

# Lac qui Parle-Yellow Bank Watershed District – GIS Terrain Analysis FY 2014 Clean Water Fund, Accelerated Implementation Grant

<http://www.bwsr.state.mn.us/cleanwaterfund/stories/>



**Clean Water Fund Grant**  
Competitive Grant \$66,572.00

**Leveraged Funds**  
Match \$16,643.00

**Funds Returned to State**  
Type \$ .00  
Date Fund Returned: NA

**Grant Period (incl. extensions)**  
From: 2/12/2013  
To: 12/31/2015

## State Cost Share Expenditures by Category

### Administration/Technical

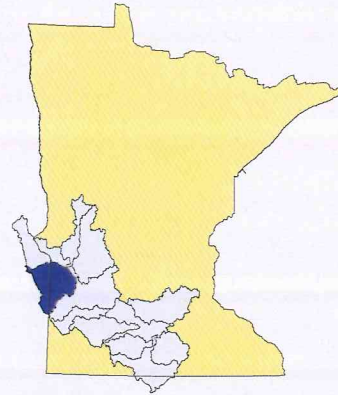
Administration/ Coordination	\$0
Technical/ Engineering Assistance Milestone 1	\$44,065.15
Technical/ Engineering Assistance Milestone 2	\$0
Technical/ Engineering Assistance Milestone 3	\$0

**Total Expenditures \$44,065.15**

### PROJECT CONTACT

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Lac qui Parle-Yellow Bank  
Highlighted in blue.



### Overall Project Description

The Lac qui Parle-Yellow Bank Watershed District has contracted services with the Water Resource Center at the Minnesota State University, Mankato, MN. Rick Moore, Watershed Research Scientist will complete the GIS terrain analysis. There are three milestones in this project. Milestone 1 includes the creation of burnlines/culvert inventory and hydrologically corrected digital elevation models (DEM's). From the burnlines, drain tiles and other data will be incorporated into the GIS database and will result in hydrologically corrected DEM's. A culvert verification was completed in May 2014 by LqP-YB staff and inputted into data to update conditioning of DEM's. NRCS watershed delineation tools have been used for additional identification and flowpaths on the land. Discussions held with Technical Service Area 5 and Houston Engineering led to additional training to identify non-contributing areas and analysis to identify depressions that will fill with water and not contribute in a rain event that is a 24 hour, 10 year event. This analysis will make data sets the same across southwest Minnesota. Ten Mile Creek had a more thorough analysis completed for a group presentation of this project. Milestone 2 includes the calculation of secondary attributes using the hydrologically corrected DEM's. These include stream power index (SPI) and compound topographic index (CTI) layers that will be used to determine locations of high erosion and depressional areas in the watershed. The indexes will be figured for each catchment area including bluff and ravine areas. Milestone 3 identifies focus areas for different conservation BMP's. This includes identifying the focus areas from the analysis completed earlier and will identify focus areas for different BMP's based on LiDAR analysis. It will identify sensitive focus areas from the SPI and CTI layer. No additional work has been completed in Milestone 2 and 3 except for the preliminary work in Ten Mile Creek. Administration and coordination of this project is in-kind from the Lac qui Parle-Yellow Bank Watershed District

Accelerated projects target Implementation