Environment and Natural Resources Trust Fund
2009 Phase 2 Request for Proposals (RFP)

LCCMR ID: 054-B1

Project Title: Sibley County Tile Inlet Alternatives

Total Project Budget: $ $49,000

Proposed Project Time Period for the Funding Requested: 3 years

Other Non-State Funds: $ $15,000.00

Priority: B1. Reduce Soil Erosion

First Name: Ronald **Last Name:** Otto

Sponsoring Organization: Sibley SWCD

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Region:	County Name:	City / Township:
Central	Sibley	

Summary: Replace 250 tile intakes with tile inlet alternatives to reduce sediment and nutrient loads that are getting into our streams and rivers.

Main Proposal: 1008-2-064-proposal-LCCMR Grant Proposal.doc

Project Budget: 1008-2-064-budget-LCCMR Project Budget.xls

Qualifications: 1008-2-064-qualifications-Project Manager Qualifications.doc

Map:

Letter of Resolution: 1008-2-064-resolution-Cmte_votes_08.doc

MAIN PROPOSAL

PROJECT TITLE: Sibley County Tile Alternatives

I. PROJECT STATEMENT

The state of water quality in the lower and middle Minnesota River Watershed has been suffering from high levels of bacteria, total phosphorus, nitrate + nitrite nitrogen and total suspended solids. The implementation of these alternatives would begin to reduce the pollutants that are reaching the Minnesota River from Sibley County. The implementation of this project would give landowners who are not a part of the High Island Creek, Rush River and Buffalo Creek Implementation Projects an opportunity to improve the quality of the water in Sibley County. Studies that have been completed show a 50% reduction of solids entering a tile when these practices were put into place. Reducing the solids entering the tile will reduce the other pollutants that are affecting our water bodies.

Bacteria, total phosphorus and nitrate nitrogen adhere to sediment. When the amount of sediment entering the water channel is reduced bacteria will be less and water quality will improve.

Rock inlet alternatives replace an open tile intake with an inlet this is not open to the ground surface. Rock inlets have a 15'-20' trench with 4" muck pipe covered with 11/2"-2" river rock to the top of the trench. These inlets cause the water to slow, which lets the sediment settle out of the water, before entering the tile.

Slotted risers are attached to the top of existing tile intakes. The slotted riser has 3/4" or 1" holes that slowly let the water into the tile outlet. There is more maintenance with this type of structure and they cannot be driven across. Debris that accumulates around the riser has to be removed after heavy rains. Again these inlets slow the water giving the sediment and nutrients time to settle out before the water enters the tile.

The last alternative is to remove the intake and let the water percolate down to the tile. Using this method stops close to 100% of the sediment from entering the water stream. To use this alternative requires more tile in the ground.

II. DESCRIPTION OF PROJECT RESULTS

Result 1: Install Rock Tile Inlets and Intake Removal **Budget: $45,000.00**
Result 2: Install Slotted Risers **Budget: $ 4,000.00**

Deliverable **Completion Date June 2012**

1. Installing rock tile inlets will result in a 50% reduction in solids reaching the lower and middle Minnesota River. The removal of an intake results in a 100% reduction of solids

entering the watershed. When solids are reduced measurable reductions in sediment, nitrate-nitrogen, phosphorus and bacteria will also be reduced.

2. Installing slotted risers give the same results as a rock tile inlet installation.

III. PROJECT STRATEGY AND TIMELINE

A. Project Partners

There are no planned partners for this project.

B. Project Impact

The project area has had no programs in the past to help landowners improve water quality. This project will improve water quality to the citizens living along the middle and lower reaches of the Minnesota River and also the Mississippi River below the confluence with the Minnesota River. .

C. Time

It is planned to spend the $49,000.00 to upgrade 250 tile inlets over a three year period ending in June 2012. Sibley SWCD is planning to hold two open house meeting and mailings to get landowners educated about this project.

D. Long-Term Strategy (if applicable)

This is a beginning for the project area. There are a lot of practices that need attention in the future. Water and sediment basins, terraces, diversions, wetland restorations, filter and buffer strips are some of the practices that will be looked at in the future as well as getting 100% of the tile inlets upgraded. Sibley SWCD will continue to look for funding opportunities in the future to further improve the water entering the lower and middle Minnesota River Watersheds

Project Budget

IV. TOTAL PROJECT REQUEST BUDGET

BUDGET ITEM	AMOUNT	% FTE
Personnel:	$ -	%
	$ -	%
	$ -	%
Contracts:	$ -	
	$ -	
	$ -	
Equipment/Tools:	$ -	
Acquisition (Including Easements):	$ -	
Restoration:	$ -	
Other: 250 Tile Inlet Alternatives	$ 49,000	
	$ -	
TOTAL PROJECT BUDGET REQUEST TO LCCMR	$ 49,000	

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Remaining $ From Previous Trust Fund Appropriation (if applicable):	NA	
Other Non-State $ Being Leveraged During Project Period: 25% Cash Match	$15,000.00	
Other State $ Being Spent During Project Period:	NA	
In-kind Services During Project Period: Landowner labor to install slotted risers and technical assistance from Sibley SWCD	$ 21,000	
Past Spending:	NA	

Project Manager Qualifications

The project manager was involved in farming operations for thirty years. The past 19 months I have been promoting best management practices, including tile inlet alternatives, for the High Island Creek and Rush River Watershed Implementation Projects. I have helped landowners plan and install over 100 intake alternatives in the last 1 ½ years. My educational background was engineering.

Organization Description

Sibley Soil and Water Conservation District is a legal subdivision of the state that promotes the conservation of land and water within its jurisdictional boundaries. Sibley SWCD receives its operational funding from the Board of Water and Soil Resources and Sibley County. It distributes funds and grants that will improve conservation practices in our county.