

***Chetek Lakes TMDL Planning Project
Grant Application***

*by
Chetek Lakes Protection Association and
Barr Engineering Company*

August 2008



Barr Engineering Company
4700 West 77th Street • Minneapolis, MN 55435-4803
Phone: 952-832-2600 • Fax: 952-832-2601 • www.barr.com

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July 31, 2008

Ms. Pamela Toshner
Lake Management Coordinator
Northern Region - West
Wisconsin Department of Natural Resources
Northwest District Headquarters
810 W. Maple
Spooner, WI 54801

Re: Chetek Lakes TMDL Planning Project Small Scale Planning Grant Application

Dear Ms. Toshner:

Barr Engineering Company is pleased to submit the Chetek Lakes TMDL Planning Project small scale planning grant application on behalf of the Chetek Lakes Protection Association. The Chetek Lakes Protection Association and local governing bodies are excited about this project and committed to the improvement of the Chetek Lakes.

During this August 1, 2008 grant cycle, the Chetek Lakes Protection Association requests \$3,000 in funding to complete a TMDL planning project.

If you have any questions about this application, please feel free to contact Mr. John Plaza (715.859.2816) or me (952.832.2810) at anytime.

Sincerely,
BARR ENGINEERING COMPANY

A handwritten signature in cursive script that reads "Meg Rattei".

Margaret R. (Meg) Rattei
Senior Biologist

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August 2008



*4700 West 77th Street
Minneapolis, MN 55435
Phone: (952) 832-2600
Fax: (952) 832-2601*

Notice: Use of this form is required by the DNR for any application filed pursuant to ch. NR 190 or 191, Wis. Adm. Code. Personal information (PI data) collected on this form, including such data as your name, address, phone number, etc., will be used for management and enforcement of DNR programs, and is not intended to be used for any other purpose. Information will be made accessible to requesters under Wisconsin's Open Records laws (s. 19.32-19.39, Wis. Stats.) and requirements.

Section I: Application Type

Lake Management Planning Grant

Check one:

Large-scale planning grant

Small-scale planning grant

Check one:

Lake education

Organizational development

Other study or assessment, or multiple-purpose project

Lake Management Protection Grant

Check one:

Wetland restoration

Ordinance development

Lake improvement

Lake classification

Land or easement acquisition

| Legislative District Numbers | |
|------------------------------|----------|
| Senate | Assembly |
| 25 | 75 |

To determine your legislative district, go to <http://165.189.139.210/WAML/>
Type in complete address, next screen shows information.

Section II: Applicant Information

| | | | | | |
|---|--|---------------------------|---|--|---|
| Applicant Chetek Lakes Protection Association | | | Type of Eligible Applicant | | |
| Lake Name Chetek Lakes | | Size in Acres 3,800.00 | <input type="checkbox"/> County | <input type="checkbox"/> Tribe | <input type="checkbox"/> Other Governmental Unit |
| Project County/Township/Section/Range Barron Cty./T33/R10/S18 & 19; T33/R11/S1, 2, 3, 11, 12, 13 | | | <input type="checkbox"/> City | <input type="checkbox"/> Sanitary District | <input type="checkbox"/> Non Profit Conservation Organization |
| Authorized Representative Named by Resolution John Plaza | | | <input type="checkbox"/> Village | <input type="checkbox"/> Lake District | <input type="checkbox"/> School Districts (Planning) |
| Authorized Representative Title President | | | <input type="checkbox"/> Town | <input checked="" type="checkbox"/> Lake Association | |
| Address 1056 24 3/4 St. | | | Project Contact Name John Plaza | | |
| City Cameron | | | Project Contact Title President | | |
| State WI | | | Address 1056 24 3/4 St. | | |
| ZIP Code 54822 | | | City Cameron | | |
| Daytime Phone (area code) (715) 859-2816 | | | State WI | | |
| Evening Phone (area code) (715) 859-2816 | | | ZIP Code 54822 | | |
| E-mail Address jplaza@charter.net | | | Daytime Phone (area code) (715) 859-2816 | | |
| | | | Evening Phone (area code) (715) 859-2816 | | |
| | | | E-Mail Address jplaza@charter.net | | |

Mail Check to: (if different from applicant)

| | | | |
|----------------|--|----------|-------|
| Name and Title | | Address | |
| Organization | | City | State |
| | | ZIP Code | |

For DNR Use Only

| | | | |
|--|--|---|---|
| Application Type | Date Received | Date Reviewed (LC) | Lake Coordinator Approval / Date |
| Waterbody ID# | Adequate Public Access <input type="checkbox"/> Yes <input type="checkbox"/> No | Environmental Grants Specialist Approval / Date | |
| Eligible Project <input type="checkbox"/> Yes <input type="checkbox"/> No | Eligible Applicant <input type="checkbox"/> Yes <input type="checkbox"/> No | Project Priority Rank | |
| Prior Grant Award(s) <input type="checkbox"/> Yes <input type="checkbox"/> No | Fiscal Year(s) | Amount Received To Date \$ | Project Awarded <input type="checkbox"/> Yes <input type="checkbox"/> No |

Lake Management Grant Application

Form 8700-283 (R 11/07)

Page 2 of 4

Section III: Project Information

| | |
|---|----------------------------------|
| Project Title Chetek Lakes TMDL Planning Project | Proposed Ending Date 06/30/09 |
|---|----------------------------------|

| Other Management Units Around Lake | Letter of Support | Other Management Units Around Lake | Letter of Support |
|------------------------------------|-------------------------------------|------------------------------------|--------------------------|
| 1. Barron County SWCD | <input checked="" type="checkbox"/> | 4. Town of Dovre | <input type="checkbox"/> |
| 2. City of Chetek | <input type="checkbox"/> | 5. Town of Stanley | <input type="checkbox"/> |
| 3. Town of Prairie Lake | <input type="checkbox"/> | 6. Town of Chetek | <input type="checkbox"/> |

Section IV: Lake Access

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites: 169

Number of Public Access Sites on Lake Including Boat Launches and Walk-ins: 15

Section V: Cost Estimate and Grant Request

| Section V must be completed or application will be returned. Details in support of Section V are welcome. | Project Costs | | |
|--|------------------------|---------------------------|--------------|
| | Column 1 Cash Costs | Column 2 Donated Value | DNR Use Only |
| 1. Salaries, wages and employee benefits | | | |
| 2. Consulting services | 4,000.00 | | |
| 3. Purchased services--printing and mailing | | | |
| 4. Other purchased services (specify): | | | |
| 5. Plant material | | | |
| 6. Supplies (specify) | | | |
| 7. Depreciation on equipment | | | |
| 8. Hourly equipment use charges | | | |
| 9. State Lab of Hygiene (SLOH) Costs | | | |
| 10. Non-SLOH Lab Costs | | | |
| 11. Land or easement acquisition value | | | |
| 12. Associated acquisition costs | | | |
| 13. Other (specify) | | | |
| 14. Subtotals (sum each column) | 4,000.00 | 0.00 | |
| 15. Total Project Cost Estimate (sum of column 1 plus sum of column 2) | 4,000.00 | | |
| 16. State Share Requested (up to 75% of total costs may be requested) | 3,000.00 | | |

Subject to the following maximum grant amounts:

- Large-scale lake planning projects--up to \$10,000
- Small-scale lake planning projects--up to \$3,000
- Lake classification and regulation or ordinance development projects--up to \$50,000
- Lake protection projects (other than lake classification and regulation or ordinance development projects)--up to \$200,000

Section VI: Attachments (check all that are included)

A. For all applicants:

- 1. Authorizing resolution
- 2. Letters of support
- 3. Map of project location and boundaries
- 4. Lake map with public access sites identified (per Section IV of this application)
- 5. Itemized breakdown of expenses
- 6. For projects that entail sending samples to the State Laboratory of Hygiene (SLOH) only: a completed SLOH Projected Cost Form
- 7. Project scope/description:
 - a. Description of project area
 - b. Description of problem to be addressed by project
 - c. Discussion of project goals and objectives
 - d. Description of methods and activities
 - e. Description of project products or deliverables
 - f. Description of data to be collected, if applicable
 - g. Description of existing and proposed partnerships
 - h. Discussion of role of project in planning and/or management of lake
 - i. Timetable for implementation of key activities
 - j. Plan for sharing project results
 - k. Other information in support of project not described above

B. For applicants that are Lake Management Organizations (LMOs) or Non-profit Conservation Organizations (NCOs):

- 1. For first time applicant LMOs only: A completed Form 8700-226 (Lake Association Organizational Application)
- 2. For first time applicant NCOs only: Copy of IRS 501(c)(3) determination letter and copies of your Articles of Incorporation and Bylaws
- 3. List of national and/or statewide organizations with which you are affiliated
- 4. List of board members' names, including municipality and county of residence. Designate officers
- 5. Documentation of current financial status
- 6. For land or easement acquisition projects: Detailed description of your organization's land management experience
- 7. Brochures, newsletters, annual reports or other information about your organization

C. Wetland Restoration Projects:

- 1. Deed, easement, or land control agreement
- 2. Preliminary engineering plans
- 3. Water regulatory permits
- 4. Map of project location and boundaries

D. Ordinance Development Projects:

- 1. Inventory of applicable existing ordinances
- 2. Description of resources each jurisdiction allocates to enforcement
- 3. Preliminary surveys

E. Lake Improvement Projects:

- 1. Engineering and design plans
- 2. Water regulatory permits
- 3. Map of project location and boundaries

Section VI: Attachments, continued

F. Land or easement acquisition projects:

- 1. DNR Form 1800-1 (Environmental Hazards Assessment Form)
- 2. Legal description of the property
- 3. Project location boundary map
- 4. Property or easement appraisal (if not previously submitted to the Department)
- 5. If escrow closing, the title insurance commitment
- 6. Evidence of compliance with Uniform Relocation Act requirements, if applicable
- 7. Agricultural Impact Statement, if applicable
- 8. Status of acquisition negotiations, including expected time frame for closing
- 9. A land management plan
 - a. Full description of property and conditions
 - b. Description of current and proposed uses of property and adjoining properties
 - c. Management requirements for property
 - d. If roads, piers or grading are proposed, a topographic survey with feature locations, and design cross sections

Section VII: Certification

I certify that information in this application and all its attachments are true and correct and in conformity with applicable Wis. Statutes.

| | |
|--|---|
| Print/Type Name of Authorized Representative Mr. John Plaza | Title of Authorized Representative President <i>John Plaza</i> |
| Signature of Authorized Representative <i>John Plaza</i> | Date Signed <i>7-28-08</i> |

*Map of Public Boat Access Sites
(Per Section IV of this Application)*



Chetek Lakes Public Boat Access Sites

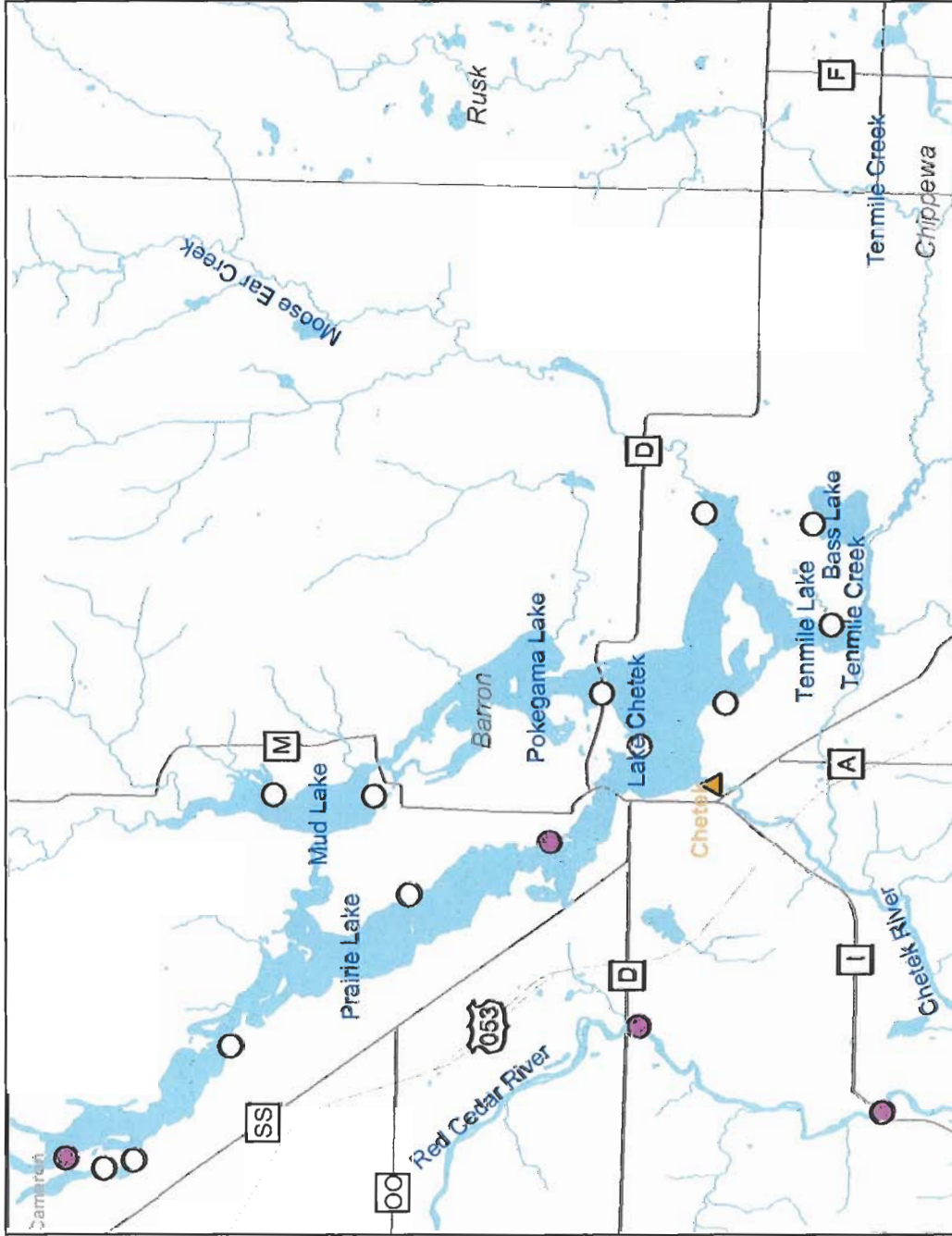


Legend

- Verified Boat Access Sites**
- RAMP
 - CARRY-IN
 - UNKNOWN
- Un-Verified Boat Access Sites**
- Not Verified
- Other Features**
- Major Highways
 - Interstate
 - State Highway
 - U.S. Highways
 - Rivers and Streams
 - County Roads
 - County Boundary
 - 24K Open Water
 - Municipalities
 - Village
 - City



Scale: 1:93,456



0 1.75 3.5 5.25 mi.

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

***Project Scope/Description
(From Section VI of this Application)***

Section 6: Project Scope/Description

1.0 Description of Project Area

Located in Barron County, Wisconsin, five lakes comprise the impoundment known as Chetek Lakes: Mud Lake, Prairie Lake, Pokegama Lake, Tenmile Lake, and Lake Chetek (See Figure 1). The five lakes comprise a surface area of 3,800 acres. The impoundment is relatively shallow, noting a maximum depth of 22 feet. Chetek Lakes are considered a great fishery and a significant water resource by the Chetek Lakes Protection Association, the Wisconsin Department of Natural Resources (WDNR), the City of Chetek, the Towns of Prairie Lake, Chetek, Stanley, and Dovre, and area residents. The lakes note frequent problematic algal blooms during the summer months.

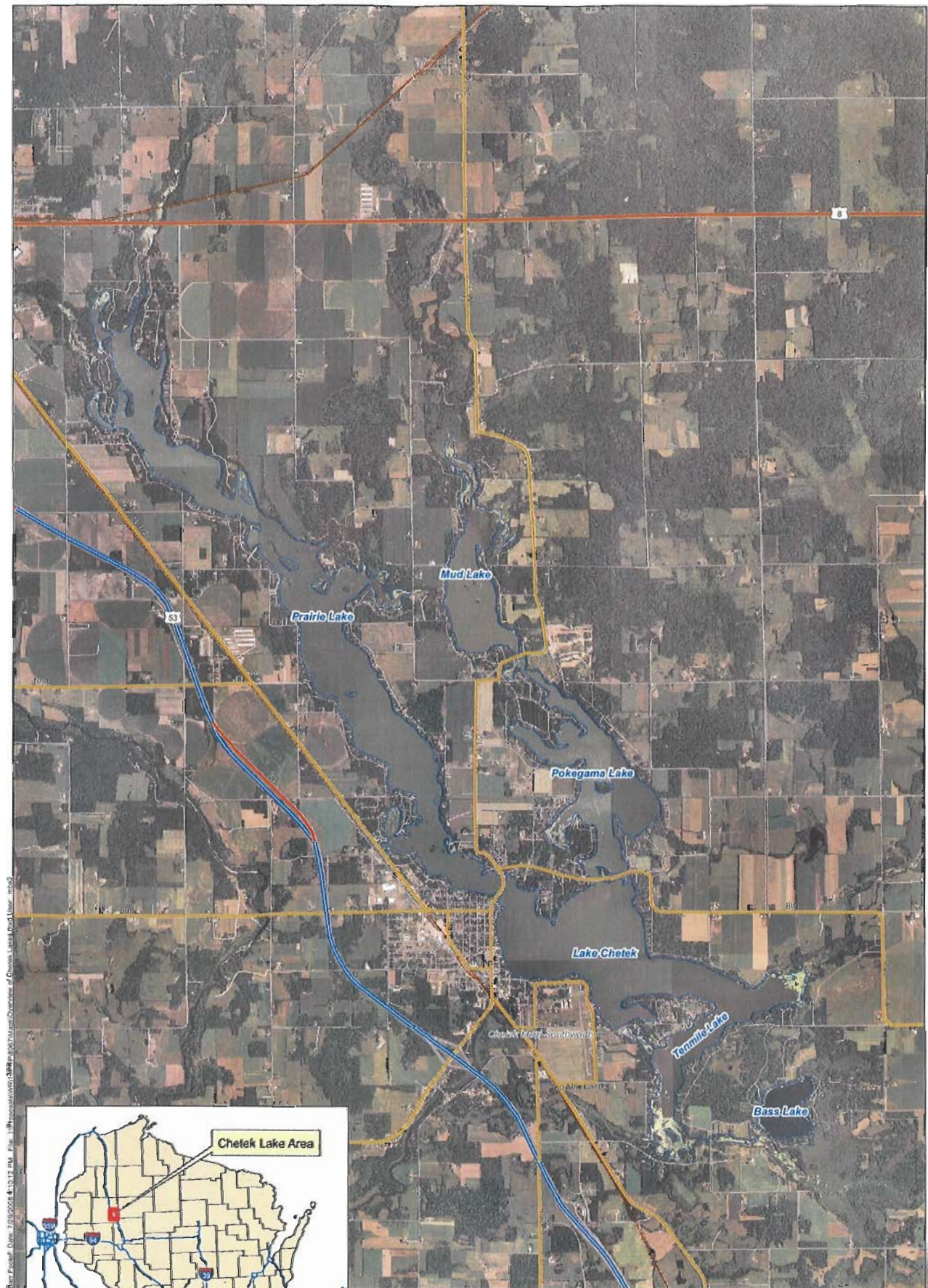
2.0 History of Problem to Be Addressed By Project

2.1 Previous Studies

During 1996, the Chetek Lakes Protection Association initiated a project to investigate the lakes' condition and to determine the lakes' hydrologic and phosphorus budgets. The study involved collection of data from the Chetek Lakes, inflows, outflow, and lakes' watersheds during 1996 through 1997. Annualized hydrologic and phosphorus budgets were then modeled for existing watershed land use conditions.

The lake water quality data showed that Chetek Lakes exhibited poor to very poor water quality. Total phosphorus, chlorophyll *a*, and Secchi disc data were generally within the eutrophic (poor water quality) during the early-summer period and the hypereutrophic (very poor water quality) during the late-summer period. Tenmile Lake was generally more nutrient-rich than the other lakes and total phosphorus and chlorophyll concentrations were in the hypereutrophic category throughout the summer period.

Water clarity is correlated with the recreational use of a lake and poor water clarity results in recreational use impairment. The data indicate moderate recreational use impairment occurred during the early-summer period and severe recreational use impairment occurred during the late-summer period in all lakes.



Base File: Data_7/09/2008_4:10:17 PM File: I:\MapInfo\GIS\MapInfo\Chetek Lakes Area User.mxd

Figure 1
 Overview of Chetek Lakes
 Chetek, WI

Riparian owners were surveyed to determine desired lake management goals. The most frequently selected lake management goal was improvement of lake water quality, selected by 92 percent of respondents.

The results of the hydrologic budgets for the five basins of the Chetek Lakes indicate tributary inflows and upstream lake basins are the primary sources of water for the basins.

The results of the overall lake phosphorus budget analysis estimated that the total phosphorus load into the Chetek Lakes is approximately 40,715 pounds per year, based on 1996 through 1997 data. Approximately 84 percent results from watershed runoff, including 56 percent from monitored inflowing streams. Macrophyte senescence within Mud Lake represents the second highest phosphorus load to the lakes, approximately 8 percent of the total annual load. An estimated 5 percent of the total projected load results from internal loading from sediments. Atmospheric deposition and septic systems comprise the remaining 3 percent of the annual load. Phosphorus budgets for the five individual lakes were also prepared.

The study concluded with a recommendation to complete a lake management plan.

In addition to the 1996 through 1997 study, the Chetek Lakes Protection Association has annually collected water quality data through the WDNR Citizen Monitoring Program. Secchi disc data have been collected from the five lakes since 1987. Water chemistry data (total phosphorus and chlorophyll *a*) are annually collected from Prairie Lake. During 2007, Prairie Lake noted maximum total phosphorus and chlorophyll concentrations of 201 and 107 µg/L, respectively. The 2007 concentrations were higher than the maximum concentrations observed during 1996. Maximum total phosphorus and chlorophyll concentrations during 1996 were 164 and 75.6 µg/L, respectively. The data indicate the lake's water quality has further degraded since 1996.

2.2 Chetek Lakes Placed on 303d Impaired Waters List

The federal Clean Water Act (CWA) requires states to adopt water-quality standards to protect waters from pollution. These standards define how much of a pollutant can be in

the water and still allow it to meet designated uses, such as drinking water, fishing and swimming.

The standards are set on a wide range of pollutants, including bacteria, nutrients, turbidity and mercury. A water body is “impaired” if it fails to meet one or more water quality standards.

To identify and restore impaired waters, Section 303(d) of the Clean Water Act requires states to:

1. Assess all waters of the state to determine if they meet water-quality standards
2. List waters that do not meet standards (also known as the 303d List) and update every even-numbered year
3. Conduct Total Maximum Daily Load (TMDL) studies in order to set pollutant reduction goals needed to restore waters.

Federal and state regulations and programs also require implementation of restoration measures to meet TMDLs.

Every two years, Wisconsin and all other states submit a list of waters determined to be "impaired" to the U.S. Environmental Protection Agency. The list helps develop priorities for restoring the state's waterbodies. Wisconsin submitted its first impaired waters list in 1996 with updates in 1998, 2002, 2004, 2006 and now in 2008. The Chetek Lakes were placed on the impaired waters list in 2006. Because the lakes are on the impaired waters list, the lakes receive a higher priority for improvement than waters not on the list. The lakes also may access Federal funds for implementation of a water quality improvement project.

3.0 Description of Problem To Be Addressed By Project

The Chetek Lakes are currently listed on Wisconsin’s 303d impaired waters list because high phosphorus concentrations have severely degraded the lakes’ water quality. A management plan is needed to identify a water quality improvement project to improve the lakes’ water quality. The plan should meet US EPA requirements for a TMDL study so that the implementation project is eligible to receive both Federal and state monies.

The Chetek Lakes Protection Association has initiated this small scale planning project to plan a water quality management plan which will identify a water quality improvement project for the lakes.

4.0 Discussion of Project Goals and Objectives

The project goal is to develop a plan outlining the work tasks, estimated schedule, and estimated costs for completion of a water quality management plan for the Chetek Lakes.

5.0 Description of Methods and Activities

The Chetek Lakes Protection Association has initiated this small scale planning project to plan a water quality management plan which will identify a water quality improvement project for the Chetek Lakes. The planning project will involve meetings (estimate 2 or 3) with WDNR staff, Barron County staff, City of Chetek representative, Chetek Lakes Protection Association representative, and any other parties who are both interested and available to assist with the planning of the Chetek Lakes water quality management plan to identify a water quality improvement project for the Chetek Lakes. The outcome of the project will be a letter report outlining the work tasks that will be required to complete a water quality management plan for the Chetek Lakes which meets TMDL requirements.

6.0 Timetable For Implementation of Project Activities

The project will be completed during the October through December period of 2008. Meetings will likely be scheduled for October through early November. A letter report will be completed by the end of December.

7.0 Cost

The estimated cost of the Chetek Lakes planning project is \$4,000. The Chetek Lakes Protection Association requests a \$3,000 small scale planning grant. The local cash share of the project will be \$1,000.

Item G: Official Management Resolution

Small Scale Lake Planning Grant Resolution

Resolution #

RESOLUTION OF Chetek Lakes Protection Association, County of Barron

WHEREAS, Prairie Lake is an important resource used by the public for recreation; and

WHEREAS, public use and enjoyment of Prairie Lake is best served by improvement of its water quality; and

WHEREAS, we recognize the need to plan a water quality improvement project to attain its beneficial uses, including recreational uses.

WHEREAS, we are qualified to carry out the responsibilities of a small scale planning project.

NOW, THEREFORE, BE IT RESOLVED THAT the Chetek Lakes Protection Association requests grant funding and assistance available from the Wisconsin Department of Natural Resources under the "Lake Planning Grant" and hereby authorizes its President to act on behalf of the Chetek Lakes Protection Association to:

- Submit an application to the State of Wisconsin for financial aid for planning purposes;
- Sign documents
- Take necessary action to undertake, direct, and complete an approved small scale lake planning grant; and
- Submit reimbursement claims along with necessary supporting documentation within six months of project completion date.

BE IT FURTHER RESOLVED THAT the Chetek Lakes Protection Association will meet the obligations of the small scale lake planning project including timely publication of the results and meet the financial obligations of a small scale lake planning grant, including the prompt payment of our 25 percent commitment to lake planning costs.

Adopted this day 10th of July, 2008

By a vote of: 8 in favor 0 against 0 abstain 0

BY: John Plaza
John Plaza
President of Chetek Lakes Protection Association

Appendix 1

Letters of Support

Barron County
Soil & Water Conservation Department
AGRICULTURE SERVICE CENTER
330 East LaSalle Avenue, Room 221
Barron, Wisconsin 54812
715-537-6315

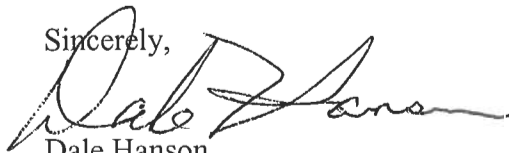
July 25, 2008

John Plaza
1056 24 ³/₄ Street
Cameron, WI 54822

Dear John:

It has come to my attention that the Chetek Lakes Protection Association is planning to apply for a small scale lakes planning grant from the Wisconsin DNR. This planning grant would fund a project that would first update the water quality data on the Chetek Chain of Lakes from the lake planning project conducted 12 years ago. Secondly the project would outline work the needs to be done to qualify for state and federal funds for an implementation project to follow this project. The implementation project would then, in essence, be a watershed project to do non-point source work in the watershed of the Chetek Chain of Lakes. The Barron County Soil & Water Conservation Department is very much in favor of this small scale lake planning grant application to begin this process to improve and protect the water quality of the Chetek Chain of Lakes. The Soil & Water Conservation Department is also willing to assist in any way the watershed assessment portion of this plan. If you have any questions, feel free to call me at 537-6315. I look forward to working with the Chetek Lakes Protection Association and the WDNR and protecting and improving the water quality of the Chetek Chain.

Sincerely,



Dale Hanson,
County Conservationist

Letters of Support from the City of Chetek and the Town of Prairie Lake will be submitted to the WDNR Shortly