Wisconsin Department of Natural Resources
SWIMS Project Summary

General Project Information

Project ID: LPL-058 (4010-1)

Name: CLOVER LEAF LAKES PROTECTIVE ASSOCIATION: Grass Lake Management Planning

Type: Lakes Grant

Subtype: Large Scale Lake Planning

Status: COMPLETE

Start Date: 4/2/1991

End Date: 6/30/1993

Purpose: 1) Review existing data on lake and watershed to assess data gathering needs. 2) Initiate public involvement/information program including workshops, public meetings, newsletters, fact sheet distribution, local media.3) Conduct water quality monitoring in spring and summer at sites as described in the application. 4) Perform winter sampling at two sites as defined in the application. 5) Conduct macrophyte survey as described in the application.6) Collect sediment samples from the southern portion of the lake. 7) Prepare base map of lake and watershed including mapping land uses. 8) Final lake management plan will include summary of data gathered, public involvement activities,aquatic plant survey, base and land use maps, and managment recommendations.

Objective:

Comments:

Outcome:

Study Design:

QA Measures:

People

Name	Role	Status	Start Date	End Date	Organization	Comments
Cloverleaf Lakes Protective As	GRANT_RECIPIENT	ACTIVE	4/2/1991	6/30/1993	Cloverleaf Lakes Protective Association	

Project Statuses

Date	Reported By	Status	Comments

Actions

Action	Detailed Description	Start Date	End Date	Status
Monitor Water Quality or Sediment	10100514	4/2/1991		PROPOSED
Develop/Distribute Newsletter	10100514	4/2/1991		PROPOSED
Hold Workshops	10100514	4/2/1991		PROPOSED
Watershed Mapping or Assessment	10100514	4/2/1991		PROPOSED
Lake Management Plan Development		4/2/1991	6/30/1993	PROPOSED
Aquatic Plant Monitoring or Survey		4/2/1991	6/30/1993	PROPOSED

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Grant Awarded	1) Review existing data on lake and watershed to assess data gathering needs. 2) Initiate public involvement/information program including workshops, public meetings, newsletters, fact sheet distribution, local media.3) Conduct water quality monitoring in spring and summer at sites as described in the application. 4) Perform winter sampling at two sites as defined in the application. 5) Conduct macrophyte survey as described in the application.6) Collect sediment samples from the southern portion of the lake. 7) Prepare base map of lake and watershed including mapping land uses. 8) Final lake management plan will include summary of data gathered, public involvement activities,aquatic plant survey, base and land use maps, and managment recommendations.	4/2/1991		COMPLETE
Data analysis, report production	10100514	4/2/1991		PROPOSED
Informational Meetings	10100514	4/2/1991		PROPOSED

Monitoring Stations

Station ID	Name	Comments

Assessment Units

WBIC	Segment	Local Name	Official Name
299000	1	Un Spring	Cloverleaf Chain
299200	1	Grass Lake (Cloverleaf Chain)	Grass Lake

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

Title	Description	Author	Published	Comments
Lake Management Plan - Grass Lake - Shawano County, Wisconsin	Grass Lake, Shawano County, is the middle lake of a three lake "chain" known as the Cloverleaf Lakes. The primary source of lake inflow is groundwater. This, combined with a primarily wooded residential or forested watershed, results in a relatively low	IPS Environmental and Analytical Services	6/30/1992	

potential for non-point source inputs of nutrients and sediment from the watershed. Water quality was fair to good for all parameters measured; transparency, nutrients and chlorophyll a indicated a mesotrophic status. Grass Lake stratified during summer and exhibited high nutrient levels and near-anoxic conditions near bottom in deeper portions of the basin. Higher nutrient levels were observed during a rain event in the small creek inflow on the north shore. This creek receives flow perennially from a spring in a forested area a few hundred meters from t h e lake and intermittently from roadside and agricultural areas during substantial rain or snowmelt events. Macrophyte growth in Grass Lake is limited, except on an extensive shallow area along the south shore, to a rather narrow littoral zone. Water celery and clasping-leaf pondweed (relatively desirable from the viewpoint of habitat provision), are most common. Water milfoil, which may include Eurasian Milfoil (a nuisance exotic plant) was also relatively common. The shallow, highly productive south shore area probably provides food, cover and spawning habitat for the fishery. Sediment from this area and particularly in the channel to Pine Lake, contains significant amounts of organic matter. Protection of this area from indiscriminate power boat usage, which may destroy or fragment plants and resuspend sediment, should be considered. Overall management objectives should emphasize protection and improvement/enhancement of this already high quality resource. - Regular water quality monitoring should be continued to track water quality trends. Event monitoring should target creek inflows or other sources of overland drainage (parking areas, roads). - Riparian land owner education and diligence regarding runoff control and yard waste/fertilizer management should be encouraged to minimize sediment and nutrient inputs. Nutrient input from the creek during

	low flow conditions should be assessed. - Macrophyte management in near shore areas should be limited to localized manual harvest (if necessary or desired). Water milfoil species should be positively determined; Eurasian Milfoil, if present, should be selectively removed. Plant management should target nuisance species control.			

Budget

Combined Budgets:

Combined WSLH:

Combined Total: $0.00

Funding

Organization	Source	Type	Amount	Start Date	End Date