

1325-012
Lake Miami Watershed Project

I. Financial Accountability

Summary of Watershed Improvement Review Board Funds

Grant Agreement Budget Line Item	Total Funds Approved (\$)	Total Funds Approved- Amended (\$)	Total Funds Expended (\$)	Available Funds (\$)
Administration	5,500.00	5,500.00	4,575.00	925.00
Archaeology/Threatened Endangered Study	8,000.00	3,250.00	3,250.00	0.00
Grade Stabilization Structures (5)	137,335.00	142,085.00	41,149.92	100,935.08
Total	150,835.00	150,835.00	48,974.92	101,860.08

The original assumption was that design and construction could occur in 2015 with final seeding in early 2016. However, due to staff changes within the Iowa DNR who were responsible for environmental reviews, survey, and design, there were significant delays during the project design phase and the project did not go to bid until August 2016. In addition, the design for Site 6 was changed from having a single grade stabilization structure to having a series of rock check dams installed. The contract between DNR and the BMP construction contractor was approved in September 2016 and allowed for a May 5, 2017 completion date. The DNR hosted a Pre-Construction meeting on November 17, 2016 which allowed for the construction activities to begin with weather permitting.

By the conclusion of the grant period, 5 check dams were completed on Site 6, partially completing the site.

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Summary of Total Project Funding

Grant Agreement Budget Line Item	Total Funds Approved (\$)	Total Funds Approved- Amended (\$)	Total Funds Expended (\$)	Available Funds (\$)
Administration (WIRB)	5,500.00	5,500.00	4,575.00	925.00
Archaeology/Threatened Endangered Study (WIRB)	8,000.00	3,250.00	3,250.00	0.00
Grade Stabilization Structures (WIRB)	137,335.00	142,085.00	41,149.92	100,935.08
Grade Stabilization Structures (DNR Lakes Restoration)		183,939.00	0.00	183,939.00
Shoreline Protection (DNR funds)	687,848.00	687,848.00	687,848.00	0.00
Other Practices (POL Funds)	0.00		28,293.43	0.00
Landowners (Private Land)			11,920.28	
Totals	838,683.00	1,022.622.00	777,036.63	285,799.08

Watershed Improvement Fund Contribution

- Amended application budget: 15%
- Actual: 6 %

Environmental Accountability

Water quality monitoring: There was no water quality monitoring component included with this this project.

Practices installed:

- 10,000 feet of Lake Shoreline Protection was installed around Lake Miami. This is amount that was planned.
- 13 water and sediment control basins were installed on private land in the Lake Miami watershed using Publicly Owned Lake (POL) funds. There were no water and sediment control basins planned at the beginning of the project, so this exceeded the goal by 13.
- 5 check dams were installed partially completing one project site on state-

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owned land in the Lake Miami watershed. There were plans to treat 6 project sites in total when the project was amended, so this is 5.5 fewer. There were fewer installed than planned because after the WIRB-funded project started, the DNR Lakes Program (project partner) experienced significant delays in completing the environmental reviews, survey, and design, and permitting. Some of these delays were attributed to staff changes which took place within DNR. As result, it took much longer than originally expected to reach bid-letting, contracting and construction.

- The project scope was reduced initially to meet WIRB funding.

Activities planned and completed:

- One kickoff meeting was held in September 2014. This was completed as planned.
- One field day / BMP tour was to be held at the end of the project to reveal the accomplishments to the public – this was not completed
- There were 2 press releases published during the project by the Monroe County Conservation Board. Up to 5 press releases were planned.
- Photos were taken of the project throughout the project period, including the lake shore armoring. One photographic journal was planned.
- Monroe SWCD completed two educational events with third graders at Lake Miami (May 2015, May 2016). We did not have any educational events planned, so this exceeded the planned amount by 2.
- One Forestry Stewardship Plan was to implemented during the project period – this was not completed.

Please see attached map of the project area showing the accomplishments due to the project.

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Practices and Activities Summary Table

Practice or Activity	Unit	Approved Application Goal	Accomplished	Percent Completion
Lakeshore armoring	feet	10,000	10,000	100
Archaeology/T&E Report	No.	1	1	100
Sediment control basins on private land	No.	0	13	1300
Grade stabilization structures on state-owned land	No.	9	0.5	6
Kick off meeting	No.	1	1	100
Press releases	No.	5	2	40
Youth field days	No.	0	2	200
Photojournal	No.	1	1	100
Progress meetings	No.	4	4	100
Forestry Stewardship Plan	No.	1	0	0
Tour of BMPs	No.	1	0	0

This project will improve the water clarity in the 122-acre Lake Miami. The lake is a significant publically owned lake and vital recreation resource in Monroe County that suffered decreases in recreational uses and associated economic return to the region. The removal of rough species from the lake and carp barrier and shoreline armoring in 2014/2015 alone have created substantial improvements to the fishery and recreation value in the short term. Completion of the currently planned structures made possible by WIRB and IDNR Lakes Restoration will provide for longer term improvements to water quality.

Of the 6 project sites currently planned to be completed by May 2017, site 6 was the only site partially completed by the December 2016 WIRB project end date. However, without the initial WIRB award, it is very unlikely that any of the structures would have been built during this time. Site 6 alone will meet 20% of the Lake Miami TMDL and when combined with the shoreline armoring the remaining sites will raise the achievement to 66% and within 2% of the original WIRB goal.

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PLANNED LAKE MIAMI WATERSHED PROJECT BMP PRACTICES		
	Sediment Delivery Reduction	Phosphorus Delivery Reduction
6 Grade Stabs	1,167 tons/year	1,020 pounds/year
Shoreline Armoring	280 tons/year	241 pounds/year
Total Reduction	1,447 tons/year	1,261 pounds/year
Reduction compared to current levels	1,447 reduction / 3,325 current = 44% reduction	1,261 reduction / 4,655 current = 27% reduction
Progress toward TMDL Limit	1,447 reduction / 2,205 TMDL reduction goal = 66% of Goal Reached	1,261 reduction / 1,855 TMDL reduction goal = 68% of Goal Reached
ACTUAL LAKE MIAMI WATERSHED PROJECT BMP PRACTICES		
	Sediment Delivery Reduction	Phosphorus Delivery Reduction
5 Rock Check Dams installed on State Owned Land	183 tons/year	154 pounds/year
13 Water & Sediment Control Basins on Private Owned Land	292 tons/year	378.6 pounds/year
Shoreline Armoring	280 tons/year	241 pounds/year
Total Reduction	755 tons/year	773.6 pounds/year
Reduction compared to current levels	755 reduction / 3,325 current = 23% reduction	773.6 reduction / 4,655 current = 17% reduction

Program Accountability

The Lake Miami Watershed Management Plan was completed in 2012. It was and continues to be a difficult time to secure funding to implement watershed improvement projects. For this reason, the award of this project in 2014 by the WIRB could not be understated.

Although the award was lower than requested, the WIRB award to the Monroe CCB attracted additional partners to the project, most importantly the IDNR Lakes Restoration

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Program. The key to the partnership was to make sure all the partners were in agreement with the costs and benefits to their respective disciplines'. Lake Miami, being a DNR Wildlife Management Area and home of the Monroe CCB meant compromise between IDNR Wildlife, Fisheries, Forestry, Engineering and Lakes Restoration would be required if the project was to get any project on the ground. Several field meetings at the gully sites with all in attendance helped develop the trust and collaboration to the point we are at today. The most difficult challenge to-date has been the December 2016 contract end date and no allowance for an extension. However, the partnership with Lakes Restoration will allow for the construction of the remaining practices to continue into 2017 and closer to the TMDL goal.

That's a whole lot of rock

In about two months, the main outlet at Lake Miami will be raised and the lake will begin to be refilled. But there's a lot that has to happen before that.

The lake was drained almost two years ago to clean out all of the rough fish in the lake (the big bass, crappie and bluegill went into the Albia Reservoir) and to begin a \$1 million water quality restoration project.

The project includes the placing 10,000 tons of rip rap around the lake, the building of two fishing jetties on the east shore and the construction of four wet silt ponds and two dry sediment ponds on the northeast and northwest sides of the lake. Those ponds will be completed by 2016.

Rip rap will be completed by the end of March. To bring in the rip rap along the west shore-line, a road was built. It will eventually be under water as the water reaches the rip rap. Currently the lake is 10 feet below its regular level. Eventually brush cut paths will be build around the lake and a path will be dozed above the rip rap that will be planted into grass.



TWO STRAIGHT TRUCKS deliver rip rap to the west shore-line of Lake Miami. The road built to get the trucks to the west side of the lake will eventually be under water when the lake is filled this spring.

The project also includes putting in fish structures like cedar trees bundled up with bricks tied to them and placed on the ice. When the ice melts the structures will fall into place.

The DNR will begin stocking

the lake in late March and early April. It will take about two years for good fishing to return.

The work is being funded by Watershed Improvement Review Board (WIRB) funding in cooperation with the IDNR, Iowa Depart-

ment of Agriculture and Land Stewardship (IDALS), Natural Resources and Conservation Service (NRCS) and Monroe County Conservation Board.

Lakeshore armoring completed as part of Lake Miami Watershed Project 1325-012



Rock check dams installed on State Owned Land as part of Lake Miami Watershed Project 1325-012



**Lake Miami, Monroe County
6 Structures at 5 Highest Priority Gully Sites on State Land**

Structures 1-5: Grade Stab BMPs Designed/Contracted, to be constructed Spring 2017

Site #6: Five rock check dams completed by December 31, 2016

Shoreline Armoring: 10,000ft installed 2015

#1
200 tons Sed / 168 lbs P. Reduced

Shoreline Armoring
280 tons Sed / 241 lbs P

#2 & 3
259 tons Sed / 218 lbs P

#4
155 tons Sed / 130 lbs P

#5
272 tons Sed / 228 lbs P

#6
183 tons Sed/154 lbs P

Legend
Orthophoto: 2016 NC

1 inch = 1,000 feet

 Miami WMA BMPs
Lake Miami Misc
erosion

 Shoreline RipRap
 watershed_boundary



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