

2005 Project Abstract

For the Period Ending June 30, 2008

TITLE: Metropolitan Area Wildlife Corridors – Phase II, Part 2.1:
“Wetland Restoration & Enhancement”

PROJECT MANAGER: Jon Schneider

ORGANIZATION: Ducks Unlimited, Inc.

ADDRESS: 311 East Lake Geneva Road, Alexandria, MN 56308

WEB ADDRESS: www.ducks.org

FUND: Minnesota Environment and Natural Resources Trust Fund

LEGAL CITATION: ML 2005, 1st Special Session, Chap. 1, Art. 2, Sec. 11, Subd. 5b.



APPROPRIATION AMOUNT: \$200,000

Overall Project Outcome and Results

DU enhanced 400-acre Mud Lake on the Carlos Avery WMA in Chisago County. DU provided bio-engineering services to DNR Wildlife Area Management field staff to survey, design and construct a new outlet water control structure and fish barrier. Mud Lake is a 400-acre shallow lake with maximum depths only four or five feet, and a history of growing wild rice and providing quality habitat for waterfowl. Prior to the project, water quality and wildlife habitat value of Mud Lake was poor due to the presence of carp and other invasive fish and stable water levels. The new outlet water control structure designed and installed by DU will allow Minnesota DNR Wildlife field staff to independently manage Mud Lake water levels, while also limiting fish access into the basin from the downstream Sunrise River to the east. The new outlet structure is being used by DNR to temporarily draw-down Mud Lake to winterkill carp and rejuvenate aquatic plants such as wild rice, which will improve both water quality and wildlife habitat value of Mud Lake. DU completed the project at a total cost of \$356,160.32, of which \$200,000 in contractor charges were reimbursed from the Environment and Natural Resources Trust Fund to DU through Minnesota DNR. Of the remaining \$156,160.32 in project costs, \$42,878 was reimbursed to DU by Minnesota DNR Wildlife using state funds, \$70,000 was reimbursed to DU by Minnesota DNR Wildlife using federal NAWCA grant funds, and \$43,282 was funded by DU (total “Other Non-state Funds” = \$113,282). The federal NAWCA funds were leveraged by Minnesota DNR and DU through a grant proposal that offered state DNR and LCCMR funds and private DU funds as non-federal match for the federal grant funds. This shallow lake improvement project helps fulfill the waterfowl habitat goals of DNR’s “Duck Recovery Plan” and DU’s “Living Lakes” conservation initiative.

Project Results, Use, and Dissemination

The results of this bio-engineering project by DU to improve Mud Lake has been helpful in developing and demonstrating water control and fish barrier techniques that can be applied to many other impaired and degraded shallow lakes around the state. Project summaries and pictures of the Mud Lake project funded through this grant will be disseminated through DU and DNR news releases, through articles in DU publications, and on the DU website www.ducks.org.

Date of Report: August 1, 2008
LCCMR Final Work Program Report
Project Completion Date: June 30, 2008

I. PROJECT TITLE: Metropolitan Area Wildlife Corridors – Phase II, Part 2.1:
“Wetland Restoration & Enhancement”

Project Manager: Jon Schneider, Manager – Minnesota Conservation Programs
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Location: Within MWC Focus Area of Chisago County. See MWC Figure 1.

Total Biennial LCMR Project Budget:	LCMR Appropriation:	\$ 200,000
	Minus Amount Spent:	\$ 200,000
	Equal Balance:	\$ 0

Legal Citation: ML 2005, 1st Special Session, 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:

DU enhanced 400-acre Mud Lake on the Carlos Avery WMA in Chisago County. DU provided bio-engineering services to DNR Wildlife Area Management field staff to survey, design and construct a new outlet water control structure and fish barrier. Mud Lake is a 400-acre shallow lake with maximum depths only four or five feet, and a history of growing wild rice and providing quality habitat for waterfowl. Prior to the project, water leaving Mud Lake entered the Sunrise River impoundment to the south that is controlled by a large weir structure and which contains carp and other invasive fish. Thus, the Mud Lake basin could not be dewatered to winterkill carp or grow wild rice plants without also dewatering the Sunrise River Impoundment, which seriously degraded the water quality and wildlife habitat value of Mud Lake. The new outlet water control structure designed and installed by DU will allow Minnesota DNR Wildlife field staff to independently manage Mud Lake water levels, while also limiting fish access into the basin from the downstream Sunrise River to the east. The new structure flows water east through a long pipeline directly into the Sunrise River, therefore bypassing the Sunrise River Impoundment to the south. The pipeline was designed and constructed at such an angle that will prohibit fish from being able to swim up the pipe and into Mud Lake, effectively serving as a barrier. Construction of the new structure was completed on April 10, 2008 following several months of late fall and winter construction, and final "as-built" engineering plans were provided to the Minnesota DNR. Carlos Avery WMA field staff subsequently used the new outlet structure to draw-down Mud Lake during the summer of 2008, and the lake will be temporarily held low until all carp and other invasive fish are eliminated. Subsequently, in 2009 or 2010, the new outlet will be closed and water levels in Mud Lake allowed to return to normal, and wild rice is expected to germinate and once again grow throughout the basin. DU completed the project at a total cost of \$356,160.32, of which \$200,000 in contractor charges were reimbursed from the Environment and Natural Resources Trust Fund to DU through Minnesota DNR. Of the remaining \$156,160.32 in project costs, \$42,878 was reimbursed to DU by Minnesota DNR Wildlife using state funds, \$70,000 was reimbursed to DU by Minnesota DNR Wildlife using federal NAWCA grant funds, and \$43,282 was funded by DU (total "Other Non-state Funds" = \$113,282). The federal NAWCA funds were leveraged by Minnesota DNR and DU through a grant proposal that offered state DNR and LCCMR funds and private DU funds as non-federal match for the federal grant funds. This shallow lake improvement project helps fulfill the goals of DNR's "Duck Recovery Plan" and DU's "Living Lakes" conservation initiative.

IV. OUTLINE OF PROJECT RESULTS:

Result 1: Restore and Enhance Significant Habitat – Carlos Avery WMA

Description: DU professional bio-engineers designed and managed the construction of a fish barrier and outlet structure/channel from Mud Lake to the Sunrise River to improve water level management capability for DNR wildlife managers so they can increase the productivity of this 400-acre emergent wetland for migratory birds. Final "as-built" DU engineering plans for the project were provided to the Minnesota DNR.

Summary Budget Information for Result 1:	LCMR Budget	\$200,000
	Spent to Date	\$200,000
	Balance	\$ 0

Completion Date: June 30, 2008

Result Status as of June 30, 2008: The 400- acre Mud Lake water control structure and fish barrier project on Carlos Avery WMA was designed and construction by DU as planned. Final project inspection was April 10, 2008. Total project cost was \$356,160, of which \$200,000 was reimbursed by this LCCMR grant.

Final Report Summary:

V. TOTAL LCMR PROJECT BUDGET:

All Results: Personnel:	\$ 0
All Results: Equipment:	\$ 0
All Results: Development:	\$200,000
All Results: Acquisition:	\$ 0
All Results: Other:	\$ 0
TOTAL LCMR PROJECT BUDGET:	\$200,000

Explanation of Capital Expenditures Greater Than \$3,500: None

VI. OTHER FUNDS & PARTNERS:

A. Project Partners: All project design work was cost-shared by DNR Wildlife and included \$70,000 from the federal North American Wetlands Conservation Council.

B. Other Funds Spent during the Project Period: DU spent \$156,160 in Other Funds, including \$42,878 in other state funds and \$113,282 in other non-state funds (federal grant funds and private DU funds) on the project.

C. Required Match (if applicable): N/A

D. Past Spending: Approximately \$20,610 of in-kind bio-engineering staff time and travel expense was incurred by DU on this project prior to July 2005.

E. Time: 3 years, through June 30, 2008.

VII. DISSEMINATION: Metro Corridors periodically distributed 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 the Mud Lake project on Carlos Avery WMA shows improvement in 2008 and 2009 following water level management with the new outlet structure, DU and DNR will both issue news releases about the success of the project and DU will post articles on the DU webpage (www.ducks.org).

VIII. REPORTING REQUIREMENTS: Periodic work program progress reports were submitted not later than February 1st and August 1st each year, starting with February 1st, 2006. This document constitutes the final work program report..

IX. RESEARCH PROJECTS: N/A

Attachment A: Budget Detail for 2005 Proposal
METRO WILDLIFE CORRIDORS - PHASE II

Date: July 31, 2008
FINAL REPORT

LCMR Requested Dollars: \$ 200,000

2005 LCMR Pre-Proposal Budget & Accomplishments	Result 2 Budget:- Restore Significant Habitat		Amount Spent as of (6/30/2008)	Balance as of (6/30/2008)
	2.1 Wetland Restoration & Enhancement: Mud Lake, Carlos Avery Wildlife Management Area			
	Ducks Unlimited			
BUDGET ITEM				
PERSONNEL (A)				
Staff expenses, wages, salaries, & benefits		\$	-	\$0
EQUIPMENT				
Equipment / Tools (B)				\$ -
Other Capital equipment (C)				\$ -
EQUIPMENT - SUBTOTAL	\$	-	\$	-
DEVELOPMENT				
Contracts (D)	\$200,000	\$	200,000	\$ -
Other land improvement (E)				\$ -
Supplies (F)				\$ -
DEVELOPMENT - SUBTOTAL	\$	200,000	\$	200,000
ACQUISITION				
Land acquisition (fee title & conservation easement)				\$ -
Land transaction costs (e.g. survey, title, appraisal, environmental, & legal)				\$ -
ACQUISITION - SUBTOTAL	\$	-	\$	-
Land stewardship				\$ -
Printing				\$ -
Other Supplies (mapping & workshop supplies)				\$ -
Travel expenses in Minnesota				\$ -
Other (G)				\$ -
OTHER - SUBTOTAL	\$	-	\$	-
TOTAL LCMR Funding	\$	200,000	\$	200,000
Other State Funding (MN DNR Wildlife)	\$	-	\$42,878	\$ (42,878)
Other Non-state Funding (DU & NAWCA)	\$	50,000	\$ 113,282	\$ (63,282)
TOTAL PROJECT FUNDING	\$	250,000	\$ 356,160	\$ (106,160)
Proposed LCMR Accomplishments (acres)		230	225	5
Proposed Other (other state and non-state funded) Accomplishments (acres)		170	175	(5)
PROPOSED TOTAL ACCOMPLISHMENTS (in acres)		400	400	0

Comments:

(A) Personnel - [FTE & name for each position to be funded]

(B) Equipment/Tools: [specify - subject to LCMR OK]

(C) Other Capital Equipment [specify - subject to LCMR OK]

(D) Contracts:

(E) Other Land:

(F) Supplies: