1997 Project Abstract
For the Period Ending June 30, 1999
This project was supported by Environment and Natural Resources Trust Fund

PROJECT TITLE:	School Nature Area Project (SNAP) I-1
Project Manager:	Char A. Bezanson
Organization:	School Nature Area Project (SNAP), St. Olaf College
Mail Address:	1520 St. Olaf Ave., Northfield, MN 55057
Web Page address:	http://www.stolaf.edu/other/snap/index.html
Legal Citation:	ML 97, Chap. 216, Sec. 15, Subd. 13(a)
Appropriation Amount:	$250,000

Statement of Objectives
This project combines ecological enhancement and ecological education through college-school partnerships. It supports ecological restoration projects on college lands to be used as models for similar ecological restoration projects on school grounds. It also provides teachers with training and consultation support, contact with college resource people, and a supported small-grants program so that they can carry out habitat enhancement projects at their own school sites with their own students.

Overall Project Results
The 1998-99 cycle of the SNAP Project Grants supported the development of 29 school projects in three urban, 13 suburban, and 13 rural schools involving native plantings or other wildlife habitat enhancement. Schools were supported through funding, workshops, resource access, phone consultation, newsletters, Internet support, and networking opportunities. At the end of the grant period, schools reported that 5,672 students had participated in the projects. The appropriation was also used to initiate and partially fund a cycle of 1999-2000 Project Grants, which have been awarded to 31 additional Minnesota schools.

Three regional eco-demonstration sites were established on college campuses. At St. Olaf College in Northfield, a model school nature area demonstration site including bird-feeding stations, a "wildlife kitchen" featuring native trees and shubs with wildlife food value, a showy native butterfly garden, and a small demonstration priarie planting was established. On a larger scale, 16 acres of prairie restoration, a 25-acre woodland restoration, and a three-acre wetland restoration were initiated. At St. John's University in Collegeville, 6.5 acres of Oak Savannah and a gravel knoll were planted. The Cloquet Forestry Center of the University of Minnesota developed a demonstration wetland trail and dock, as well as a "wildlife kitchen". Each of these areas are being used extensively for educational purposes, and will continue to serve as examples of appropriate nature area construction, access, and management. During the grant period, the areas have been used by over 200 teachers for workshops and demonstrations.

The appropriation also directly supported eleven separate teacher workshop events, ranging in length from half-day sessions to five-day Institutes. Most of these events were held at the regional campus eco-demonstration sites. Over 300 teachers participated in these workshops, which provided continuing education related to the development and/or use of school nature areas. Thirteen additional related one- to five-day workshop events, funded primarily by other grants, were held at the campus sites and made use of the restoration areas.

Project Result Use and Dissemination
Project results have and will continue to be disseminated through SNAP staff presentations at conferences, through the SNAPshots Newsletter, through local media coverage of school projects and workshops, and through the award-winning SNAP website. In addition, 50% of school projects leverage other funds and continue to develop beyond the initial grant period. SNAP projects and workshops have been featured on media spots such as the NSP Environmental Moment and the Minnesota Lottery Environmental Journal.

Date of Report: July 1, 1999
LCMR Final Work Program Update Report

Project Completion Date: June 30, 1999

LCMR Work Program 1997

I. PROJECT TITLE: School Nature Area Project (SNAP) I-1
Program Manager: Char A. Bezanson
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Total Biennial Project Budget:

$ LCMR:	$250,000
- $ LCMR Amount Spent	249,982
= $ LCMR Balance:	$18

A. Legal Citation: ML 97, Chap. 216, Sec. 15, Subd. 13(a)

Appropriation Language: This appropriation is from the trust fund to the commissioner of natural resources for an agreement with St. Olaf College for the second biennium to accelerate partnerships between institutions of higher education and schools to develop school nature areas and demonstrate methods of ecological enhancement for integration into school curriculum.

B. Status of Match Requirement: No match required.

II. PROJECT SUMMARY AND RESULTS:

Summary

SNAP will create partnerships between higher education institutions in three Minnesota biomes and K-12 schools in their regions. The partnerships will employ resources of the colleges and universities to educate teachers about regional ecology and native species enhancement, as the teachers plan and develop their own school nature areas. Teachers will study and visit eco-demonstration sites on the campuses to learn about the historical vegetation of their region and the challenges of restoring it. They will employ this training in their own native vegetation enhancement projects and incorporate their knowledge into school curriculum. The project offers site assistance and regional ecological instruction to 50 teachers representing 25 schools selected through a statewide competition.

Results

- ***Twenty-five (25) K-12 school projects*** in urban and rural school nature areas to augment native plant species, enhance wildlife habitat, improve student access, and promote hands-on environmental education.

- ***Three (3) regional eco-demonstration sites*** at St. Olaf College, St. John's University and U. of M. Cloquet Forestry Center to be used with K-12 teachers in eco-education workshops on these campuses. Teachers will use the college eco-demonstration sites as models for their own school nature area projects.

- ***Three (3) eco-education workshops*** on each regional campus in which K-12 teachers study regional ecology, native species enhancement, and environmental education curriculum development. A Project Grant Conference in March, 1999 will provide training for Project Grant applicants and current Project Grant recipients.

- ***Twenty-five (25) additional K-12 projects*** in urban and rural school nature areas to augment native plant species, enhance wildlife habitat, improve student access, and promote hands-on environmental education.

III. PROGRESS SUMMARY, all four results, chronological

(see also the concise summaries under each result in the Outline of Project Results)

February 1, 1998

SNAP Project Grant applications were mailed to all Minnesota K-12 schools in the fall of 1997. Project Grants provide $500 - $1500 to urban and rural school nature areas to augment native plant species, enhance wildlife habitat, improve student access, and promote hands-on environmental education. Forty-three applications were received. Three outside reviewers and four SNAP staff reviewed applications, writing comments and suggestions for project improvements.

Three regional eco-demonstration sites are in the process of being planned at St. Olaf College, St. John's University, and the Cloquet Forestry Center. Planting projects will begin in the spring of 1998.

September 1, 1998

31 Minnesota K-12 schools were selected to receive Project Grants. Some schools were required to make revisions to their proposals. Schools were then sent 75% of their funds. They will submit interim reports on their work in November, 1998.

A "Starting Prairie Seedlings in Your Classroom" and a "Project Grants Conference" were conducted in March, 1998 at the Minnesota Valley National Wildlife Refuge. At the seed starting workshop 31 teachers received seeds, seedlings, planting trays, and resource materials. Thirty-five teachers attended the conference which included concurrent sessions presented by schools that had conducted successful projects, a panel of growers from native plant nurseries, and numerous resources to help teachers improve their projects.

Forty-two teachers attended the week-long Environmental Education Institute. There they learned about methods and activities to incorporate the nature area and environmental education into their curriculum.

Eco-restoration work conducted at St. Olaf College includes planting of 72 native shrubs and vines to create a "wildlife kitchen" demonstration area on the grounds surrounding the SNAP office. A sandy loam dry prairie area and a mesic/wet prairie area have also been planted near the SNAP office. Thirteen additional acres of the St. Olaf prairie restoration have been planted with native grasses and forbs. Thirty acres were planted to domestic grasses in preparation for a tree planting representative of the Big Woods.

1000 prairie plants were planted on a portion of the St. John's prairie restoration. Additional acres have been burned in preparation for more prairie plantings.

February 1, 1999
Minnesota schools that received 1998-99 SNAP Project Grants are completing their projects; some have finished, and have submitted final reports.

Fifty-four Minnesota schools submitted applications for the 1999-2000 SNAP Project Grants. These applications are being reviewed. Schools will be notified of awards early in March, and will be invited to the Project Grants Conference at the Minnesota Valley National Wildlife Refuge to assist them in conducting a successful project.

Work continued on the SNAP Office demonstration sites throughout the mild autumn, and seed from the prairie restoration area was hand-collected for use in seed-starting workshops with Minnesota schools this spring. In addition, 6.5 acres were seeded with native prairie grasses and forbs on the St. John's savannah restoration.

The SNAP Partnership Program made extensive use of the restoration areas on the St. Olaf campus and the Cloquet Forestry Center site for ecological education during the August teacher institute week and the October institute weekend.

Teacher workshop sessions on schoolyard habitat enhancement projects were offered at the Minnesota Science Teachers' Association (MSTA) October conference in St. Paul, and at the SNAP Natural Science Enrichment for Teachers (NSET) seminar at St. Olaf in November.

July 1, 1999
By June 15, 25 of the 1998-99 Project Grant schools had submitted final reports and received the remaining 25% of their awards. Of the four schools yet to submit a final report, two projects are essentially complete and the status of the remaining two is unknown. SNAP staff will continue to follow-up on the remaining schools. Schools reported that 5,672 students were involved in this round of projects.

Thirty-one schools were awarded 1999-2000 Project Grants and were invited to the March 26 Seed Starting Workshop and March 27 Project Grants Conference. 45 teachers attended; 19 schools sent representatives. 16 awardees were asked to submit revised plans, which they did. All schools were sent the first 75% of their awards by early June; SNAP staff will monitor the projects and the final 25% of awards will be paid from another source by June, 2000.

At St. Olaf, over 600 trees were planted during April and May in the 30-acre Big Woods restoration area prepared earlier. This area also includes a 3-acre wetland restoration.

The Cloquet Forestry Center developed a demonstration wetland trail and dock and a "wildlife kitchen" demonstration area, planted during a teacher workshop which focused on planning, implementing, and maintaining a native tree and shrub planting. Teachers gained experience with a variety of types of tree and shrub materials (bare-root, balled-and-burlapped and container-grown stock) and with planting and tree-protection techniques. All of these areas will serve as examples of appropriate nature area construction, access, and management practices and will continue to be used for educational purposes..

A one-day conference entitled *School Nature Area Management: Challenges and Tools* was held at St. Olaf College on Tuesday, June 29. Topics included prairie burns, trail corridor management, and control of exotic species, and speakers were drawn from St. Olaf College and the DNR. Afternoon sessions featured field trips to local natural areas where participants could observe exotic species and a variety of management practices. The conference was attended by 50 people; 30 were teachers, and the rest were primarily from city and county government, local environmental organizations, or watershed districts.

IV. OUTLINE OF PROJECT RESULTS:

RESULT 1: Twenty-five (25) K-12 school projects in urban and rural school nature areas to augment native plant species, enhance wildlife habitat, and improve student access.

Total LCMR Budget for Result 1:	115,700	Balance: $ (303)
Grants to 25 schools for site supplies	27,700	
Staff travel to schools	8,100	
Office supplies and site information resources	5,000	
Communications (mail, phone, printing)	5,000	
Equipment	2,200	
Staff and intern: salaries and benefits	64,200	
Consultants (reviewers, Advisory Bd. newspaper column)	3,500	

Summary of Work Completed, Result 1

SNAP Project Grant applications were mailed to all Minnesota K-12 schools in the fall of 1997. Project Grants provide $500 - $1500 to urban and rural school nature areas to augment native plant species, enhance wildlife habitat, improve student access, and promote hands-on environmental education. Forty-three applications were received. Three outside reviewers and four SNAP staff reviewed applications, writing comments and suggestions for project improvements. 31 Minnesota K-12 schools were selected to receive Project Grants. Some schools were required to make revisions to their proposals. Schools were then sent 75% of their funds. Two schools had circumstances that caused them to decline their awards. By November, 1998, 24 schools had submitted interim reports and were well underway. By June 15, 25 schools had submitted final reports and received the remaining 25% of their awards. Of the four schools yet to submit a final report, two projects are essentially complete and the status of the remaining two is unknown. SNAP staff will continue to follow-up on the remaining schools.

Stage 1. Program Publicity and Grant Applications. Completed December 31,1997

The SNAP Director and office assistant will prepare and mail program information and grant applications to all Minnesota K-12 schools in Fall, 1997. The Director and staff will promote the LCMR program in fall teacher workshops at regional campus centers, in press releases to newspapers, articles in newsletters, presentations at conventions such as MSTA and MEA, and visits to schools. The technology specialist will make grant applications and program information available on the SNAP Web Page. Schools will apply in December.

Work Completed:

SNAP Project Grant applications were mailed to all Minnesota K-12 public and private schools. Press releases were sent to newspapers throughout the state and to a variety of newsletters including the ECSU Review and MEA Advocate. The applications were also announced on several internet listservs and on the SNAP Web Page.

SNAP Project Grants were also the focus of a workshop conducted at the fall MSTA conference Chaska which 16 teachers attended, and the SNAP Natural Science Enrichment for Teachers (NSET) program at St. Olaf which twenty teachers attended. The grants were also announced at two seed collecting workshops that SNAP conducted at Goodhue Elementary School and St. Olaf College. At these workshops teachers learned the basics of collecting prairie seed, how to clean it and store it for future planting, and ethical considerations in seed collection.

The deadline for receipt of Project Grant applications was December 12, 1997. Forty three applications were received.

Stage 2: Selection of Schools and Final Approval of Projects. Completed: May 31, 1998

The SNAP Director will oversee the proposal review process. To maintain equity in awards, an outside panel will advise the SNAP staff in reviewing and ranking school proposals. The outside panel will represent, as fairly as possible, diverse educational, geographical and natural resource perspectives relevant to the school grants program. Reviewers will write comments on proposals to assist schools in improving their projects. The reviewers will be paid as consultants.

The SNAP Director and staff will make the final selection of schools based on panel rankings and considerations of geographical, urban/rural and primary/secondary balance. Twenty-five (25) schools will be selected to receive project grants for enhancement of native plants, wildlife, and students access. The SNAP site planner and SNAP ecologist will discuss revisions of selected projects with teachers in spring workshops at regional centers (described below). An initial payment of 75% of the grant award will be sent to the school when the project work program is approved. The final payment of 25% will be sent to the school upon submission and approval of a final report and account of spending.

Work Completed:

Three outside reviewers were selected as paid consultants to review the Project Grants. They were Cathi Fouchi, a DNR regional resource manager from Mankato, Harriet Mason, a botanist from St. Peter, and Margaret Menzies, a teacher from Warba. Each reviewer read approximately 30 grant proposals and wrote comments and suggestions for improving projects. Four SNAP staff also reviewed applications and wrote comments. Each grant was read by three reviewers. In February, thirty-one schools were selected to receive Project Grants.

Schools applying for grants were invited to a Project Grant Conference in March (described in Result 3, Workshops) to help them to develop their projects and, if necessary, revise their plans to focus on Minnesota native plants and ecologically sound habitat-enhancement projects. Nineteen of the awardee schools sent at least one team member to the workshop; many sent two or more. The first 75% of funds were sent to schools upon acceptance of their grant revisions, if revisions were necessary. Two schools (Alice O'Brien and Rice Lake Elementary) had special circumstances that prevented them from completing plan revisions and continuing their projects; these schools declined their awards at this time. The following table lists the schools and projects selected for awards, and includes the number of students that each school reported as participating in the project by the time of its completion.

School	Grade Level	# Students Involved	Community Type	Project	Grant Amount
Austin, Southgate Elementary	K-5	500	Rural	prairie courtyard	550
Backus Elementary	5	25	Rural	bird feeding stations	500
Bemidji, Horace May Elementary	1-5	225	Rural	boreal forest area	1500
Blue Earth Area High School	7, 10-12	160	Rural	prairie planting	1000
Eagan, Tesseract School	5-6	(25?)	Suburban	trees and shrubs	1300
Faribault, Shattuck St. Mary's School	9-12	20	Rural	prairie garden	500
Grand Marais, Sawtooth Elementary	K-5	130	Rural	pond and vegetation	700
Hastings, Christa McAuliffe Elementary	K-5	75	Rural	prairie planting	1500
Hopkins, Eisenhower Elementary	K-6	30	Suburban	small wetland creation	1300
Hugo Elementary	2	(25?)	Rural	prairie butterfly garden	600
Lakeville, McGuire Jr. High	6-8	250	Suburban	trees and shrubs, prairie garden, pond	1500
Lakeville, Christina Huddleston Elementary	K-6	157	Suburban	native prairie garden	500
Lakeville, Orchard Lake Elementary	3	80	Suburban	prairie garden	500
Lino Lakes, Rice Lake Elementary	2, 5	0	Suburban	prairie garden	500
Maplewood, St. Jerome School	7-8	220	Suburban	trees and shrubs	500
Mazeppa, Zumbrota-Mazeppa Middle	5-6	300	Rural	prairie restoration	950
New Prague Public School	K-12	45	Rural	"Big Woods" tree planting	500
Newfolden, Marshall County Central School	4-12	85	Rural	prairie planting shrub planting	1000
Oakdale, Skyview Community School	K-8	500	Suburban	prairie restoration	1000
Plymouth, Wayzata Public Schools	10-12	280	Suburban	native woodland wildflower restoration	1000
Plymouth, Sunset Hill Elementary	2, 5	440	Suburban	native shrubs, butterfly garden	1500
Ramsey Elementary	K-5	26	Suburban	native butterfly garden, native trees and shrubs	500
Robbinsdale, Language Immersion School	K-5	98	Suburban	native trees and shrubs	900
Sauk Centre Junior High	3,7,10	34	Rural	native trees and shrubs	550
St. Paul, St. Francis-St James United	1,8	74	Urban	native butterfly garden	50(

School	Grade Level	# Students Involved	Community Type	Project	Grant Amount
St. Paul, Como Park Senior High	7-12	900	Urban	native grasses, forbs, shrubs	1500
St. Paul, Franklin Music Magnet	K-6	60	Urban	prairie butterfly garden	850
Togo, Alice O'Brien School of Thistledew	8-12	0	Rural	native trees, shrubs, and forbs	500
Vadnais Heights Elementary	K-5	137	Suburban	native trees and shrubs	1000
White Bear Lake North Campus	9-10	327	Suburban	prairie restoration	1000
Winona, Jefferson School	3-5	434	Rural	prairie, bird houses	1500
31 Schools	21 elementary, 11 secondary	5,672 students	14 Rural 14 Suburban 3 Urban	18 prairie projects 2 bird houses and feeding stations 13 tree and shrub plantings 3 pond and wetland projects	27700

Stage 3: Conduct School Projects. Completed June 30, 1999

The SNAP Director, site planner, ecologist, technology specialist and post-graduate intern will provide on-site and off-site consultation to schools as they pursue their projects. When available, local consultants will also participate. The Director and office assistant will coordinate communications, visits, and procedures with schools. The site planner and intern will work with schools to insure that project plans are consistent with the ecological needs of the site and educational needs of the school. The SNAP ecologist and intern will advise about existing vegetation, selection of native plants, and proper planting procedures. The SNAP technology specialist will assist schools in gaining familiarity with the Internet, listservs, and the World Wide Web. He will help set up projects to share data collected in nature areas with students at other schools.

Work Completed:

The SNAP staff were available by phone and occasionally by personal visit to assist schools in planning projects. Most schools also enlisted the volunteer assitance of local resource people with expertise in natural resources, horticulture, or other appropriate areas; these were often parents or school neighbors, or employees of local, state and federal agencies such as the DNR, local watershed districts, University Extension, U.S. Fish and Wildlife personnel, etc. Schools also received technical advice from native plant growers, who often made plants available at wholesale prices. In addition, five schools requested up to $300 for a paid consultant (approved by SNAP) to help with projects if appropriate volunteers were not available.

Brief interim reports were received from 24 schools; these allowed staff to identify schools that may have run into problems, and follow up if necessary. Some schools had personnel turnover (coordinator) or other problems that required modifications of their projects, and SNAP staff worked with those schools as necessary. Final reports were due early in June 1, 1999, but could be submitted earlier if all granted funds have been spent. The final 25% of the grant award was sent to schools after approval of the final fianacial report.

The Final Report that we asked of schools was a brief narrative of the progress of their project accompanied by an itemized list of expenses accompanied by reciepts. While additional information was optional, many schools sent copies of local media reports, videos, photographs, and letters from students to help document their project. Teachers often expressed their surprise at

how much community support their projects generated: community members donated time, materials, refreshments, equipment, and funds when needed. Teachers, in turn, were often empowered as leaders in their schools and communities. About half of the projects expanded, and additional funds were leveraged through community donations of various kinds. This was more likely if the project got an early start, and was well-planned from the beginning. We expect that even those projects that are still "in progress" will continue to grow, although we may not hear about them! Our experience has been that schools often reapply for additional grants to do additional projects after success on a small scale.

Although the Final Reports from schools are very brief, it was not always easy for schools to submit them on time. Even though reminder letters were sent in early May, ten reports were still outstanding after the June 1 deadline, and required followup calls by the SNAP Ecologist. In most cases, projects were proceeding well, but press of work at the end of the semester as well as the challenge of ordering plant material, organizing planting projects, and adjusting schedules to the changing weather was a problem in some cases. One teacher stated that "I just throw all the mail in a box until after grades are in, so I never saw your letter". Reaching teachers by phone is difficult, as well, and if school is out of session, messages can languish for weeks or months. In spite of the difficulties, however, final reports were received from all but four schools by June 15, and final checks were sent to them. Two of those schools had been in contact earlier, and did not spend the additional 25% of their award. In at least one case, the project was finished, but the coordinator had moved to another school. In the 1999-2000 Project Grant cycle (Result 4), we required the building principal to sign the grant acceptance form, taking responsibility for project reporting in the event of staffing changes.

The SNAP model for working with schools emphasizes ongoing collaborations and interactions between schools related to school nature area work. The SNAP web page (www.stolaf.edu/other/snap) has been instrumental in this regard, and has recently averaged 800-1000 hits per month. Schoolyard projects started as long ago as 1992 are described so that teachers have some models to go by and can make contact with other schools if desired. The website provides access to the SNAP email listservs (SNAPnet), which provide an ongoing forum on school nature area issues for any interested subscriber (over 300 subscribers), as well as specific lists that connect groups of teachers with more focused interests. The SNAP technology specialist was available as needed to provide assistance to schools in making use of these features.

The SNAP website also provides access to three interactive projects (collectively referred to as "Cyberseasons") which were developed by the SNAP technology specialist, working with teachers in the SNAP partnership program. During the 1998-99 school year, "Following Fall" involved 56 classrooms from 13 schools in Minnesota and 18 around the country and included 59 teachers on its listserv; "SNOW" involved 8 Minnesota classrooms, 13 other U.S. classrooms, and 2 international classrooms and included 36 teachers on its listserv; and "Did Spring SNAP?" involved 11 Minnesota classrooms and 6 other U.S. classrooms, with 23 teachers on its listserv. Several classrooms created their own web pages to document their investigations in these projects. In 1988, the SNOW project was featured on the Minnesota State Lottery Environmental Journal; Following Fall was written up in Growing Ideas, the national newsletter of the GrowLab program, and presentations on the projects were made at a variety of state educators' conferences. Information on the SNAP website as well as pages describing the 1998-99 Project Grants are included as an appendix; these will be updated with information from the Final Reports by the end of summer.

RESULT 2: Three (3) regional eco-demonstration sites at St. John's University, St. Olaf College, and U. of M. Cloquet Forestry Center to be used with K-12 teachers attending eco-education workshops on these campuses. Teachers will use the college eco-demonstration sites as models for their own school nature area projects.

Total LCMR Budget for Result 2:	$46,500	Balance: $26
Supplies for eco-demonstration projects	30,000	
Staff travel	400	
Staff and intern salaries and benefits	16,100	

Summary of Work Completed, Result 2

At St. Olaf, the area surrounding the SNAP offices is being developed as a nature area demonstration site, including bird-feeding stations, a "wildlife kitchen" featuring native trees and shrubs valuable for wildlife food, a showy native butterfly garden, and a small prairie restoration planting. Other St. Olaf projects include an additional 16 acres of prairie restoration, a 25-acre woodland restoration, and a three-acre wetland restoration. These sites are used frequently for teacher workshops, as well as for a seed-source for prairie seed-starting workshop materials. At St. John's, a gravelly knoll was enhanced by 1000 prairie seedlings which were planted by teachers during a workshop session, as well as the seeding of 6.5 acres of Oak Savanna. The Cloquet Forestry Center developed a demonstration wetland trail and dock and a "wildlife kitchen" demonstration area, planted during a teacher workshop. All of these areas will serve as examples of appropriate nature area construction, access, and management practices and will continue to be used for educational purposes.

Step 1: Native Restoration Projects at Campus Demonstration Sites Completed June 30, 1999

SNAP Regional Teacher Education Centers will be established at St. Olaf College in Northfield, St. John's University in Collegeville, and the University of Minnesota Cloquet Forestry Center. Eco-demonstration projects on these three college campuses will be conducted throughout the project period to provide examples of restoration practices for teachers to observe and assist.

St. John's will restore five acres of oak savannah with inclusion of 80 species of native grasses and forbs. Teachers will participate in planting seeds and seedlings, and will monitor restoration progress. At St. Olaf, demonstration projects will include expansion of a 25 acre prairie, 50 acre woodland, and a native plant garden to attract insects and butterflies. At Cloquet, a focus on planting trees to diversify woodlands will provide hands-on experiences for teachers. They will learn how to organize planting events, how to properly handle and care for tree seedlings and how to properly plant them to insure good survival.

The project will fund supplies for these eco-demonstration projects and for minor equipment for teachers to use as they assist with these projects.

Work Completed

At St. Olaf College, nature area demonstration projects are being established on the property surrounding the SNAP offices. Bird feeding stations were built in the fall of 1997. In the spring of 1998, seventy-two shrubs and vines representing fifteen species were planted on property surrounding the SNAP office as a "wildlife kitchen" demonstration project for schools. A sandy loam mesic area of 115 square feet was planted with 25 species of prairie plants, creating a native butterfly garden that can serve as a model for smaller school sites or those that want a planting with a more "landscaped" feel. A mesic/wet area of 1000 square feet was seeded with 32 species of native prairie wildflowers and grasses, providing an example of a showy but functional small prairie restoration. Throughout the summer and fall months, seedlings grown from locally-collected seed by the SNAP intern and student workers were added to the wet prairie demonstration area near the SNAP office. As teachers visit the SNAP office, they will have an

opportunity to view different species and their growing habits. These areas will also be used for seed collection for teacher workshops.

Other St. Olaf restoration projects included the planting of 16 acres into prairie, three of which were hand-planted, and a 25 acre woodland restoration. Thirty acres were disked and planted with domestic grasses (timothy and perennial rye mixed with a nurse crop of oats) in preparation for a 600-tree planting of native hardwood species. This tree planting was done in April and May of 1999, and was planned in conjunction with the efforts in Rice County by the Nature Conservancy and the Cannon River Watershed Partnership to restore local areas to the Big Woods habitat that existed here originally. A three acre wetland restoration is also taking place in this area.

At St. John's University 1000 prairie seedlings were planted by teachers on a sandy gravel knoll portion of the St. John's Arboretum as part of pre-conference workshop prior to the 9th Annual Minnesota EE Conference to be held on June 19-20 at the same location. A kiosk is being constructed to provide interpretive information about the arboretum and a prairie garden will be planted around the kiosk with plants identified to assist visitors in recognizing different species. In addition, 6.5 acres of Oak Savanna Complex was seeded in October, 1998 with a native grass and wildflower mix after the site was prepared by burning and other methods. LCMR funds were used for seed only; site preparation, sowing, hand raking and other labor costs were borne by St. John's. Site preparation, including burning, has taken place for the planting of additional prairie acres in the spring of 1999.

In spring of 1999, the Cloquet Forestry Center developed a demonstration wetland trail and dock area as well as a "wildlife kitchen" planting consisting of 150 trees and shrubs with particular food value for native wildlife species. The "wildlife kitchen" area was planned and planted as part of a SNAP partnership weekend by 20 teachers from local schools. The trail and dock will serve as examples of appropriate nature area construction for access of wet natural areas for educational purposes.

Step 2: Coordinate Restoration Projects and Eco-Education Workshops Completed June 30, 1999

The SNAP ecologist assisted by the post-graduate intern will work with cooperating faculty and staff on each campus who are responsible for restoration projects on campus lands. She will coordinate the educational program of the regional teacher workshops (see below) with the campus eco-demonstration projects. The intern will assist in this process, especially in selection, preparation, and leadership of hands-on projects and field trips at model eco-demonstration sites on campus. Cooperating faculty at each institution will contribute time to the project and will not be paid from LCMR funds.

Work Completed

In September of 1998, a workshop on Prairie Seed Collecting was held in the St. Olaf prairie restoration area, which was attended by 34 teachers. Most of these teachers were involved in previous Project Grant cycles, or intended to apply for Project Grants this year. This workshop was funded by another grant. In May of 1998, 10 teachers and students from Tesseract school in Eagan as well as 15 St. Olaf students assisted with the planting of native shrubs and vines around the SNAP office on a weekend day. Volunteers assisted with the digging of holes and planting of 72 shrubs and vines.

In Fall of 1998, prairie seed was hand-collected by the SNAP ecologist, intern, and student workers from prairie plants in the St. Olaf prairie restoration area and from local prairie remnants. This seed was cleaned, labeled, and prepared for use in the seed-starting workshops that were held in February and March of 1999 at SNAP Partnership Schools and for Project Grant recipients at the Minnesota Valley National Wildlife Refuge. In addition, the intern organized a student workday to construct a demonstration brushpile for bird and small mammal habitat, and the bird feeding station was expanded to include a large platform feeder and heated water source. Plans are underway to enhance a seasonally-wet area near the office with additional native shrubs, and to develop a teacher workshop on easy-to-propagate native shrub and vine species. In the spring of

1999, SNAP staff organized a prairie seedling planting project with a class from Prairie Woods School of Northfield. 20 students, parents, and a teacher planted 1500 prairie seedlings that had been grown by the SNAP intern and student workers from seed collected the previous fall from the restoration area. In addition, numerous prairie walks were led by SNAP staff, St. Olaf student naturalists, and others.

At St. John's University, teachers participating in a School Nature Areas Pre-Conference Workshop assisted with planting 1000 prairie seedlings on a gravely knob overlooking a prairie pothole on the St. John's Arboretum. They learned about prairie history, the St. John's Arboretum, and the restoration work of St. John's.

At the Cloquet Forestry Center, a Natural Science Enrichment for Teachers (NSET) seminar was conducted in April 1998. This was an after school event consisting of two hour-long concurrent sessions, a dinner and a dinner speaker. One of the sessions focused on forest management.

The SNAP Partnership Program, funded by the Blandin Foundation, made extensive use of the St. Olaf restoration area and the Cloquet Forestry Center site during the summer and fall of 1988. The Partnership Program Institutes brought 30 teachers together at each site for a week in August and two days in October, making use of the sites to teach ecological concepts and to model techniques for using nature areas to help address the Minnesota Graduation Standards in the areas of Inquiry, Science, and Managing Resources. Teachers also worked through a model performance package ("Experimenting with Ecosystems") using the prairie ecosystem on the St. Olaf campus and the Coniferous Forest ecosystem at the Cloquet Forestry Center. Additional workshops in April and June built on these experiences in the campus natural areas throughout the Minnesota seasons. In Cloquet, the June workshop focused on planning, implementing, and maintaining a native tree and shrub planting. Teachers gained experience with a variety of types of tree and shrub materials (bare-root, balled-and-burlapped and container-grown stock) and with planting and tree-protection techniques.

RESULT 3: Three (3) eco-education workshops on each regional college campus in which K-12 teachers study regional ecology, native species enhancement, and environmental education curriculum development. Teachers will use the college eco-demonstration sites as models for their own school nature area projects. A Project Grant Conference in March, 1999 will provide training for Project Grant applicants and current Project Grant recipients.

Total LCMR Budget for Result 3:	$48,400	Balance: $ (698)
Supplies: resources for workshops	4,700	
Staff travel for workshops	600	
Communications (phone, mail, printing)	2,000	
Workshop participants room and board	9,000	
Staff and intern: salaries and benefits	32,100	
Completion Date:		June 30, 1999

Summary of Work Completed, Result 3

Eleven separate workshop events, ranging in length from several hours to five days, were funded by this appropriation and occurred between September, 1997 and June, 1999. These events were attended by over 300 teachers. Thirteen additional one- to five-day workshop events, funded primarily by other grants, were held at the St. Olaf College and Cloquet Forestry Center sites and made use of the natural areas supported by this appropriation for at least part of each program.

Step 1: Workshops in Fall, 1997 Completed December 31, 1997

In Fall, 1997, the SNAP Director and staff will offer one-day workshops at each of the three regional campuses to promote native restoration, environmental education, and the SNAP school grants program. Teachers interested in applying for grants will have an opportunity to accompany SNAP staff and regional faculty on field trips to eco-restoration projects on each campus and learn about the steps involved in a restoration project.

Work Completed

Rather than conducting one-day workshops on college campuses, we revised our plans to offer open houses at four SNAP schools. Schools in White Bear Lake, Gilbert, Thief River Falls, and Granite Falls were selected based on geographic location and projects they have conducted. The White Bear Lake project represents a small prairie planting appropriate for urban schools; the Gilbert project is creation of a pond; Thief River Falls projects included prairie and tree plantings and demonstration gardens, and Granite Falls projects include a prairie restoration, native tree arboretum, and bird nest boxes and feeding stations. We decided to offer these events at schools to provide an opportunity for teachers in the region to visit a nature area, learn of the activities of the school, to learn about SNAP, to receive assistance in planning SNAP grants, and to learn about SNAP technology opportunities. In previous SNAP workshops teachers had commented on how they would like to visit other school nature areas. The open houses were announced in our newsletter and in cover letters that were sent with the grant applications.

Open houses were held in White Bear Lake and Gilbert. Teachers at the participating schools highlighted their projects and led a tour of their site. SNAP staff provided resources and answered participant questions. The other two events were canceled due to very low registration numbers. People who did attend the events that were held appreciated the opportunity to see a nature area and learn more about SNAP. We concluded that the poor attendance was probably due to busy schedules; teachers may have felt they did not have the time after school to devote to driving to a neighboring community for a short two-hour event.

Step 2: Workshops in Spring, 1998 Completed May, 31, 1998

In the Spring, 1998, two teachers from each grantee school will attend a workshop at the Minnesota Valley National Wildlife Refuge in Bloomington. The SNAP site planner, ecologist, intern and additional local consultants will provide advice to help schools revise and improve their project plans. They will supply information and materials to assist with implementation of projects. Faculty and staff at the regional centers will assist with field trips and hands-on projects using the eco-demonstration sites on campus.

Work Completed

On Friday, March 20, a 4-hour workshop on starting prairie plants from seed was held at the Minnesota Valley National Wildlife Refuge in Bloomington for Project Grant recipients. The 31 teachers at the seed-starting workshop received many materials including seeds, seedlings, planting trays, and resource materials. Teachers were instructed on cleaning seeds from mature flowers, stratifying seeds, setting up growing stations, planting, transplanting, sources of native seeds, planting seedlings outside, and record-keeping and inquiry activities.

The following day, a Project Grants Conference was held at the Refuge. All Project Grant applicants were invited to attend this conference, even if their application was rejected. Participants at the March 1998 conference received a variety of resources to assist them in improving upon their projects. Concurrent sessions were offered by teachers who had conducted successful project grants in the past. One session focused on student involvement in creating nature areas in which the teacher and his students planned and implemented the planting of a 2.5 acre prairie; trees, shrubs, and vines on another portion of their school grounds; and emergent pond vegetation in a holding pond. Another concurrent session addressed planting an urban prairie garden and the third session focused on planting native shrubs and vines as food and shelter for birds and other wildlife. A panel of growers from three native plant nurseries discussed their products, the importance of planting native species, and guidelines for ordering and handling plant materials. 35 teachers attended the conference, representing 19 of the 31 Project Grant schools for 1998-99.

We decided to offer one joint spring workshop in the metro area rather than at three regional centers to give participants more opportunities to network among themselves and with resource people. A hotel allowance was offered to participants from over 100 miles from the conference to help defray expenses. Lunch and refreshments were provided.

Step 3. Workshops in Summer, 1998 Completion August 31, 1998

In summer, 1998, SNAP staff assisted by the post-graduate intern, local natural resource consultants, and environmental educators will offer a five-day intensive ecology and environmental education workshop for two teachers from each grantee school. Basic ecology, environmental education, and curriculum development will be covered in the workshop. Teachers from each school will have opportunity to develop curriculum incorporating student activities and projects in their nature area. SNAP will pay for site development resource materials, curriculum resources, workshop supplies, field trips, and room and board for teachers to attend these workshops.

Work Completed

A week-long environmental education institute was conducted in July 1998 at the Wolf Ridge Environmental Learning Center. Two teachers from each Project Grant school were invited to attend. Forty-two teachers attended the week which included sessions on trail site surveys, trail design, managing the human impact, forest ecology, foundations of environmental education, population education, music and EE, outdoor teaching techniques, animal activities, plant activities, cultural activities, aquatic activities, curriculum resources, and building electronic collaborations.

Step 4. Workshops in Fall 1998 and Spring and Summer, 1999 Completion June 30, 1999

We plan to offer additional workshops, besides the week-long institute, in spring, summer, and fall of 1998, and spring and summer of 1999, to provide continuing education opportunities to grant recipients. We are planning to hold two of these workshops at the Cloquet Forestry Center and one workshop at St. John's University. Funding for some of the workshops will come from other grants. A Project Grant Conference, in March, 1999, will provide training for Project Grant applicants and current Project Grant recipients. It will be held at the Minnesota Valley National Wildlife Refuge in Bloomington and will include a half-day workshop on starting prairie seedlings in the classroom followed by a full day conference focused on providing assistance to improve Project Grants, highlighting successful projects, and education about using native plant species. SNAP staff and teachers from Project schools will make presentations at MSTA conferences to highlight successful projects and assist people with developing habitat restoration projects.

Work Completed

A Natural Science Enrichment for Teachers (NSET) Seminar was held at the Cloquet Forestry Center for northern Minnesota teachers, including Project Grant recipients. Twenty-four teachers attended this four-hour after-school workshop with two concurrent sessions, a dinner, and an after dinner speaker. The workshop topics included "Insects as Phenological Indicators", "Art as an Investigation Tool", "Sharing the Wonder of Birds with Kids", "Did Spring Snap" (an internet phenology project), and "Forest Management--What Works". The dinner speaker's topic was "Birds of the Boreal Forest". NSET was funded by a different grant.

A School Nature Areas Pre-Conference Workshop was held at St. John's University in Collegeville in conjunction with the Ninth Annual Minnesota EE Conference. The workshop had three strands: curriculum connections, Minnesota biomes, and nature area access/interpretation. Most of the presenters were from SNAP schools and shared information on the work they conducted at their own sites. Bill Hammond, a nationally known environmental educator who has had wonderful success in working with students to conduct action projects on behalf of the environment, was the keynote speaker. The workshop was partially funded by a different grant. Fifty teachers and community members attended the workshop; eighteen people were presenters. Attendees assisted with the planting of 1000 prairie seedlings on a portion of the St. John's eco-demonstration site. This component of the workshop was funded through LCMR.

A session on Planning a Successful Schoolyard Project was offered at the Minnesota Science Teachers' Association (MSTA) October conference at Arlington High School in St. Paul. Ten teachers participated. Information on the 1999-2000 SNAP Project Grants was also provided.

A Seed-Starting Workshop and Project Grants Conference (similar to those conducted in March, 1998 and described above) were conducted at the Minnesota Valley National Wildlife Refuge visitors' center on March 26 and 27. Sixteen teachers attended the Seed Starting Workshop, which was featured in a segment of the Minnesota State Lottery Environmental Journal. 29 teachers (and one student) representing 20 schools attended the Project Grants conference. The student in attendance, representing Roseville High School, had participated in a SNAP project when he was in middle school, and had planned and written a successful 1999-2000 Project Grant now that he is a high school junior.

A one-day conference entitled *School Nature Area Management: Challenges and Tools* was held at St. Olaf College on Tuesday, June 29. The purpose of this conference was to provide assistance to teachers and grounds personnel responsible for the care and maintenance of natural areas and restoration projects on school grounds. Since this often involves control of exotic plant species, participants were provided with copies of the Wisconsin Manual of Control Recommendations for Ecologically Invasive Plants. Topics included prairie burns, trail corridor management, and control of exotic species, and speakers were drawn from St. Olaf College and the DNR. Afternoon sessions featured field trips to local natural areas where participants could observe exotic species and a variety of management practices. The conference was attended by 50 people; 30 were teachers, and the rest were primarily from city and county government, local environmental organizations, or watershed districts.

RESULT 4: *Twenty-five (25) additional K-12 projects* in urban and rural school nature areas to augment native plant species, enhance wildlife habitat, improve student access, and promote hands-on environmental education.

Total LCMR Budget for Result 4:	$39,400	Balance: $993
Grants to 25 schools for site supplies	20,600	
Communications (mail, phone, printing)	500	
Staff and intern: salaries and benefits	16,000	
Consultants (reviewers, school consult.	2,300	

Completion Date: June 30, 1999

Summary of Work Completed, Result 4

1999-2000 SNAP Project Grants Applications were distributed in Fall, 1998. Fifty-four applications were received and read by five outside evaluators and two SNAP staff. Thirty-two projects were selected for awards; all applicants received written comments and were invited to the SNAP Project Grant Conference in March of 1999. Nineteen schools sent representatives. Awardees included 4 urban schools, 15 suburban schools, and 12 rural schools. After submitting any necessary revisions, checks for 75% of the award amount were sent to 31 schools; one school declined the award due to changing circumstances involving the availability of the site. The SNAP Ecologist /Project Grant Administrator will monitor projects and provide phone consultation and support as necessary. Payment of the final 25% of awards will be made from funds provided by the Blandin Foundation of Grand Rapids, Minnesota.

Stage 1. Program Publicity and Grant Applications. Completed December 31,1998

SNAP staff will prepare and mail program information and grant applications to all Minnesota K-12 schools in Fall, 1998. Staff will promote the program in fall teacher workshops, press releases to newspapers, articles in newsletters, and presentations at conventions such as MSTA. The technology specialist will make grant applications and program information available on the SNAP Web Page. Schools will apply in December.

Work Completed

SNAP Project Grant applications were mailed to all Minnesota K-12 public and private schools. Press releases were sent to newspapers throughout the state and to a variety of newsletters. The applications were also announced on several internet listservs and on the SNAP Web Page. SNAP Project Grants were the focus of workshops conducted at the October MSTA conference in St. Paul, and the November Natural Science Enrichment for Teachers (NSET) program at St. Olaf. The deadline for receipt of Project Grant applications was December 11, 1998. Fifty-four applications were received.

Stage 2: Selection of Schools and Final Approval of Projects. Completed: March 31, 1999

SNAP staff will oversee the proposal review process. To maintain equity in awards, an outside panel will advise the SNAP staff in reviewing and ranking school proposals. The outside panel will represent, as fairly as possible, diverse educational, geographical and natural resource perspectives relevant to the school grants program. Reviewers will write comments on proposals to assist schools in improving their projects. The reviewers will be paid as consultants.

The SNAP staff will make the final selection of schools based on panel rankings and considerations of geographical, urban/rural and primary/secondary balance. Twenty-five (25) schools will be selected to receive project grants for enhancement of native plants, wildlife, and students access. An initial payment of 75% of the grant award will be sent to the school when the project work program is approved.

Work Completed

Five outside reviewers were selected as paid consultants to review the Project Grants. They are Bonnie Erpelding, a DNR regional wildlife specialist from Rochester (currently on child-care leave), Harriet Mason, a botanist from St. Peter, Janet Larson, a consulting ecologist from Bloomington who works with Tree Trust, Nancy Albrecht, a botanist from Bloomington who works for the Friends of the Minnesota Valley National Wildlife Refuge, and Heidi Muller, a biology teacher from Northfield. Each reviewer read up to 30 grant proposals and wrote comments and suggestions for improving projects. Two SNAP staff also reviewed applications and wrote comments. The final selection of 32 grants was made in February. Schools were notified early in March, and 16 were asked to submit revised plans for approval before checks were issued. Assitance in revising plans was provided by SNAP staff as needed. One school declined the award due to a change in availablity of the site. The projects selected are listed below:

BRAINERD, Riverside Elementary School students will plant native trees and shrubs in a nearby arboretum.

BUFFALO High School plans to restore four acres of school ground into prairie.

BURNSVILLE, Metcalf Junior High will attract wildlife with a prairie planting and the addition of shrubs to complete their Link Landscape Project.

CHISHOLM Middle School students will plant a butterfly and humming bird garden along the shoreline of Longyear Lake.

EDEN PRAIRIE, Central Kindergarten Center will add prairie forbs and grasses as well as woodland varieties to their existing Peace Garden.

EDINA, Creek Valley Elementary is going to develop an outdoor learning area on their school grounds with native plantings.

GRAND RAPIDS, Murphy Elementary School students will research and plan native habitat enhancement for their "Wild Side" project.

HAMPTON, Saint Mathias School will develop a wildlife sanctuary on their school grounds.

HOPKINS, The Blake School students will plant native plants to attract butterflies and birds to their school grounds.

IRON, Cherry School is adding bird-attracting plants to their school forest habitat.

LAKEVILLE, Christina Huddleston Elementary School will add 100 square feet to their current prairie planting, which was also funded by a 1998-99 SNAP grant.

LITTLE CANADA, Roseville Area Middle School will plant native shrubs, grasses, and wild flowers to attract wildlife to their school site.

MAHTOMEDI, O.H. Anderson Elementary School students will plant trees and shrubs to attract and feed birds at their site.

MAPLE GROVE, Basswood Elementary will create a prairie planting and add native woody shrubs to the Basswood School Nature Area.

MAPLE GROVE, Weaver Lake Elememtary will enhance their nature center with native tree and wildflower plantings.

MINNEAPOLIS, Anne Sullivan Communication Center will plant native shrubs, perennials, and re-seeding annuals in a courtyard.

MINNEAPOLIS, Armatage Community School will turn their courtyard into a restored prairie area.

NEW LONDON, Prairie Woods Elementary will enhance diversity at their school nature area by adding more species to their restored native prairie.

NORTHFIELD, Prairie Creek Community School will add a pond, a brush pile and native vegetation to their site to attract wildlife.

PARKERS PRAIRIE Public Schools will enhance their school courtyard with a butterfly garden, native grass area, and a shrub planting.
PLYMOUTH, Wayzata High School will add diversity to their current prairie restoration.
PRIOR LAKE, Five Hawks Elementary will slow erosion on a slope near the playground with native plantings.
REMER, Northland High School students will transform five acres of school grounds into a native prairie study area.
ROCHESTER, Pinewood Elementary School will plant shrubs and forbs near the school to attract wildlife to the grounds.
ROSEVILLE Area High School will create a butterfly garden with this *student coordinated* (!) project.
SHAKOPEE, Sweeny Elementary School will remove invasive buck thorn plants from their nature area.
SAINT PAUL, Linwood A+ Elementary students will plant trees shrubs, and butterfly-attracting plants near their new playground.
SAINT PAUL, Mounds Park All-Nations School will re-establish two patches of prairie.
SWANVILLE Molly Springs Alc students will plant native shrubs, wildflowers in their nature area, as well as constructing bird houses for the site.
THIEF RIVER FALLS, Challenger Elementary School will add bird houses to their school site.
WALKER-HACKENSACK-AKELEY District students will create a butterfly garden and plant native shrubs on their school grounds.

Stage 3: Conduct School Projects. Completed by June 30, 2000

Most schools receiving Project Grants do much of the work on their project in the first spring of their grant. During the first spring, SNAP staff will provide mainly off-site consultation to schools as they pursue their projects. Local consultants will be hired by some schools and they will, provide most of their service during the first spring as schools refine and begin their projects. The SNAP ecologist and intern will advise about existing vegetation, selection of native plants, and proper planting procedures. The final 25% of funds will be paid to schools from a different funding source.

Work Completed

For most schools, projects are "on hold" for the summer. Some have initiated or completed a spring planting project, but many are in the planning stage, and will resume work on projects during the next school year. SNAP will remain in contact with Project schools through the SNAPshots Newsletter, through workshops, through the email listserve, through individual email, and by phone and personal visit. After eight years of working with schools, SNAP has a reputation as a resource, and we are frequently contacted when schools need help with projects. Often we can help them; if not, we often know who can, and make referrals to other organizations or persons. We hope to be able to provide assistance to schools in this way as long as it is needed.

V. DISSEMINATION: To inform and inspire other schools and to broaden the impact of the school grants program, descriptions of projects will be disseminated as widely as possible to educators and conservationists. Project descriptions will be added to ***SNAP Environmental Action Grants,*** a booklet with summaries of all SNAP-funded projects. These booklets will be distributed to all interested and participating schools in Minnesota. The SNAP technology specialist will add school project descriptions to our Web Page so readers can peruse information and make contacts with individual schools. Project information will be posted on SNAPnet, a listserv with 300+ subscribers interested in school nature areas.

Project Coordinators will be able to present their work to other interested teachers at SNAP workshops and at state and regional teacher conferences. Selected school projects will be featured in the SNAP newsletter with a circulation to 1250 teachers, conservationists and environmental educators.

The SNAP Advisory Board consisting of 22 educators and natural resource professionals will distribute information about the program through their institutions and organizations.

LCMR funds will cover publication and distribution of the project booklet, part of the costs of the newspaper column, and part of the expenses of the Advisory Board meetings.

Work Completed

School project descriptions are being written and updated by the SNAP intern and SNAP staff. The technology specialist will add these to our Web Page. They will also be added to the **SNAP Environmental Action Grants** booklet. Information about projects will also be included in the SNAP Shots newsletter.

We had planned to hire Paul Gruchow to write weekly newspaper columns highlighting school nature areas. Paul, however, took a full-time position at Concordia College in Moorhead and does not have time to do the columns. We are exploring the possibility of revising the project grant descriptions that we are writing and submitting these to local newspapers. The money saved on hiring Gruchow will still be spent on dissemination, including expanding the size of the SNAP Shots newsletter to include more school information, and printing and mailing the newsletter.

Two presentations entitled, "From Tallgrass Prairie to Butterfly Garden: Using Minnesota Native Plants to Improve Schoolyard Habitats" were made at a Monarchs in the Classroom workshop in the summer, 1998. About 30 teachers attended each presentation and the Project Grants were highlighted. SNAP also had an exhibit at the 9th Annual Minnesota EE Conference in June, 1998, at which grant information was distributed. Teachers from throughout Minnesota attended these workshops and conferences.

SNAP staff disseminated information on the program at the October MSTA conference at Arlington High School in St. Paul and at the November NSET (Natural Science Enrichment for Teachers) seminar at St. Olaf College. As schools finish their projects and submit their Interim and Final reports, the intern and technology specialist are working to update project descriptions so that they can be posted to the SNAP website. Teachers from Project schools are also being encouraged (and recruited) to present the results of their work in a variety of ways, including newsletter articles and presentations at state conferences such as MSTA and SNAP-sponsored events. Several have indicated in their Final Project Grant Reports that they have made presentations (including presentaions to school boards, teacher's meetings, workshops, etc.) been featured on local cable TV, or have otherwise presented their work.

VI. CONTEXT:

A. Significance.

The significance of this project lies in combining ecological enhancement and ecological education through college-school partnerships. Enhancement projects will benefit native vegetation and wildlife habitat on college campuses and school grounds, while creating opportunities for teachers to study Minnesota's varied ecology and learn methods of native species enhancement.

The proposed project multiplies out-of-classroom educational opportunities for K-16 students, identified as a priority in *Greenprint for Minnesota,* by involving college students and faculty in campus eco-restoration projects while training K-12 teachers to enhance their school yards with native plantings. Promoting ecological education through ecological action, the project differs from other teacher training initiatives involving higher education and from other out-of-classroom opportunities at nature centers, RELCs, state parks, zoos and museums by engaging participants in land-use decisions, native vegetation enhancement, on-going environmental stewardship and local community ownership. Similar in some respects to the DNR School Forest Program, with which SNAP cooperates, the proposed project differs from it by including nature areas of any biotic type, large or small, in any part of the state, urban or rural.

B. Time: All results described in this proposal will be completed by June 30, 1999.

C. Budget Context:

The School Nature Area Project has assisted Minnesota schools since 1992 through the support of the C.K. Blandin Foundation, Environmental Protection Agency, Hughes Medical Institute and Western Regional Environmental Education Council. These funders support the SNAP *partnership* program. This program starts a new cycle of 15 *partnership* schools each year to work intensively with SNAP for 1 to 3 years. We anticipate continuation of the partnership program for the foreseeable future.

In 1995-97, SNAP added the LCMR-funded school *project* program. Through a statewide competition, this program funds 25 *project* schools on a two year cycle to enhance native vegetation and wildlife habitat on school grounds. In 1997-99, we will enrich this program by incorporating regional college centers sponsoring eco-education workshops for *project* school teachers.

Appendix: SNAP Web Page Documents

including

1998-99 Project Grant Pages

http://www.stolaf.edu/other/snap

Welcome
Newsletter
SNAP Schools
SNAPnet

SNAP

Grants
Search SNAP
Resource Room
CyberSeasons

School Nature Area Project

SNAP's Mission: The School Nature Area Project works as a partner with Minnesota schools and communities, using local nature areas to further environmental education and benefit the environment through grants, training, and resource support.

SNAP's online resources are open to **all** those interested in environmental education and utilizing their schoolyards as a meaningful part of the school experience. Please visit the SNAP website. We hope you find our site a valuable resource. Drop us a note.

For further information, visit our website, call 507-646-3599, or write us at:

School Nature Area Project
St. Olaf College
1520 St. Olaf Avenue
Northfield, MN 55057

SNAP Web Site

http://www.stolaf.edu/other/snap

The Website of the School Nature Area Project seeks to provide resources for teachers interested in nature area work and/or environmental education.

- From our Welcome page, meet us and order available SNAP resources;
- SNAP Shots is our newsletter containing informational articles, book and resource reviews, announcements about SNAP and upcoming events;
- SNAP Schools is a directory and description of all the schools that have received a Partnership or Project Grant. Get an idea what other schools are doing.
- SNAPnet provides links to EE Internet-supported projects, EE related websites and online educational resources;
- Grants includes information about our upcoming round of grants and grant application forms;
- Search SNAP provides the opportunity to search the entire SNAP website. If you are interested in butterfly gardens, searching for butterfly gardens might give you a newsletter article and a listing of schools that are working to create or integrate a butterfly garden at their site.
- Resource Room is designed specifically for SNAP Partnership teachers containing information useful to the SNAP Partnership
- CyberSeasons contains SNAP's online projects designed to bring together the rich resources of the outdoor schoolyard with collaborative oipportunites made available through online technology.

SNAP net

Kids and nature areas connected through technology.

http://www.stolaf.edu/other/snap/SNAPnet.html

SNAPnet provides links to related websites. It is our goal to connect you with all the resources and tools you might need to create an exciting learning environment for your students in your schoolyard. From SNAPnet, you will find Internet-Supported Projects, websites committed to environmental education, educational resources, and connections to SNAP partners.

SNAP Listserv

SNAP maintains an electronic mailing list. Use our Listserv to ask questions about a project you are working on, make a comment about an experience you had with your students in your nature area, respond to other's questions or comments, or read an announcement about an upcoming event or new resource available.

To subscribe to the SNAP Listserv, send an e-mail message to:

snap-request@stolaf.edu

In the body of the message, write the word-

subscribe

We look forward to welcoming you to the SNAP community.

To particpate in a e-mail discussion with the whole list, address your message to

snap@stolaf.edu

All members on the list will receive your post.

Backus Elementary School
P.O. Box 47

Backus, MN 56435

218-947-3421

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 16 acres on the shore of Pine Mountain Lake

Coordinator:

- Diane Norlin, 5th grade teacher
dnorlin@prbackus.k12.mn.us

Projects:

- Nesting and feeding structures

Description:

Backus Elementary School lies just one block from Pine Mountain Lake. A sixteen acre park on the lakeshore has potential to become a high quality outdoor classroom. The community realizes this and has undertaken a Waterfront Revitalization Project, which promotes expanding the teaching potential of the park for the elementary school.

The fifth graders at Backus Elementary do a unit on birds, and that sparked student interest in feeding them. Four bird feeders were made, using designs in Woodworking for Wildlife, Making Birdhouses & Feeders, Birdfeeders-Shelters & Baths, and Landscaping for Wildlife books. A parent volunteer from the DNR helped place the feeders, which were filled with sunflower seeds, in the park. The school still plans to add suet feeders, nesting platforms, and wildlife-attracting shrubs to the park.

Return to: SNAP Project Schools | SNAP Home Page
Last Update: May 3, 1999

Blue Earth Area High School
1125 Highway 169 North
Blue Earth, MN 56013
507-526-3201

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 5 acres on school grounds

Coordinator:

- Dan Gilpin, Ecology teacher
  dgilpin@blueearth.k12.mn.us

Projects:

- Prairie planting

Major Cooperators:

- City of Blue Earth
- Wal-Mart
- Roger Fletcher
- Minnesota DNR

Consultants:

- Randy L. Schindle, DNR
- Paul Schroeder, BRW, Inc.

Description:

Blue Earth Area High school had a 33 acre campus which was formerly farmland. The city sold some of it, but together with the school, desired to develop an on-site, outdoor classroom there. Teachers and students, along with the many consultants and community volunteers decided to plant many native shrubs, trees, grasses, and forbs. Eventually, oak-savanna, oak-hickory, maple-linden, mixed floodplain, and river-lake margin habitats will be present around the school.

This SNAP Project Grant aided in the preparation and seeding of 5 acres of prairie, and the school had generous donations from local businesses and organizations so they could purchase native trees and shrubs for the land.

Return to: SNAP Project Schools | SNAP Home Page
Last Update: May 3, 1999

Christina Huddleston Elementary School
9569 175th Street West
Lakeville, MN 55044
651-469-7282

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 100 square feet on school grounds

Coordinator:

- Christopher Matzke, 4th grade teacher

Projects:

- Native plant garden

Major Cooperators:

- Local Garden Club

Description:

Because students at Christina Huddleston have participated in Journey North, Monarch in the Classroom, and the Foss Science Curriculum, the school decided to enhance its grounds by creating an outdoor classroom. A plot was selected which was away from culverts and sodded areas on the property.

The area needed sod removal in preparation for the plantings. Parent volunteers removed the sod on a Saturday. The following Monday, first and fourth graders, with Garden club volunteers, planted the native prairie plants (purchased from Prairie Moon Nursery). A Garden Club volunteer completed summer maintenance. A wood structure as well as five birdhouses have been added to the plot. The bird houses were built by the local boyscout troop.

Return to: SNAP Project Schools | SNAP Home Page
Last Update: May 3, 1999

Blue Earth Area High School
1125 Highway 169 North
Blue Earth, MN 56013
507-526-3201

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 5 acres on school grounds

Coordinator:

- Dan Gilpin, Ecology teacher
  dgilpin@blueearth.k12.mn.us

Projects:

- Prairie planting

Major Cooperators:

- City of Blue Earth
- Wal-Mart
- Roger Fletcher
- Minnesota DNR

Consultants:

- Randy L. Schindle, DNR
- Paul Schroeder, BRW, Inc.

Description:

Blue Earth Area High school had a 33 acre campus which was formerly farmland. The city sold some of it, but together with the school, desired to develop an on-site, outdoor classroom there. Teachers and students, along with the many consultants and community volunteers decided to plant many native shrubs, trees, grasses, and forbs. Eventually, oak-savanna, oak-hickory, maple-linden, mixed floodplain, and river-lake margin habitats will be present around the school.

This SNAP Project Grant aided in the preparation and seeding of 5 acres of prairie, and the school had generous donations from local businesses and organizations so they could purchase native trees and shrubs for the land.

Return to: SNAP Project Schools | SNAP Home Page
Last Update: May 3, 1999

Christa McAuliffe Elementary
1601 West 12th Street
Hastings, MN 55033
612-438-0862

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 24,000 square feet on school grounds

Coordinator:

- Linda Bindman, 3rd grade teacher, Nancy Danneker, MAG teacher

Projects:

- Wildflower and shrub planting

Major Cooperators:

- Outback Nursery
- Native Heritage Landscapes
- Landscape Alternatives
- Hastings Garden Club
- Boy Scout Troops

Consultants:

- Sonja Mossman

Description:

Christina McAuliffe Elementary received at 1997-98 SNAP Project Grant, as well. With that, they planted trees and shrubs to create an oak savanna woodland area. This grant improved that area, making it more accessible. It also facilitated the addition of native grasses and forbs to their grassland area.

Students in the MAG (multi-age group) planted a variety of native grasses and flowers indoors in 1997. On planting day in May of 1998, MAG and third grade students, along with parent volunteers, planted grass seeds and over 500 wildflowers and grass plants in the native grassland area. The MAG students also planted the plants that they grew the spring before! By autumn, Brown Eyed Susans were in full bloom and Side Oats Grama, Indian Grass and other wildflowers appeared. The school has heard many positive comments from parents, children and staff, who walk through their prairie every day.

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- Como Park Senior High
  740 West Rose Avenue
  Saint Paul, MN 55117
  651-293-8800

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 2,000 square feet on school grounds

Coordinator:

- Sue Gross-Macemon, Healthstart Clinic Coordinator

Projects:

- Peace Garden with native plants

Consultants:

- Shelley Shreffler, Natural Resources Program Manager

Description:

Como Park Senior High School wanted to establish a natural habitat area which symbolized the students' and commuity's commitment to peace on the school grounds. They planned to transform a lawn into a ecological resource which would symbolize peace through its design, beauty and natural sounds. To prepare the area, newspaper will be placed on the area and covered with woodchips to kill the grass. Students from both the elementary and senior high schools will participate in planting day. Plants selected for the area include: Pussytoes, Black-Eyed Susans, Prairie Smoke, Golden Alexander, Purple Prairie Clover, Lead Plant, and Rough Blazingstar. Many others will be included, as well.

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Eisenhower Elementary
1001 State Highway 7
Hopkins, MN 55305
612-988-4300

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- Courtyard on school grounds

Coordinator:

- Sue Price, teacher sue_pricek@hopkins.k12.mn.us

Projects:

- Wetland habitat

Major Cooperators:

- Wildlife Nurseries
- Country Wetlands Nursery
- Landscape Alternatives Inc.
- J&J Transplant Aquatic Nursery
- U of MN Landscape Architecture Dept.

Consultant:

- Cheryl Bauer

Description:

Students, parents and teachers have worked hard to create an outdoor classroom at Eisenhower, and urban school located on a high-traffic thoroughfare. The nature area, located in a triangular courtyard, holds six different habitats reflecting Minnesota: a prairie, a north woods, spring ephemerals, deep shade garden, perennial bed, and a children's garden. This SNAP grant aided in the addition of a wetland habitat to the outdoor classroom, to broaden the diversity of natural populations of plants and animals in the classroom.

In April and May of 1998, twenty-three Eisenhower fourth, fifth, and sixth graders met as a task force to develop a plan for the wetland. They tested the soil, discussed placement of the demonstration pond, and drainage and sunlight in areas of the courtyard. The final design was a blend of two student designs, and in mid-May, district maintenance workers dug a 6' by 14' hole for the pond. The liner, rock and water were put into place, with student, parents and staff participation the this exciting adventure. They also installed a pump, but left the pond to stabilize over the summer. The school hopes to add plants to the pond this spring, creating a bog on one side.

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Franklin Music Magnet School
690 Jackson Street
Saint Paul, MN 55101
651-293-8620

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- School grounds

Coordinator:

- Polly Williamson, Science Teacher
  vicdakota@msn.com

Project:

- Butterfly garden with native plants

Major Cooperators:

- Boys and Girls Club of St. Paul
- Boy Scouts

Consultant:

- Cheryl Bauer

Description:

As a part of the new science program at Franklin, teachers decided to plant a dry, highland prairie garden. Students studied butterflies and insects as part of their science and regular classes. The students have been busy studying the prairie's flora and fauna in preparation for their butterfly garden. Since Franklin's site has particularly heavy soil with clay in it, plants chosen for the garden included: Pasque Flower, Prairie Smoke, Pale Purple Coneflower, Coreopsis, Spiderwort, Purple Prairie Clover, and Compass Plant. The site was prepared with Round Up herbicide and the students were involved in planting day. Wood chips were placed around the plants to keep out the weeds.

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Horace May Elementary School
201 Fifteenth Street
Bemidji, MN 56601
218-759-3240

SNAP
School Nature Area Project

1998-1999 Project School

Site:
- One acre on school grounds

Coordinator:
- Arlane Mullranin, teacher

Project:
- Tree planting and moving

Major Cooperator:
- Minnesota Conservation Crew

Description:

Horace May Elementary School is working to reestablish a boreal forest on part of their property as part of their larger natural Heritage Plan. The Plan's goal is to create opportunities for students to experience broadleaf forest, boreal forest, and pine savanna habitats on the school grounds.

Septic system expansion at the school necessitated a number of spruce, balsam, and red pines which were planted in 1976 to be removed. The school's Grounds Development Committee incorporated them into various parts of their plan, such as the boreal forest. Before moving the trees, the Minnesota Conservation Crew and parent volunteers aided in the removal of non-native caragana in the area. When enough of the caragana was removed, large equipment was necessary to move the eight to fifteen foot trees from their original location to the boreal forestt area. Students in the second, third, and fourth grades watered the transplanted trees. To add more to their boreal forest, Horace May plans to order and plant native boreal seedlings such as tamaracks, birches, and firs this spring. Students and parent volunteers will water the trees throughout the summer.

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Hugo Elementary School

14895 Francesca Avenue North
Hugo, MN 55038
612-653-2798

SNAP
School Nature Area Project

1998-1999 Project School

Site:	Coordinator:
• 400 square feet on school grounds	• Sandy Harthan
Project:	**Major Cooperator:**
• Butterfly garden	• PTO

Description:

Second graders at Hugo Elementary study butterflies and their habitat as part of their science curriculum. The students also take part in Journey North's Monarch Butterfly program over the internet. Their interest was sparked, and they began searching for them on the playground during recess. When sightings were low, the students felt that a butterfly garden would attract butterflies by giving them more nectar sources.

To prepare the school grounds, Round Up herbicide will be sprayed on the area. Then, they will till the area, plants will be inserted and marked, and the garden will be mulched to keep weeds down. Parent volunteers will water over the summer, and the second graders will watch changes in the garden throughout the fall, especially noting the presence of Monarchs.

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Jefferson School
1268 West Fifth Street
Winona, MN 55987
507-454-9560

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 6 acres of Prairie Island Nature Site

Coordinator:

- Ann Rethlefsen, teacher
  arethlef@jeffelem.luminet.net

Projects:

- Prairie Restoration
- Bird houses

Major Cooperator:

- City of Winona

Description:

Students and staff at Jefferson Elementary School selected Prairie Island Nature Trail in Winona as its target area for enhancement. The site is within walking distance of the school, and already includes a deer park, floodplain forest, marsh, river backwaters, pine plantation, and a sand acre site. The sand prairie is intended to be restored with the assistance of youth and school groups in the community, so this was an appropriate act for Jefferson!

A parent volunteer helped students build twenty bluebird houses for the site. More volunteers helped with the building of ten wood duck houses, and they were placed in the Mississippi backwaters adjacent to the nature trail. A DNR volunteer also helped with this task. Jefferson decided to plant the prairie right after the first frost, because the area was scheduled to be burnt during the summer months. Planting day went smoothly, and the children are excited about the growing prairie.

The school has also vowed to keep the Prairie Island Nature Site clean, and many third, fourth, and fifth grade classes make trips to the area specifically to clean up debris.

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Language Immersion School
3730 Toledo Avenue North
Robbinsdale, MN 55429
612-521-6927

SNAP
School Nature Area Project

1998-1999 Project School

Site:
- 20,000 square feet on school grounds

Coordinator:
- Gwenda Bottoli, 4th grade teacher

Project:
- Development of a mini-arboretum

Major Cooperator:
- Green Team

Description:

With this SNAP grant, the Language Immersion School hopes to convert 19,800 square feet of lawn into a mini-arboretum, which will include species of plants native to Minnesota. Students at the school have been involved with the entire project. Fourth graders investigated materials for the area's walkways. Students also decided which native shrubs to plant, finding specific information on the size, soil and light needs, and the wildlife the shrubs attract. The students will also determine the location of the shrubs they will plant. Planting is scheduled for May, 1999, but the area has already been measured and marked by the students. After the sod was removed, students prepared the soil with peat and compost, and spread woodchips over the area.

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Marshall County Central Schools

Box 189
Newfolden, MN 56738
218-874-7225

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- Four acres on school grounds

Coordinator:

- Jim Pederson, Senior High Science Teacher
  jimpeder@newfolden.k12.mn.us

Project:

- Native shrub and prairie planting

Major Cooperators:

- DNR Assistant Area Wildlife Manager
- Oscar Carlson farm

Description:

Marshall County Central Schools desired to remove the exotics from an overgrown plot of land north of the high school. They wanted to seed the area with native forbs and grasses, and add native shrubs to the area. With community and parent volunteers, site preparation and planting went smoothly in this damp, grassy area.

Members of the Newfolden Fire Department burned the area early in the spring to remove the brush. The area was treated with Round Up herbicide to kill off the non-natives still growing. On planting day, students, teachers, and other volunteers scattered seed, and stomped it into the ground. Young chokecherries, dogwoods, and willows were planted throughout the site a couple of weeks later, and the school is awaiting the arrival of their seeded plants this spring.

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McGuire Junior High School
21220 Holyoke Avenue
Lakeville, MN 55044
612-469-7202

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 8200 square feet on school grounds

Coordinator:

- Georgie Molitor, Science Teacher

Project:

- Butterfly and water gardens

Description:

Students in McGuire's Science Club desired to enhance the perimeter of their school building with several environmental study stations. During a building renovation project, most existing vegetation was destroyed around the building, and the topography was leveled. Students wanted access to a nature area from which they could learn and observe, so they developed an environmental improvement plan, to be implemented in sizable phases. This SNAP Project Grant aided in phase two of the project: establishment of butterfly and water gardens on campus.

On McGuire's Habitat Day, 240 students worked on the initial excavation and layout work of the water catch. Teachers and parents volunteered to help with the heavy equipment, and soon the group dug the holes, mixed the soil, and completed the final grading of the shrub planting and pond area. The following fall, a 4800 square foot area of grass was killed and seventh graders acted as buffalo as they seeded the area with a mixture of 64 fobs and 14 grasses native to the Lakeville area. Over one hundred forbs were planted into the area later in the same day, to increase the diversity of prairie plants.

McGuire students will utilize their new nature area for many scientific and inquiry-based activities, as well as a major journaling activity in the coming years. Although the classroom projects will focus on changes as these areas get established, individual projects will certainly branch out from that.

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New Prague Middle School
405 First Avenue Northwest
New Prague, MN 56071
612-758-2586

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 11 acres on school grounds

Coordinators:

- Steve Bruchman, Community Education
- Jodi Prchal, teacher/student council advisor

Project:

- Tree planting

Major Cooperators:

- City of New Prague
- Joe Malinski Farm
- Don Mushitz Nursery

Description:

New Prague high school and elementary school border a "Living Lab" for this community. It is already used for environmental and ecological studies by students at all levels. The site is eleven acres, and contains a wetland, paths, a floating dock, an overlook deck, and a picnic shelter. Native trees and wildflowers were already planted in the area. Part of these plantings includes a Wildlife Kitchen with hundreds of plum, cherry, ash, hackberry, dogwood and highbush cranberry trees. This SNAP grant helped to plant a Big Woods area on the site. The schools received bur oak, walnut, butternut, red oak, and hackberry trees from city and private donations. The coordinators ordered Green Ash, Hard Maple, American Linden, and Hackberry trees from a local nursery. All trees will be planted in the area this spring.

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North Campus School
5040 Bald Eagle Avenue
White Bear Lake, MN 55110
651-543-2600

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 3000 square feet on school grounds

Coordinator:

- John Wachlarowicz, Special Education teacher

Project:

- Prairie garden

Consultant:

- Erik Olson, Tennant Landscaping/ Outback Nursery

Description:

North Campus School already has some prairie restoration on their site, but with this SNAP grant, they will add to that area, and develop a prairie demonstration area. They hope to include plants such as: Prairie Dock, Purple Coneflower, Stiff Goldenrod, Prairie Smoke, Wild Rose, Wild Indigo, Prairie Onion, and Indian and Switch grasses. Students have been active in the planning of the nature area-the grant was written from an communications class' designs.

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Orchard Lake Elementary School
16531 Klamath Trail
Lakeville, MN 55044
612-469-7322

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 180 square feet on school grounds

Coordinator:

- Lynn Lahti-Hommeyer, 3rd grade teacher

Project:

- Prairie garden

Major Cooperator:

- Parent Teacher Organization

Description:

Orchard Lake Elementary's prairie Garden is building a solid foundation. The garden started in the 1996-97 school year with funds provided by the PTO. Unfortunately, it suffered greatly from the summer drought of 1997. The garden was revived in the spring of 1998 with the funds from this SNAP Project Grant. Third graders collected seeds from their existing garden, and planted the seedlings which they grew from the seeds the next spring. What an exciting way to restore native habitat on school grounds!

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Ramsey Elementary School
15000 Nowthen Boulevard
Ramsey, MN 55303
612-506-4000

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- School grounds

Coordinator:

- Carolyn Lindstrom, teacher
  lindstrc@anoka.k12.mn.us

Projects:

- Butterfly garden

Consultant:

- Pine Cone Nursery Designer

Description:

Ramsey Elementary wished to further enhance their nature area by adding a butterfly garden and several native shrubs to the area to attract butterflies and other animals. The students are very interested in attracting butterflies to the area because they participate in a monarch migration internet activity.

The area which became the butterfly garden was sod, so it was treated with Round Up after the students marked the plot. Then, the students planted 300 native forbs in the garden area and the restored prairie area on site. They also planted thirty Prairie Rose and New Jersey Tea shrubs in their nature area.

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Sauk Centre Junior High School

903 State Road
Sauk Centre, MN 56378
320-352-2285

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- School grounds

Coordinator:

- Donna Blanchette, Science Teacher
  donna_blanchette@isd743.k12.mn.us

Project:

- Tree/shrub planting

Major Cooperator:

- City Of Sauk Centre

Description:

Sauk Centre Junior High School is located on about fifty acres, bordered partially by the Sauk River. The land is primarily sandy soil, with brome grass throughout. The teachers at the school wanted to increase the diversity of native species in the area, and to begin by adding shrubs with this SNAP grant.

Seventeen students in the Zoology/Botany class completed the planning, site preparation, planting, and follow-up maintenance for the shrub planting. They chose to plant Wild Black Cherry, White Spruce, and Green Ash trees, and Gooseberry, Sandcherry, Snowberry, and False Indigo shrubs after researching species native to the area. They dug the holes and put in the plants on planting day, they then mulched around the shrubs with wood chips donated by the city.

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Sawtooth Elementary School
PO Box 1030
Grand Marais, MN 55604
218-387-2273

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- County Community Center grounds

Coordinator:

- Ken Sheils, 5th grade teacher

Project:

- Pond development and marsh plant plantings

Major Cooperator:

- Cook County Community Center
- 4-H clubs

Description:

Sawtooth Elementary lies adjacent to Cook County Community Center, where a pond and native marsh planting was proposed for this SNAP grant. While the excavation has not yet begun, students have stratified some of their own seedlings, which will be planted around the pond later this spring. Plants they will add include: Marsh Marigold, Pondweed, and Horsetails. The students will also add Tamarack, American Elder, and Highbush Cranberry trees to the site. The project involves students at all levels, but the fifth graders in Mr. Scheils' class are the primary workers.

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Shattuck-St. Mary's School
1000 Shumwag Avenue
Faribault, MN 55021
507-334-6466

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 1.5 acres on school grounds

Coordinator:

- Molly Brown, English teacher
- Ross Vassar, student

Project:

- Butterfly Garden

Description:

Students at Shattuck-St. Mary's School in Faribault desired to create two separate prairie gardens on their campus. The areas were merely lawn before initiative took hold and the headmaster approved the gardens. Student Jed Brown submitted the SNAP grant proposal, and other students aided in the implementation of the grant.

An elective Ecology class researched the grant proposal once it was funded. All of them tested the soil and light conditions on the site. They staked out the area of the garden for the prairie plants and calculated how many plants to order. Members of the Environmental Club revised their planting list to include Prairie Onion, Lead Plant, Butterfly Weed, New Jersey Tea, Prairie Smoke, blazing stars, goldenrods and a mixture of grasses and other native forbs.

Students removed the sod in the garden sites and turned over the soil during a special community service day for seniors. The seedlings were ordered from Prairie Restorations, and the ecology class planted them during a fun afternoon.

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Skyview Community School
1100 Heron Avenue North
Oakdale, MN 55128
612-702-8162

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- One acre on school grounds

Coordinator:

- Lori Forkner, teacher lforkner@eta.k12.mn.us

Project:

- Prairie planting

Major Cooperators:

- Northern States Power
- District 622 Youth Leadership Mini Grant
- Washington-Ramsey Watershed District
- City of Oakdale
- Tree Trust Organization
- University of Minnesota
- Prairie Restorations Inc.
- MEA Foundation

Description:

Skyview Community School sits on seventy acres of land with several ponds, an aspen-willow thicket, red oaks, cotton woods, and a red pine plantation. The flat site is partially natural grasslands, as well. An area which was formerly farmland was chosen to be restored into a native prairie with this SNAP Project Grant.

The planned site will need weed eradication and a burn before planting. Students in grades six, seven and eight will collect seeds from area native forbs and grasses for the nature area.

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Saint Jerome School
284 East Roselawn Avenue
Maplewood, MN 55117
651-771-8494

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 7700 square feet on school grounds

Coordinator:

- Sally Norris, science teacher spjem@connectinc.com

Project:

- Tree and shrub plantings for bird habitat

Description:

Students at Saint Jerome School became interested in the birds which visited their school. They wanted to attract more birds to the area, and provide year-round habitat for them. To do this, they will add shrubs, trees, and feeders to a courtyard area at their school to improve bird habitat. Eventually, they hope to create a pond in their nature area, and add benches for observation.

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Tesseract School
3800 Tesseract Place
Eagan, MN 55122
651-454-0604

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- School grounds

Coordinators:

- Diana Adamson obie5@prodigy.net

Project:

- Prairie garden

Description:

Tesseract School wished to enhance an area of lawn on their school grounds that surrounds a water drainage pond. The project involves planting a prairie garden, and adding native trees and shrubs to attract wildlife for the students to observe.

To plant their prairie garden, Tesseract will tap into community resources for site preparation. Sod removal will be facilitated by parent volunteers, working with the kids. Holes for the trees and shrubs will be dug in advance by local Scout troops and parent association volunteers.

Last spring, three student volunteers, accompanied by Diana, aided at a tree and shrub planting at the SNAP farmhouse. These three students will be leaders on planting day, helping other students properly plant the new trees and shrubs.

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Tesseract School
3800 Tesseract Place
Eagan, MN 55122
651-454-0604

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- School grounds

Coordinators:

- Diana Adamson obie5@prodigy.net

Project:

- Prairie garden

Description:

Tesseract School wished to enhance an area of lawn on their school grounds that surrounds a water drainage pond. The project involves planting a prairie garden, and adding native trees and shrubs to attract wildlife for the students to observe.

To plant their prairie garden, Tesseract will tap into community resources for site preparation. Sod removal will be facilitated by parent volunteers, working with the kids. Holes for the trees and shrubs will be dug in advance by local Scout troops and parent association volunteers.

Last spring, three student volunteers, accompanied by Diana, aided at a tree and shrub planting at the SNAP farmhouse. These three students will be leaders on planting day, helping other students properly plant the new trees and shrubs.

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Vadnais Heights Elementary School
3645 Centerville Road
Vadnais Heights, MN 55127
651-653-2858

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- School grounds

Coordinator:

- Nancy McAllister, 5th grade teacher
  njmcal@wbl.whitebear.k12.mn.us

Project:

- Shrub planting as part of Peace Site Project

Consultant:

- Anna Newton, Tamarack Nature Center

Description:

As part of Vadnais Heights Elementary's Peace Site Project, the school made a commitment to establish an on-going nature center to be used by students, parents and community members. As part of that project, this SNAP grant funded native shrub and tree planting in a prairie area on the school grounds. The school is surrounded by 10 acres which include woodland, prairie and wetlands, but teachers at the school wished to put natives back into the grounds.

Students studied plants and determined the best ones for the site. A fifth grade team set delivery and planting dates, and parents showed up for the day. Larger holes were dug by volunteers, but planting teams of students put in the trees and shrubs, and encircled them with chicken wire.

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Wayzata Public Schools
4955 Peony Lane
Plymouth, MN 55447
612-745-6600

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- 65 acres on school grounds

Coordinator:

- David Astin, teacher
  david_astin@wayzata.k12.mn.us

Project:

- Woodland forb plantings

Description:

The site for this woodland flower planting is on the grounds of the New Wayzata High School, which is part of the large outdoor learning area restored as the result of a partnership between Wayzata Public Schools and the City of Plymouth. The site contains two ponds, Elm Creek, a planted prairie area, and a Maple-Basswood forest. The forest area was very overgrazed by deer and little grew on the forest floor.

This SNAP grant aided in planting more native woodland flowers in a deer enclosure in the Maple-basswood section of the nature area. Plants obtained from Landscape Alternatives, Inc. included Wild Columbine, Jack-in-the-Pulpit, Wild Geranium, Blood Root, Blueflag Iris, Spleenwort, and Dutchman's Breeches. Students did all of the planting.

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Zumbrota-Mazeppa Middle School
425 Chestnut Street
Mazeppa, MN 55956
507-843-2165

SNAP
School Nature Area Project

1998-1999 Project School

Site:

- Quarter acre on school grounds

Coordinator:

- Lowellene Jackson, fifth grade teacher
  LowJackson@aol.com

Project:

- Prairie planting

Description:

One hundred and one Zumbrota Mazeppa fifth graders seeded their prairie plot by hand last fall. Some students had never planted anything before and were truly elated by the experience! The experience of scattering and then stomping in the seeds was a great tool for bonding the students to nature.

Prior to the seeding, a parent volunteer disked the leveled the site twice. The site was also treated with Round Up herbicide twice to kill the non-native plants before the seeds were scattered. The students worked on the site preparation by picking rocks out of the plot before planting. A seed mix from Prairie Moon Nursery was used, and the seeds were mixed with sawdust so the 'seeders' could see where seeds had already been thrown. Now, all the school's students await the arrival of spring and their hand-sewn prairie plants.

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