

## **2005 Project Abstract**

For the Period Ending June 30, 2007

**TITLE: Metropolitan Area Wildlife Corridors – Phase II: 2.5 Restore and Enhance Significant Habitat – Great River Greening.**

**PROJECT MANAGER: Wiley Buck**

**ORGANIZATION: Great River Greening**

**ADDRESS: 35 W. Water St., Ste. #201, St. Paul, MN 55107**

**WEB SITE ADDRESS: [www.greatrivergreening.org](http://www.greatrivergreening.org)**

**FUND: Minnesota Environment and Natural Resources Trust Fund (Trust Fund)**

**LEGAL CITATION: ML 2005, 1<sup>st</sup> Spec. Sess., Chap. 1, Art. 2, Sec. 11, Subd. 5b.**

**APPROPRIATION AMOUNT: \$100,000**

### Overall Project Outcome and Results

Great River Greening's 13 projects in the Metro Corridors priority focus area included restoration of Minnesota County Biological Survey (MCBS)-quality dry prairies, wetlands, oak woodland, large floodplain and hardwood forests, and shoreline. Criteria for projects included ecological significance and partner commitment.

In total, Great River Greening restored 0.24 mile of shoreline and 135 acres of high quality natural areas at 13 different sites, leveraging over \$202,000 in non-state funds. At least 1005 volunteers contributed to these restorations. These projects enhanced habitat for at least 11 populations of state-listed species.

Great River Greening's restoration projects were:

1. Mississippi River shoreline restoration and native planting, Brooklyn Center;
2. Floodplain forest gap restoration and planting, Crosby Regional Park, St. Paul;
3. Floodplain forest and streambank restoration, Cargill Salt, Savage on the Credit and Minnesota Rivers;
4. Oak savanna restoration, Indian Mounds Regional Park, St. Paul;
5. Prescribed burn at Pioneer Park, Blaine;
6. Hill prairie restoration, Hidden Valley Park, Savage;
7. Mississippi River shoreline revetment and restoration, Coon Rapids;
8. Prescribed wetland burns, Big Marine Lake, Scandia;
9. Prescribed burn, prairie remnant, St. Croix Valley recreation trail, Lake St. Croix Beach;
10. Riparian forest restoration, Meeker Dam/Desnoyer Seep, St. Paul;
11. Vegetated detention pond with native species, Arcola Mills Historic Foundation, Stillwater;
12. Oak savanna and prairie reconstruction at Pilot Knob Hill Phase I, Mendota Heights; and
13. "Big Woods" invasive removal and oak planting, Independence.

### Project Results Use and Dissemination

Great River Greening lists projects, techniques, and community volunteer events on its website, [www.greatrivergreening.org](http://www.greatrivergreening.org); highlights projects and events in its newsletter (circulation 4000); mails monthly e-postcard (circulation 1900), event brochures and flyers; provides signs at volunteer events; and issues press releases. Projects are typically collaborations with partners that foster exchange of information on techniques, strategies, and priorities, and often engage community volunteers, building community capacity and understanding of restoration and the importance of natural areas. Where possible, we work with partners to continue stewardship beyond state funding with volunteers, employees, and other community members.

## LCMR 2005 Work Program

**Date of Report:** February 8, 2008  
**Title:** LCMR Final Work Program Report  
**Date of Next Status Report:** n/a  
**Date of Work program Approval:** June 14, 2005

**Project Completion Date:** June 30, 2008

**I. PROJECT TITLE:** Metropolitan Area Wildlife Corridors – Phase II: 2.5 Restore and Enhance Significant Habitat – Great River Greening.

**Project Manager:** Wiley Buck  
**Affiliation:** Great River Greening  
**Mailing Address:** 35 W. Water St., Ste. #201  
**City / State / Zip :** St. Paul, MN 55107  
**Telephone Number:** 651-665-9500 x15  
**E-mail Address:** wbuck@greatrivergreening.org  
**FAX Number:** 651-665-9409  
**Web Page address:** www.greatrivergreening.org

**Location:** Within mapped Focus Area and within the counties of Anoka, Carver, Chisago, Dakota, Goodhue, Hennepin, Isanti, LeSueur, Nicollet, Ramsey, Rice, Scott, Sherburne, Sibley, and Washington. See Figure 1.

<b>Total Biennial LCMR Project Budget:</b>	<b>LCMR Appropriation:</b>	<b>\$ 100,000</b>
	<b>Minus Amount Spent:</b>	<b>\$ 100,000</b>
	<b>Equal Balance:</b>	<b>\$ -0-</b>

**Legal Citation:** ML 2005, 1<sup>st</sup> Spec. Sess., Chap. 1, Art. 2, Sec. 11, Subd. 5b.

**Appropriation Language:** Metropolitan Area Wildlife Corridors – Phase II. \$1,765,000 the first year and \$1,765,000 the second year are from the trust fund to the commissioner of natural resources for the second biennium for acceleration of agency programs and cooperative agreements with the Trust for Public Land, Ducks Unlimited, Inc., Friends of the Mississippi River, Great River Greening, Minnesota Land Trust, Minnesota Valley National Wildlife Refuge Trust, Inc., Pheasants Forever, Inc. and Friends of the Minnesota Valley for the purposes of planning, improving, and protecting important natural areas in the metropolitan region, as defined by Minnesota Statutes, section 473.121, subdivision 2 and portions of the surrounding counties, through grants, contracted services, conservation easements, and fee acquisition. Land acquired with this appropriation must be sufficiently improved to meet at least minimum management standards as determined by the commissioner of natural resources. Expenditures are limited to the identified project areas as defined in the work program. This appropriation may not be used for the purchase of residential structures, unless expressly approved in the work program. Any land acquired in fee title by the commissioner of natural resources with money

from this appropriation must be designated: (1) as an outdoor recreation unit under Minnesota Statutes, section 86A.07; or (2) as provided in Minnesota Statutes, sections 89.018, subdivision 2, paragraph (a); 97A.101; 97A.125; 97C.001; and 97C.011. The commissioner may similarly designate any lands acquired in less than fee title. This appropriation is available until June 30, 2008, at which time the project must be completed and final products delivered, unless an earlier date is specified in the work program.

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

Great River Greening's 13 projects in the Metro Corridors priority focus area included restoration of Minnesota County Biological Survey (MCBS)-quality dry prairies, wetlands, oak woodland, large floodplain and hardwood forests, and shoreline. Criteria for projects included ecological significance and partner commitment.

In total, Great River Greening restored 0.24 mile of shoreline and 135 acres of high quality natural areas at 13 different sites, leveraging over \$202,000 in non-state funds. At least 1005 volunteers contributed to these restorations. These projects enhanced habitat for at least 11 populations of state-listed species.

Great River Greening's restoration projects were:

1. Mississippi River shoreline restoration and native planting, Brooklyn Center;
2. Floodplain forest gap restoration and planting, Crosby Regional Park, St. Paul;
3. Floodplain forest and streambank restoration, Cargill Salt, Savage on the Credit and Minnesota Rivers;
4. Oak savanna restoration, Indian Mounds Regional Park, St. Paul;
5. Prescribed burn at Pioneer Park, Blaine;
6. Hill prairie restoration, Hidden Valley Park, Savage;
7. Mississippi River shoreline revetment and restoration, Coon Rapids;
8. Prescribed wetland burns, Big Marine Lake, Scandia;
9. Prescribed burn, prairie remnant, St. Croix Valley recreation trail, Lake St. Croix Beach;
10. Riparian forest restoration, Meeker Dam/Desnoyer Seep, St. Paul;
11. Vegetated detention pond with native species, Arcola Mills Historic Foundation, Stillwater;
12. Oak savanna and prairie reconstruction at Pilot Knob Hill Phase I, Mendota Heights; and
13. "Big Woods" invasive removal and oak planting, Independence.

## **IV. OUTLINE OF PROJECT RESULTS:**

**Result 1:** Restore and Enhance Significant Habitat

**Description:** Great River Greening anticipates restoring and/or enhancing 50 acres of ecologically significant natural areas and habitat, plus 15 acres using leveraged funds for a total of 65 project acres. Native plant community restoration will be our primary focus, and may include prairie, forest, savanna, wetland, floodplain, and shoreline within the focus area. Greening ecologists will select specific locations and projects based on our analyses of priority sites, and in consultation with the community, city, and other partners. Restoration projects will likely include invasive species removal, native plant community reconstruction, supplemental seeding and planting, prescribed burning, and more. We anticipate working on three to ten sites in the focus area.

<b>Summary Budget Information for Result 1:</b>	<b>LCMR Budget</b>	<b><u>\$ 100,000</u></b>
	<b>Balance</b>	<b><u>\$ -0-</u></b>

**Completion Date:**

It is anticipated that by February 1, 2006 Greening will have restored 20 acres

It is anticipated that by February 1, 2007, Greening will have restored an additional 20 acres, for a total of 40 acres.

It is anticipated that by February 1, 2008, Greening will have restored an additional 10 acres for a total of 50 acres.

**Final Report Summary:**

In total, Great River Greening restored 0.24 mile of shoreline and 135 acres of high quality natural areas at 13 different sites, leveraging over \$202,000 in non-state funds. At least 1005 volunteers contributed to these restorations. Of the 134 acres, 51 acres are attributed to Metro Corridors (including 1 to FMV); 2 to other state sources (Conservation Partners) and 82 acres to non-state sources. This acreage pro-rating reflects the success we have had raising non-state matching funds. We exceeded our acreage goals, in large part due to opportunities to conduct relatively large prescribed (Rx) burns on important areas.

In the remainder of Phase III and Phase IV, we anticipate being more selective in our stormwater management projects, as it is difficult to quantify the results of some types in the acreage and shoreline tallies. However, projects such as the bluffline erosion control projects we have in 2007 Phase III, which have impacted acreage directly attributable to them, will continue to be pursued. We do not consider this a problem as there are many worthy projects that can be quantified in acreage and shoreline.

Specific results for each completed project follows:

1. Mississippi River shoreline restoration and native planting project in Brooklyn Center restored 0.20 mile and 1.5 acres of Mississippi River shoreline spanning 8 contiguous private landowners. Turfgrass and rip-rap were

- converted to native vegetation including shrubs, seeds, grasses and flowers. The plantings were done at a high density to stabilize the slopes and increase diversity. The project is located directly shoreside of the Anoka Co. Island of Peace Park island, and is a priority site for the Mississippi National River and Recreation Area (MNRRA).
2. The Crosby Park floodplain/terrace forest gap restoration was completed including an extra large spring 2006 volunteer event with Admission Possible, engaging 373 talented, motivated and economically disadvantaged high school seniors to plant a high diversity of trees and shrubs. Avalon High School students also volunteered twice. This project sparked an upwelling of volunteer and funding support, and grew from 12 acres to 28 acres. Blanding's turtle and cerulean warbler have been found in the area. Off-shore, the area is known as a former mussel concentration, undergoing reintroductions.
  3. Ten acres of streambank plantings, forest gap plantings, and buckthorn control (using leveraged funds) at Cargill Salt, Savage on the Credit and Minnesota Rivers, which included a 35-employee event, were completed in fall 2006. The plantings were heavily damaged in the drought of 2007; we are working with Cargill to return to the site with a modified planting approach and greater emphasis on post-installation maintenance. The buckthorn control was very successful, employing the inexpensive basal bark method, effectively preventing the buckthorn from spreading while temporarily storing carbon in the standing dead material.
  4. A 275-person volunteer event was held in the fall 2006 at Indian Mounds Park, St. Paul, a kitten-tails site, restoring five acres of oak savanna with buckthorn removal, and planting of native trees, shrubs, grasses and forbs. Restoration maintenance and expansion are currently being developed there with various partners.
  5. A 35-acre fall 2006 prescribed burn was completed at Pioneer Park, Blaine, as part of the on-going wetland restoration, covering the original Metro Greenways project area with six state-listed species, and surrounding buffer.
  6. In spring 2007, invasive species control and a burn were completed at Hidden Valley Park, Savage on the Credit River to enhance the restoration of the Minnesota County Biological Survey (MCBS)-quality prairie and adjacent reconstruction, with two listed species, totaling 4.5 acres. The leadplant responded remarkably well.
  7. Restoration of ~200' (.04mi) of eroding Mississippi riverbank at the Coldwell residence, Coon Rapids, demonstrating alternatives to the area's rip-rap and retaining walls, was completed in spring 2007. It will be a demonstration site in Greening/Mississippi Watershed Management Organization's (MWMO) Riverbank Restoration Guide. The cedar revetments and live staking will result in direct water quality and habitat improvement. Leveraged funds were twice the Corridor investment.
  8. Two spring 2007 burns totaling 8 acres at Big Marine Lake were completed for management of one population of state-endangered tubercled rein-orchid, and a potential seed bank of state-threatened lance-leaved violet.

9. 3.5 acres were burned in spring 2007 along the recreation trail in the St. Croix Valley in Lake St. Croix Beach to rejuvenate a prairie remnant. Native grasses and forbs responded well. It was the first burn for the remnant in many years, and required extensive cooperation from Washington County DOT and adjacent landowners.
10. A 170-person volunteer event was held at St. Paul Parks' Meeker Dam/Desnoyer Seep site in the river gorge in the spring of 2007. Fifteen acres of primarily oak forest and seep communities were restored, including invasive species removal and planting of over 1,700 native trees, shrubs, and under-story plants.
11. A retention pond at Arcola Mills Historic Foundation on the St. Croix River, was installed and vegetated with 350 native plants in spring 2007, intercepting and treating runoff before it reaches the St. Croix River. This site hosts at least three populations of state listed species.
12. In fall 2007, site prep was concluded at Pilot Knob Hill Phase I, Mendota Heights, and the 8 acres were seeded to prairie and savanna, including a volunteer event for hand-seeded areas. Per the MN-DNR's 2006 Comprehensive Wildlife Conservation Strategy, Pilot Knob Hill is located in a top rated township for Species of Greatest Conservation Need (SGCN) needs and opportunities, and prairie and oak savanna restoration are top priorities. This DNR publication underscores the importance of the Pilot Knob Hill restoration.
13. A 17-acre high quality oak forest restoration was completed in late fall 2007 at the Johnson residence near Baker Park Reserve, Independence. This land is permanently protected under a Board of Water and Soil Resources (BWSR) easement (the restoration activities we completed are not required under the easement). This site is a priority for Hennepin County Environmental Services, who provided matching funds including those needed for unanticipated buckthorn removal costs. Fifty oak trees were planted with deer protection in forest gaps throughout the site. A recent windstorm toppled several over-mature oaks in the immediate vicinity of several of the plantings, underscoring their importance.

The Lake St. Croix Beach public raingarden mentioned in progress reports is still pending completion; the City Council has not yet voted to complete the project. We have not included this project in our results. To date, a minimal amount of Metro Corridors funds were used to supply a design for the raingarden. Initial improvements were made to upgrade the site to a floodwater detention area, but to date it does not function as stormwater management area during normal rainfall events.

The Hidden Valley Park restoration we feel is exemplary of our work. The City of Savage has proven itself to be a dedicated partner with multi-year matching funds and local expertise. It is an MCBS-quality site facing many of the common

challenges to natural areas and requiring careful management. Our restoration activity at the site has led us to a potential cluster of projects in the area along the now-impaired Credit River, including Cargill Salt and a Hidden Valley raingarden project in 2007 Phase III.

In total, Great River Greening restored 0.24 mile of shoreline and 135 acres of high quality natural areas at 13 different sites, leveraging over \$202,000 in non-state funds. At least 1005 volunteers contributed to these restorations. These projects enhanced habitat for at least 11 populations of state-listed species.

**TOTAL LCMR PROJECT BUDGET:**

**All Results: Personnel: \$33,500**  
**All Results: Equipment: \$10,300**  
**All Results: Development: \$47,500**  
**All Results: Acquisition: \$ -0-**  
**All Results: Other: \$8,700**

**TOTAL LCMR PROJECT BUDGET: \$ 100,000**

**Explanation of Capital Expenditures Greater Than \$3,500:**

Greening anticipates purchasing a 4wd truck at or near the beginning of this project period. We estimate that the pro-rated portion of the purchase price attributable to Metro Area Wildlife Corridor Phase II activities, based on usage of the truck, will be \$7800 over the project period. We estimate that over the project periods, this purchase will be less costly to the Environment and Natural Resources Trust Fund than a rental.

If at the end of this project period the truck is still useful, we will pay back the Environment and Natural Resources Trust Fund an amount equal to either the pro-rated cash value at that date or a pro-rated residual value approved by the LCMR director if it is sold.

**V. OTHER FUNDS & PARTNERS:**

**A. Project Partners:** See Table 1.

**B. Other Funds being Spent during the Project Period:**

Greening could potentially spend the following additional money during the project period:

National Fish and Wildlife Foundation \$ 7,000  
USFWS Partners for Fish and Wildlife \$2,500

A Local Unit of Government \$20,000 - \$30,000

Greening In-Kind \$5,000

**C. Required Match (if applicable):** NA

**D. Past Spending:**

- Big Rivers Partnership (BRP) funded by an \$800,000 appropriation from LCMR during the 1999-2001 biennium, and matched by at least \$374,000 through public and private sources, and \$50,000 from the National Park Service for inventory work during this same biennium.
- LCMR appropriation during the 2002-2003 biennium of \$910,000 to build on the successful Big Rivers Partnership.
- LCMR History: \$300,000 RIM Critical Habitat Match – Environmental Trust Fund and Future Resource Fund.
- Non-LCMR History: \$2.6 million foundation, corporate, and private contributions.
- Metro Area Wildlife Corridors Phase I : Restore and Enhance Significant Habitat. \$124,000 awarded in 2003.

**E. Time:** 3 years, until June 30, 2008.

**VI. DISSEMINATION:** Metro Corridors will periodically distribute information about the program through the widely broadcasted emails to people on the Regional Greenways Collaborative (RGC) database, through the RGC quarterly meetings, and jointly held county meetings. As projects are completed, Greening will periodically publicize accomplishments through press releases, e-postcards, quarterly newsletter, and on our website.

**VIII. REPORTING REQUIREMENTS:** Periodic work program progress reports will be submitted not later than February 1<sup>st</sup> and August 1<sup>st</sup> each year, starting with February 1<sup>st</sup>, 2006. A final work program report will be submitted by July 1<sup>st</sup>, 2008.

**IX. RESEARCH PROJECTS:** NA

Attachment A: Budget Detail for 2005 Metro Corridors Project  
 Project Title: Metro Area Wildlife Corridors - Phase II: 2.5 Restore and Enhance Significant Habitat - Great River Greening  
 Legal Citation: Laws of Minnesota 2005, Chapter 1, Article 2, Section 11

Project Manager Name: Wiley Buck  
 LCMR Requested Dollars: \$ 100,000

BUDGET ITEM	Budget 2/1/07	Amount Spent as of 2/1/08 (\$)	2/1/08 balance	Comments
<b>PERSONNEL</b>				
Staff expenses, wages, salaries, & benefits	\$ 33,500.00	\$ 33,500.00	\$ -	Project Mgr, Buck .06FTE; Project Asst, Wenz, .02FTE; Office Asst, Gagner, .03FTE; Ecologists Buck/Harris/Shaw .1FTE; Field Coordinator, Hammerschmidt, .4FTE; Restoration Technicians Varien/Peterson/Seasonal, 1.0FTE; Volunteer Manager Johnston/Buda .0
<b>EQUIPMENT</b>				
Equipment / Tools	\$ 2,500.00	\$ 2,500.00	\$ -	chainsaws, brush cutters, sprayers, shovels, loppers, weed wrenches, bow saws, water packs, drip torch.
Other Capital equipment	\$ 7,800.00	\$ 7,800.00	\$ -	Pro-rated portion of 4wd truck purchase
<b>EQUIPMENT - SUBTOTAL</b>	<b>\$ 10,300.00</b>	<b>\$ 10,300.00</b>	<b>\$ -</b>	
<b>DEVELOPMENT</b>				
Contracts	\$ 11,836.05	\$ 11,836.05	\$ -	site prep, mulch delivery, prairie install
Other land improvement	\$ 32,763.95	\$ 32,763.95	\$ -	chemical, plants, seeds
Supplies	\$ 2,900.00	\$ 2,900.00	\$ -	gloves, safety glasses, pin flags, flagging tape, stakes, misc parts
<b>DEVELOPMENT - SUBTOTAL</b>	<b>\$ 47,500.00</b>	<b>\$ 47,500.00</b>	<b>\$ -</b>	
<b>ACQUISITION</b>				
Land acquisition (fee title & conservation easement)			\$ -	
Land transaction costs (e.g. survey, title, appraisal, environmental, & legal)			\$ -	
<b>ACQUISITION - SUBTOTAL</b>			<b>\$ -</b>	
<b>OTHER</b>				
Easement stewardship		\$ -	\$ -	
Printing		\$ -	\$ -	
Volunteer Event Supplies	\$ 7,550.00	\$ 7,550.00	\$ -	approved food and bev, portable toilets, tents, signage, PA system
Other Supplies	\$ 50.00	\$ 50.00	\$ -	mapping supplies
Travel expenses in Minnesota	\$ 1,100.00	\$ 1,100.00	\$ -	
<b>OTHER - SUBTOTAL</b>	<b>\$ 8,700.00</b>	<b>\$ 8,700.00</b>	<b>\$ -</b>	
<b>TOTAL LCMR Funding</b>	<b>\$ 100,000.00</b>	<b>\$ 100,000.00</b>	<b>\$ -</b>	