters were slow in coming. Second, the contract approval process is a lengthy one at the Minnesota Office of Environmental Assistance (OEA), requiring careful scrutiny by many people. At present, there are no approved contracts. Seven contracts are at

their respective universities for signature. Three contracts are still in the approval process at the OEA. All contracts are anticipated to be in force by January 31, 1996.

Team efforts on course development are proceeding. As per LCMR agreement, teams began work on the courses as soon as their workplans were approved. All teams have formed and have met at least once except for St. Cloud State University. Team members seem involved with and committed to the project. Team meetings are attended by the project coordinator to assess the level of cooperation between Higher Ed managers and team members. Concordia College has submitted a course prospectus to the project manager for comment.

**July 1, 1996** - All ten teams have fully developed courses and have submitted a course prospectus and outline. Nine of the participating Universities will be conducting their courses during the summer of 1996. Winona State University will offer its course during the 1996-97 school year or in June of 1997. All ten universities have submitted a course outline deliverable for approval by the Project Manager.

Teams are approaching the courses in a variety of ways. Outdoor learning is addressed by ELC's, state parks, regional parks and school grounds. A variety of teaching methodologies are being employed, such as service learning, cooperative learning and student-centered learning. Many classes are holding SEEK training classes as well as introducing teachers to technologies such as the Internet, videos and ITV. Some classes are being conducted at schools that are currently offering environmental curricula. Commoner's "Laws of Ecology" make up the largest part of the content portion of the classes. Many are much more detailed in their content delivery. Some partners have chosen to break up their classes into two credit classes, while others are offering one course with four credits. Some teams are approaching the four project goals by dividing the course into areas that address each goal, while others are taking a more integrated approach. The classes are targeted to many levels of teachers, from elementary to high school.

The University of Minnesota-Duluth held its course during the week of June 10. The Project Coordinator attended one day of the five-day course. The Duluth course was comprised of teachers from a variety of disciplines and grade levels. On the day Coordinator attended, all four project goals were demonstrated. The Duluth class is very process oriented and approaches the goals of the project in an integrated manner.

Winona State University was scheduled to hold its course during the week of June 10 but postponed the course for lack of participants. This was not a result of lack of interest by area teachers. Rather, administrative aspects related to marketing and registration were not properly implemented. The Winona team has begun the process of marketing for the coming year and has obtained commitments from area teachers.

Hamline University conducted its course during the week of June 18th, 1996. The Project coordinator attended the final day of the four-day course. The Hamline course

was comprised of teachers from a variety of disciplines and grade levels. On the day the coordinator attended, the class participated in two group modeling exercises; one investigating the impacts of land use on the environment and the other an environmental audit of an "environmental" elementary school. The day's activities were very focused on the human dimension of natural resources. The teachers reported general overall satisfaction with the course.

**January 1, 1997** - An additional seven of the ten cooperating universities held their inservice classes during the summer of 1996. They were Bemidji State University, Concordia College, Mankato State University, Moorhead State University, St. Cloud State University and the Universities of Minnesota, Morris and Twin Cities. In total, 207 Minnesota teachers were reached by the Teacher Preparation Project. The Project Coordinator attended at least one session of each of the above classes except Bemidji State. Winona State will be holding its first inservice class starting June of 1997, which will reach an additional 25 teachers.

Concordia, Moorhead, Morris and St. Cloud structured their classes in two parts. The first class placed their content emphasis on ecological principles. The second part places the content emphasis on social/natural interactions. These four institutions intend to offer Part II of their classes during the summer of 1997. While these four did not specifically intend to include the human dimension in the 1996 classes, the Project Coordinator observed that the classes were taught in an integrated manner which included the human dimension.

Bemidji State also had the two-part structure but held both sections during the 1996 summer session. U of M - Twin Cities and Mankato both covered the four goals of the project in one weeklong session. Winona State will also cover the four goals in one more length session.

All of the institutions which held courses required students to participate in an evaluation of the class. Based on these evaluations, the observations of the Project Coordinator and her conversations with the participating teachers, the classes were a resounding success. Teacher experiences were overwhelmingly positive. Many who took the classes are continuing to participate in recruitment of other teachers for upcoming sessions. Others have taken an active role in the on-going development of the Project by participating in Project planning workshops. A sample of evaluations has been included.

Other unexpected, but positive results have been noted. Many participating institutions were unenthusiastic about working as a team with the other institutions when the project first began. The Duluth team was especially reluctant. As the project progressed, however, team building materialized on a number of levels including communities and their schools; teachers within schools and districts; the participating institutions and the institutions, their trainees and the community. Ken Gilbertson, of the University of Minnesota - Duluth, recently remarked at an evaluation meeting, "When

we first started this project, we just wanted you to get out of the way and let us do our thing. Now, we are excited and encouraged by the team building that has occurred on several levels." This emerging community is seen as key to the Project's success and as a valuable element for continuing the Project in the future. Support and interest from the public also continues to manifest itself. The Project Coordinator receives inquiries from interested parties on an on-going basis. A list of persons making inquiries has been included.

Five possible avenues for continuation have been identified by the team. The first avenue is the second sessions of the pilot courses that will be offered this summer. Many institutions hope to offer the second class with incentives. The Project Coordinator has submitted a written request for an extension of the Teacher Preparation Project. Many institutions had money remaining with which they would like to provide incentives for upcoming classes. This will allow an additional 100 teachers to be trained with the original LCMR funds. Winona State has yet to hold their pilot course and cannot do so before the Project end date of June 31, 1997. Winona State and nine other institutions required teachers to implement what they have learned in the classroom the following fall and return to the institutions to present results and receive their grade. Second year classes will therefore run into fall of 1997.

A second avenue for continuation is the incorporation of the courses into preservice offerings. The contracts with the ten institutions expected this aspect to be easier than it is. The success of this aspect of the Project will be varied. In cases where the institution project manager is the inservice instructor, principles of the Project will be more easily incorporated. However, administrations at the Higher Ed institutions are unwilling to make major changes while the university system is shifting from a quarter to semester system. No new classes are being considered at this time. Instructors who teach existing pre-service classes are reluctant to make changes until they know how or if their existing courses will survive. Other problems with incorporation into preservice include shrinking staff struggling to incorporate more material in an already full education program; uncertainty with how to incorporate outdoor education; the changing status of teacher licensure; and little or no access to social science courses. The Project Manager and EEAB are working to be sure that EE is incorporated into teacher licensure.

Another avenue for continuation includes expanding higher Ed participation by including several new colleges that are interested in participating. The Project Manager has been approached by other Higher Ed institutions that are interested in participating in the Project and is in communication with them. Another avenue under discussion is the building of, or combination with, existing Best Practices Networks to support the effort to train teachers in environmental education. The Project Manager is working with Kathleen Lundgren of the Dept. of Children, Families and Learning, DCFL, to discover how this could be done. Finally, team members have suggested beginning an academy of Project graduates to expand the concept of using the environment as an integrating tool and expanding the school, community and higher Ed teams using

environmental learning projects.

The Project Coordinator has undertaken an unofficial audit of the debits from the Project account. Confusion with account numbers led the OEA fiscal agenda to misdirect money, which in turn led to differing estimates of the balance remaining. The Project Coordinator discovered that approximately \$6,800 was misdirected, while approximately \$1,500 was not debited where appropriate. The Coordinator is working with the OEA supervisor and fiscal agent to correct these errors. As a result, budget totals in the Workplan have been changed and will differ from previous updates.

The original workplan did not include a written review and summary of the project. We have included this as a new activity. The Project Manager feels a report is imperative to publicize the project and will act as a guide to facilitate implementation of similar programs elsewhere.

**July 1, 1997 - Additional Classes** - LCMR granted the Teacher Preparation Project an extension to allow participating higher Ed institutions to complete first or second round classes. The extension allows an additional number of Minnesota teachers to be trained with the original LCMR grant. An estimated 130-150 teachers will join the ranks of the 207 teachers trained last year. Winona is holding its first course this summer with follow-up sessions this coming fall. Other universities are holding second Teacher Preparation classes this summer. They are Universities of MN - Twin Cities and Duluth, Concordia, Bemidji and St. Cloud. Still others are holding their third Teacher Preparation classes. They are University of Minnesota - Morris and Mankato State University. Morris and Mankato held their second classes during the 1997 school year.

All schools, with the exception of Morris, are offering some incentive to Minnesota teachers who take the class. These incentives come from money remaining in each respective university's original budget. Each institution has an approved amended workplan reallocating funds to the additional classes. Additionally, amended contracts between the universities and the OEA extending the funding period for the institutions are in process.

Moorhead State did not offer a second class even though money remained in the budget that could have been used for this purpose. Inability to secure the desired instructors was cited as the reason. The Academic Manager is committed to offering the course in upcoming years. Remaining money will be used to provide support services for the remaining universities or incentives for other institutions offering additional classes. Hamline University also did not offer a second class and has a small amount of money remaining. Hamline's Project Manager intends to use the money for promotion of next year's class.

**December 31, 1997** - Additional courses were conducted during the project extension. Teams recruited 107 teachers to participate in these course offerings. The previously reported figure of 207 teachers enrolled in the 1st year of the project was amended to

239 teachers. Total classroom teacher participation in the project was 346. Seven of the project institutions have courses scheduled in 1998.

A process model was developed that describes the methodology of the Teacher Preparation Project. Elements of the course and team process evaluations are included in the model. The process model is included with this report. A printed version will be available in quantity in February, 1998.

Some funds were encumbered for payment beyond the December 31 grant extension. This was done to cover costs for printing, untimely cooperating institution requests for reimbursement and staff costs for tracking these items.

**June 30, 1998 – A final summary report was completed by the cooperating institutions of Higher Ed. These results showed that a total of 17 courses were attended by 330 teachers. Three of the institutions required that the class participants communicate to their schools information about the course. Seven institutions have listed the course as a continuing offering. All of the institutions have incorporated the course into their preservice coursework.**

**Evaluation** - The evaluation component of the project is nearing completion. Results have been favorable overall. Teachers found the classes and teaching materials useful. More teachers are planning on using EE in their classrooms and many feel much more informed about the location of key EE information sources. This is a key area of improvement, as past surveys found that teachers primarily depended upon television and newspapers for their environmental information. There were significant increases in the number of teachers who felt they were well informed about the environment. There were also significant increases in the use of innovative teaching methodologies such as computers, service learning and EE investigations. A copy of the report is included. Staff intended to administer the pre- and post-test evaluation instrument on the upcoming participants, however, monies remaining in the budget were inadequate to carry out that task.

**December 31, 1997** - The course and team process evaluations were completed and draft copies are enclosed with this report. Printed versions will be available in February, 1998. Both evaluations affirm the effectiveness of the project.

**June 30, 1998 – The course evaluation and process model are at the printers. Printed copies will be delivered when they become available from the printer.**

**Promotion** - Promotion of Teacher Prep around the state and nation is continuing. The Project Manager and Academic team leaders presented the Project at the National EE Conference in San Francisco and an EE Summit in Stevens Point, Wisconsin. The Project Coordinator was invited to present at several Minnesota conferences and meetings, including: Minnesota Association for College Teacher Educators, Minnesota Science Teachers Association, Parent Teacher Association, Minnesota Association of

Secondary Administrators, Minnesota EE Conference, Hazardous Waste Planning Council and EE Advisory Board.

At a recent EE Summit in St. Paul, sponsored by the OEA, Suzanne Saric, of the EPA praised Minnesota for its groundbreaking work in EE. She particularly mentioned the *GreenPrint* and Teacher Preparation Project as innovative programs that should be continued. There has also been considerable interest in the *GreenPrint* and Teacher Prep at the University of Puget Sound in Washington State. Dr. Robert Steiner has been following the Project and is considering it for a model there.

#### **June 30, 1998 – Summary of National Promotion of the Project**

- The North American Association for Environmental Education included the project among its concurrent sessions at its national conference in San Francisco in 1996. The session was well attended, with standing room only for some participants.
- The Pew Charitable Trusts State Education and Environment Roundtable held its spring, 1997 meeting in Minnesota so its 12 state members could spend a day learning about the project.
- The federally funded National Environmental Education Advancement Project requested presentations on the project at two of its meetings, one in Wisconsin and one in San Diego.
- The Pennsylvania Department of Education flew the project manager and the Higher Education contact from the University of Minnesota, Morris to the state in April, 1998. The two made a presentation to representatives from the 100 higher education institutions in Pennsylvania that have teacher education programs.
- In the fall of 1997, the Commissioner of the MN Department of Children, Families and Learning approached one of Minnesota's national senators to explore the possibility of federal funding to continue the project. As a result of that contact, the National Environmental Education and Training Foundation will be working to include a grants program for such projects in the 1999 national K-12 funding legislation.

**Significant Results and Future Directions** - The Teacher Prep staff and team members were invited to spend the day at the annual workshop of the Pew Charitable Trust's State Environment and Education Roundtable. Teacher Prep team members and staff provided the representatives of twelve other states with information about their individual classes. The Roundtable is very supportive of our fund raising efforts and is providing direct advice and help in raising funds to support projects growing from this one.

The Roundtable has contributed to a paradigm shift within the Project, which has transformed the overall vision of the Project. The Roundtable has developed and is researching the concept of using the environment as an integrating concept (EIC) in

K-12 education. Research has shown significant improvements in student learning in schools employing the concept. A copy of the Roundtable report is enclosed. While the Teacher Prep has always advocated integrating EE into the curriculum, EIC takes it one step further by using the environment as an integration tool.

As a result, the Project is working to create a communications network between the university cooperators, DCFL and the education community about EIC. Communication between the DCFL, the education community and the higher Ed institutions that train teachers is poorly developed or lacking in most cases. Consequently, the higher Ed institutions have been behind DCFL in the area of educational innovation. Teacher Prep has contributed significantly to improved communications at the university level in this area.

An EIC network provides access to other EE efforts in the state and nation. For example, the Department of Agriculture's Global Change Project is providing further opportunities for communication and cooperation at many levels in Minnesota and nationally. The Global Change Project provides training in EIC for the trainers of teachers and will provide training workshop opportunities for Teacher Prep participants in upcoming months.

**December 31, 1997** - A number of projects extending various applications and extensions of the Teacher Preparation Project have been developed by staff, project Directors and team members. Senator Wellstone has requested language for an amendment to the Higher Education Act of 1965 to fund this effort. Funding from other sources is also being sought for some elements of these extensions.

**June 30, 1998** – Two major projects have been developed as an extension of this project:

- **Environment as an Integrating Context:** A proposal has been developed and funding is being sought.
- **EE Content Concept Pre-K to Adult Scope and Sequence:** A project has been developed and \$30,000 has been raised to cover costs for the first six months of the project. Additional funds are being sought.

**Teacher Licensure and Budget Concerns** - Prospects for including EE into teacher licensure have improved. The new licensure standards currently in the public arena for review have many EIC concepts incorporated within them. Further, the new Graduation Standards incorporate many environmental components and many of the assessment packages contain environmental situations that require an understanding of the human and natural interrelationships that exist in our world.

The Project Coordinator closely monitored the Teacher Prep budget in light of the misdirected funds that were uncovered last year. The Legislative Auditors office undertook an audit of the Project in April and found that the records were in excellent condition. Nancy Skuta, Grants Coordinator for the OEA, stated that persons in the

Auditors office considered them "an auditors dream."

**December 31, 1997** - Some of the cooperating institutions have incorporated the course into their pre-service education programs. Mankato has modeled their coursework after the North Carolina teacher environmental education certification model.

**June 30, 1998** – Three of the cooperating universities have initiated a certification program. Seven universities have not for the following reasons:

- Two courses are not enough.
- There is no unifying mechanism to work through MN State College Universities.
- Too much change involved for the semester conversion.
- Its usefulness is not clear without licensure clarification by the State School Board.

#### IV. Statement of Objectives:

A. Title: Design a statewide, coordinated training program in environmental education for students in teacher education programs and for individuals currently teaching.

B. Title: Deliver 10 courses statewide.

#### Timeline for Completion of Objectives:

Timeline:	7/95	1/96	6/96	12/97
A. Product 1: Courses developed, materials created.....		X		
B. Product 2: Ten courses delivered and 250 teachers taught.....				X
C. Product 3: Certification program initiated in 10 universities.....				X

#### V. Objectives/Outcomes:

A. Title of Objective/Outcome: Design a coordinated environmental education (EE) training program for preservice and inservice teachers.

**A.1. Activity:** Higher education representatives, teachers and other major EE deliverers agree on overall goals and standards for the four courses and implementation options; they also identify higher Ed institutions not yet represented that should be given the option of participating in the project.

**A.1.a. Context within the project:** All participants need to agree on the core goals and standards in order to have a statewide coordinated program, even though each higher education institution will adapt the courses to its own needs and requirements. Other universities have teacher education programs but have not participated in the planning. They should be identified and invited to participate. The EEAB will hold two 2-day meetings for all cooperators in the six months before the project begins in order to become familiar with project parameters and guidelines, the state's graduation



standards and the roles the cooperators must play in carrying out the project. They will also begin making some preliminary decisions about goals, standards and criteria for choosing participating higher education institutions.

**A.1.b. Methods:** Hold a 2-day workshop for all cooperators.

**A.1.c. Materials:** *GreenPrint*, Graduation Rule, Addendum to the *GreenPrint*, (K-12 model curriculum integration process), examples of excellent environmental education materials.

**A.1.d. Budget:** 2-day workshop for 52 people.

<b>Expenditures:</b>	
travel expenses	2,030.84
sub pay for 20 teachers @ \$100/ea	0.00
meals and facilities @ \$150/ea	2,181.36
speakers	2,305.40
materials and supplies	0.00
staff time for coordination	1,389.75
steering committee expenses	97.20
	8,004.55

**Total Biennial LCMR Budget: 26,708**  
**LCMR Balance: 18,703**

The budget for Activity A.1. was reduced. The expenses for the 2-day workshop were less than had been anticipated.

**A.1.e. Timeline:** by Aug 30, 1995

Product 1: Goals and standards for the EE courses.

Product 2: List of implementation options.

Product 3: List of other higher Ed institutions to approach for participation.

**A.1.f. Workprogram Update: January 1, 1996** - A 2-day workshop was held for all cooperators at Deep Portage Conservation Reserve in Hackensack, MN on August 15th and 16th. Those present agreed on a set of principles to guide the development of the content of the proposed course. Workshop participants chose content aimed at enabling teachers to understand and impart concepts and skills related to natural systems, social systems, technological systems, values, citizenship action and communication. To this end courses should enable teachers to understand and impart concepts and skills related to Commoner's Laws of Ecology.

Further, participants believed the course should: 1) help teachers develop knowledge and skills needed to help students meet standards of graduation, 2) utilize and incorporate quality resources for instruction, and 3) use examples which are

interdisciplinary in nature and focus on global, regional and local perspectives. Other concerns participants wished to incorporate included integration methods, out-of-classroom sites (community and outdoors), philosophy foundations, resources available and graduation rules.

Participants felt teachers should be able to use innovative teaching methodology. This includes tying teaching to the graduation standards, being able to use the *GreenPrint* addendum process, being able to use a variety of integration methods and being able to effectively use out-of-classroom learning, including service learning. In sum, the courses will enable teachers to: incorporate sound and innovative pedagogy such as the constructivist position, adapt the curriculum to students' needs and interests, use experiential methodology in teaching, use methods for integration of EE across the curriculum, understand how to use real-world experiences, use out-of-classroom experiences for student learning and use team and service learning methodologies.

The steering committee met to address issues raised at the August workshop. Steering committee expenses have been added to budget A.1.d.

**Product 1:** The final course outcomes were determined. See summary for list.

**Product 2:** Workshop participants discussed and listed implementation options for teams.

**Product 3:** Thirty cooperators participated in the workshop at Deep Portage. Included were representatives of ten Higher Ed institutions that chose to participate in the project. No additional higher Ed institutions were invited to participate at this time as all cooperators had been selected. See summary for list of higher Ed institutions participating.

**June 30, 1998 – Activity completed.**

**A.2. Activity:** Distribute and monitor planning contracts to institutions of higher Ed.

**A.2.a. Context within the project:** Each higher education institution needs to develop its own set of courses and choose accompanying materials based on the common agreed-upon goals and standards. These contracts provide some funds to the university to pay graduate students or interns to help with the work, provide some release time for other faculty to help with the project and search for good materials to use. During the two preliminary meetings held by the EEAB, the cooperators will identify the criteria by which the higher Ed institutions will be chosen to participate, so that the RFP's will be ready to distribute by July 1.

**A.2.b. Methods:** Steering Committee and project staff will construct RFP's before July 30, 1995. Steering committee will make final decisions by Aug. 30, 1995. Project staff will work with all higher Ed institutions to see that contracts are being followed and higher Ed administrations accept the courses as a legitimate component of their offerings.



**A.2.c. Materials:** Request for Proposals for the higher Ed institutions.

**A.2.d. Budget**

**Expenditures:**

\$10,000 per institution	146,525.57
travel for developing agreements	0.00
coordination time to coordinate activities between institutions and between institutions and their administrations	41,219.80
secretarial	6,946.88
travel for staff	1,485.51
materials and supplies	<u>772.48</u>
	196,950.24

**Total Biennial Budget: 166,472**

**LCMR Balance: (30,378)**

The budget for this activity has been reduced. Four of the ten institutions contracted for less than the \$10,000 available to them. First year expenses for staff salary and travel and material and supplies was less than had been anticipated.

**A.2.e. Timeline:** by Jan 30, 1996.

Product 1: Contracts with ten institutions.

Product 2: Universities accept courses as legitimate component of their offerings.

**A.2.f. Workplan Update:** All ten cooperating universities were selected prior to the August workshop and their individual workplans were considered responses to the project's RFP's.

**Product 1:** January 1, 1996 - Contracts with ten institutions are pending. All ten have approved workplans. Seven contracts have been sent to the cooperating institutions for signatures. Three more are in the approval process within the OEA. Contract approval is expected by January 31, 1996.

**July 1, 1996** - All ten participating universities have signed contracts.

**January 1, 1997** - Administration of the grants and contracts required more of the Coordinator's time than had originally been anticipated. Paperwork requirements at the administering agency are extensive and detailed and require more lead-time than is possible for some of the Project's needs. Problems with misdirected funds required six months to resolve. These problems took time away from other duties such as publicizing the course to education associations and team building.

**Product 2: January 1, 1996** - As a condition of workplan approval, the acceptance of the proposed courses as legitimate components of the institutions' overall course offerings was required. Each individual workplan has language that stipulates that the course will be offered in the catalog or by some other means. Additionally, funding proposals for continuing support of the class must be submitted to fulfill the requirements of the contract. Support for the courses was expressed in writing by the Dean or Chairperson of the Education Dept. of each participating University.

**July 1, 1996** - Meetings between the project managers to discuss future funding for the courses are scheduled for later in the fall.

**January 1, 1997** - The Project Manager and the academic contacts at the ten institutions are continuing to work to find funding to provide teachers with incentives. All ten institutions are continuing to offer courses with or without such incentives.

**June 30, 1998** - The budget for the university grants actually increased to an average of \$26,900 because most conducted courses in both years of the project. Grant costs were posted to this objective. A summary of spending by objective/outcome has been included to show these variations.

**A.3. Activity:** Design of initial four environmental education courses by each higher Ed institution. These courses include basic concepts of ecology; interlinking of science, social science, economics, political science, etc.; teaching methodology including integration methods and teaching outdoors; introduction to curriculum options and technology and resources available in Minnesota, including curriculum, out-of-classroom experiences, resource people, organizations and agencies.

**A.3.a. Context within the project:** These courses are the substance of the preservice and inservice teacher training. They need to be thorough, well balanced, flexible and capable of being taught in a variety of settings, including at EE centers, or over interactive television.

**A.3.b. Methods:** Each institution solicits team members from among the cooperators with the project and holds 4 meetings of the teams during the first year to design the course content and format. This ensures that both the customers (teachers) and other professional deliverers (EE center professionals, education reform experts, DCFL) all have some input into the content and format for the courses. This is necessary to make the courses appealing and relevant to teachers.

**A.3.c. Materials:** Selected EE curricula.

**A.3.d. Budget:**

**Expenditures:**

4 meetings of planning teams per institution  
@ \$200/person + \$100/ea for expenses x  
10 teams of 4 people ea 31,731.92

**Total Biennial LCMR Budget: 48,000**

**LCMR Balance: 16,628**

**A.3.e. Timeline: by May, 1996.**

Product 1: Four courses designed at each participating higher education institution.

**A.3.f. Work program Update:**

**Product 1: January 1, 1996** - Design of courses is in process. Most teams have met at least once. The only team which has not met as of the date of this report is St. Cloud State University. The Project Coordinator has attended all initial meetings of the teams except for University of Minnesota, Morris. Overall, team members are interested and committed and are submitting interesting, innovative ideas for their course. Two team, Bemidji and Winona, are having difficulty initiating their project and the Project Manager and Project Coordinator are working closely with those teams to facilitate progress. Both teams have dynamic and committed members and it is felt that they will be able to overcome their initial difficulties and produce a course that will be a valuable contribution to the project. Concordia College has submitted a course prospectus which is under review by the Project Manager.

**July 1, 1996** - All ten teams have fully developed courses and have submitted a course prospectus and outline. Nine of the participating universities will be conducting their courses during the summer of 1996. Winona State University will offer its course during the 1996/97 school year or in June of 1997. All ten universities have submitted a course outline deliverable for approval by the Project Manager that outlines how each course achieves the four goals of the project. Course outline deliverables and the course catalog are enclosed.

The Bemidji team has overcome the difficulties mentioned above and plans with their course are proceeding on schedule. The Winona team continues to experience difficulties. A difference of opinion exists between team members and the academic project manager. The team itself is highly motivated and has developed a dynamic course. However, administrative support from the academic team leader has been lacking. The team has expressed a desire to obtain an alternative advisor in order to proceed and the Project Coordinator and Manager are working with the Dean of the Education Department at Winona to find an alternative faculty advisor. Because the team has worked very hard to produce an excellent product, the Project Coordinator and Project Manager are committed to working out the problems with Winona State.

**January 1, 1997** - Winona State has a new faculty advising team. The new team is working closely with the planning team and the planning team has reported that the relationship is proceeding to their satisfaction. The new faculty advisors are in contact with the Project Coordinator and are quickly assimilating into the Project. Plans for the inservice and preservice course are proceeding at an appropriate pace.

**June 30, 1998 – Objective completed. Institutions report continuing adjustments to their courses and revisions for their preservice courses.**

**A.4. Activity:** Compare the results of work at all higher Ed institutions to:

a) be sure of coordination and match to state plan and graduation rule and b) exchange course design ideas, and ideas for options on how and where to teach the courses, using what faculty (e.g. could they designate EE center staff as adjunct faculty?), and to plan for the ten workshops to be carried out the following fiscal year.

**A.4.a. Context within the project:** The higher Ed institutions and their teams have been working all year to design their individual set of courses with options for delivery. They need to come together to see that they are all still on track the agreed-upon goals and standards, and to see what they can learn from each other. In addition, they need to start to plan for the ten courses to be given the following year so there is a variety of places, times and formats from which teachers can choose.

**A.4.b. Methods:** Hold a second 2-day workshop for all participant teams.

**A.4.c. Materials:** Each team should bring the materials they intend to use in their courses for the other participants.

**A.4.d. Budget:**

**Expenditures:**

2-day workshop for 52 people	
travel expenses	1,386.87
sub pay for 20 teachers @ 100/ea	150.00
meals and facilities @ 150/day/ea	3,443.15
speakers	1,365.70
materials and supplies	196.77
staff coordination time	4,768.00
secretarial time	640.00
travel expenses for staff	190.67
	12,141.16

**Total Biennial LCMR Budget: 26,708**

**LCMR Balance: 14,567**

**A.4.e. Timeline:** by May, 1996.

Product 1: Ten sets of four courses matched to state plan, graduation rule and agreed-upon goals and standards.

Product 2: Exchange of course design ideas and ideas for options on how.

Product 3: Schedule and description of courses to be taught the following year.

**A.4.f. Work program Update:** July 1, 1996.

Product 1: The ten universities have developed courses that are matched to the state plan, graduation standards and the agreed-upon goals. Course outlines are enclosed.

Product 2: Teams participated in a 2 1/2-day workshop in April to exchange course design ideas, as well as options for how and where the courses would be offered. Eight planning teams participated. Teams from St. Cloud State and University of Minnesota, Duluth were absent. Teams also shared ideas for written and visual materials.

Product 3: Schedules and descriptions of courses to be taught are enclosed.

**June 30, 1998 – Objective completed.**

**B. Title of Objective/Outcome:** Higher Ed institutions and their cooperating teams deliver ten EE course statewide to test out the content, format and new delivery options such as place and technology. The Project Manager has applied for a six-month extension. Wirona has yet to offer their pilot course and will do so during the summer of 1997. However, they wish to hold a follow-up session where teachers implement their EE training into their classrooms and return in the fall to report their progress. This requires continuing beyond the June 30, 1997 end date.

Additionally, three universities who have surplus money will offer their course for a second time. These universities also require teachers to implement their training and return to report in the fall.

Project administrators anticipate a 20,000 surplus that we will distribute to the ten participating Universities. This will allow all the teams to offer their course a second or third time.

**B.1. Activity:** Higher Ed planning teams help instructors plan and carry out workshops.

**B.1.a. Context within the project:** Higher Ed planning teams must ensure that the workshops are being carried out properly; planning teams can help set up the workshops with the teachers.

**B.1.b. Methods:** Higher Ed planning teams of cooperators meet twice during the second year.

**B.1.c. Materials:** Those developed and identified for the courses.

**B.1.d. Budget:**

**Expenditures:**

2 meetings of planning teams/institution

@200/person + 100/ea for expenses

x 10 teams of 4 people ea 5,328.83

Materials and Supplies 3434.55

**Total Biennial LCMR Budget:** 24,000

**LCMR Balance:** 15,236.62

**B.1.e. Timeline:** by Dec, 1996.

Product 1: Logistics for ten courses planned in detail.

**B.1.f. Workprogram Update:** July 1, 1996 - All ten universities have developed their courses. Course outline deliverables are enclosed.

**June 30, 1998 – Objective completed.**

**B.2. Activity:** Coordinating staff helps to set up, publicize, monitor and evaluate courses taught in second year.

**B.2.a. Context within the project:** This is the trial implementation of the prepared workshops or courses. Evaluation of these courses is necessary for improving design and methods, and may be useful for other states working on similar or related projects. A random control group of teachers will be tested, as will the course participants, both before and after taking the course.

**B.2.b. Methods:** Coordinating staff works together, travels to institutions and client schools.

**B.2.c. Materials:** Publicity materials, evaluation questionnaires.

**B.2.d. Budget:** Coordinating staff sets up, markets, monitors, evaluates courses.

coordination time	66,627.07
marketing materials	5,445.55
secretarial 2da/wk@80/da	4,854.61
travel expenses for staff	708.16
evaluation materials, computer time, data entry, development of questionnaire	<u>11.50</u>
	77,646.89

**Total Biennial LCMR Budget: 64,782**  
**LCMR Balance: (12,865)**

The budget for the coordinating activities was increased by 32,071 to cover the expenses for administering the six-month extension for 4 workshops and for the Report in Activity B.7.

**B.2.e. Timeline:** by July 1996.

Product 1: Course arrangements made.

Product 2: Publicity on courses distributed to teachers, administrators, school boards,

Product 3: Evaluation reports, pre-course and post-course.

**B.2.f. Workprogram Update:**

Product 1: **July 1, 1996** - Course arrangements for all courses are made. Winona tentatively is planning to offer the course at the same time next year. Course schedules are enclosed. The Project Manager and Coordinator are monitoring all classes by attending at least one day.

Product 2: **January 1, 1996** - Work has begun on informational brochure that illustrates the project goals and solicits participation in the pilot courses.

**July 1, 1996** - The brochure was completed and was mailed out to approximately 12,000 Minnesota teachers and school administrators. A publicity news release was developed by OEA staff and published in numerous educational newsletters. The Project Coordinator personally solicited participation of Rochester and Winona area schools for Winona State University through phone calls to school administrators.

Product 3: **January 1, 1996** - The Teacher Prep Project has contracted with the University of Minnesota for course evaluation. This task will be performed by a graduate student working under the direction of the University of Minnesota team's project manager.

**July 1, 1996** - Development of the course evaluation is proceeding. The written portion of the evaluation will utilize a pre-test/post-test format. The pre-test will be administered to Project participants before the class. The post-test will be mailed out to participants several months after completion of the courses. The written portion of the evaluation has been completed and was administered to the Duluth, Hamline and University of MN, Twin Cities teams. Further ideas for project evaluation include focus groups of participating teachers next summer and synthesis of individual course evaluations from each project manager and class.

**January 1, 1997** - The written pre-test evaluation was administered to all university participants except Bemidji and Winona. Distribution of the written post-test evaluation will begin in January. Planning for part II of the evaluation, focus groups, has proceeded. Focus group questions and audience have been determined and dates have been set for early 1997. Plans for using the course evaluation administered by the universities is in the planning stage. Because the evaluations differ considerably from course to course, this avenue of evaluation is not yet certain.

**July 1, 1997** - The evaluation process is nearing completion. The project evaluator is in the process of writing the complete report. A copy of the preliminary report, which includes only results and no analysis, is enclosed.

**December 31, 1997** - The course evaluation is complete and a draft is included with this report. Printed evaluations will be available in February, 1998. Test results showed significant increases in some ecological knowledge and changes in participants' teaching methodology. Significant data are summarized in the process model for wider distribution.

**June 30, 1998. Objective completed. Draft documents included with this report as exhibits. Final printed versions for dissemination will be disseminated when the reports are returned from the printer.**

**B.3. Activity:** 250 teachers from throughout the state take a selection of the newly formulated courses.

**B.3.a. Context within the project:** This trial of courses and materials is the culmination of the planning and design carried out during the first year.

**B.3.b. Methods:** Ten 5-day courses for teachers, one delivered by each cooperating higher Ed institution.

**B.3.c. Materials:** Those developed by the higher Ed institutions and selected materials that have already been published.

**B.3.d. Budget:****Expenditures:**

10 workshops of 5 da/ea, 2 instructors	10,341.22
per workshop@200/da	985.44
100/instructor for travel	<u>51,280.93</u>
300/teacher for incentives	62,607.59

**Total Biennial LCMR Budget: 97,000.**

**LCMR Balance: 34,392.**

Participating universities are offering a variety of incentive packages. Some prefer to offer free tuition in lieu of stipends. Others prefer to offer materials to schools, rather than individuals in order to encourage participation from school-based teams. Therefore, we are combining the 100 teacher stipend and the 200 materials allotment into a 300 incentive package to be distributed at the discretion of the individual university.

**B.3.e. Timeline: by June 30, 1997.**

Product 1: Ten EE courses delivered to a total of 250 teachers. One course will be delivered by each higher education institution as they schedule them in their academic year. These could take on weekends, evenings, consecutive days, nonconsecutive days, or any schedule as the planning teams decide; but each must consist of enough hours to achieve at least one hour of graduate academic credit.

**B.3.f. Workprogram Update: July 1, 1996** - Two of the ten courses were provided to 75 Minnesota teachers for 4 credits of graduate credit.

**January 1, 1997** - Nine of the ten courses were offered to 207 Minnesota teachers over the summer of 1996 for four graduate credits. Winona State will offer their pilot course in the summer of 1997. (This figure was amended to 239 teachers following a review of enrollment with the universities for the Dec 97 report.)

**July 1, 1997** - Winona's course is in progress at this writing. Mankato and University of MN, Morris offered second courses during the spring of 1997. Additionally, Mankato, Morris, U of MN, Duluth and Twin Cities, St. Cloud, Concordia and Bemidji will be offering courses during the summer and fall of 1997.

**December 31, 1997** - Nine institutions taught ten courses with an enrollment of 239 teachers during the first year of the project. Seven institutions offered seven courses during 1997. Teams recruited 107 teachers to participate in the courses. Total classroom teacher participation in the project was 346. This total includes 16 teachers from Sweden who took the course during the first year at the University of MN, Twin Cities. Classroom teachers recruited to participate in the prototype courses represent

about 1% of Minnesota's 44,000 classroom teachers. Clearly, more work needs to be done. Continued efforts of the project's higher Ed institutions and recruitment of additional teacher preparation institutions would contribute significantly to reaching more teachers. This effort would also reach students enrolled in education programs, preparing a new generation of teachers for the workforce. A mentoring program to facilitate this effort is being considered.

**June 30, 1998** - A post project survey of the cooperating universities was completed during spring of 1998. Results showed that 330 teachers participated in the courses and a total of 17 courses were taught. Seven of the ten universities continue to offer the course. The other three have incorporated the coursework into existing courses. All universities have infused the course into their preservice course offerings.

**B.4. Activity:** All higher Ed teams assess project successes and problems, plan for continuation beyond LCMR funding period.

**B.4.a. Context within the project:** Cooperators need to learn from results of workshops and assist each other in continuation of courses.

**B.4.b. Methods:** Final 2-day workshop for all teams.

**B.4.c. Materials:** Evaluations developed by coordinators and steering committee.

**B.4.d. Budget:****Expenditures:**

2-day workshop for 60 people.	
100 stipend x25 teachers	1,600.00
travel expense	1,240.50
sub pay for 25 teachers @ 100/ea	2,276.90
meals and facilities (150/ea)	6,006.74
speakers	250.00
materials and supplies	0.00
staff coordination and follow-up time	12,726.00
secretarial time	2,080.00
staff travel expenses	<u>100.00</u>
	26,279.14

**Total Biennial LCMR Budget: 36,330.**

**LCMR Balance: 10,051.**



Costs have been upgraded for two reasons. First, we found that offering a stipend for attendance greatly increased participation by team members, especially teachers. Second, the accommodations offered by the less expensive RELC's has not been adequate to the needs of the Project. The move to a hotel type of accommodation increases the cost per person.

**B.4.e. Timeline:** By June 30, 1997.

Product 1: Final report on the project with comments from teams.

Product 2: Identified sources for future funding.

**B.4.f. Workprogram Update:** A 2-day workshop was held for participants in April. Topics included evaluation results, status of four goals, status of future course offerings, role of Teacher Prep courses in achieving Graduation Standards, teacher licensure, including DCFL in EIC network development and a presentation by the Wilder Foundation of a recent survey of teachers concerning EE needs.

**December 31, 1997** - Higher Ed teams have reviewed the courses for strengths and weaknesses. A 3-day training session conducted in October focused on the Environmental Graduation Standard Assessment. This training has motivated many of the teams to restructure their courses to a more specific focus on the Graduation Standards.

A final statewide team meeting was also held in November. Discussions focused on the status of the project, courses scheduled for 1998, project continuation and importance of the incentives as a course budget item. It was the consensus of the group that the course could be established in regular course offerings without the incentive money for enrollees in the course. Universities are scheduling the course for 1998 and have incorporated elements of the course into their undergraduate education programs.

**June 30, 1998 – Objective completed.** Input from faculty and planning team members is included in the evaluation report and the Teacher Preparation Project Overview.

**B.5. Activity:** Produce a videotape to document the project.

**B.5.a. Context within the project:** This videotape will be useful to market the courses for all the colleges, universities and EEC's participating. It will also be useful for other states wishing to carry out similar projects.

**B.5.b. Methods:** Contract to produce the video.

**B.5.c. Materials:** Videotape, scripts.

**B.5.d. Budget:**

**Expenditures:**

Contract for production and copies of video.	9,981.25
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**Total Biennial LCMR Budget: 10,000.**

**LCMR Balance: 19.**

**B.5.e. Timeline:** By June 30, 1997.

Product 1: Videotape of the project.

**B.5.f. Workprogram Update: January 1, 1996.**

Product 1: The Project Coordinator is interviewing prospective video production contractors. Some video footage has already been taped by OEA staff and other footage is available from Media Rare.

**July 1, 1996** - A video production contractor was selected and has begun work on the project. A draft of the script has been submitted and approved by the Project Manager. Filming has begun.

**January 1, 1996** - A video production continues on schedule. Drafts of the evolving script and video have been submitted and reviewed by the Project Manager and Coordinator.

**July 1, 1997** - The video script continues to evolve and the latest draft is under review by the Project Manager. The contract for the video will also be extended through Dec 31, 1997 to allow the production team to include upcoming courses in their product.

**December 31, 1997** - The project video is complete and included with this report. Copies will be distributed to each of the ten higher education cooperators in the project. Two copies will be retained by the OEA.

**June 30, 1998 – Objective completed.** Copies of the video were distributed to all cooperating universities. Five copies are included with this report.

**B.6. Activity:** Design and implement one supplementary workshop.

**B.6.a. Context within the project:** The higher Ed institutions and their planning teams have expressed a need for further training to implement select topic areas into their courses. These areas include, but are not limited to, the *GreenPrint* integration models, graduation standards and technology. They have also indicated a need to debrief soon after their inservice courses are completed in order to share information, successes and drawbacks with other teams.

**B.6.b. Methods:** Hold one 3-day workshop for all project participants. Workshop topics listed in B.6.a. will be incorporated into the workshop.

**B.6.c. Materials:** Materials that pertain to each topic area and are produced by workshop resource persons.

**B.6.d. Budget:**

**Expenditures:**

1 workshop for 52 people.	
200/person + 100/ea travel expenses	4,158.67
sub pay for 20 teachers @100/ea	868.40
meals and facilities (40/ea) (70/ea)	7,051.28
speakers	650.00
materials and supplies	235.73
staff travel	<u>88.56</u>
	13,152.63

**Total Biennial LCMR Budget: 0.**

**LCMR Balance: (13,053).**

Budget for this activity has been reduced. The expenses for the workshop were less than had been anticipated.

Funds for the supplementary workshops will come from money remaining after the completion of the three 2-day workshops for project teams. Approximately 18,000 remained from the workshop in August 1995 and 13,000 remained from the workshop in April 1996. The budget for the final workshop (B.4.d.) has been amended to reflect the updated projected expenses.

**B.6.e. Timeline:** By June 30, 1997.

Product 1: One 3-day workshop planned and delivered.

**B.6.f. Workprogram Update: July 1, 1996** - The first supplementary workshop has been planned and is tentatively scheduled for November. the workshop will be a cooperative venture with the DCFL and the Best Practices Network to train teachers in the implementation of the graduation standards.

**January 1, 1997** - One workshop was held in November for the Project participants. The agenda included integration methods, graduation standards, using technology ad future funding options. Team members spent a half-day debriefing with other teams. Teachers who took the class during the summer participated in the debriefing and following planning sessions. An increased level of enthusiasm about the Project from the workshop participants was notable to the Project Manager and Coordinator.

**June 30, 1997 – Objective completed.**

**B.7. Activity:** Write and publish a report summarizing the Teacher Preparation Project.

**B.7.a. Context within the project:** A written report is necessary to document the unique nature of the Project. A report will enable others interested in implementing a similar project to understand the successes and failures connected with this one and to use the Teacher Preparation Project as a template.

**B.7.b. Methods:** The Project Manager and Project Coordinator will work together to produce the volume.

**B.7.c. Materials:** Publishing materials.

**B.7.d. Budget:**

**Expenditures:**

Produce the report and print 1,000 copies for distribution. 4,500

**Total LCMR Budget: 0.**

**LCMR Balance: 4,500.**

**B.7.e. Timeline:** January 30, 1998. This date reflects our request for a six-month extension. The extension allows for the participating universities to offer and complete additional teacher training courses. Because we intend that the report reflect on the continuing progress of the Project, we want to include all data possible. This timeline will allow the Project Coordinator to compile data from the final follow-up sessions that will be held by December 31, 1997.

**B.7.f. Workplan Update:** December 31, 1997 - The process model has been completed and 1,000 copies will be printed for distribution. The model also includes exhibits demonstrating the course planning guidelines and examples of two course outlines.

**June 30, 1998 – Objective completed. Project overview is at the printers.**

**VI. Evaluation:** The project will have been successful if:

1. The EE training courses will have been developed.
2. The courses meet the goals of the Graduation Rule and the *GreenPrint* for K-12 students.
3. Teachers and other EE deliverers have been included in he development.
4. Teachers feel the courses will meet their needs and they will be motivated to take part.



5. The courses are included in the college curriculum as required courses and the universities will commit to continuing the offerings. (Part of this outcome is outside the control of the project. If the Graduation Rule contains environmental education as a requirement and as a result the Board of Teaching includes EE in the requirements for teacher licensure, this outcome is 95% assured.) The Project Manager and steering committee will collect data on each of these outcomes. Data for Item 4 will be included as part of the evaluation of the pilot workshops in the second year.

**June 30, 1998 – The evaluation and feedback from faculty and team members show that this objective has been successfully met.**

**VII. Context within field:** Significance: The *GreenPrint for Minnesota: State Plan for Environmental Education* places this project as its first priority for its first priority audience. The National Council for Environmental Education Training, the Environmental Education staff for the World Wildlife Fund and the environmental education consultant for the PEW Foundation, a national foundation contributing heavily to environmental education, all confirm that teacher training in EE is one of the major goals for a sound environmental literacy and that nationwide it is severely lacking.

**VIII. Budget Context: 1993-1995:** The model EE curriculum project was authorized by Minnesota Chap. 126A, the 1990 Environmental Education Act, and funded by the Legislature through LCMR in 1991. In 1993 the Legislature provided 60,000 to MDE (Now MDCFL) to aid in disseminating the integration guide and model curriculum, to be used in the EE training workshops. Those funds provided a part-time coordinator to work with this effort; 30,000 will be used to hold two major meetings for all participants in February and May of 1995 to lay the groundwork for this project. At these meetings, participants will be made familiar with the project logistics and requirements, the model curriculum integration process and the Graduation Rule. They will be asked to help design request for proposal to which the higher education institutions that wish to participate in the project can respond.

**1995-1997:** University personnel will be contributing approximately 50,000 of their time to this project during the two-year funding period. The Environmental Education Advisory Board was continued in the 1995 legislative session but was not funded. Coordination that was to be contributed by the Board will now need to be incorporated into the project budget.

- IX. Dissemination:** After 1997, the higher education institutions and others such as the environmental learning centers (who may have adjunct faculty appointments to the higher Ed institutions) will have the responsibility for publicizing the availability of the courses and recruiting participants.

**June 30, 1998 – The universities have incorporated the coursework into their regular offerings and advertise the course in their catalogs campus mailings. Copies of the project overview will be distributed to the following: Chairs of the Senate and House Education Committees, all universities and community colleges not participating in the project, the State School Board, the Pew Environment and Education Roundtable, North American Association of Environmental Educators, and MN Association of Environmental Educators. Reports will be mailed to others who respond to the project posting on SEEK.**

- X. Time:** This project will begin preparation in winter and spring of 1995. The first year the courses, standards and certificate program will be developed and the teams will be trained. The second year of the initial workshops will be delivered and evaluated. Following the contract period the higher Ed institutions and the major cooperators will continue to offer the coordinated EE program as part of their permanent programs.

**June 30, 1998 – Cooperating universities, with the exception of one, completed planning and offered courses in the first year. The certification program was not implemented for reasons described earlier in this report.**

**XI. Cooperation:** Bemidji, Mankato, St. Cloud, Moorhead and Winona State Universities; Concordia College, St. Paul; Hamline University; University of Minnesota, Duluth and Morris; University of Minnesota College of Education; U of M Extension; Residential Environmental Learning Center Coalition (5 RELC's); and the 8 districts piloting the integration guide and model curriculum. School Nature Area Project, St. Olaf; Center for School Change.

**X. Reporting Requirements:** Semiannual six-month workprogram reports will be submitted not later than January 1, 1996, July 1, 1996, January 1, 1997, July 1, 1997 and a final six-month workprogram update and final report by December 31, 1997 to reflect the request for a Program extension.

### **XIII. REQUIRED ATTACHMENT:**

- 1. Qualifications:**
- 2. Project Staffing Summary:**

#### **Project Coordinator:**

Christine Penney  
Minnesota Office of Environmental Assistance  
520 Lafayette Road, 2nd Floor  
St. Paul, MN 55155  
Ph: 215-0254  
Fax: 215-0229

#### **Project Manager:**

Pam Landers  
Formal Environmental Education Coordinator  
Minnesota Environmental Education Advisory Board  
520 Lafayette Road  
St. Paul, MN 55155  
Ph: 282-5788  
Fax: 297-8687

Pam has worked with the state environmental education for twenty years, first as coordinator and later as director of the Minnesota Environmental Education Board, then as EE coordinator for the Environmental Education Advisory Board. She was heavily involved in the writing of the *GreenPrint for Minnesota: A State Plan for Environmental Education*, and was co-author of the *Addendum to the GreenPrint: A Guide for Integrating Environmental Education*, both projects funded by the legislature at the recommendation of the LCMR. She is currently also serving as the Director of the Residential Environmental Learning Center GreenPrint Council, a group that aids and coordinates residential environmental learning centers in the state.