

2009 Project Abstract

For the Period Ending June 30, 2011

PROJECT TITLE: Metro Conservation Corridors-Phase V-Friends of the Minnesota Valley (2.4)

PROJECT MANAGER: Lori Nelson

AFFILIATION: Friends of the Minnesota Valley

MAILING ADDRESS: 10800 Lyndale Avenue South, Suite #120

CITY/STATE/ZIP: Bloomington, MN 55420

PHONE: 952-881-9065

E-MAIL: lnelson@friendsofmnvalley.org

WEBSITE: www.friendsofmnvalley.org

FUNDING SOURCE: Environment and Natural Resources Trust Fund

LEGAL CITATION: M.L. 2009, Chp. 143, Sec. 2, Subd. 4(f)

APPROPRIATION AMOUNT: \$90,000

Overall Project Outcome and Results

Friends of the Minnesota Valley (FMV) undertook restoration of habitat for the Lower Minnesota River Watershed portion of the Metropolitan Conservation Corridors Project (MeCC) as a continuation of our wildlife habitat restoration within the Minnesota Valley National Wildlife Refuge and Wetland Management District (Refuge) and within the Lower Minnesota River Watershed. FMV sought to restore native habitats within the Refuge and to work in concert with the U.S. Fish & Wildlife Service and other partners on critical, publicly-owned habitat on Refuge lands. During this phase of the MeCC project, FMV and our partners were able to successfully restore and enhance 17 acres of native wet prairie, 48 acres of native dry sand-gravel oak savanna, and 28 acres of native dry sand-gravel prairie with Environment and Natural Resources Trust Fund funds for a total acreage of 93 acres. We were also able to restore additional match acreage of 59 acres of native dry sand-gravel oak savanna with non-LCCMR, non-state funds, bringing total acres impacted by this project to 152 acres.

The FMV objectives were to complement and connect habitat restoration and management of Refuge lands with that being done by other entities. Restoration sites were selected to address primary management issues and challenges, including the need to restore hydrology within floodplain communities and to restore upland communities such as native oak savanna and wet and dry prairies. Public access to restored lands for recreation and education and the assurance of permanent protection were also primary factors. Due to persistent flooding, our access to wetland sites was severely limited and, as a result, we shifted our focus to upland restoration, as reflected in our amended work program.

All work was completed on four Refuge Units. Work included cutting and herbicide treatment of non-native woody brush species such as buckthorn, honeysuckle, prickly ash, eastern red cedar, and Siberian elm. Minnesotans will be able to access and appreciate the restored sites through the access and education provided to Minnesota Valley National Wildlife Refuge visitors. Our project data is publicly accessible by contacting FMV, through information disseminated through our newsletter and on our website, and through information provided by the MeCC Partnership.

Project Results Use and Dissemination

As projects were completed, Friends of the Minnesota Valley publicized project accomplishments through the Friends' quarterly newsletter, our annual report, publication of a habitat restoration prospectus, and the posting of projects on our website. Other dissemination of information occurred through the Metro Conservation Corridors partnership and on the Metro Corridors website.

Environment and Natural Resources Trust Fund 2009 Work Program Final Report and Trust Fund 2010 Work Program

Date of Report: August 22, 2011

	M.L. 2009	M.L. 2010
Date of Next Status Report:	FINAL	February 1, 2012
Date of Work Program Approval:	June 16, 2009	June 9, 2010
Project Completion Date:	June 30, 2011	June 30, 2012

I. PROJECT TITLE: Metro Conservation Corridors – Phase V – Friends of the MN Valley – 2.4, Lower Minnesota River Watershed Restoration & Enhancement Project [M.L. 2009]

Project Manager: Lori Nelson
Affiliation: Friends of the Minnesota Valley
Mailing Address: 10800 Lyndale Avenue South, Suite 120
City / State / Zip: Bloomington, MN 55420
Telephone Number: 952-881-9065
E-mail Address: lnelson@friendsofmnvalley.org
FAX Number: 952-881-3174
Web Site Address: www.friendsofmnvalley.org

Location: Lower Minnesota River Watershed of Carver, Hennepin, Le Sueur, Sibley, and Scott Counties

Total Trust Fund Project Budget:	M.L. 2009	M.L. 2010	Total
Trust Fund Appropriation:	\$90,000	\$50,000	\$140,000
Minus Amount Spent:	\$89,988.88	\$ 0	\$ 89,988.88
Equal Balance:	\$11.12	\$50,000	\$50,001.12

Legal Citation:

M.L. 2009, Chp. 143, Sec. 2, Subd. 4(f)

Appropriation Language:

\$3,375,000 is from the trust fund to the commissioner of natural resources for the fifth appropriation for acceleration of agency programs and cooperative agreements. Of this appropriation, \$2,185,000 is for Department of Natural Resources agency programs and \$1,190,000 is for agreements as follows: \$380,000 with the Trust for Public Land; \$90,000 with Friends of the Mississippi River; \$155,000 with Great River Greening; \$250,000 with Minnesota Land Trust; \$225,000 with Minnesota Valley National Wildlife Refuge Trust, Inc.; and \$90,000 with Friends of the Minnesota Valley for the purposes of planning, restoring, and protecting important natural areas in the metropolitan area, as defined under Minnesota Statutes, section 473.121, subdivision 2, and portions of the surrounding counties, through grants, contracted services, technical assistance, conservation easements, and fee title 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 corridor 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. All conservation easements must be

perpetual and have a natural resource management plan. Any land acquired in fee title by the commissioner of natural resources with money from this appropriation must be designated as an outdoor recreation unit under Minnesota Statutes, section 86A.07. The commissioner may similarly designate any lands acquired in less than fee title. A list of proposed restorations and fee title and easement acquisitions must be provided as part of the required work program. All funding for conservation easements must include a long-term stewardship plan and funding for monitoring and enforcing the agreement. To the maximum extent practical, consistent with contractual easement or fee acquisition obligations, the recipients shall utilize staff resources to identify future projects and shall maximize the implementation of biodiverse, quality restoration projects in the project proposal into the first half of the 2010 fiscal year.

M.L. 2010, Chp. 362 , Sec. 2, Subd. 4(g)

Appropriation Language:

\$1,750,000 is added to Laws 2009, chapter 143, section 2, subdivision 4, paragraph (f), from the trust fund to the commissioner of natural resources for acceleration of agency programs and cooperative agreements. Of this appropriation, \$1,750,000 is for agreements as follows: \$890,000 with the Trust for Public Land; \$485,000 with Minnesota Land Trust; \$325,000 with Minnesota Valley National Wildlife Refuge Trust, Inc.; and \$50,000 with Friends of the Minnesota Valley for planning, restoring, and protecting important natural areas in the metropolitan area, as defined under Minnesota Statutes, section 473.121, subdivision 2, and portions of the surrounding counties, through grants, contracted services, technical assistance, conservation easements, and fee title 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 corridor 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. All conservation easements must be perpetual and have a natural resource management plan. Any land acquired in fee title by the commissioner of natural resources with money from this appropriation must be designated as an outdoor recreation unit under Minnesota Statutes, section 86A.07. The commissioner may similarly designate any lands acquired in less than fee title. A list of proposed restorations and fee title and easement acquisitions must be provided as part of the required work program. All funding for conservation easements must include a long-term stewardship plan and funding for monitoring and enforcing the agreement.

II. PROJECT SUMMARY AND RESULTS

M.L. 2009 FINAL PROJECT SUMMARY

Friends of the Minnesota Valley (FMV) undertook restoration of habitat for the Lower Minnesota River Watershed portion of the Metropolitan Conservation Corridors Project (MeCC) as a continuation of our wildlife habitat restoration within the Minnesota Valley National Wildlife Refuge and Wetland Management District (Refuge) and within the Lower Minnesota River Watershed. FMV sought to restore native habitats within the Refuge and to work in concert with the U.S. Fish & Wildlife Service and other partners on critical, publicly-owned habitat on Refuge lands. During this phase of the MeCC project, FMV and our partners were able to successfully restore and enhance 17 acres of native wet prairie, 48 acres of native dry sand-gravel oak savanna, and 28 acres of native dry sand-gravel prairie with Environment and Natural Resources Trust Fund funds for a total acreage of 93 acres. We were also able to restore additional match acreage of 59 acres of native dry sand-gravel oak savanna with non-LCCMR, non-state funds, bringing total acres impacted by this project to 152 acres.

The FMV objectives were to complement and connect habitat restoration and management of Refuge lands with that being done by other entities. Restoration sites were selected to address primary management issues and challenges, including the need to restore hydrology within floodplain communities and to restore upland communities such as native oak savanna and wet and dry prairies. Public access to restored lands for recreation and education and the assurance of permanent protection were also primary factors. Due to persistent flooding, our access to wetland sites was severely limited and, as a result, we shifted our focus to upland restoration, as reflected in our amended work program.

All work was completed on four Refuge Units. Work included cutting and herbicide treatment of non-native woody brush species such as buckthorn, honeysuckle, prickly ash, eastern red cedar, and Siberian elm. Minnesotans will be able to access and appreciate the restored sites through the access and education provided to Minnesota Valley National Wildlife Refuge visitors. Our project data is publicly accessible by contacting FMV, through information disseminated through our newsletter and on our website, and through information provided by the MeCC Partnership.

M.L. 2010:

Restore and/or enhance 50 acres of significant biological communities throughout the MeCC mapped corridors, including wetlands, prairie, and oak savanna, focusing on the Minnesota River Corridor within the Lower Minnesota River Watershed. An additional 25 acres will be restored and/or enhanced using other, non-state funds.

III. PROGRESS SUMMARY AS OF:

August 22, 2011:

M.L. 2009

Completed (See "M.L. 2009 Final Project Summary" in Section II above)

M.L. 2010:

N/A - work has not yet begun on M.L. 2010.

IV. OUTLINE OF PROJECT RESULTS:

Result/Activity 1: Restore and/or enhance significant habitat

Description:

M.L. 2009:

Restore and enhance 90 acres of significant biological communities and wildlife habitat throughout the MeCC mapped corridors of the Lower Minnesota River Watershed within Carver, Hennepin, LeSueur, Sibley, and/or Scott Counties. An additional 45 acres will be restored/enhanced using other, non-state funds.

Restoration efforts will focus on public lands including the Minnesota Valley National Wildlife Refuge, land purchased by the Minnesota Valley Trust, Inc., and on private lands. Priority will be given to permanently protected lands. Restorations on private lands will be protected through a minimum 10 year landowner agreement through the U.S. Fish and Wildlife's Partners For Fish and Wildlife Program. Projects will be selected based on but not limited to: ecological importance of area, based on size, habitat quality, buffering of existing high

quality habitat, water quality benefits, connectivity to other natural areas, matching funds, and partner interest and commitment.

Friends of the MN Valley and its partners will restore and enhance the hydrology of wetlands such as shallow lakes, for the benefit of wildlife and water quality, plant retired agricultural fields to prairie using native ecotype seed, remove and manage exotic species, and restore important floodplain forest communities along the Minnesota River. Following LCCMR local ecotype guidelines, only native plant species will be used with specific native seed mixes being adjusted for local site conditions and availability. All contracts will be awarded based upon a competitive, experience, and performance basis.

Ecological restoration and management plans will be developed prior to restoration work. With the underlying goal to restore a self sustaining ecosystem, the restoration plans meet or exceed the project requirements as laid out by the LCCMR (M.L. 2009, Chap. 143, Sec. 2, Subd. 11. Project Requirements) and utilize natural processes to the extent possible to help establish and maintain the best restoration. Elements of the restoration and management plans will include a description of current conditions including biotic and abiotic elements; descriptions of target communities; descriptions of proposed restoration methodology; evaluation processes utilized for determining the effectiveness of restoration; and proposed ongoing management activities and responsibilities. Restoration and management plans will be developed by the U.S. Fish & Wildlife Service in consultation with Friends of the Minnesota Valley.

M.L. 2010:

Restore and enhance 50 acres of significant biological communities and wildlife habitat throughout the MeCC mapped corridors of the Lower Minnesota River Watershed within Carver, LeSueur, Sibley, and/or Scott Counties. An additional 25 acres will be restored/enhanced using other, non-state funds.

Restoration efforts will focus on public lands including the Minnesota Valley National Wildlife Refuge and on lands that will become new refuge units purchased by the Minnesota Valley Trust, Inc. Projects will be selected based on but not limited to: ecological importance of area, based on size, habitat quality, buffering of existing high quality habitat, water quality benefits, connectivity to other natural areas, matching funds, and partner interest and commitment.

Friends of the MN Valley and its partners will restore and enhance the hydrology of wetlands such as shallow lakes, for the benefit of wildlife and water quality, plant retired agricultural fields to prairie using native ecotype seed, remove and manage exotic species, and restore important floodplain forest communities along the Minnesota River. Following local ecotype guidelines, only native plant species will be used with specific native seed mixes being adjusted for local site conditions and availability. Restoration and management plans will be developed prior to restoration work. Contracts will be awarded based upon a competitive, experience, and performance basis.

All restoration and enhancement work will be permanently protected and managed by the U.S. Fish and Wildlife Service as part of the Minnesota Valley National Wildlife Refuge.

Ecological restoration and management plans will be developed prior to restoration work. With the underlying goal to restore a self sustaining ecosystem, the restoration plans meet or exceed the project requirements as laid out by the LCCMR (M.L. 2009, Chap. 143, Sec. 2, Subd. 11. Project Requirements) and utilize natural processes to the extent possible to

help establish and maintain the best restoration. Elements of the restoration and management plans will include a description of current conditions including biotic and abiotic elements; descriptions of target communities; descriptions of proposed restoration methodology; evaluation processes utilized for determining the effectiveness of restoration; and proposed ongoing management activities and responsibilities. Restoration and management plans will be developed by the U.S. Fish & Wildlife Service in consultation with Friends of the Minnesota Valley.

See attached project list.

Summary Budget Information for Result/Activity 1:

	Total	M.L. 2009	M.L. 2010
Trust Fund Budget:	\$ 140,000	\$90,000	\$50,000
Amount Spent:	\$ 13,032	\$89,989	\$0
Balance:	\$126,968	\$11	\$50,000

Deliverable/Outcome	Completion Date	Budget
1. M.L. 2009 Restore and/or enhance 90 acres	June 15, 2011	\$ 90,000
2. M.L. 2010 Restore and/or enhance 50 acres	June 30, 2012	\$50,000

Result Completion Date: M.L. 2009: June 15th, 2011; M.L. 2010: June 30, 2012

M.L. 2009 Final Report Summary (August 2011):

Within the focus area, Friends of the Minnesota Valley has restored and enhanced 93 acres of significant biological communities and wildlife habitat throughout the MeCC mapped corridors of the Lower Minnesota River Watershed within Carver, Hennepin, Le Sueur, Sibley, and/or Scott Counties. An additional 59 acres was restored/enhanced using other, non-state funds.

Restoration efforts focused on public lands including the Minnesota Valley National Wildlife Refuge. Priority was given to permanently protected lands. Projects were selected based on but not limited to: ecological importance of area, based on size, habitat quality, buffering of existing high quality habitat, water quality benefits, connectivity to other natural areas, matching funds, and partner interest and commitment.

Friends of the Minnesota Valley and its partners removed and managed exotic species, and restored important upland communities along the Minnesota River. Following LCCMR local ecotype guidelines, only native plant species were used with specific native seed mixes being adjusted for local site conditions and availability. All contracts were awarded based upon a competitive, experience, and performance basis.

Ecological restoration and management plans were developed prior to restoration work. With the underlying goal to restore a self sustaining ecosystem, the restoration plans met or exceed the project requirements as laid out by the LCCMR (M.L. 2009, Chap. 143, Sec. 2, Subd. 11. Project Requirements) and utilized natural processes to the extent possible to help establish and maintain the best restoration. Elements of the restoration and management plans include a description of current conditions including biotic and abiotic elements; descriptions of target communities; descriptions of proposed restoration methodology; evaluation processes utilized for determining the effectiveness of restoration; and proposed ongoing management activities and responsibilities. Restoration and management plans were developed by the U.S. Fish & Wildlife Service in consultation with Friends of the Minnesota Valley.

St. Lawrence Unit

Friends of the Minnesota Valley, along with the U.S. Fish & Wildlife Service, successfully treated 17 acres of invasive woody brush species such as buckthorn, honeysuckle, and prickly ash at the St. Lawrence Unit of the Minnesota Valley National Wildlife Refuge in order to restore native wet prairie habitat. Treatment consisted of cutting and herbicide treatment of non-native species, based on community descriptions by the Minnesota Department of Natural Resources' County Biological Survey. All project costs were paid by Friends of the Minnesota Valley with Phase V funding for a total project area of 17 acres. Match dollars from partners includes USFWS (\$2,245) and FMV (\$1,250).

Some work initially planned for the fall of 2010 was delayed at the St. Lawrence and Upgrala project sites due to heavy snow that occurred before the ground was frozen. Deep snow insulated the ground and prevented freezing, High valued plant communities targeted for additional woody invasive species removal were susceptible to damage with unfrozen ground.

Upgrala Unit

Friends of the Minnesota Valley, along with the U.S. Fish & Wildlife Service, successfully restored 7 acres of native dry sand-gravel prairie at the Minnesota Valley National Wildlife Refuge's Upgrala Unit. Treatment consisted of cutting and herbicide treatment of non-native species such as buckthorn, honeysuckle, prickly ash, eastern red cedar, and Siberian elm. All project costs were paid by Friends of the Minnesota Valley with Phase V funding for a total project area of 7 acres. Partner match dollars include USFWS (\$2,245) and FMV (\$1,250).

Bald eagle nesting season limited access to some areas of the unit, resulting in fewer acres being treated than originally anticipated in the work program.

Rapids Lake Unit

Friends of the Minnesota Valley, along with the U.S. Fish & Wildlife Service, successfully restored 21 acres of native dry sand-gravel prairie and 34 acres of native dry sand-gravel oak savanna at the Minnesota Valley National Wildlife Refuge's Rapids Lake Unit. Treatment consisted of cutting and herbicide treatment of non-native species such as buckthorn, honeysuckle, prickly ash, eastern red cedar, and Siberian elm. All project costs were paid by Friends of the Minnesota Valley with Phase V funding for a total project area of 55 acres. Partner match dollars include USFWS (\$2,245) and FMV (\$1,250).

Louisville Swamp Unit

Friends of the Minnesota Valley and the U.S. Fish & Wildlife Service restored and enhanced 59 acres of native dry sand-gravel oak savanna at the Minnesota Valley National Wildlife Refuge's Louisville Swamp Unit. The restoration was accomplished by treating invasive woody brush species, based on community descriptions by the Minnesota Department of Natural Resources' County Biological Survey data. Restoration activities include cutting and herbicide treatment of buckthorn, honeysuckle, prickly ash, eastern red cedar, and Siberian elm. No Phase V project funds were used but Friends of the Minnesota Valley in-kind services were provided. Federal funds from the American Recovery and Reinvestment Act were used for restoration project costs, resulting in a total match acreage project area of 59 acres. Partner match dollars include USFWS (\$2,245 in-kind; \$69,210 in ARRA dollars) and FMV (\$1,250).

M.L. 2010:

Result Status as of: August 22, 2011
N/A - work has not yet begun on M.L. 2010.

Result Status as of: February 1, 2012:

M.L. 2010 Final Report Summary:

V. TOTAL TRUST FUND PROJECT BUDGET: 90,000

M.L. 2009:

Personnel: \$15,000 - FMV Watershed Initiative Coordinator (.48 FTE). Total expended during grant period: \$14,998.88.

Contracts: \$ 50,000 (for earthwork contractors to install water control structures, build earthen dams, break drainage tile lines, field prep, seed installation, invasive species removal, etc.) Total expended during grant period: \$50,000

Equipment/Tools/Supplies: \$ 25,000 (for native seed and trees, water control structures, herbicide, chainsaws, gloves, etc.) Total expended during grant period: \$24,990.

Acquisition, including easements: \$ NA

Travel: \$ 0

Other: \$ 0

TOTAL 2009 TRUST FUND PROJECT BUDGET: \$ 90,000

Total expended during grant period: \$89,988.88.

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

M.L. 2010:

Personnel: \$ 5,000 - Watershed Initiative Coordinator (.16 FTE)

Contracts: \$ 35,000 (for earthwork contractors to install water control structures, build earthen dams, break drainage tile lines, field prep, seed installation, invasive species removal, etc.)

Equipment/Tools/Supplies: \$ 10,000 for supplies only (includes native seed and trees, water control structures, herbicide). Herbicide cost is estimated at approximately \$500, water control structures at around \$2,500 and native seed and trees at around \$7,000.

Acquisition (Fee Title or Permanent Easements): \$ 0

Travel: \$ 0

Additional Budget Items: \$ 0

TOTAL 2010 ENRTF PROJECT BUDGET: \$50,000

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

VI. PROJECT STRATEGY:

A. Project Partners: U.S. Fish & Wildlife Service, MN Valley National Wildlife Refuge Trust, Inc., local units of government, private landowners, and other partners.

B. Project Impact and Long-term Strategy: Restoration efforts will increase breeding/migratory habitat for resident/migrant waterfowl including wood ducks and lesser

scaup, resident/migrant shorebirds, as well as a myriad of other species including resident game species such as pheasant and deer. Restoration efforts will improve and protect the water quality of the Minnesota River and its tributaries through wetland restoration and restoring retired cropland and publicly-owned permanently-protected lands to native habitat such as prairie, oak savanna, and floodplain forest. Friends of the Minnesota Valley will continue to restore and enhance significant biological communities throughout the MeCC mapped corridors within the Lower Minnesota River Watershed.

C. Other Funds Proposed to be spent during the Project Period:

Original anticipated match was \$45,000. Match actually acquired and spent during the grant period totaled \$83,190.

D. Spending History: ETF - 2001: \$ 0; 2003: \$ 18,000 (BRP); 2005: \$ 40,000 (MeCC)
2007: \$34,000; 2008: \$107,000;
Other Funds - : \$ 0; 2003: \$ 0; 2005: \$ 5,000 (MeCC); 2007: \$5,000
2009: \$54,000

VII. DISSEMINATION:

M.L. 2009

As projects were completed, Friends of the Minnesota Valley publicized project accomplishments through the Friends' quarterly newsletter, our annual report, publication of a habitat restoration prospectus, and the posting of projects on our website. Other dissemination of information occurred through the Metro Conservation Corridors partnership and on the Metro Corridors website.

M.L. 2010

Status as of August 22, 2011: N/A - work has not yet begun on M.L. 2010.

VIII. REPORTING REQUIREMENTS: Periodic work program progress reports will be submitted not later than February 2010, August 2010, February 2011, August 2011, February 2012. A final work program report and associated products will be submitted between June 30 and August 1, 2011 for M.L. 2009 and between June 30 and August 1, 2012 for M.L. 2010 as requested by the LCCMR.

IX. RESEARCH PROJECTS: NA.

Attachment A: Final Budget Detail for 2009 Projects							
Project Title: Metro Conservation Corridors – Phase V – Friends of the MN Valley – 2.4, Lower Minnesota River Watershed Restoration & Enhancement Project							
Project Manager Name: Scott Sparlin, Watershed Initiative Coordinator							
Trust Fund Appropriation: \$ 90,000							
2009 Trust Fund Budget	Result 1 Budget:	Amount Spent <i>(date)</i>	Balance	TOTAL BUDGET	TOTAL BALANCE		
	<i>Restore and/or Enhance 90 acres</i>						
BUDGET ITEM							
PERSONNEL: wages and benefits <i>(Scott Sparlin, .48 FTE)</i>	15,000	14,998.88	1.12	15,000	1.12		
Contracts							
Professional/technical <i>(engineering firms to design wetland restorations, earthwork contractors to install water control structures, break drainage tile lines, and build earthen dams, contractors to install native seed, prep fields, remove and treat invasive species etc.)</i>	50,000	50,000	0	50,000	0		
Non-capital Equipment / Tools <i>(local ecotype native seed, chainsaws, gloves, water control structures, culverts, erosion matting, survey lath, etc.)</i>	25,000	24,990	10	25,000	10		
COLUMN TOTAL	\$90,000	\$89,988.88	\$11.12	\$90,000	\$11.12		



LCCMR - MeCC Ph. 5: FMV
Mn Valley NWR - Louisville Swamp Unit Oak Savanna Resto.
Woody/Invasive Species: Mechanical, Chemical, Rx Fire
44d 44m 14s N, 93d 36m 03s W





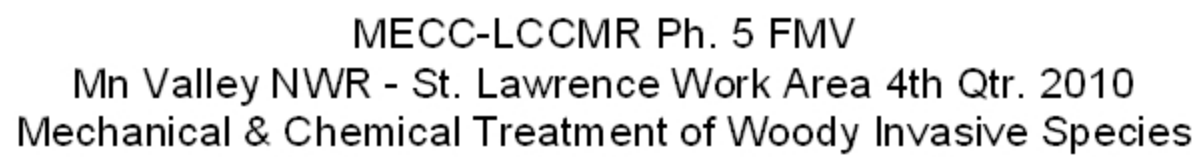
LCCMR - MeCC Ph. 5: FMV
Mn Valley NWR - Rapids Lk. Unit Native Prairie & Savanna Resto.
Woody/Invasive Species: Mechanical
44d 44m 18s N, 93d 38m 39s W





LCCMR - MeCC Ph. 5: FMV
Mn Valley NWR - Upgrala Unit Native Prairie Resto.
Woody/Invasive Species: Mechanical
44d 49m 06s N, 93d 28m 03s W

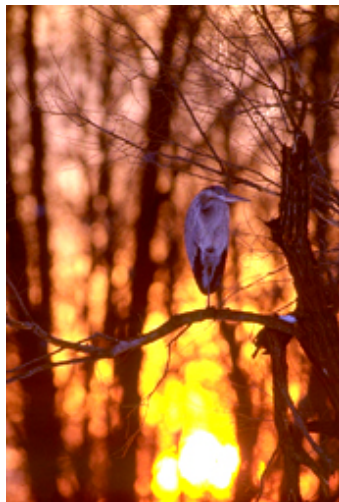






CREATING A CONSERVATION LEGACY:

WILDLIFE HABITAT RESTORATION IN THE MINNESOTA RIVER VALLEY



2011-2012
HABITAT RESTORATION PROJECTS:
A PROSPECTUS

Friends of the Minnesota Valley



INTRODUCTION

Friends of the Minnesota Valley works to conserve the natural resources within the eleven-county Lower Minnesota River Watershed. The Friends is also one of three nongovernmental organizations working to improve the water quality of the Minnesota River. Founded in 1982, the Friends' first objective was to help establish the Minnesota Valley National Wildlife Refuge. The organization has a Valley-wide conservation vision and strives to protect resources beyond refuge boundaries by taking a watershed-based approach.

As part of our programmatic agenda, Friends of the Minnesota Valley restores native wildlife habitat in the Minnesota River Valley. Through our partnership and involvement in the Metropolitan Conservation Corridors Project, funded with proceeds from the Minnesota State Lottery and administered by the Legislative-Citizens Commission on Minnesota Resources, and with additional financial assistance provided by the McKnight Foundation and other private funders, we are actively restoring hundreds of acres of native habitat including native prairie, oak savanna, wetlands, shallow lakes, and other riparian habitat each year.

Our partners include the U.S. Fish & Wildlife Service, the Minnesota Valley National Wildlife Refuge Trust, other private conservation organizations, local soil and water conservation districts, and private landowners. For more information on Friends and the Minnesota Valley and our programs, please visit www.friendsofminnvalley.org.



The refuge's wetlands provide habitat for waterfowl, such as this male wood duck.

HISTORICAL HABITAT

Early explorers' accounts and paintings provide glimpses of what the landscape resembled before widespread European settlement. Many explorers wrote descriptions about the rich flora and fauna and Native Americans inhabiting the Minnesota River Valley in the 1700s and 1800s. They described a landscape covered in tall grass, wetlands, shallow lakes and forested areas with numerous American Indian tribes living along the Minnesota River.

The area in which Friends of the Minnesota Valley is conducting wildlife habitat restoration in 2011-2012 is in commonly known as The Big Woods. At one time, a 2,000 to 3,000-square mile forest extended from the Mankato area north to Monticello. Filled with elm, sugar maple, basswood and oak, this deciduous forest stood in contrast to the surrounding immense prairie-wetland landscape. French explorers in the 17th Century called it bois fort or bois grand, later translated as the "Big Woods" by English-speaking settlers. Today, less than 2 percent of the original "Big Woods" remains after Euro-American settlers began to clear the forest to establish farms, plant crops and build cities (Minnesota State University Water Resources Center, *Minnesota River Trends*, 2009, page 4). In 1850, approximately 62% of The Big Woods was forest. By 1988, 62% of The Big Woods had been converted to farmland (Id.).

The Minnesota River runs through the middle of the once predominantly-forested Big Woods. The Mississippi River forms the northeastern boundary. Lakes and wetlands are common; more than 100 lakes are greater than 160 acres in size, and many are groundwater-controlled with no inlets or outlets. Twin Cities metropolitan area continues to expand into The Big Woods, and both farming and urbanization have led to dramatic changes in habitats. Water quality is also a conservation concern in this agricultural landscape (Minnesota Department of Natural Resources, *Tomorrow's Habitat for the Wild and Rare, Big Woods Sub-section Profile*, 2006, page 76). 121 Species in Greatest Conservation Need (SGCN) are known or predicted to occur within the Big Woods, the fourth most of all subsections in Minnesota. These SGCN include 55 species that are federal or state endangered, threatened, or of special concern. Big Woods habitats feature woodland birds such as red-shouldered hawks and warblers, savanna species such as Blanding's turtles and red-headed woodpeckers, and wetland species such as turtles, ospreys, Forster's terns, and black terns. The Minnesota River also provides habitat to many species. Smooth softshell turtles utilize exposed sand bars and south-facing cut-banks as basking and nest sites. Forested river terraces are occupied by milk snakes and western foxsnakes, while bull snakes and racers live among open sandy terraces (Id.).

The Minnesota River Basin is located in the so-called "duck factory," considered North America's best waterfowl breeding habitat and one of the most important duck breeding areas in the world. This area covers the southern part of Minnesota along with the Dakotas, Iowa and central Canada. Much of the prairie and wetlands originally found in the "duck factory" area have disappeared and what remains faces continued pressure to be broken up and drained for agricultural production. Ducks rely on upland areas around wetlands and shallow lakes for both nesting and as a food source. With the elimination of nearly 95 percent of wetlands in the basin over the last 80 years, there is less habitat and food sources for ducks. Many of the remaining wetlands have degraded water quality and quantity. The immense drainage system put in place across the basin has significantly decreased the duck population capability (*Minnesota River Trends*, page 52).

CURRENT RESTORATION GOALS

Friends of the Minnesota Valley is a restoration partner in the Metro Conservation

Corridors. Started in 2003, the Metro Conservation Corridors (MeCC) is a partnership of conservation organizations whose goal is to protect a series of connected corridors throughout the greater Twin Cities area. These corridors provide area citizens with open space, wildlife habitat, and water quality benefits.

With funding from the Environmental Trust Fund as recommended by the Legislative-Citizens Commission on Minnesota Resources, the project partners permanently protect and restore ecologically important land in predetermined corridors.

During the 2011 and 2012 field seasons, Friends of the Minnesota Valley plans to restore a minimum of 210 acres of significant biological communities and wildlife habitat throughout the MeCC-mapped corridors of the Lower Minnesota River Watershed within Carver, Hennepin, Le Sueur, Sibley, and/or Scott Counties. Our restoration projects focus on lands within the Minnesota Valley National Wildlife Refuge. We will focus our restoration efforts on publicly-accessible lands within the Minnesota Valley National Wildlife Refuge, within the Refuge's boundary expansion area, and on private lands. We will give priority to permanently-protected lands. Restorations on private lands will be protected through a minimum 10-year landowner agreement through the U.S. Fish and Wildlife's Partners For Fish and Wildlife Program. Projects will be selected based on but not limited to criteria such as the ecological importance of the restoration area, based on size, habitat quality, buffering of existing high quality habitat, water quality benefits, connectivity to other natural areas, matching funds, and partner interest and commitment.

Friends of the Minnesota Valley and its partners will restore and enhance the hydrology of wetlands such as shallow lakes, for the benefit of wildlife and water quality, plant retired agricultural fields to prairie using native ecotype seed, remove and manage exotic species, and restore important floodplain forest communities along the Minnesota River. Only native plant species will be used with specific native seed mixes being adjusted for local site conditions and availability. We will develop ecological restoration and management plans prior to beginning our restoration work.

Elements of the restoration and management plans will include a description of current conditions including biotic and abiotic elements; descriptions of target communities; descriptions of proposed restoration methodology; evaluation processes utilized for determining the effectiveness of restoration; and proposed ongoing management activities and responsibilities. Restoration and management plans will be developed by the U.S. Fish & Wildlife Service in consultation with Friends of the Minnesota Valley.

PLANNED RESTORATION PROJECTS

Project #1: Jessenland Unit, Sibley County Ecotypes: Wetland, Oak Savanna, Floodplain Forest

Description:

Restoration Phase I (Construction) – 400 Total Unit Acres/ 126 Minimum Restored Acres

Friends of the Minnesota Valley will restore approximately 25 acres of Type I, II, and VI wetlands by breaking drain tile, shallow scraping, and constructing earthen dams within drainage ditches. We will seed wetlands with native wetland species. Local ecotype oak savanna grasses and forbs have been planted to restore approximately 101 acres. After the grasses are established, we will plant oak trees to complete the oak savanna restoration. We will remove exotic species such as buckthorn through mechanical and chemical treatment to allow native species to re-establish or expand. In addition, woody species will be removed to create firebreaks for future fire management of the oak savanna.

Restoration Phase II (Management and Maintenance)

After the completion of Phase I, the land will be protected and managed in perpetuity by the U.S. Fish and Wildlife Service (USFWS). The USFWS will manage and monitor the restoration and will ensure the long-term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Results and Benefits

This restoration is an important piece in linking floodplain forest habitats in the Jessenland Conservation Area Boundary. When combined with adjacent downstream parcels, the restoration will complete the Jessenland Unit of Valley National Wildlife Refuge and complement the permanently-protected Reinvest in Minnesota (RIM) and Conservation Reserve Enhancement Program (CREP) habitat easements on the Scott County side of the Minnesota River.



Picture depicting oak savanna habitat

Project #2: Henderson Unit, Scott & Sibley Counties Ecotypes: Wetland, Floodplain Forest

Description:

Restoration Phase I (Construction) – 1250 Total Unit Acres/ 130 Minimum Restored Acres

We will convert 80 acres currently in agricultural production to floodplain forest and shallow riverine wetland habitats. Approximately 50 acres of Type I, II, and III wetlands will be restored by breaking drain tile, shallow scraping, and constructing earthen dams within drainage ditches. We will also seed wetlands with native local ecotype wetland species. Exotic species such as buckthorn will be mechanically and chemically treated to allow native species to re-establish or expand.

Restoration Phase II (Management and Maintenance)

After completion of Phase I, the land will be protected and managed in perpetuity by the U.S. Fish and Wildlife Service (USFWS). The USFWS will manage and monitor the restoration and will ensure the long term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Results and Benefits

Wetland and riparian habitat in the vicinity of the Henderson Unit that supports 22 species of ducks, geese and other waterbirds will be enhanced by this restoration project. Many other birds are known to frequent the area, including gulls, terns, hawks, ospreys, eagles, herons, egrets, rails, kingfishers, and swallows.



Picture depicting wetland habitat

Project #3: St. Lawrence Unit, Scott County

Ecotypes: Wetland, Prairie

Description

Restoration Phase I (Construction) – 160 Total Unit Acres/ 20 Minimum Restored Acres

The absence of fire has resulted in the encroachment of woody species within the wetland and prairie, specifically cedar trees. Approximately 35 acres of cedars and other woody species such as buckthorn and honeysuckle will be mechanically removed and chemically treated to allow native species to re-establish and expand. In addition, approximately 20 acres of Type I, II, and III wetlands will be restored by breaking drain tile, shallow scraping, and constructing earthen dams within drainage ditches. Wetlands will also be seeded with native local ecotype wetland species.

Restoration Phase II (Management and Maintenance)

The property is located within the Minnesota Valley National Wildlife Refuge and is permanently protected by the U.S. Fish and Wildlife Service (USFWS). After completion of Phase I, the USFWS will manage and monitor the restoration and will ensure the long term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Benefits and Results

This restoration will provide high quality habitat for nesting, breeding, and brood-rearing of migratory waterfowl and birds. In addition, the close proximity to other permanently-protected state and federal public lands magnifies the potential benefit to wildlife, water quality, and recreational opportunities.



Picture depicting prairie habitat

Project #4: Upgrala Unit, Hennepin County

Ecotype: Prairie

Description

Restoration Phase I (Construction) – 32 Total Unit Acres/ 15 Minimum Restored Acres

The absence of fire has resulted in the encroachment of woody species within the prairie. The Friends and our partners will remove 4 acres of cedars, elms, and other woody species through mechanical means. Eleven (11) acres of non-native brush, such as buckthorn and honeysuckle, will be mechanically removed and chemically treated to allow native species to re-establish and expand.

Restoration Phase II (Management and Maintenance)

The property is located within the Minnesota Valley National Wildlife Refuge and is permanently protected by the U.S. Fish and Wildlife Service (USFWS). After completion of Phase I, the USFWS will manage and monitor the restoration and will ensure the long term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Benefits and Results

The prairie is part of the Minnesota Valley National Wildlife Refuge and is identified by the Minnesota County Biological Survey as a high-quality southern dry prairie remnant with four documented species listed on this site. The site is listed as a critical habitat type in the Minnesota Valley National Wildlife Refuge/ Wetland Management District Comprehensive Conservation Plan and is also recognized as a rare ecosystem in the Minnesota Department of Natural Resources' Tomorrow's Habitat for the Wild and Rare Plan.



Photo provided courtesy of Scott Sharkey

Project #5: Jailhouse Marsh Unit, Scott County

Ecotype: Wetland

Description

Restoration Phase I (Construction) – 84 Total Unit Acres/ 50 Minimum Restored Acres

River flooding has caused an earthen dike and fixed crest water control structures to fail, reducing the extent and quality of this wetland. With completion of this proposed work to replace the dike and water control structure, a minimum of 50 acres of this marsh will be restored or enhanced to support Type I, II, & III wetlands.

Restoration Phase II (Management and Maintenance)

The property is located within the Minnesota Valley National Wildlife Refuge and is permanently protected by the U.S. Fish and Wildlife Service (USFWS). After completion of Phase I, the USFWS will manage and monitor the restoration and will ensure the long term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Benefits and Results

The site is listed as critical habitat type in the Minnesota Valley National Wildlife Refuge/ Wetland Management District Comprehensive Conservation Plan. This restoration will provide high-quality habitat for nesting, breeding, and brood-rearing of migratory waterfowl and birds. In addition, the close proximity to permanently-protected state and federal lands magnifies the potential benefit to wildlife, water quality, and recreational opportunities.



Photo provided courtesy of Chad Gustafson

Project #6: Louisville Swamp Unit, Scott County

Ecotype: Oak Savanna

Description

Restoration Phase I (Construction) – 1,000 Total Unit Acres/ 5 Minimum Restored Acres

The Louisville Swamp Unit of the Minnesota Valley National Wildlife Refuge includes many parcels of degraded oak savanna. With this project, restoration will be initiated on 5 acres of degraded oak savanna. This work will include mechanical removal of woody vegetation not associated with oak savanna ecosystems. Also included in this restoration phase is herbicide treatment of stumps (twice), seeding with oats to build a fine fuel base, and the application of prescribed fire.

Restoration Phase II (Management and Maintenance)

The property is located within the Minnesota Valley National Wildlife Refuge and is permanently protected by the U.S. Fish and Wildlife Service (USFWS). After completion of Phase I, the USFWS will manage and monitor the restoration and will ensure the long term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Benefits and Results

The site is listed as critical habitat type in the Minnesota Valley National Wildlife Refuge/ Wetland Management District Comprehensive Conservation Plan. Also, the project is identified by the Minnesota Department of Natural Resources' Minnesota County Biological Survey as supporting Dry Sand-Gravel Oak Savanna communities of significant (high) quality. With this project, we will maintain that quality and expand the extent of savanna communities. Restoration and management activities for this project specifically implement those actions recommended for this habitat as identified in Minnesota's Comprehensive Wildlife Conservation Strategy *Tomorrow's Habitat for the Wildlife and Rare*.



Project #7: Rapids Lake Unit, Carver County

Ecotype: Oak Savanna, Prairie

Description

Restoration Phase I (Construction) – 1,000 Total Unit Acres/ 35 Minimum Restored Acres

The Rapids Lake Unit of the Minnesota Valley National Wildlife Refuge includes many areas of degraded prairie remnant intermixed with degraded oak savanna. With this project, restoration will be initiated on 35 acres of degraded remnant prairie and oak savanna. This work will include mechanical removal of woody vegetation not associated with prairie and oak savanna ecosystems. Also included in this restoration phase is herbicide treatment of stumps and seeding with oats to stabilize erosive soils and build a fine fuel base for future prescribed fires.

Restoration Phase II (Management and Maintenance)

The property is located within the Minnesota Valley National Wildlife Refuge and is permanently protected by the U.S. Fish and Wildlife Service (USFWS). After completion of Phase I, the USFWS will manage and monitor the restoration and will ensure the long term success of the project through multiple mechanisms including prescribed fire, exotic species control, and ecological assessment.

Benefits and Results

The site is listed as critical habitat type in the Minnesota Valley National Wildlife Refuge/ Wetland Management District Comprehensive Conservation Plan. Also, the project is identified by the Minnesota Department of Natural Resources' Minnesota County Biological Survey as supporting Southern Dry Prairie and Dry Sand-Gravel Oak Savanna communities of significant (high) quality. With this project, we will maintain that quality and expand the extent of prairie and savanna communities. Restoration and management activities for this project specifically implement those actions recommended for this habitat as identified in Minnesota's Comprehensive Wildlife Conservation Strategy *Tomorrow's Habitat for the Wildlife and Rare*.



Photo provided courtesy of the U.S. Fish & Wildlife Service



Guarantee Our Outdoor Legacy: Support Habitat Restoration In the Minnesota River Valley

You can help make it possible for us to complete our profiled wildlife habitat restoration projects by making a contribution to Friends of the Minnesota Valley. Our funders, including the Minnesota Environment and Natural Resources Trust Fund and the McKnight Foundation, encourage and anticipate that the Friends and our partners will identify and raise matching funds to help support our work. Matching funds from non-state sources, such as Friends' members and supporters, help make annual grant applications for the Metro Conservation Corridors project more competitive. In addition, the McKnight Foundation will match donations for restoration projects at 100% up to \$10,000.

Each of our restoration projects can cost tens of thousands or even hundreds of thousands of dollars. Restoration is a sound investment but not an exact science. Projects are influenced by variables such as weather and field conditions and unforeseen circumstances sometimes require modification or substitution. A typical restoration project budget includes costs for professional and technical services such as engineering services for wetland restoration design; earthwork to install water control structures, break drainage tile lines, and build earthen dams; installation of native seed, field preparation, and removing and treating invasive species. Other costs include the acquisition of equipment and tools needed to complete restoration such as local ecotype native seed, chainsaws, gloves, water control structures, culverts, erosion matting and survey lath. We make sure our project planning and restoration dollars are used efficiently by working with the U.S. Fish & Wildlife Service to develop comprehensive ecological restoration and management plans prior to beginning our restoration work.

HOW YOU CAN HELP

Your support is key to the success of Friends of the Minnesota Valley's wildlife habitat restoration projects in the Minnesota River Valley. By making a contribution today, you can help ensure that wildlife in the Minnesota Valley National Wildlife Refuge and in the Minnesota River Watershed will have a sustainable future. You will also be investing in our outdoor legacy to ensure that future generations will be able to continue to enjoy our natural environment for many years to come.

MORE ABOUT YOUR GIFT

In return for your financial contribution, you will receive a donation letter to confirm your 100%-tax deductible donation to Friends of the Minnesota Valley. Of course, you will receive the reward of knowing that your gift goes directly to support the real, tangible restoration of critical habitat in the Valley.

Gifts can be given to support our restoration program as a whole or to support a specific restoration project. To learn more about our program or specific projects, or to arrange a meeting to discuss potential support of our program or a project, please contact Lori Nelson at 952-881-9065 or lnelson@friendsofmnvalley.org.

With your gift of **\$25** or more, you will receive a signed acknowledgment letter recognizing your support of our restoration program or designated project.

With your gift of **\$100** or more, you will receive an authentic, signed certificate of appreciation with a special thank-you letter from the Friends' President.

With your gift of **\$500** or more, you will receive a signed, framed certificate of appreciation and special thank-you letter, plus special recognition on our website, in our annual report, and at our annual dinner.

With your gift of **\$1,000** or more, you will receive all of the above, plus a beautiful bound project scrapbook including a project description, "before and after" pictures, and other details. This scrapbook is our special gift to you and can be displayed in your home or at your office.

Send your gift to: Friends of the Minnesota Valley, Attn: Restorations, P.O. Box 20697, Bloomington, MN 55420 OR give online at GiveMN.org.

Our promise: If project changes are required, we will contact you and make every effort to find an acceptable substitute restoration project.



The River. The Land. The Future.

***Published by and for the Benefit of
Friends of the Minnesota Valley
P.O. Box 20697
Bloomington, MN 55420***