

Wisconsin Department of Natural Resources SWIMS Project Summary

General Project Information

Project ID: NOR_03_CMP11

Name: Sissabagama Lake 303d Evaluation [NOR_03_11]

Type: TMDL/303d Projects

Subtype: Identify Impaired Waters

Status: COMPLETE

Start Date: 7/1/2010

End Date: 6/30/2011

Purpose: Sissabagama Lake (Sawyer Co.) has an average total phosphorus concentration of 25 ug/l which exceeds the WisCALM threshold of 20 ug/l for a seepage lake for 303d listing. It is not known whether there are controllable TP sources in the lake's watershed. Monitoring will be done to determine if there are controllable TP sources and whether the lake should be added to the 303d list. Monitoring and evaluation includes:

1. Analyze existing in-lake and cranberry bog discharge data. Evaluate the significance of internal TP loading. Develop a TP model for the lake.
2. Examine surficial and pre-development sediment samples to compare current and pre-development conditions. Paul Garrison has said he is willing to collect and analyze the samples.
3. Collect TP samples at 1 watershed stream on 5 dates. Flow estimates, and D.O. , temp. and pH measurements will also be made.
4. Collect TP samples from 10 residential wells to evaluate groundwater TP concentrations.

Objective: Sissabagama Lake is being evaluated for possible inclusion on the 303d list. The project will determine if inclusion is appropriate.

Comments: Project Category 2: 303(d) Impaired Waters List

Outcome: Performance Measures: These are milestones that will be reported on in the Division Quarterly Report. Please estimate dates in a manner that encourages success.

- 1) Number of sample sites associated with the project. 11
- 2) Number of sampling events associated with project. 6
- 3) Estimated date when sample collection will be complete. October 1, 2010
- 4) Estimated date when all data will be entered into appropriate database. 12/31/2010
- 5) Estimated date when final report will be complete. 05/01/2011

Study Design:

QA Measures:

People

Name	Role	Status	Start Date	End Date	Organization	Comments
Roesler, Craig P	COORDINATOR	COMPLETE	7/1/2010	6/30/2011	Wisconsin DNR	

Project Statuses

Date	Reported By	Status	Comments
3/4/2010	MOLLI MACDONALD	Proposed	
12/7/2010	MOLLI MACDONALD	Progress: 25-50% Complete	This project looks to be on schedule but there are still a number of scheduled events going back to August. Are these just waiting on analysis of some kind or do these events need to be cancelled and then deleted? Need January status update.

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1/31/2011	Craig Roesler	Progress: 50-75% Complete	All field work is complete. Atypical runoff in 2010 resulted in abnormally high TP concentrations in streams. I've proposed a continuation project to extend stream sampling into 2011 to try to get more representative stream samples to allow TP modeling. Preliminary report work will be done this winter, but a final report will wait until 2011 data is available.
4/11/2011	Craig Roesler	Complete	Field work and report is complete. 2010 data was found to be adequate. Plans for 2011 monitoring have been dropped.

Actions

Action	Detailed Description	Start Date	End Date	Status
Monitor Targeted Area	Monitoring will be done to determine if there are controllable TP sources and whether the lake should be added to the 303d list. Monitoring and evaluation includes: 1. Analyze existing in-lake and cranberry bog discharge data. Evaluate the significance of internal TP loading. Develop a TP model for the lake. 2. Examine surficial and pre-development sediment samples to compare current and pre-development conditions. Paul Garrison has said he is willing to collect and analyze the samples. 3. Collect TP samples at 1 watershed stream on 5 dates. Flow estimates, and D.O. , temp. and pH measurements will also be made. 4. Collect TP samples from 10 residential wells to evaluate groundwater TP concentrations.	7/1/2010	6/30/2011	COMPLETE

Details: Parameter	Value/Amount	Units	Comments
Temperature			
Total Nitrogen			
Total Phosphorus			
Total Suspended Solids			

Monitor or Propose 303(d) Listing	Sissabagama Lake: 2393500, Unnamed stream: 5004138. Sissabagama Lake (Sawyer Co.) has an average total phosphorus concentration of 25 ug/l which exceeds the WisCALM threshold of 20 ug/l for a seepage lake for 303d listing. It is not known whether there are controllable TP sources in the lake's watershed. Monitoring will be done to determine if there are controllable TP sources and whether the lake should be added to the 303d list.	7/1/2010	6/30/2011	PROPOSED
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Monitoring Stations

Station ID	Name	Comments
10031599	Sissabagama Lake - Well 1	
10031608	Sissabagama Lake - Well 10	
10031600	Sissabagama Lake - Well 2	
10031601	Sissabagama Lake - Well 3	
10031602	Sissabagama Lake - Well 4	
10031603	Sissabagama Lake - Well 5	

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10031604	Sissabagama Lake - Well 6	
10031605	Sissabagama Lake - Well 7	
10031606	Sissabagama Lake - Well 8	
10031607	Sissabagama Lake - Well 9	
10031098	Unnamed trib on north side of Sissabagama Lake	
10031097	Unnamed trib on west side of Sissabagama Lake	

Assessment Units

WBIC	Segment	Local Name	Official Name
2393400	1	Sissabagama Creek	Sissabagama Creek
2393500	1	Sissabagama Lake	Sissabagama Lake
5004138	1	Local Water	Unnamed

Lab Account Codes

Account Code	Description	Start Date	End Date
WT128	LAKES SPECIAL PROJECTS	6/18/2010	6/30/2011

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
7/15/2010 14:00	COMPLETE	WS-1	10031097	Unnamed trib on west side of Sissabagama Lake
7/15/2010 14:30	COMPLETE	NS-2	10031098	Unnamed trib on north side of Sissabagama Lake
7/28/2010 15:30	COMPLETE	58	10031098	Unnamed trib on north side of Sissabagama Lake
7/28/2010 16:00	COMPLETE	WS-1	10031097	Unnamed trib on west side of Sissabagama Lake
8/20/2010 14:00	COMPLETE	WS-1	10031097	Unnamed trib on west side of Sissabagama Lake
8/20/2010 14:15	COMPLETE	NS-2	10031098	Unnamed trib on north side of Sissabagama Lake
9/17/2010 10:00	COMPLETE	WS-1	10031097	Unnamed trib on west side of Sissabagama Lake
9/17/2010 10:30	COMPLETE	NS-2	10031098	Unnamed trib on north side of Sissabagama Lake
11/9/2010 14:00	COMPLETE	NS-2	10031098	Unnamed trib on north side of Sissabagama Lake
11/9/2010 14:20	COMPLETE	WS-1	10031097	Unnamed trib on west side of Sissabagama Lake

Documents

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Title	Description	Author	Published	Comments
Results of Sediment Cores taken from Sissabagama Lake, Sawyer County, Spirit Lake, Taylor County, and North Spirit Lake, Price County, Wisconsin 2011	On 5 and 6 October 2010 sediment cores were collected from lakes Sissabagama, Spirit, and North Spirit with a gravity corer. The diatom communities indicate that phosphorus concentrations in all the lakes are higher now than they were historically.	Paul Garrison	7/1/2011	
Sissabagama Lake Phosphorus Assessment, 2010		Craig Roesler	3/15/2011	

Budget

Budget Description: Budget for Sissabagama Lake 303d Evaluation [NOR_03_11] **Start Date:** 7/1/2010 **End Date:** 6/30/2011

Code	Description	Quantity	Units	Unit Cost	Total Cost	Comments
FTE	FTE Hours	100	Hours	\$0.00	\$0.00	Craig Roesler
LTE SAL	LTE Salary		Hours	\$13.00	\$0.00	
LTE FR	LTE Fringe				\$0.00	
LTE IND	LTE Indirect				\$0.00	
LTE TOT	LTE Total Cost				\$0.00	
SUPPLY	Supplies	6		\$20.00	\$120.00	shipping samples to lab
MILEAGE	Mileage	216	Miles	\$0.37	\$79.92	
MEAL	Meals		Meals	\$9.00	\$0.00	
LODGE	Lodging				\$0.00	
TRAVEL	Travel Total				\$79.92	
BUG	Bug Contracts				\$0.00	
OTHER	Other Contracts				\$0.00	
EQUIP	Equipment				\$0.00	
USGS	USGS Costs				\$0.00	
TOTAL	Total Cost (excludes SLOH)				\$199.92	

Test Code	Description	Test Group	# Planned	Unit Cost	Total Cost
I520PLT	TOTAL PHOSPHORUS (AS P) (EPA 365.1)	INORGANIC CHEMISTRY	15	\$23.60	\$354.00
R210PBD	LEAD 210 SEDIMENT DATING	RADIOCHEMISTRY	1	\$105.60	\$105.60

Total WSLH Lab Costs: \$459.60
Total Budget: \$659.52

Combined Budgets: \$199.92
Combined WSLH: \$459.60
Combined Total: \$659.52

Funding

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Organization	Source	Type	Amount	Start Date	End Date
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