

Description of Project Area

Bass Lake is located in St. Croix County in the townships of Somerset and St. Joseph, approximately 50 miles east of the Minneapolis-St. Paul metropolitan area in Minnesota. It is a long, narrow 441 acre lake, with a maximum depth of 38 ft. It has an immediate watershed area of 1397 acres. The land uses within the watershed are agriculture and rural residential. Bass Lake is listed by the WI DNR as an “Outstanding Resource Water.”

St. Croix County is the fastest growing county in Wisconsin and the Bass Lake area is experiencing rapid population growth. There are currently 106 shoreline residents. The lake sees heavy use by anglers both winter and summer, and is a very popular site for recreational boating of all types. Its location close to the Twin Cities makes it a popular destination.

Description of problem to be addressed by project

Agricultural land use, rapid residential development in the watershed and heavy recreational use are having a negative effect on the water quality of Bass Lake. DNR and Citizen Lake Monitoring Data show a decline in the water quality. Shoreline and lake habitat have been lost due to the 106 lake homes. As people have moved from the suburbs, they have brought their suburb yard care with them and removed vegetation in the lake, shoreline and upland. Bass Lake currently has Eurasian Milfoil, and with its heavy recreational use, is susceptible to further invasive species being introduced. Residents of Bass Lake are concerned with the public over-usage of the lake. The public boat landing is often over crowded and vehicles are parked along the roadway. This is causing two safety concerns. One is for vehicles on the roadway. The second is for watercraft and people swimming and using the lake.

Discussion of Project Goals and Objectives

The BLRD wants to develop a Bass Lake Management Plan to protect Bass Lake from further degradation. A management plan will give the BLRD direction by setting specific goals. These goals will reflect the values of the lake users and use scientific data to help achieve them. The Bass Lake Management Plan would be shared with watershed residents and local government agencies to direct management of Bass Lake.

The management plan would include 5 major goals:

1. Improve water quality by establishing water quality goals for phosphorus, algae and water clarity.
2. Improve in-lake habitat AND
3. Improve shoreland habitat through lake education and shoreline restorations
4. Address Eurasian Watermilfoil through an aquatic invasive species goal
5. Improve the recreational value of the lake

Description of Methods and Activities

The following steps are needed to achieve a useful Bass Lake Management Plan:

- Develop a Planning Team
- Conduct a sociological survey of residents on the lake and within the watershed
 - The results of this survey will help direct the specifics of the Bass Lake Management Plan to achieve the lake improvement goals of the community.
- Summarize Existing studies and data

- This data will tell us how Bass Lake has changed and where the water quality is heading. It will be used to construct a nutrient budget and set nutrient loading limits.
 - BLRD Recreational Survey
 - BLRD 2007 Intern Study
 - 1986-present WI DNR Lake Trends monitoring data
 - Fisheries
 - Aquatic Plants
 - Water Chemistry
 - EPA Phase 1 Diagnostic and Feasibility Study
 - St. Croix Lakes Priority Watershed Project Plan and Appraisal
 - Bass Lake Strategic Plan
- Evaluate the existing pumping system as a tool to manage and control existing nutrients.
- Develop a Land Use Map
 - Evaluate the land use and use data to help construct a nutrient budget and set nutrient loading limits.
 - Establish the sources and amounts of controllable inputs to the lake.
- Evaluate Current Ordinances
 - Evaluate current town and county ordinances to see how they do/don't currently protect Bass Lake. The results could result in a management goal to change current ordinances.

The BLRD will contract with the St. Croix County Land & Water Conservation Department (LWCD) to develop and write the Bass Lake Management Plan.

A Bass Lake Management Plan Development Team will be assembled. This team will meet 4-5 times. The team will direct the LWCD's work and help write and finalize the Bass Lake Management Plan's goals. Members of the team will include: BLRD members, LWCD, WI-DNR Lakes coordinator, DNR Fisheries Biologist, DNR AIS specialist, St. Croix County Planning/Zoning, St. Croix County Sportsmen's Alliance, Bass Lake Residents.

The LWCD will work with the West Central Region Lakes coordinator to produce the Sociological Survey. The results will direct the writing of the goals. LWCD will work with the St. Croix County Planning & Zoning Department to evaluate current ordinances and make suggestions for change. The LWCD will develop and produce a detailed up to date land use map. The LWCD will review existing studies and summarize the findings for use in the management plan.

Description of Products and Deliverables

The Bass Lake Management Plan will be printed and shared with watershed residents, St. Croix County, WI DNR and the BLRD. The management plan will be presented at a BLRD meeting.

Description of Data to be collected

A sociological survey will be conducted to gain insight of what lake users want from the lake.

Description of existing and proposed partnerships

The BLRD currently partners with the St. Croix County LWCD and the St. Croix County Parks Department to protect the water quality of Bass Lake for the public.

The BLRD has promoted the St. Croix Lakes Priority Watershed project throughout its life span. Many members have also participated in the Watershed Project. During the summer of 2007, the BLRD provided funds for a Bass Lake Intern. This intern was supervised by the LWCD. She collected water quality data throughout the summer and provided a shoreline property survey. At the end of the summer, the intern shared her findings with both the BLRD and LWCD.

The BLRD works with the St. Croix County Parks Department to promote safe boating on Bass Lake. A sign provided by the BLRD is located at the boat landing in the county park.

Bass Lake residents and Bass Lake Rehabilitation District have a history of taking action to protect Bass Lake

Due to concerns of wildly fluctuating high water levels, a pumping facility was recommended by the Bass Lake Rehabilitation District (BLRD) and installed in the fall of 1996. The BLRD has been involved in several other lake improvement projects:

- Fencing a pasture to remove cattle from the northwest shore of the lake.
- Instituting high water speed restrictions to protect lake quality
- Water safety and boating regulations
 - Water Patrol
 - 8 to 8 Slow-no-Wake Ordinance
 - Speed limits near landing and shore
 - Placement of caution/danger signs
- Eurasian milfoil control
- Review of building permit applications for structures in the district.
- Development of Strategic Plan

Description of role of project in planning and/or management of lake

The BLRD is committed to the protection of Bass Lake and has written a Strategic Plan to help focus their actions. The Bass Lake Management Plan will help to fulfill the strategic plan goals. This document will also provide specific guidance to the BLRD for achieving water quality goals: improve water quality, improve in-lake habitat, improve shoreland habitat, address aquatic invasive species and improve the recreational value of the lake.

BLRD vision statement:

Bass Lake Rehabilitation District is a proactive force to improve and protect the environmental quality of Bass Lake and its immediate watershed and assure its use for recreational purposes for this and future generations while maintaining its designation as an “outstanding resource water.” Its focus will be to monitor environmental conditions, diagnose threats and deficiencies, and conduct programs to eliminate threats, correct deficiencies and make desired lake quality improvements. BLRD residents will become model stewards of this precious resource.

BLRD Strategic Plan Goals:

1. Consistent & regular lake quality monitoring using Carlson Trophic State Index (TSI) to provide scientific data upon which to determine water quality trends.
2. Setting District TSI goals and gaining resident support for achieving those goals.
3. Continuing education of lake residents to encourage the adoption of “best practices” on each resident’s property so all residents are model environmental/safety custodians of the lake.
4. District programs to improve water quality and lake safety.

5. Work with other units of government to coordinate efforts, capture available funding and share resources.

Bass Lake is part of the St. Croix Lakes Cluster Priority Watershed Project. The Watershed Project goals are protection oriented and include a sediment reduction goal and a phosphorus reduction goal. Both of these goals have been met, yet Bass Lake is still experiencing higher levels of phosphorus than desired. The St. Croix Lakes Cluster Priority Watershed Project ends in 2008. The Bass Lake Management Plan will provide guidance to the further protection of Bass Lake after the Priority Watershed is complete.

The St. Croix County Land & Water Conservation Department Natural Resource Management Plan has a goal to “*Protect and enhance surface waters and wetlands to preserve and restore their water quality, ecological functions, and recreational and scenic values.*” The Bass Lake Management Plan will help the county to achieve this goal by setting specific standards.

Timetable for implementation of key activities

See Excel Worksheet

Plan for sharing project results

The Bass Lake Management Plan will be

- Presented to:
 - Bass Lake Rehabilitation District Meeting
 - St. Croix County Land & Water Conservation Committee
 - St. Croix County Board
- Printed and shared with:
 - BLRD
 - Bass Lake Residents
 - St. Croix County Land & Water Conservation Department
 - St. Croix County Land & Water Conservation Committee
 - St. Croix County Planning & Zoning Committee
 - St. Croix County Chair
 - Town of St. Joseph
 - Town of Somerset
 - WI DNR
- Available as a PDF from the Town of St. Joseph web site