

Lac qui Parle Soil & Water Conservation District

Water of Concern

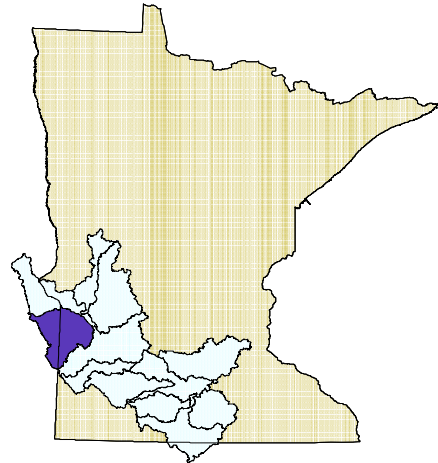
Lac qui Parle River

Impairment

turbidity

Project Title: **Lac qui Parle County Highway 31**

CWL Funding by Category	
Technical Assistance Funds	
SSTS Funds	0
Professional Development	0
Hired Positions	0
Total TA Funds	0
Implementation Funds	
AgBMP Loans	0
CWAG Funds	\$122,000.00
*Lake & River Mgt	\$70,000.00
*Public Interest	\$52,000.00
Leveraged Dollars/Inkind	\$27,712.18
Total Imp. Funding	\$149,708.13
Total CWL Funding	\$121,995.95



Overall Project Description

The Lac qui Parle River was eating into the riverbank by Lac qui Parle County Highway 31 near bridge 37547. Existing CREP buffers prevented cropland sediment from entering the river, but 100 tons of soil per year from the stream-bank erosion site were added to the River. The sediment deposited 4 miles downstream into Lac qui Parle Lake. Additionally, the adjacent infrastructure was endangered.

The riverbank was stabilized with a combination of stream barbs, selective riprap, and bank re-sloping with reseeding of native grasses protected by erosion control blanket held in place by willow stakes. The project was completed in autumn 2007, and held through ice flows and high water events the following year.

Unfortunately in spring 2009 an area of sloughed bank was discovered at the project site. Necessary repair included some reshaping and reseeding covered by erosion control blanket, a small amount of rock at the edge of the riprap, and dogwood and plum planted on the lower shelf. The repair was completed in June 2009.

PROJECT CONTACT

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BWSR Contact

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Project Number:
00 Hwy 31CWL

*Prepared by Board of Water and Soil Resources
Fiscal Year 2007-2009 Clean Water Legacy Project*

Conservation Practices Implemented

Name of Conservation Practice(s) Installed	Number of Linear Feet Installed	Estimated Pollutant Load Reduction (include units)	Total Cost
streambank & shoreline stabilization/protection	1511.6	100 tons of soil/year	\$149,708.13
stream barbs	5 units		
riprap	450 feet		
re-slope & vegetate	800 feet		

CREP buffers existed on both sides of the stream prior to project implementation.

Conservation Planning Activities

Name of Plan(s) Written	Number of Landowners Contacted	Number of Plans Written	Total Cost	Types of Practices Identified	Number of Practices Identified	Number of Practices Implemented
<i>Investigated use of EQIP at the site, but unable to reconcile multiple agency plan specifications.</i>						

Contributing Partners: (List or copy from restoration implementation plan)

Partner	Description	Project Contribution	Leveraged Funds
Lac qui Parle County	Hwy Dept. & Hwy Eng. time	Hwy Dept. & Hwy Eng. time	\$10,880.66 inkind
Lac qui Parle County Water Plan	willow stakes	willow stakes	\$1000.00 cash
DNR	time & fleet expense	time & fleet expense	\$9716.00 inkind
NRCS	time	time	\$840.00 inkind
LqP SWCD	time	time	\$4175.52 inkind
Sentence to Serve	time	time	\$1100.00 inkind

Lac qui Parle YellowBank Watershed District pledged \$5000 and the Lac qui Parle Lake Association pledged an undetermined amount of cash if additional funds were needed to complete the project.

Project Informational/Educational Activities

Type of Activity	Newsletters, Brochures, Posters, Etc.	Work with Kid Groups	Tours, Demos, Etc.	Presentations Given	Presentations by guest speakers	Other
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If this project included an education component, please include brief education narrative here:

Project Outcomes: detail specific project outcomes that work towards meeting Restoration (total maximum daily load studies) and Protection (local water plans) water quality goals

For restoration project, please include overall Overall TMDL Point Source Reductions Needed (% & Pounds)
Overall TMDL Non-Point Source Reductions Needed (% & Pounds) Estimated Total TMDL Non-Point Source Reduction (% & Pounds) from Project(s)

This project will reduce loading of 100 tons of soil per year with the potential of an additional 100 tons or more during a 500-year event to the Lac qui Parle River and 4 miles downstream to Lac qui Parle Lake; stabilize the riverbank to protect highway and bridge infrastructure and maintain public safety; enhance fish, aquatic life and wildlife habitat; enhance recreational uses such as fishing and canoeing; and enhance the aesthetics of the site.

The project consists of: (1) installing a series of 5 stream barbs to divert flow back into the River channel and allow the banks to heal with natural selection establishment of willows, etc.; (2) selectively riprapping 450 feet of critically exposed bank; and (3) re-sloping 800 feet of the upper reaches of the sloughed banks in less critically exposed areas. These re-sloped areas have been reseeded to native vegetation.

From the Lac qui Parle County Local Water Management Plan: *Local Water Plan Erosion Priority Issue, Objective A, Action 4*, reads: "Promote practices to reduce stream-bank and ditch-channel erosion. Promote bank stabilization methods, such as willow planting or stream barbs in critical areas. Target 5,000 ft. of bank stabilization."

The bridge at this site is one of the Lac qui Parle Yellow Bank Clean Water Partnership monitoring sites. The best transparency tube readings before the project began were in the 30s, with no observations of fish or other wildlife along the river. Upon practice completion, throughout summer 2008, there was a significant improvement in water clarity with sightings of fish, turtles, and other wildlife. On July 14, 2009, following a significant rain event, the transparency tube reading at this location was 56, and a doe with fawn were sighted along the river. A veteran canoeist exiting the river June 23 at this project location was quoted in the local newspaper "... the river was the clearest I have seen in the last 10 years."



Before, the eroding riverbank is evident on the left (January 2007)



Same view, construction completed (October 2007)



Looking opposite direction (June 2008) — everything held and vegetation is growing. Impacted road/bridge visible middle & to right.



Willow stakes hold erosion control blanket in place & grow, too! Stream barbs help direct river current to middle of streambed & provide fish habitat.



Same view as above but from farther upstream is the section of bank that gave way. (spring 2009)



(June 2009) Immediate results: clearer water, fish & wildlife seen, and citizens have noticed!