

Wisconsin Department of Natural Resources  
SWIMS Project Summary

General Project Information

**Project ID:** SPL-351-15

**Name:** CHURCH PINE ROUND & BIG LAKE P & R DISTRICT: Big Lake Internal Load Study

**Type:** Lakes Grant

**Subtype:** Small Scale Lake Planning

**Status:** COMPLETE

**Start Date:** 2/15/2015

**End Date:** 6/30/2017

**Purpose:** The Church Pine, Round, and Big Lake P&R District is sponsoring a project to assess the internal load in Big Lake.

The final deliverables include all data collected, updated nutrient budget, and updated implementation strategy.

Specific Phase 1 project tasks include: 1) In-Lake water quality monitoring; 2) Quantify lake nutrient budget; 3) Implementation strategy.

Special Conditions: CLMN efforts should not be duplicated, and these data shall be included in the trends analysis and final reporting.

This scope summarizes the project detail provided in the application and does not negate tasks/deliverables described therein. Data, records, and reports, including GIS-based maps, and digital images, must be submitted to the Department in a format specified by the regional Lake Coordinator.

**Objective:**

**Comments:** Grantee is CHURCH PINE ROUND & BIG LAKE P & R DISTRICT

**Outcome:**

**Study Design:**

**QA Measures:**

People						
Name	Role	Status	Start Date	End Date	Organization	Comments
Church Pine/Round/Big Lake P &	GRANT_RECIPIENT	ACTIVE	3/6/2015		Church Pine/Round/Big Lake P & R District	
Smith, Alex R	COORDINATOR	COMPLETE	3/6/2015		Wisconsin DNR	

Project Statuses

Date	Reported By	Status	Comments
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Actions

Wisconsin Department of Natural Resources  
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Action	Detailed Description	Start Date	End Date	Status
Grant Awarded	The Church Pine, Round, and Big Lake P&R District is sponsoring a project to assess the internal load in Big Lake.  The final deliverables include all data collected, updated nutrient budget, and updated implementation strategy.  Specific Phase 1 project tasks include: 1) In-Lake water quality monitoring; 2) Quantify lake nutrient budget; 3) Implementation strategy.	2/15/2015	12/31/2016	COMPLETE
Nutrient Budget Development		2/15/2015	12/31/2016	PROPOSED
Monitor Water Quality or Sediment		2/15/2015	12/31/2016	PROPOSED

Monitoring Stations

Station ID	Name	Comments
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Assessment Units

WBIC	Segment	Local Name	Official Name
2615900	1	Big Lake	Big Lake

Lab Account Codes

Account Code	Description	Start Date	End Date
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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
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Documents

Title	Description	Author	Published	Comments
Big Lake Internal Loading	The internal loading of Big Lake in Polk County.	Grant Recipient		

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Internal Loading, Big Lake, Polk County, WI, WBIC: 2615900. 2018	In shallow lakes there is intense interaction at the water sediment interface. Therefore, understanding sediment water interactions is crucial to understanding the nutrient dynamics of shallow lakes such as Big Lake (Scheffer, 1998). The sediments demand for oxygen is high as it is broken down by microbial communities. At the sediment surface, a difference of a few millimeters in oxygen penetration is the critical factor regulating exchange of nutrients and inorganic elements such as iron between the sediment and water. Under aerobic conditions, the exchange is largely from the water to the sediment. Under anaerobic conditions, however, phosphorus can move from depths up to 10 cm deep and be released into the water column (Wetzel, 2001). An analysis of the hypolimnetic nutrients of Big Lake has implications for best management actions in 2016 to 2018.	Jeremy Williamson	1/1/2018	
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Budget

Combined Budgets:

Combined WSLH:

Combined Total: \$0.00

Funding

Organization	Source	Type	Amount	Start Date	End Date
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