Wisconsin Department of Natural Resources
SWIMS Project Summary

General Project Information

Project ID: LPL-1525-13

Name: BIG CHETAC CHAIN LAKE ASSOCIATION: Alum Dosage Study & Modeling

Type: Lakes Grant

Subtype: Large Scale Lake Planning

Status: COMPLETE

Start Date: 4/1/2013

End Date: 12/31/2014

Purpose: Big Chetac Chain Lakes Association is sponsoring a project to assess the feasibility of an alum treatment for Big Chetac Lake.

The final deliverables include a final report documenting the results of the regulations review, sediment cores, alum dosage analysis, and lake response modeling.

Specific project tasks include: 1) Sediment core collection; 2) Alum dosage analysis; 3) Lake response modeling; 4) Inventory & review programs & regulations affecting water quality.

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 BIG CHETAC CHAIN LAKE ASSOCIATION

Outcome:

Study Design:

QA Measures:

People

Name	Role	Status	Start Date	End Date	Organization	Comments
Big Chetac And Birch Lakes Ass	GRANT_RECIPIENT	ACTIVE	6/28/2013		Big Chetac And Birch Lakes Association	

Project Statuses

Date	Reported By	Status	Comments

Actions

Action	Detailed Description	Start Date	End Date	Status
Project Deliverable	Final Report	4/1/2013	12/31/2014	PROPOSED
Lakes Planning Grant		4/1/2013	12/31/2014	PROPOSED
Water Quality Modeling		4/1/2013	12/31/2014	PROPOSED

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Grant Awarded	Big Chetac Chain Lakes Association is sponsoring a project to assess the feasibility of an alum treatment for Big Chetac Lake. The final deliverables include a final report documenting the results of the regulations review, sediment cores, alum dosage analysis, and lake response modeling.	4/1/2013	12/31/2013	COMPLETE
Diagnostic/Feasibility Assessment	Alum Feasibility Study	4/1/2013	12/31/2014	PROPOSED
Monitor Water Quality or Sediment		4/1/2013	12/31/2014	PROPOSED

Monitoring Stations

Station ID	Name	Comments

Assessment Units

WBIC	Segment	Local Name	Official Name
2113300	1	Lake Chetac	Lake Chetac

Lab Account Codes

Account Code	Description	Start Date	End Date

Forms

Form Code	Form Name

Methods

Method Code	Method Description

Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name

Documents

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Title	Description	Author	Published	Comments
Phosphorus Budget Analysis and Alum Dosage Estimation for Big Chetac Lake, Wisconsin	Phosphorus (P) budget analysis of the 2007 summer limnological data set confirmed that internal P loading, primarily from anaerobic sediments located in the north basin, is the dominant P source driving algal blooms in Big Chetac Lake. Empirical steady-state models predicted that management of internal P loading in the north basin would result in a 47% decrease in mean summer total P concentrations to 0.045 mg/L. Predicted chlorophyll concentrations declined by 60% to 21 μg/L and frequency of nuisance algal blooms (i.e., chlorophyll concentrations > 30 μg/L) decreased from 73% to only 19% of the time during the summer. In contrast, management and reduction of tributary P loads resulted in minor predicted improvements in limnological characteristics because these inputs were low relative to P inputs via internal loads.	University of Wisconsin Stout; Discovery Center - Sustainability Sciences Institute	12/13/2013	

Budget

Combined Budgets:

Combined WSLH:

Combined Total: $0.00

Funding

Organization	Source	Type	Amount	Start Date	End Date