

FINAL REPORT

JUL 31 2001

Work Program Update and Amendments

Date of Report: July 26, 2001
Date of Next Status Report: NA
Date of Work Program Approval: June 9, 1999
Project Completion Date: June 30, 2001

LCMR Work Program 1999

1. PROJECT TITLE: E06 RESTORING NATIVE VEGETATION IN PARKS AND NATURE CENTERS 260,000

Project Manager: Craig R. Andresen
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Total Biennial Project Budget:

\$LCMR: \$260,000

\$LCMR Amount Spent: \$260,000

\$LCMR Balance: \$ 0

A. Legal citation: ML 1999, [Chap. 231, Sec. 16, Subd. 16c.

This appropriation is from the Future Resources Fund to the commissioner of natural resources for an agreement with St. Paul Audubon Society to restore natural vegetation at community nature centers and parks.

B. Status of Match Requirement:

II. PROJECT SUMMARY AND RESULTS:

This project will restore and enhance native vegetation on at least 747 acres at five nature centers and three parks. The project will reduce exotic vegetation using best management practices. Restoration activities will include prescribed burns, cutting of invasive woody vegetation, herbicides, biological controls, weeding and reseeding. Enhancement plantings will be conducted where needed, using local seed sources. Public participation will result in an enhanced environmental learning experience for the local citizen volunteers. Educational

components are being developed that may include a web site, signage, and instructional displays. Criteria for selecting project site locations focused on the ecological restoration potential and/or the educational opportunities.

III RESULT SUMMARY:

Approximately 750 acres of prairie, oak savanna, and oak woodland habitat have been enhanced with this grant project as follows:

Result 1 Afton State Park: Prescribed burns were conducted on 45 acres and invasive woody species were removed from 130 acres; net acres upgraded: 140

Result 2 Bunker Hills: 110 acres of pine plantations were cleared of slash from a wildfire and/or logging operation. These areas are now reverting back to the original sand prairie and oak savanna still persisting on the site.

Result 3 Dodge Nature Center: Invasive woody species have been cut from 23 acres of oak woodland and oak savanna areas; a wild fire burned 2/3 of the site eliminating the need for a prescribed burn in 2000

Result 4 Macalester's Natural History Area: Twenty acres were cleared of woody species and burn breaks were started on the property boundaries. This site has proved to be a challenge. A boundary dispute with neighbors, and poor communications between the project manager and site manager have been frustrating. This is the only result to have failed to reach its objectives.

Result 5 Maplewood Nature Center: Twenty acres have been cleared of invasive woody species. Prescribed burns have been completed at Jim's Prairie and at a portion of the nature center location. This project has grown as activities proceeded. The learning opportunities have been invaluable for all involved with the project. A thorough job of restoring of most of the oak woodlands at the nature center is moving along.

Result 6 Springbrook Nature Center: 100 acres of exotic buckthorn, honeysuckle and native invasive species have been cleared from the site and prescribed burns have taken place on approximately thirty acres.

Result 7 Tamarack Nature Center: 240 acres have been cleared of invasive exotic and native species. Fifty acres have been burned, sprayed and planted to native prairie. Spending surpassed initial plans with this project but the project came together nicely with various management teams working closely and opportunities falling nicely into place. The outcome will far exceed the original intent.

Result 8 William O'Brien State Park: 100 acres have been cleared of buckthorn and other invasive species.

Result 9: Fifty acres of old farm fields were planted to prairie at Tamarack Nature Center.

IV. OUTLINE OF PROJECT RESULTS:

Result 1 Afton State Park

Afton State Park was chosen for the quality of the natural areas within the park. The size of the park was also a factor. Larger habitats are important ecologically because they allow a greater diversity of species and larger numbers of individuals within a species, increasing sustainability probabilities. Rankings of B and C were given to specific areas of the park. (Rankings refer to the ecological quality of the site at the time of the Minnesota County Biological Survey - the rank is a qualitative evaluation based on ecological criteria such as native species composition, rare species, site condition and disturbance history.) Rankings of B or C will respond favorably to restoration activities and the results may yield a higher rating classification. The area of this project will exceed one hundred acres and consist of old fields, bluff prairies, oak woodlands, and oak savanna areas. The first efforts will be to eliminate woody exotics followed by controlled burns to encourage the native vegetation. Crews associated with this grant will assist park staff with burn breaks and the prescribed burns. Volunteers will assist with the collection, propagation, and dispersal of native seed to be used within the park for plant community restoration.

LCMR Budget	\$29,717.97	Match:\$
Balance:	\$.00	Match Balance:\$
Completion Date June 30, 2001		

Accomplishments:

Prescribed burns were conducted on three units consisting of forty-five acres. Invasive woody species removal occurred on 130 acres. The total acreage impacted by the above management practices: 140 acres. Contract crews associated with this grant assisted Minnesota State Park crews with the prescribed burns.

Result 2 Bunker Hills - Anoka County Park

Bunker Hills Park was chosen because: 1. Existing remnant prairie and oak savanna areas. 2. The County Biological Survey found a number of state list plants within the park. (A listing signifies the plant is rare within the state. The State Endangered Species Act provides for a classification system and protection of plants whose populations are in danger of becoming extinct.) 3. Public use is also very high. One hundred acres will be managed for the restoration of the native plant communities. Woody exotics will be removed and prescribed burns will be carried out. Volunteers will assist with the collection, propagation, and

dispersal of native seed to be used within the park for plant community restoration.

LCMR Budge	\$31,384.56	Match:\$
Balance:	\$.00	Match Balance:\$
Completion Date: June 30, 2001		

Accomplishments:

A thorough job of cleaning up pine plantations proved to be a very labor-intensive activity. Twenty acres of the project area had been burned in a wildfire that occurred on May 3, 1999. Some areas had incurred logging activity, which left considerable pine slash. One hundred and ten acres of woody debris from the pines and other cuttings were piled for burning. Approximately three quarters of the piled debris was burned under this grant. Remaining piles will be burned with county crews.

Seed collection in the fall of 1999 of prairie grasses and forbs (flowers) by Audubon volunteers and contract personnel yielded a good supply of seed for additional restoration activities by county park staff.

Result 3 Thomas Irvine Dodge Nature Center

Dodge Nature Center has the highest student count of all the sites in this project. Thirty-five thousand student visits are recorded annually. Students, come from the following neighboring school districts: West St. Paul, South St. Paul, St. Paul, Inver Grove Heights, Burnsville and Rosemount. The proposed project consists of controlling woody and herbaceous exotics. Performing prescribed burns will encourage native vegetation and control woody plants from invading prairie areas. Volunteers will assist with the collection, propagation, and dispersal of native seed to be used within the nature center for plant community restoration. Fifty acres will be upgraded with this restoration effort.

LCMR Budget	\$13,074.20	Match:\$
Balance:	\$.00	Match Balance:\$
Completion Date: June 30, 2001		

Accomplishments:

Twenty-three acres were cleared of invasive woody species and the accompanying slash was piled and burned. A wildfire occurred on this site on March 26, 2000, eliminating the need for a prescribed burn.

Result 4 Macalester College's Katharine Ordway Natural History Study Area

Although Katharine Ordway purchased many natural sites for preservation throughout the nation, this is the only parcel in Minnesota. It consists of prairie and oak savanna remnants on a two hundred and eighty-acre site. Its bluffs overlook the Mississippi River. The Minnesota Department of Natural Resources Scientific Areas Program (SNA) is interested in the Macalaster property in that it is part of the larger Pine Bend Bluffs macro site, which SNA has explored protection efforts on. Neighboring Koch Refinery is also studying restoration activities on their property. Management will include controlling invasive woody exotics and conducting prescribed burns. The total area managed for restoration will exceed one hundred acres. This area has very high potential because of a history of minimal disturbance. State listed plants have been found in the area.

LCMR Budget	\$5,452.03	Match:\$
Balance:	\$.00	Match Balance:\$
Completion Date: June 30, 2001		

Accomplishments:

Native sumac, gray dogwood, American elm and cherry trees and some exotic honeysuckle and buckthorn were cut from approximately 20 acres of the site during the first few months of the grant period. Some work was started to create firebreaks along the property lines but boundary disputes with neighbors halted further efforts to establish the burn breaks. Three different property managers managed the site during the two years of this grant. Poor communications between the project manager and the site management doomed the project to failure.

Result 5 Maplewood Nature Center - City of Maplewood

The Maplewood Nature Center and "Jim's Prairie" a satellite remnant wet prairie and adjacent oak savanna serve as high quality natural areas for student visits. Buckthorn has invaded some areas and will be removed. Prescribed burns will be carried out to encourage revitalization of native vegetation. Volunteers will assist with the collection, propagation, and dispersal of native seed to be used within the nature center for plant community restoration. Twenty acres will be upgraded in this manner improving virtually all degraded areas.

LCMR Budget	\$15,360.57	Match:\$
Balance:\$	\$.00	Match Balance:\$
Completion Date: June 30, 2001		

Accomplishments:

Native brush was removed from mesic (wet) prairie areas of approximately four acres and dead oak trees were removed from upland areas in preparation of a prescribed burn at Jim's Prairie. Jim's Prairie was subsequently burned under separate contract with city funding in the spring of 2001. Sixteen additional acres

of oak woodlands were cleared of invasive exotic and native woody species at the nature center. A small prairie was burned at the nature center in the spring of 2000 and a woodland burn was conducted in the spring of 2001.

Result 6 Springbrook Nature Center - City of Fridley

Springbrook Nature Center was chosen for funding as an educational facility and it's highly diverse, native plant communities. Over three hundred and fifty plant species have been identified in the one hundred and twenty-seven-acre site. Twenty thousand students and adults attend formal educational programs annually. Two hundred thousand guests visit Springbrook Nature Center annually. Exotic invasive species including buckthorn are decimating the upland plant communities of the nature center. Woody exotics will be removed and controlled burns will be implemented. Volunteers will assist with the collection, propagation, and dispersal of native seed to be used within the nature center for plant community restoration. Seventy-seven acres will be managed for the native plant communities affecting all upland areas.

LCMR Budget	\$38,359.07	Match:\$
Balance:\$	\$.00	Match Balance:\$
Completion Date: June 30, 2001		

Accomplishments:

Over one hundred acres of oak savanna and wetlands have been cleared of buckthorn, honeysuckle, some box elder, cherry and elm. Stumps were treated to prevent re-sprouts and the slash was burned. A prescribed burn in the spring of 2001 successfully burned approximately thirty acres of prairie, oak savanna, and oak woodlands.

Result 7 Tamarack Nature Center - Ramsey County Park

Fifteen thousand students a year visit Tamarack Nature Center and an additional ten thousand attend public educational programs. It's a busy place with over one hundred volunteers involved in one way or another. Buckthorn has invaded the oak woodlands, savanna areas, and wetlands. A ten-acre black locust grove continues to expand every year, out competing and suffocating all native vegetation. In another area mature oak trees set the stage for restoration efforts in the upland areas. The wetlands contain tamarack trees, diamond willow, and a diverse herbaceous plant community. Volunteers will assist with the collection, propagation, and dispersal of native seed to be used within the nature center for plant community restoration. 200 acres at the nature center will be upgraded with exotic species removal efforts, re-plantings, and prescribed burns impacting virtually all degraded areas.

LCMR Budget	\$86,884.32	Match:\$
Balance:\$	\$.00	Match Balance:\$

Completion Date: June 30, 2001

Accomplishments:

At Tamarack 240 acres were cleared of invasive woody species. A ten-acre black locust grove with intermingled exotic white poplar, Siberian elm, buckthorn and honeysuckle beyond the original ten acres, was cut and the salvageable firewood was sold by the nature center. A fifty-acre field was cleared of woody species and replanted to prairie. Most of the seed used for the prairie planting was collected under the funding of this grant and Audubon Volunteers. Ten acres of shrub swamp were also cleared of woody exotics. Prescribed burns were conducted on approximately eighty acres with the aid of Ramsey County crews.

Result 8 William O'Brien State Park:

William O'Brien State Park was chosen for the high quality natural areas within the park and the high user counts. Three areas boast a ranking of A/B for remnant vegetation and six other areas rank B or B/C. The specific site to be restored is in a high use area near the interpretive center known as "Wedge Hill". Wedge Hill has a natural canopy of bur, pin and white oak. The first priority will be to eliminate woody exotics and native invasive trees from remnant areas, followed by controlled burns to encourage the native vegetation. Volunteers will assist with the collection, propagation, and dispersal of native seed to be used within the park for plant community restoration. Crews associated with this grant will also assist park staff with burn breaks and the prescribed burns.

LCMR Budget \$17,531.42
Balance: \$.00
Completion Date: June 30, 2001

Match:\$
Match Balance:\$

Accomplishments:

Approximately fifty acres of woody exotics were cut from "Wedge Hill" and an additional fifty acres were cut on the south boundary of the park. Herbicides are not being used at this park as requested by the park staff. The park has a very aggressive burn policy and will attempt to suppress the re-sprouts with fire.

Result 9. Seed collection in the fall of 1999 exceeded expectations. Contract crews collected a large amount of grass and forb (flower) seed. By supplementing this seed with more varieties and additional quantities of collected seed from a native seed vendor, a fifty-acre field was planted at Tamarack Nature Center. The soil conditions at the collection site and planting site were similar enough to be considered a local seed source, an ecological advantage.

LCMR Budget	\$22,235.86	Match:\$
Balance:	\$.00	Match Balance:\$
Completion Date: June 30, 2001		

Accomplishments:

As stated above "Result 9"

V. Dissemination: N/A

VI. CONTEXT:

A. Significance: The east metro area consisted of prairies, oak savanna and wetlands with an array of wildlife prior to settlement. This project will attempt to retain the natural vegetation that persists in isolated protected areas. Our parks and nature centers offer us an opportunity to propagate native flora and provide sanctuaries for some of the wildlife, which inhabit these natural haunts. As education centers for young and old, the educational possibilities are endless.

B.

B. Time: N/A

Spent:

Contractors		\$252,500.00
Labor Contractors	\$179,327.59	
Labor ICWC	\$ 41,795.10	
Equipment	\$ 25,411.08	
Herbicides	\$ 5,966.23	
Project Manager		<u>7,500.00</u>
Total		\$260,000.00

VII. Cooperation:

St. Paul Audubon Society Oversight Committee:
 Jean Wirsig, Chair 25 hours - no cost associated
 Tom Bell 15 hours - no cost associated
 John Bauhs 15 hours - no cost associated
 Alan Kuentz 15 hours - no cost associated
 Dr. Val O'Malley 15 hours - no cost associated
 Julian Sellers 15 hours - no cost associated
 Curt Thorpe 15 hours - no cost associated
 The authorizing St. Paul Audubon Society signatory will be the current president.

Minnesota Department of Natural Resources - State Parks:

Tom Polasik, Resource Specialist, Metro Region - no cost assoc.
 Park Manager, O'Brien - no cost associated

Randy Lorenzen, Assistant Manager O'Brien - no cost associated
Calvin Kontola, Park Manager, Afton - no cost associated
Gene Groebner, Assistant Manager, Afton - no cost associated

Anoka County Parks

John VonDeLinde, Director - no cost associated
Jeffery Perry, Resource Specialist - no cost associated

Thomas Irvine Dodge Nature Center

Macalester College's, Katherine Ordway Natural Study Area
Janet Ebaugh, Associate Director - no cost associated

Maplewood Nature Center

Janet M. Grew Hayman, Director - no cost associated
Ann Hutchinson, Lead Naturalist - no cost associated

Springbrook Nature Center

Siah St. Clair, Director - no cost associated

Ramsey County Parks and Recreation Department

Gregory Mack, Director - no cost associated
Larry Holmberg, Supervisor of Planning - no cost associated
John Moriarty, Natural Resource Specialist - no cost associated

VIII. Location:

Afton State Park - Washington County

Bunker Hills Regional Park - Anoka County

Thomas Irvine Dodge Nature Center - Dakota County, West St. Paul and
Mendota Heights

Macalester College's Katherine Ordway Natural History Area - Dakota
County, Inver Grove Heights

Maplewood Nature Center - Ramsey County, Maplewood

Springbrook Nature Center - Anoka County, Fridley

Tamarack Nature Center - Ramsey County, White Bear Township

William O'Brien State Park, Washington County

IX. **Reporting Requirements:** Periodic work program progress reports will be submitted not later than June 30, 2000; and June 30, 2001. A final work

program progress report and associated products will be submitted by June 30, 2001, the completion date as set in the appropriation.

X. Research projects: N/A

Project Title: Restoring Native Vegetation in Parks and Nature Centers
Project Number: E06

LCMR Recommended Funding: \$260,000

Date: July 17, 2001

Attachment A Deliverable Products and Related Budget	Result 1 Afton Budget \$30,000	Result 2 Bunker Hills Budget \$31,000	Result 3 Dodge Budget \$13,000	Result 4 Macalester Budget \$5,452	Result 5 Maplewood Budget \$15,548	Result 6 Springbrook Budget \$37,000
Contractors	\$28,992.27	\$30,436.27	\$12,683.40	\$3,343.31	\$14,895.69	\$37,420.09
Labor: Contractors	\$18,368.00	\$21,151.97	\$ 7,302.51	\$ 2,858.78	\$10,796.83	\$27,049.21
*Labor ICWC Contract	\$ 5,180.70	\$ 7,425.67	\$ 1,036.14	\$.00	\$ 1,208.83	\$ 3,281.11
Labor ICWC Extra Days	\$ 1,950.00	\$ 500.00	\$ 2,172.19	\$.00	\$ 928.28	\$ 1,370.61
Equipment	\$ 2,939.75	\$ 1,358.63	\$ 1,649.50	\$ 154.50	\$ 1,298.05	\$ 4,354.54
Herbicides	\$ 553.82	.00	\$ 523.06	\$ 330.03	\$ 663.70	\$ 1,366.62
Project Manager	\$ 725.70	\$ 948.29	\$ 390.80	\$2,108.72	\$ 464.88	936.98
Totals	\$29,717.97	\$31,384.56	\$13,074.20	\$ 5,452.03	\$15,360.57	\$38,359.07

Attachment A Deliverable Products and Related Budget	Result 7 Tamarack Budget \$85,764	Result 8 O'Brien Budget \$20,000	Result 9 Seedlings Budget \$22,236			Total Budget \$260,000
Contractors	\$85,306.84	\$17,184.27	\$22,235.86			\$252,500.00
Labor: Contractors	\$57,731.43	\$12,047.37	\$22,021.49			\$179,327.59
Labor ICWC Contract	\$11,224.85	\$ 1,381.52				\$ 30,738.82
Labor ICWC Extra Days	\$ 2,575.20	\$ 1,560.00	\$.00			\$ 11,056.28
Equipment	\$11,246.36	\$ 2,195.38	\$ 214.37			\$ 25,411.08
Herbicides	\$ 2,529.00	.00	.00			\$ 5,966.23
Project Manager	\$ 1,577.48	\$ 347.15	\$.00			\$ 7,500.00
Totals	\$86,884.32	\$17,531.42	\$22,235.86			\$260,000.00