Request for Funding Form Lessard-Sams Outdoor Heritage Council Fiscal Year 2011

Program or Project Title: #27 Mustinka River Channel Rehabilitation, Reconnection, and Northern Pike Spawning Area

Date: October 30, 2009

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	Council Funding Request	Out-Year Projections of Needs		
Funds Requested (\$000s)	FY 2011	FY 2012 FY 2013 FY 2014		FY 2014
Outdoor Heritage Fund	2,650,000	250,000 5,000,000		1,300,000

A. Summary

Many rivers and streams in the Red River Basin were straightened or cutoff and rerouted in the past 100 years to improve drainage. Watershed districts in collaboration with conservation interests, and local, state, and federal agencies are interested in restoring some straightened channels and their corridors to provide quality fish and wildlife habitat, increase connectivity, and reduce erosion. This project habitat restoration project will convert about 5.3 miles of ditch into eight miles of functional natural channel with 250 acres of stream corridor habitat, convert two miles of ditch to a two-stage channel with 80 acres of habitat, and will reconnect 8.8 miles of the Mustinka River which were bypassed when the natural channel was ditched. This habitat restoration project can likely be completed by the end of 2015.

B. Background Information

1. What is the problem or opportunity being addressed?

The Mustinka River was first channelized as a state ditch in 1896 and again as a project in the early 1950's. This channelization resulted in a direct conversion of about 43 miles of natural sinuous channel to about 25 miles of straightened channel without a functional corridor. The channelization not only cut through the meandering natural channel it also bypassed an entire 8.8 mile reach of natural channel. The current Mustinka River (Judicial Ditch 14) provides little functional aquatic or riparian corridor habit.

The Bois de Sioux watershed district, landowners, conservation organizations, and local, state, and federal agencies have worked through a "project team" process to put this project together to restore a more natural channel and corridor area along the upstream reaches of the channelized river (5.3 miles of straightened channel to 8 miles of sinuous channel), to convert two miles of ditch to a two-stage channel with a 350 foot corridor, and to reconnect the 8.8 mile loop of river. This project presents the greatest opportunities that we are aware of in Minnesota at this time to convert a ditch back to a functional natural channel and to reconnect a long reach of river disconnected by channelization. The 8.8 mile channel is the longest reach of disconnected channel that we are aware of in the Red River basin.

Preliminary engineering is complete, environmental review is in process, and land acquisition is in process.

2. What action will be taken?

- About 5.3 miles of the Mustinka River (JD 14) will be replaced with 8 miles of sinuous natural channel with a 350 foot wide habitat corridor.
- About two miles of ditch will be reconstructed as a two-stage channel that will allow a natural meandering channel pattern to develop with a 350 foot wide habitat corridor (80 acres).
- About 8.8 miles of the Mustinka River that was cut off from when the ditch was built will be reconnected.
- A 160 acre northern pike spawning area will be created adjacent to the restored channel as part of a 320 acre multipurpose water storage pool.

Note: This stream habitat restoration project is part of a comprehensive flood damage reduction and natural resource enhancement project known as the Redpath Project. This application describes the aquatic habitat project components of this project.

3. Who will take action and when?

The Bois de Sioux Watershed District will continue to lead a collaborative effort with members of the project team including the Traverse County Soil and Water Conservation District, the Natural Resource Conservation Service, MN DNR, MPCA, USFWS, conservation groups, and landowners to complete this project. Construction could be complete in 2015 if full funding is secured.

4. How will you coordinate this program with the other Constitutional Funding?

Similar to wetland and prairie restorations, this stream restoration project is primarily a habitat restoration project with incidental clean water benefits. The Mustinka River is impaired for turbidity and a TMDL is under review by EPA. Representatives of BWSR and PCA have been members of the watershed based project team that helped develop this project. The watershed district will consider preparation of grant applications for BWSR clean water assistance and BWSR shoreland improvement grants that are due December 1, 2009.

5. What specific habitat changes will occur if this item is funded? Be specific about and list multiple benefits if they exist.

- About 5.3 miles of straight ditch will be restored to about 8 miles of sinuous channel designed using principles of natural channel design. In addition to doubling the amount of aquatic habitat in this area, this project will create high quality channel and corridor habitats that provide more natural functions than the existing straightened ditch. The sinuous channel will provide seasonal aquatic habitat for a variety of fish species and other aquatic organisms. The 350 foot wide stream corridor will provide more than five miles of contiguous flood plain grassland habitat.
- About two miles of ditch will be reconstructed as a two-stage channel with a 350 foot wide habitat corridor (80 acres).
- About 8.8 miles of disconnected loop of river channel and its corridor will be reconnected to the Mustinka River.
- A 160 acre off-channel northern pike spawning area will be created. Fisheries biologists
 believe that northern pike spawning area is limited in the Mustinka River which is a
 tributary to Lake Traverse.

6. When do you expect to see these habitat changes?

The substantive habitat changes will be evident immediately after construction of the project. The newly created habitats will improve over time as the stream corridor vegetation matures and the stream channel stabilizes.

7.	Will your Outdoor Heritage Fund dollar request complete the planned
	accomplishments?

Yes, with S-LOHC funding over the next 4 years project funding will be complete.

___X__YES ____NO
If not, how will you finance completion?

8. How will you pay for the maintenance of the accomplishments?

The Bois de Sioux watershed district in cooperation with landowners will be responsible for long term maintenance of this project. The watershed district is leading the land acquisition, project development, and engineering of this project with full cooperation of a "project team" composed of landowners and representatives of local, state, and federal agencies. The Bois de Sioux Watershed district initiated this project by action of their board under watershed district law (Minnesota Statutes 103D). Long term project maintenance is thus authorized through established watershed district construction and maintenance funds. Maintenance of vegetation along the newly created stream corridor and in the northern pike spawning area will be part of project maintenance.

9. How does this action <u>directly</u> restore, enhance, or protect prairies, wetlands, forests or habitat for fish, game, and wildlife?

This project will directly rehabilitate eight miles of riverine habitat and 250 acres of functional river corridor habitat in what is now a dtich. This project will reconnect 8.8 miles of river channel and corridor habitats along reach of river cutoff by a ditch. This project will convert two miles of ditch into a two-stage channel with 80 acres of associated floodplain habitat. The project will also create a 160 acres northern pike spawning area with an associated 160 acres of upland grassland habitat. These habitats do not exist today. Once established, these habitats will be protected and maintained to benefit a variety of fish and wildlife communities.

10.If you are restoring of permanently protected	or enhancing property, is the activity on ed land?
XYES	NO
If yes briefly describe th	e kind of protection.
We expect to own the pro acquisition	perty by fee title. Part of this application is for

11. How will you ensure transparency and provide information about your work and use of Outdoor Heritage Fund dollars.

- The Bois de Sioux Watershed District is required to be audited annually and submit that financial report to the state and others who request it. We also prepare and distribute an annual report of our physical and financial activity for the public to review as required by law.
- The Bois de Sioux Watershed district has led this project including land acquisition, project development, and engineering. The watershed district used a public "project team" process to help develop the project. Over the past 2 years, more than 8 project team meetings have been held to move this project forward. The watershed board initiated and is pursuing this project as an official watershed district project that must follow administrative procedures outlined in Minnesota Statute 103D. Under provisions of the law, a public hearing is required to finalize the project. An Environmental Assessment Worksheet (EAW) will be completed for this project and will be available upon request. The development of this project is fully described in the Bois de Sioux Watershed District 2008 annual report. The project is described completely in the preliminary engineer's report. Please contact the watershed district for a copy of this report.
- The watershed will provide information about this project and it's completion through its
 watershed newsletter and website, through the Red River Water Management Board
 newsletter and website (<u>.rrwmb.</u>), and through engagement in a variety of public
 venues including the Minnesota Association of Watershed Districts, the Red River Basin
 Commission, the International Water Institute, and regional newspapers.
- The watershed district is experienced in administering, accounting for, and implementing complex land and water projects with a variety of funding sources including state grant funds from BWSR, MN PCA, and MN DNR.

12. Why will this strategy work?

This strategy will work because this project is the result of careful planning and engineering by an interdisciplinary project team of resource professionals and landowners dedicated to reducing flood damages and enhancing natural resources in the Bois de Sioux Watershed District. This watershed district has led the development and completion of several large multipurpose projects that reduce flood damages and enhance natural resources. This project is the next project in development. Preliminary engineering is complete. Land acquisition is in progress. Environmental review is in progress. Landowner and agency support is secure and the project is consistent with the Bois de Sioux Watershed District plan

(<u>://mnwatershed.govoffice.com/index.asp?Type=B_BASIC&SEC={752E546E-BBDF-4B05-A5F9-7D33266AC441}&DE={217808F7-872B-4DF5-A4C9-4D985436AA1D}</u>).

13. Who might make decisions that assist or work against achieving the expected impact program?

This project is nearing the final stages of implementation. Preliminary engineering is complete. Land acquisition is in progress. Environmental review is in progress. Landowner and agency support is secure and the project is consistent with the Bois de Sioux Watershed District plan. Necessary permits (e.g., DNR protected waters, PCA 404, U.S. Army Corps of Engineers) are in the process of application and no significant issues have been identified in direct discussions with permitting agency representatives during project team meetings. The project has been approved by the Red River Water Management Board. A project readiness form has been completed by the project team and approved by the Red River Basin Flood Damage Reduction Work Group.

A lack of funding is the only known obstacle that would delay completion of this project.

14. If this is acqu the acquisition	•	government formally approved
<u>x</u>	YES	NO
	simple acquisition of land, is rotection such as a conserva	
х ү	ES	NO
use? Y	•	e eased land be open for public _NO
	at time of door	
easement as	icquisition, will the easemer described in MS 2009, Chap e natural resource values of	
Y	ES	_NO

	sing funding for a new or o you expect this progran	ongoing program how long n to operate?
<u>NA</u>	Years	
19. Which planning list below.	sections will you work in	? Check all that apply in the
1	Northern Forest	
1	Forest/Prairie Transition	
;	Southeast Forest	
X	Prairie	
1	Metropolitan Urbanizing Area	
<u>-</u>	t address an urgent cons nediately funded?	ervation opportunity that will
district will move forw channel and will not a or reconnection of the	rard with flood control import estore a meandering natural e cutoff channel. It is unlike	ect are not funded the watershed undments adjacent to the ditch al channels, the habitat corridor, ely that this opportunity would t project is not secured now.
<u>X</u> YE		NO
If yes, please	ехріаін.	
<u>-</u>	t restore and/or enhance r Aquatic Management A	habitat on existing state- reas or Scientific and Natural
· ·	XN names of the AMAs, WM d and/or enhanced.	NO IAs and/or SNAs and the acres
planning and ev		ugh a science based strategic the United States Fish and rvation model?
YES If yes explain	the model briefly.	_NO
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23. Explain the scientific foundation for your project, and the benefits it will produce.

This project is based on the principles of natural channel design, hydrology, and fluvial geomorphology. Use of these scientific principles will create 8 miles of functional natural channel, 250 acres of corridor habit, a two-stage channel with 80 acres of habitat, and a 120 acre northern pike spawning area. The river channel habitats will provide seasonal spawning and juvenile habitat to northern pike and a variety of other species.

24. How do you set priorities? (Be sure to list the criteria you use and the weight you give each one.)

The watershed district initiates projects based on priority problems identified in the watershed district plan. This project is part of a larger comprehensive flood damage reduction project that will store water adjacent to this river channel. The watershed district sets priorities in its watershed plan and initiates projects to meet those priorities as opportunities for land acquisition become available and when there is landowner interest in a project.

C. Relationship to the *Minnesota Conservation and Preservation Plan* and Other Published Resource Management Plans

Minnesota Statewide Conservation and Preservation Plan

Proposed projects are consistent with "Habitat recommendation 6: protect and restore critical in-water habitats of lakes and streams".

In particular, it is consistent with the recommendations on page 82: "A priority for former prairie zones of Minnesota is to reverse the negative effects of stream channelization on instream habitats for fish and other aquatic organisms....."

<u>Lessard – Sams Outdoor Heritage Council Preliminary Goals and Objectives 25-Year Targets, Prairie Section, August 27, 2009</u>

This planning document includes a table on page 11 that identifies stream habitat restoration and protection goals and objectives. This proposed project is consistent with this plan and will help achieve year one goals for channel restoration and riparian restoration.

Bois de Sloux Watershed District Plan (2003)

This proposed restoration project is consistent with flood damage reduction, natural resource enhancement, and water quality goals and objectives in the Bois de Sioux Watershed District Plan.

Red River Basin Mediation Agreement (1998)

This habitat restoration project is consistent with the flood damage reduction and natural resource goals and objectives in the mediation agreement including:

- 1. Manage streams for natural characteristics.
- 2. Enhance riparian and in-stream habitats.
- 4. Provide connected, integrated habitat including compatible adjacent land uses.
- 6. Provide recreational opportunities.

<u>Campaign for Conservation – Fifty Year Vision</u>

This habitat restoration project is consistent with the recommended actions in the fifty year vision for the Red River Valley planning region as follows:

- C. Lakes, Rivers, Wetlands and Groundwater
 - 2. Return watercourses to semi-natural hydrology and morphology.
- D. Fish and Wildlife
- 1. Develop incentives and regulations for enhanced protection of shoreline and stream restoration in both Minnesota and North Dakota.
- 4. Ensure that suitable habitat for species of concern is primary focus of land and water conservation efforts.
- 5. Expand private landowner stewardship incentive programs. Provide ongoing funding to entice landowners to idle (plant grass or trees) acres in sensitive wetland, riparian, and prairie areas.
- 6. Create habitat corridor connections for prairie chickens and other grassland species across the Red River Valley from the Agassiz Beach Ridges prairies in the east to the Sheyenne National Grasslands in the west. Corridors are needed to provide dispersal routes and prevent genetic isolation.

State AMA Acquisition Plan

This project is consistent with the following recommendations from the Red River Prairie Ecoregions needs section of the plan:

"The recreational demand on this area of the state will likely outpace the projected population change and additional public access to fishing lakes and streams is a priority. Permanent angling and management easements on streams, while maintaining private ownership, draw anglers to the area, bring additional dollars into the local economy, and provide the inroad to create permanent protection to shoreline habitat, which insures clean water for future generations. Additional lake and warmwater shoreline should still be acquired when extraordinary opportunities arise and County approval is obtained. There may be opportunities for Non-Government Organizations to acquire critical shoreline parcels in this area, to either be managed by them or turned over to the DNR as AMAs or other Outdoor Recreation Units."

<u>Tomorrow's Habitat for the Wild and Rare- Minnesota's Comprehensive Wildlife</u> <u>Conservation Strategy</u>

This project is consistent with the following goals and strategies.

Goal 1: Stabilize and increase SGCN populations

- 3. Nonforested wetlands and floodplain forests
 - c. manage habitats adjacent to wetlands and floodplain forests to enhance SGCN values
- 4. Stream habitats
- a. maintain good water quality, hydrology, geomorphology, and connectivity in priority stream reaches
- b. Maintain and enhance riparian areas along priority stream reaches

National Fish Habitat Action Plan

These projects in this proposed program are consistent with the goals and objectives of this plan.

- Reverse declines in the quality and quantity of aquatic habitats to improve the overall health of fish and other aquatic organisms.
- Increase the quality and quantity of fish habitats that support a broad natural diversity of fish and other aquatic species.

D. Budget

Budget Item	Fiscal Year 11	Fiscal Year 12	Fiscal Year 13
Personnel			
Contracts			5,700,000
Equipment/Tools/Supplies			
Fee Acquisition	2,400,000		
Easement Acquisition			
Easement Stewardship			
Professional Services	250,000	250,000	600,000
Travel			
Additional Budget Items			
TOTAL	2.650.000	250 000	6 200 000 (this
TOTAL	2,650,000	250,000	6,300,000 (this would likely extend into FY14)

E. Personnel Details In the space below list the names, titles and anticipated program funds to be paid by this recommendation. If you will need to fill a position just list the title and amount.

Title Name Amount.

The watershed district plans to use existing personnel as part of an in kind match to project.

F. All Leverage In the table below list the sources and amounts of leverage you anticipate by fiscal year you anticipate receiving it. Include state and non-state leverage.

Source of Non-	Fiscal Year 11	Fiscal Year 12	Fiscal Year 13
State Leverage			

To date, the Bois de Sioux watershed district has spent \$257,000 to oversee project development, land acquisition, environmental review, and preliminary engineering of this project.

To date, local, state, and federal agency staff have contributed more than 150 hours of in-kind support for development of this project.

To date, the Red River Water Management Board has contributed \$2.5 million to development of the Redpath Project. This project is a component of this larger flood damage reduction and natural resource enhancement project.

Bois de Sioux \$250,000 \$250,000 \$250,000 Watershed District (cash and in-kind project support)

TOTAL	250,000	250,000	250,000	

G. Outcomes:

- 1) In the first table below, quantify the outcomes you plan to achieve with the recommended funds.
- 2) In the second table show list the sections where outcomes will occur.
- 3) In the third table, allocate your recommended funds to each cell with outcomes listed in table1.
- 4) In the fourth table show the leverage to be applied to each cell with outcomes listed in table 1. and
- 5) If you have any outcomes listed in the "protect" row in table 1, account for them according to the type of acquisition and PILT status in table 5

Table 1 Accomplish-	Wallanda	D uction	Famata	Habitats for Fish, Game
ments	Wetlands	Prairies	Forests	and Wildlife
Restore				8 miles of stream habitat, 8.8 miles of reconnected stream habitat, 250 acres of riverine corridor habitat, and 160 acres of northern pike spawning habitat
Protect Enhance				
Lillance				

Table 2 Sections Impacted and Impact Quantifier	Wetlands	Prairies	Forests	Habitats for Fish, Game and Wildlife
Restore				Prairie
Vesine				i iaiiie
Protect				Traine

Table 3 Recommend Fund Allocation	Wetlands	Prairies	Forests	Habitats for Fish, Game and Wildlife
Restore				9,200,000
Protect				
Enhance				

Table 4 Leverage \$	Wetlands	Prairies	Forests	Habitats for Fish, Game and Wildlife
Restore				1,000,000+
Protect				
Enhance				

Table 5 Acquisition Data	Wetlands	Prairies	Forests	Habitats for Fish, Game and Wildlife
Acquired in Fee with State PILT Liability				
Acquired in Fee without State PILT Liability				2,400,000
Permanent Easement				

H. Accomplishment Time Table Using the headings below, include a clear statement of how much of what is being accomplished and when. Attach a map showing where accomplishments are anticipated. Accomplishments should clearly restore, enhance or protect forests, wetlands, prairies and habitat for fish, game and wildlife.

Milestone	Date	Measure
Land Acquisition Conduct Detailed Engineering/Design	Fall 2012 Fall 2012	
Conduct Detailed Engineering/Design Conduct Final Hearing	December	
Permits Finalize Plans and Specifications	January 20 March 201	
Conduct Bidding Process	April 2013	
Begin Construction	May 2013	
Finalize Construction	Fall 2015	

I. Relationship to Your Current Budget

In the budget below the Redpath project is budgeted for \$2M in expenses and \$2M in income. This is all outside money and not generated by our established pattern of funding.

CY 2010 BUDGET	9-10-2009 Final	
Misc. Administration Expenses		
Audit	\$6,500.00	
Dues	\$3,500.00	
Misc. Expenses	\$1,000.00	
Total Mice Administration Evacage	-	¢44 000 00
Total Misc. Administration Expenses		\$11,000.00
Personnel		
Administrator Salary		\$60,472.09
Assistant Salary		\$45,024.64
Water Quality Technician		
Benefits (costs to the District)		
PERA	\$6,329.80	
Social Security	\$9,141.50	
Benefits	\$25,000.00	
Total Benefits		\$40,471.30
General Operations		
Office Space-Building Fund		\$35,000.00
Mileage - Board		\$4,000.00
Meeting Expenses		\$9,300.00
District Insurance		\$11,500.00
Electricity		\$1,900.00
Utilities		\$500.00
Heating Fuel		\$1,000.00
Telephone Expense		\$3,800.00

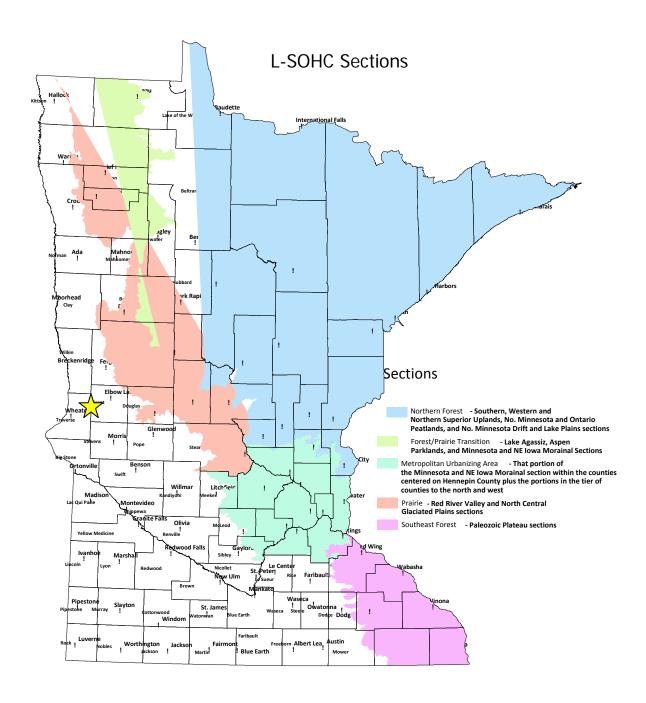
Snow Removal	\$1,000.00
Yard Maintenance	\$800.00
Office Maintenance	\$1,400.00
Advertising	\$500.00
Manager Compensation	\$14,000.00
Legal Services - General	\$25,000.00
Engineering Services - General	\$60,000.00
Accountant Services	\$12,000.00
Postage	\$2,700.00
Office Supplies	\$5,500.00
Office Equipment - Leases	\$1,700.00
District Vehicle - fuel	\$2,000.00
District Vehicle - maintenance	\$1,500.00
Equipment	\$5,000.00
Projects	
Legal Services - Project/Ditch Related	\$20,000.00
Engineering Services - Project/Ditch Related	\$450,000.00
Advertising - Project/Ditch Related	\$3,000.00
North Ottawa Construction	\$4,000,000.00
Redpath Project	\$2,000,000.00
Riverwatch	\$8,000.00
Transfer to RRWMB	\$495,783.53
Stream Gauging	\$20,000.00
Culvert Inventory	\$60,000.00
Other Project Work	\$281,000.00
WRP/SWCD Admin Program	\$60,000.00
Total	\$7,754,851.56
	, , ,
	\$0.00

\$493,400.00
\$4,000,000.00
\$2,000,000.00
\$20,000.00
\$991,567.06
\$249,884.51
\$7,754,851.56

J. How Will the Habitat Improvements Be Sustained?

The Bois de Sioux watershed district will be responsible for long term maintenance of this project. The watershed district is leading the land acquisition, project development, and engineering of this project with full cooperation of a "project team" composed of landowners and representatives of local, state, and federal agencies. The Bois de Sioux Watershed district initiated this project by action of their board under watershed district law (Minnesota Statutes 103D). Long term project maintenance is thus authorized through established watershed district construction and maintenance funds.

K. Attach a list of your projects listing their county location and edit the map of Minnesota on the next page to show each project as a symbol.



L-SOHC Request for Funding Form