

# Wisconsin Department of Natural Resources SWIMS Project Summary

## General Project Information

**Project ID:** LPT-324-08

**Name:** MERCER LAKE ASSOCIATION: LMI-Mercer Lake Water Quality, Hydrology, and Watershed Study

**Type:** Lakes Grant

**Subtype:** Lake Protection Grant

**Status:** COMPLETE

**Start Date:** 9/1/2007

**End Date:** 12/31/2014

**Purpose:** The Mercer Lake Association in cooperation with the Town of Mercer and the US Geological Service (USGS) will conduct a lake/watershed evaluation and develop a final lake/watershed management plan.

Project goals include:

1. Develop a water & phosphorus (including internal sediment loading) budget for Mercer Lake including a model to simulate phosphorus loading changes & predict water quality improvements.
2. Work with Mercer lake Association to analyze & interpret USGS report.
3. Determine amount of suspended solids & phosphorus entering the lake from the downtown commercial area in the Town of Mercer.
4. Analyze alternatives to treat stormwater runoff from urban area.
5. Develop sub watershed action management plan for watershed planning area.
6. Update Preliminary Lake Watershed Management Plan with USGS data; revise the Plan for Mercer Lake.
7. Present project updates at Association, Town & County meetings; invite interested parties.
8. Develop future courses of action to improve water quality in Mercer Lake.

Project deliverables include:

- \* Precipitation data, stream stage & flow data presented "real-time" on USGS internet site.
- \* Archive data in USGS computer database.
- \* Publish data annually in USGS, Wisconsin data reports.
- \* Hard copy & electronic map of Mercer Lake's watershed and land cover by USGS.
- \* USGS present interpretive information to the Lake Association at the annual 2011 meeting.
- \* Technical report in the "Scientific Investigations Report" series prepared by USGS at the end of the project.
- \* A sub watershed action plan identifying and prioritizing recommended actions and associated costs.
- \* A Final Comprehensive Management Plan.

Specific conditions:

- \* Forward lake/watershed plan to WDNR for review and approval before adoption of the plan.
- \* The WDNR will be provided electronic and hard copies of all data and or reports/plans generated as a result of this project.

**Objective:**

**Comments:** Grantee is MERCER LAKE ASSOCIATION

**Outcome:**

**Study Design:**

**QA Measures:**

## People

Name	Role	Status	Start Date	End Date	Organization	Comments
Manteufel, Bridgett	TEAM_MEMBER	ACTIVE	9/1/2007		USGS	
Mercer Lake Association,	GRANT_RECIPIENT	ACTIVE	9/1/2007		Mercer Lake Association	
Robertson, Dale	COORDINATOR	ACTIVE	9/1/2007	12/31/2013	USGS	

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USGS,	TEAM_MEMBER	INACTIVE	9/1/2007		U.S. Geological Survey	
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Project Statuses

Date	Reported By	Status	Comments
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Actions

Action	Detailed Description	Start Date	End Date	Status
Grant Awarded	<p>The Mercer Lake Association in cooperation with the Town of Mercer and the US Geological Service (USGS) will conduct a lake/watershed evaluation and develop a final lake/watershed management plan.</p> <p>Project goals include:</p> <ol style="list-style-type: none"><li>1. Develop a water &amp; phosphorus (including internal sediment loading) budget for Mercer Lake including a model to simulate phosphorus loading changes &amp; predict water quality improvements.</li><li>2. Work with Mercer lake Association to analyze &amp; interpret USGS report.</li><li>3. Determine amount of suspended solids &amp; phosphorus entering the lake from the downtown commercial area in the Town of Mercer.</li><li>4. Analyze alternatives to treat stormwater runoff from urban area.</li><li>5. Develop sub watershed action management plan for watershed planning area.</li><li>6. Update Preliminary Lake Watershed Management Plan with USGS data; revise the Plan for Mercer Lake.</li><li>7. Present project updates at Association, Town &amp; County meetings; invite interested parties.</li></ol>	9/1/2007		COMPLETE
Nutrient Budget Development		9/1/2007	12/31/2012	PROPOSED
Watershed Mapping or Assessment		9/1/2007	12/31/2012	PROPOSED

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Grant Awarded	<p>The Mercer Lake Association in cooperation with the Town of Mercer and the US Geological Service (USGS) will conduct a lake/watershed evaluation and develop a final lake/watershed management plan.</p> <p>Project goals include:</p> <ol style="list-style-type: none"> <li>1. Develop a water &amp; phosphorus (including internal sediment loading) budget for Mercer Lake including a model to simulate phosphorus loading changes &amp; predict water quality improvements.</li> <li>2. Work with Mercer lake Association to analyze &amp; interpret USGS report.</li> <li>3. Determine amount of suspended solids &amp; phosphorus entering the lake from the downtown commercial area in the Town of Mercer.</li> <li>4. Analyze alternatives to treat stormwater runoff from urban area.</li> <li>5. Develop sub watershed action management plan for watershed planning area.</li> <li>6. Update Preliminary Lake Watershed Management Plan with USGS data; revise the Plan for Mercer Lake.</li> <li>7. Present project updates at Association, Town &amp; County meetings; invite interested parties.</li> </ol>	9/1/2007	12/31/2012	COMPLETE
Lake Management Plan Development	The Mercer Lake Association in cooperation with the Town of Mercer and the US Geological Service (USGS) will conduct a lake/watershed evaluation and develop a final lake/watershed management plan.	9/1/2007	12/31/2014	COMPLETE
Hydrologic Budget Development		9/1/2007	12/31/2012	PROPOSED

### Monitoring Stations

Station ID	Name	Comments
263125	Grand Portage Lake - Outlet	
263009	Little Turtle River - Tn Rd Bl Mercer Lake	
10022388	Mercer Lake West Basin Deep Hole	
263129	Mercer Lake at Max Point Of Depth	
10022086	Mercer Well 1 At Mercer WI	
10022087	Mercer Well 2 At Mercer WI	
10022088	Mercer Well 3 At Mercer WI	
10022089	Mercer Well 4 At Mercer Wi	
10022090	Mercer Well 5 At Mercer WI	
10022091	Mercer Well 6 At Mercer WI	
10022092	Mercer Well 7 At Mercer WI	
10022390	Storm Sewer at Mercer L. Boat Landing	
10022093	Tahoe Creek Near Mercer Wi	

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### Assessment Units

WBIC	Segment	Local Name	Official Name
2312800	1	Little Turtle River	Little Turtle River
2312800	3	Little Turtle River	Little Turtle River
2312800	4	Little Turtle River	Little Turtle River
2313600	1	Mercer Lake	Mercer Lake
2313700	1	Tahoe Creek	Tahoe Creek

### Lab Account Codes

Account Code	Description	Start Date	End Date
CF013	LAKE PROTECTION GRANTS	1/1/1960	12/31/2099
CF014	LAKE PROTECTION GRANTS	1/1/1960	12/31/2099
CF015	LAKE PROTECTION GRANTS	1/1/1960	12/31/2099
CF016	LAKE PROTECTIONS GRANTS	1/1/1960	12/31/2099

### Forms

Form Code	Form Name
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### Methods

Method Code	Method Description
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### Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
10/23/2007 15:15	COMPLETE	T-1	10022093	Tahoe Creek Near Mercer Wi
10/30/2007 13:00	COMPLETE	LT01	263009	Little Turtle River - Tn Rd BI Mercer Lake
10/30/2007 14:05	COMPLETE	LT11	263125	Grand Portage Lake - Outlet
11/13/2007 14:15	COMPLETE	LT02	263009	Little Turtle River - Tn Rd BI Mercer Lake
11/13/2007 15:15	COMPLETE	LT12	263125	Grand Portage Lake - Outlet
3/20/2008 11:30	COMPLETE	WBB1	10022388	Mercer Lake West Basin Deep Hole
4/21/2008 11:00	COMPLETE	CUL-4	10022390	Storm Sewer at Mercer L. Boat Landing
4/21/2008 11:30	COMPLETE	IN-5	263125	Grand Portage Lake - Outlet
4/21/2008 12:45	COMPLETE	OUT-6	263009	Little Turtle River - Tn Rd BI Mercer Lake
5/5/2008 10:07	COMPLETE	MDB3	263129	Mercer Lake at Max Point Of Depth
5/5/2008 11:12	COMPLETE	MWBB3	10022388	Mercer Lake West Basin Deep Hole
6/17/2008 12:05	COMPLETE	WBB-4	10022388	Mercer Lake West Basin Deep Hole
7/10/2008 10:30	COMPLETE	WBB-5	10022388	Mercer Lake West Basin Deep Hole
7/25/2008 7:37	COMPLETE		10022388	Mercer Lake West Basin Deep Hole
8/14/2008 15:56	COMPLETE	WBB-6	10022388	Mercer Lake West Basin Deep Hole

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8/31/2008 12:02	COMPLETE		10022388	Mercer Lake West Basin Deep Hole
9/16/2008 18:06	COMPLETE	WBB-7	10022388	Mercer Lake West Basin Deep Hole
1/21/2009 9:30	COMPLETE	IN-16	263125	Grand Portage Lake - Outlet
1/21/2009 11:00	COMPLETE	OUT-16	263009	Little Turtle River - Tn Rd BI Mercer Lake
1/21/2009 12:00	COMPLETE	T-4	10022093	Tahoe Creek Near Mercer Wi
3/7/2009 11:30	COMPLETE	SS-15	10022390	Storm Sewer at Mercer L. Boat Landing
3/7/2009 11:45	COMPLETE	IN-17	263125	Grand Portage Lake - Outlet
3/7/2009 13:00	COMPLETE	OUT-17	263009	Little Turtle River - Tn Rd BI Mercer Lake
3/7/2009 14:30	COMPLETE	T-5	10022093	Tahoe Creek Near Mercer Wi
3/17/2009 12:00	COMPLETE	SS-16	10022390	Storm Sewer at Mercer L. Boat Landing
3/23/2009 10:52	COMPLETE	MDT-8	263129	Mercer Lake at Max Point Of Depth
3/23/2009 11:36	COMPLETE	WBT-8	10022388	Mercer Lake West Basin Deep Hole
4/15/2009 13:50	COMPLETE	OUT-18	263125	Grand Portage Lake - Outlet
4/15/2009 14:15	COMPLETE	T-6	10022093	Tahoe Creek Near Mercer Wi
4/15/2009 15:15	COMPLETE	IN-18	263009	Little Turtle River - Tn Rd BI Mercer Lake
4/15/2009 15:45	COMPLETE	SS-17	10022390	Storm Sewer at Mercer L. Boat Landing
4/28/2009 11:30	COMPLETE	SS-18	10022390	Storm Sewer at Mercer L. Boat Landing
4/28/2009 12:00	COMPLETE	T-7	10022093	Tahoe Creek Near Mercer Wi
4/28/2009 12:06	COMPLETE	MDH	263129	Mercer Lake at Max Point Of Depth
4/28/2009 13:09	COMPLETE	MWB	10022388	Mercer Lake West Basin Deep Hole
5/20/2009 12:00	COMPLETE	SSL	10022390	Storm Sewer at Mercer L. Boat Landing
5/20/2009 12:30	COMPLETE	IN-19	263125	Grand Portage Lake - Outlet
5/20/2009 12:45	COMPLETE	P3	10022088	Mercer Well 3 At Mercer WI
5/20/2009 13:30	COMPLETE	P2	10022087	Mercer Well 2 At Mercer WI
5/20/2009 13:45	COMPLETE	OUT-18	263009	Little Turtle River - Tn Rd BI Mercer Lake
5/20/2009 14:30	COMPLETE	P7	10022092	Mercer Well 7 At Mercer WI
5/20/2009 16:00	COMPLETE	P2	10022086	Mercer Well 1 At Mercer WI
5/20/2009 17:05	COMPLETE	P5	10022090	Mercer Well 5 At Mercer WI
5/20/2009 17:05	COMPLETE	P6	10022091	Mercer Well 6 At Mercer WI
5/20/2009 17:30	COMPLETE	P4	10022089	Mercer Well 4 At Mercer WI
6/16/2009 11:10	COMPLETE		263009	Little Turtle River - Tn Rd BI Mercer Lake
6/16/2009 11:35	COMPLETE		10022093	Tahoe Creek Near Mercer Wi
6/29/2009 10:00	COMPLETE	MLDHT	263129	Mercer Lake at Max Point Of Depth
6/29/2009 10:00	COMPLETE	OUT-20	263009	Little Turtle River - Tn Rd BI Mercer Lake
6/29/2009 11:05	COMPLETE	MLWT	10022388	Mercer Lake West Basin Deep Hole

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6/29/2009 12:00	COMPLETE	SS-22	10022390	Storm Sewer at Mercer L. Boat Landing
6/29/2009 12:15	COMPLETE	LTI-21	263125	Grand Portage Lake - Outlet
7/30/2009 15:09	COMPLETE	OUTLET	263009	Little Turtle River - Tn Rd BI Mercer Lake
7/30/2009 15:21	COMPLETE	LANDING	10022390	Storm Sewer at Mercer L. Boat Landing
7/30/2009 16:41	COMPLETE	INLET	263125	Grand Portage Lake - Outlet
8/5/2009 8:31	COMPLETE	MB-12	263129	Mercer Lake at Max Point Of Depth
8/5/2009 9:41	COMPLETE	MWB-12	10022388	Mercer Lake West Basin Deep Hole
8/5/2009 10:25	COMPLETE	IN-22	263125	Grand Portage Lake - Outlet
8/5/2009 11:24	COMPLETE	OUT-22	263009	Little Turtle River - Tn Rd BI Mercer Lake
8/19/2009 11:13	COMPLETE	MB	263129	Mercer Lake at Max Point Of Depth
8/19/2009 12:10	COMPLETE	WB	10022388	Mercer Lake West Basin Deep Hole
8/19/2009 12:37	COMPLETE	IN	263125	Grand Portage Lake - Outlet
8/19/2009 14:45	COMPLETE	OUT	263009	Little Turtle River - Tn Rd BI Mercer Lake
8/25/2009 8:29	COMPLETE	OT	263009	Little Turtle River - Tn Rd BI Mercer Lake
8/25/2009 8:45	COMPLETE	IN	263125	Grand Portage Lake - Outlet
9/2/2009 11:30	COMPLETE	P1	10022086	Mercer Well 1 At Mercer WI
9/2/2009 12:00	COMPLETE	TC	10022093	Tahoe Creek Near Mercer Wi
9/2/2009 12:30	COMPLETE	OUT	263009	Little Turtle River - Tn Rd BI Mercer Lake
9/2/2009 12:57	COMPLETE	MDB	263129	Mercer Lake at Max Point Of Depth
9/2/2009 13:30	COMPLETE	IN-1	263125	Grand Portage Lake - Outlet
9/2/2009 13:59	COMPLETE	WBB	10022388	Mercer Lake West Basin Deep Hole
9/2/2009 15:00	COMPLETE	P-3	10022088	Mercer Well 3 At Mercer WI
9/2/2009 15:15	COMPLETE	P2	10022087	Mercer Well 2 At Mercer WI
9/2/2009 16:00	COMPLETE	P4	10022089	Mercer Well 4 At Mercer Wi
9/2/2009 16:15	COMPLETE	P5	10022090	Mercer Well 5 At Mercer WI
9/2/2009 16:30	COMPLETE	P7	10022092	Mercer Well 7 At Mercer WI
9/16/2009 13:10	COMPLETE	MDHB	263129	Mercer Lake at Max Point Of Depth
9/16/2009 13:45	COMPLETE	MWT	10022388	Mercer Lake West Basin Deep Hole
10/1/2009 14:00	COMPLETE	IN	263125	Grand Portage Lake - Outlet
10/1/2009 14:15	COMPLETE	OUT	263009	Little Turtle River - Tn Rd BI Mercer Lake
10/7/2009 9:15	COMPLETE	IN-27	263125	Grand Portage Lake - Outlet
10/15/2009 11:30	COMPLETE	IN-28	263125	Grand Portage Lake - Outlet
10/15/2009 12:00	COMPLETE	T-8	10022093	Tahoe Creek Near Mercer Wi
10/15/2009 12:15	COMPLETE	OUT-27	263009	Little Turtle River - Tn Rd BI Mercer Lake

### Documents

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Title	Description	Author	Published	Comments
Aquatic Macrophyte Survey - Point Intercept Method - Mercer Lake, Iron County Wisconsin		Ecological Integrity Service, LLC	8/30/2010	
Aquatic Plant Management Plan - Mercer Lake, Iron County, Wisconsin		Ecological Integrity Service	6/30/2012	

Budget

Combined Budgets:

Combined WSLH:

Combined Total: \$0.00

Funding

Organization	Source	Type	Amount	Start Date	End Date
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