



Stormwater Management for Medicine Lake

Featured Project

A \$425,000 stormwater management project was completed in 2007-2008 near Medicine Lake to improve water quality and to protect a regional park trail and road crossing.

Medicine Lake, located in Plymouth, is the second largest lake in Hennepin County and is considered the most important recreational water body in the Bassett Creek Watershed. Inadequate stormwater capacity was causing water to back up, which led to excessive erosion along a 1,200-foot drainage way. The erosion was continuously contributing sediment and phosphorus to Medicine Lake, and it was comprising the integrity of a road crossing and regional park trail.

The project repaired the drainage way by re-grading the eroded channel and installing three flow-control weirs and stilling basins to slow flow and prevent future erosion. Two new culverts were installed to prevent water from backing up into the pedestrian trail corridor under County Road 9. Water quality ponding, which provides additional holding capacity, was also constructed concurrently with the drainage way repair to increase the water quality benefits of the project.



A flow-control weir and settling basin (top), and ponds for improved water quality (bottom).



Location:

Section 14 and 15, Township 118, Range 22, Hennepin County

BWSR Featured Project

Partners: City of Plymouth, Hennepin County Environmental Services, Hennepin County Transportation Department, Bassett Creek Watershed Management Commission (BCWMC), and Three Rivers Park District.

Project Timeline: This project was identified in the Phase II: Medicine Lake Implementation and Management Plan in 2004. Actual construction and completion of the project occurred between summer of 2007 and winter of 2008.

Water quality monitoring stations have been in place for several years and will continue to be in place to monitor TSS, phosphorus and water flow. Future data will be compared to the historical data.

Project Costs / Funding Sources: Total Project Cost were approximately \$425,000

Three Rivers Park District	\$100,000
City of Plymouth	~\$125,000
BWSR Clean Water Legacy	\$198,000

Keys to Success: Although a TMDL study is currently underway and expected to be completed in 2009, the BCWMC, the City of Plymouth, and Three Rivers Parks have been working collaboratively to improve the water quality of Medicine Lake for many years. This is a result of the comprehensive watershed planning that has taken place by both the BCWMC and the City of Plymouth.

BWSR roles: BWSR staff developed a Request for Proposals under the Clean Water Legacy Program and were part of an inter-agency team that evaluated applications. In addition, BWSR approves water plans developed under 103B.201 for watershed management organizations, watershed districts, and counties within the seven-county metro area. The water managers with a state-approved, locally adopted plan generally have the authority to compel local units of government, such as municipalities, to adopt or delegate minimum regulatory controls.

Measurable Outcomes: This project is estimated to decrease phosphorus loading to Medicine Lake by 60 pounds annually, which will improve water quality in the lake. Sediment deposits that were hindering the integrity of Three River Park District's regional trails were removed and additional holding capacity was created. In addition, a dangerous crossing of County Road 9 was eliminated.

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