



Stormwater Project Analysis in the first 400 miles of the Mississippi Headwaters



Clean Water Funds: 2015

Accelerated Implementation Grant	\$81,000
Leveraged Funds*	\$20,250
Total Project Budget	\$101,250

* Leveraged Funds include required 25% match

Targeted Water:

Headwaters of the Mississippi River

Project Sponsor:

Mississippi Headwaters Board (MHB)

Partners:

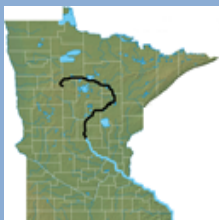
Member Counties: Clearwater, Beltrami, Cass, Hubbard, Itasca, Aitkin, Crow Wing, Morrison

Grant Period:

January 2015 - December 2018

Project Contact:

Tim Terrill
 (218) 824-1189
 timt@mississippiheadwaters.org
 www.mississippiheadwaters.org



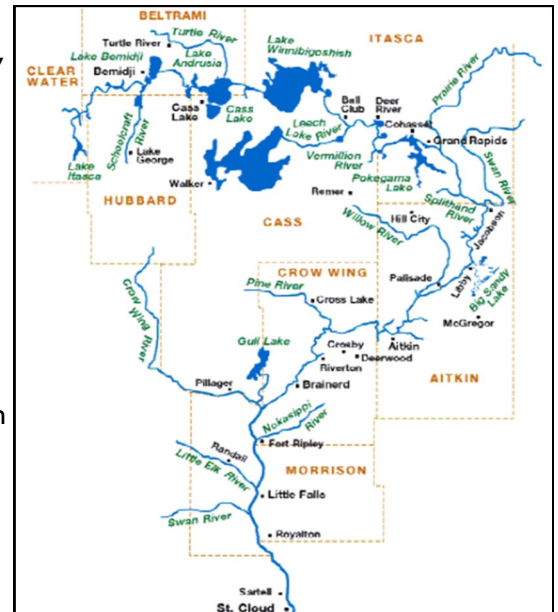
Project Narrative

The 400-mile stretch of the Mississippi River from its Headwaters at Lake Itasca to Morrison County near Little Falls is the focus of this project and the Mississippi Headwaters Board (MHB) is the local sponsor.

The Mississippi Headwaters Board received a Clean Water Fund grant from the Board of Water and Soil Resources to help cities identify ways to clean their stormwater runoff. This grant will work with 7 cities on the Mississippi River and Headwater Lakes to help them identify places where storm water practices would best remove pollutants and help protect the water quality of the Mississippi River.

“Everyone knows that clean lakes and rivers in our region help the cash register ring here.” said Tim Terrill, Executive Director of the MHB. “What they don’t know is **where** they can place these pollution prevention practices, **how** effective they are, and **what** the cost may be. This grant will help fund an analysis that provides option for cities to answer these questions, and present an opportunity for grant funding should they choose to implement.”

The Mississippi Headwaters Board has taken action to identify gaps and develop a strategy to protect these portions of the River. Along the first 400 miles of the Mississippi River and Headwater Lakes, almost 10% are within city boundaries. Also, over 33% of those counties populations reside in those cities as well. These figures have guided the MHB to focus their water quality protection efforts in the cities, as well as, the county land in the corridor where the Mississippi flows.



Measureable Outcomes:

GIS analysis and treatment options for individual cities to provide planning information toward implementation. Around 90% of the cities on the Mississippi River and headwater lakes will have an analysis completed.

Annual Conference to display results to all the cities on the Mississippi River in the first 400 miles to develop a strategy toward implementation on a regional scale.

Stormwater Project Analysis

Sites were identified using GIS analysis to determine stormwater pollution reduction benefits



PROTECTING THE FIRST 400 MILES



Source: Bing Maps (2011)

The Mississippi Headwaters Board (MHB) was organized in 1980 as an alternative to federal control of the first 400 miles of the Mississippi River. The counties of Clearwater, Hubbard, Beltrami, Cass, Itasca, Aitkin, Crow Wing and Morrison entered into a joint powers agreement under Minnesota Statutes 103F.361-378 to preserve and protect the shore lands of the Mississippi River and seven Headwater lakes. The counties adopted a shore land zoning ordinance for land and recreation use within the corridor as a means to carry out its mandate of protection.

The Mississippi River is North America's largest River and also a working river from Lake Itasca to New Orleans. In the headwaters, the Mississippi is a corridor for highways and rail traffic; important for fish and wildlife and the accompanying recreational seeker. It is an important water source for northern Minnesota industry and communities and those far beyond the first 400 miles of the river.

Priority Management Area	BMP Option	Annual TP loading (lbs/yr)	Annual TSS loading (lbs/yr)	BMP TP Treatment (lbs/year) / (% Removal)	BMP TSS Treatment (lbs/year) / (% Removal)	50 Year Value (\$/lb-TP)
PMA 6 opt1	Permeable Parking Lot	16.4	5,206	4.4/27%	1,457/28%	\$1078
PMA 6 opt2	Parking Lot Bioretention	16.4	5,206	4.9/30%	1,699/30%	\$700
PMA 7 opt1	Stormwater Reuse	154.5	48,786	34.7/23%	15,402/32%	\$393
PMA 7 opt2	Extended Detention	154.5	48,786	46.3/30%	29,197/70%	\$294
PMA 7 opt3	Extended Detention	154.5	48,786	61.8/40%	34,115/70%	\$392
PMA 25	Iron-Chloride System	551.9	175,077	149.8/27%	45,741/26%	\$213