

Big Chetac, Birch, and Little Birch Lakes

2018-2022

Draft Lake

**Management Goals,
Objectives, Actions,
and Measurements
(LEAPS, 10-17-2017)**

Promote and support a healthy, diverse, and sustainable fishery in Big Chetac, Birch, and Little Birch Lakes.

1. Objective 1 – Work with varied stakeholders to develop a Fisheries Management Plan as an addendum to the new Lake Management Plan.
 - a. Action - Form a Fisheries Management Committee made up of fishing interests on Big Chetac, Birch, and Little Birch lakes and community stakeholders with the express purpose of developing a Fisheries Management Plan by 2019
 - i. *Measurement: A completed Fisheries Management Plan*
2. Objective 2 – Work to improve in-lake fisheries habitat through the Healthy Lakes Initiative
 - a. Action – Work with property owners to install a minimum of 20 Fishsticks fisheries habitat improvement projects in Big Chetac, Birch, and Little Birch lakes in five years.
 - i. *Measurement: Installed Fishsticks projects*

Maintain and/or improve water quality in Big Chetac, Birch, and Little Birch Lakes to make them more able to support a healthy and diverse ecosystem, more appealing, and more attractive for recreation.

1. Objective 1 – Reduce the combined average seasonal (May-August) total phosphorus (TP) levels in the Central and North basins of Big Chetac Lake to 55 ppb.
 - a. Action - Promote and support through the Healthy Lakes Initiative, nearshore and riparian best management practices that will improve wildlife habitat, reduce runoff, and minimize nutrient loading into Big Chetac Lake.
 - i. *Measurement: The number of moderate and high priority properties on Big Chetac Lake as determined by the 2017 Shoreland Habitat Assessment Survey are reduced by 33% (25 parcels) in five years*
 1. Total Parcels Evaluated = 456
 2. High Priority Parcels = 34, Moderate Priority Parcels = 41
 - b. Action – Work with Sawyer, and Washburn Counties to identify watershed best management practices related to agriculture, forestry, and mining that will reduce runoff and minimize nutrient loading into Big Chetac Lake.
 - i. *Measurement: The tributary/greater watershed load is reduced by 50% (from 6% to 3%) in five years, based on 2010 phosphorus inputs to the lake*
2. Objective 2 – Should it become evident that Objective 1 will not be met with only the identified actions, re-consider the need for large-scale herbicide management of CLP to aide in meeting the stated objective.
 - a. Action – Consider management of curly-leaf pondweed (CLP) in Big Chetac Lake through application of herbicide to no more than 20% of the CLP in any given year.
 - i. *Measurement: The average turion count and average plant density within managed beds will be reduced by 40% in five years. (There were 400 acres (20.8% of surface area (1920 acres) of CLP identified in 2016/17 (extrapolated by LEAPS))*
 1. Average density of CLP in this area = 2.46 on a 1-3 scale
 - a. Target Value = 1.48
 2. Average turion count for the entire lake is based on the average number of turions in the North Basin in 2013 (pre-treatment) and the fall 2016 turion count in untreated areas - 143.06 turions/m².
 - a. Target Value = 85.84 turions/m²
3. Objective 3 – Reduce the average seasonal (May-August) total phosphorus level to 47 ppb in the main basin of Birch Lake.

- b. Action - Promote and support through the Healthy Lakes Initiative, nearshore and riparian best management practices that will improve fish and wildlife habitat, reduce runoff, and minimize nutrient loading into Birch and Little Birch lakes.
 - i. *Measurement: The number of moderate and high priority properties on Birch and Little Birch lakes as determined by the 2017 Shoreland Habitat Assessment Survey will be reduced by 33% (20 parcels) in five years.*
 - 1. Total Parcels Evaluated = 195
 - 2. High Priority Parcels = 28, Moderate Priority Parcels = 31
- c. Action – Work with the Town and Village of Birchwood to identify concentrated sources of runoff (culverts/gullies/ditches) into Birch and Little Birch lakes and practices that could be implemented to reduce their contribution of sediment and nutrients on Birch and Little Birch lakes.
 - i. *Measurement: 50% of sources identified will be improved and/or corrected in five years.*
- 4. Objective 4 – Should it become evident that Objective 3 will not be met with only the identified actions, re-consider the need for large-scale herbicide management of CLP to aide in meeting the stated objective.
 - a. Action – Consider management of curly-leaf pondweed (CLP) in Birch Lake through application of herbicide to no more than 20% of the CLP in any given year.
 - ii. *Measurement: Reduce turion count and average density within managed beds by 40% in five years. (There were 76 acres (20.9% of surface area (364 acres) of CLP identified in 2017)*
 - 1. Average density of CLP in this area = 2.06 on a 1-3 scale
 - a. Target Value = 1.24
 - 2. Turion count is at this time, undetermined
- 5. Objective 5 – Implement an alum treatment education, information, and public involvement outreach campaign.
 - a. Action – Review and discuss implications of the Big Chetac-North Basin Alum Study with community stakeholders
 - b. Action – Complete an Alum Study for Birch Lake
 - c. Action – Community Meetings/Public Surveys to determine support for application of alum
 - i. *Measurement: If an alum treatment occurs on any lake, it will be because at least 80% of lake constituents and stakeholders support it.*
- 6. Objective 6 – Determine water and phosphorus budgets for Birch Lake

a. Action – Apply for lake management planning grant funding to complete a nutrient and water budget for Birch Lake

i. Measurement: Nutrient and water budgets are completed

1. This project may also include funding for an alum study on Birch Lake, and other actions identified

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Reduce the threat that new aquatic invasive species (AIS) will be introduced into and go undetected in Big Chetac, Birch, and Little Birch Lakes.

1. Objective 1 – Educate boaters on methods to prevent the spread of AIS into and out Big Chetac, Birch, and Little Birch lakes
 - a. Action – Implement and/or maintain a watercraft inspection program (Clean Boats, Clean Waters) at the Little Birch Lake landing and WDNR public access off Ol’Hayes Road.
 - i. *Measurement: A minimum of 200 hours annually will be documented on each landing*
 - b. Action – Design and install new signage that is more complete and informative than the common WDNR AIS signage at three main landings (two on Big Chetac, one on Birch)
 - i. *Measurement: New signs will be designed and installed by the 2019 open water season*
 - c. Action – Encourage installation of WDNR AIS signage at private (resort) access points on the lakes
 - i. *Measurement: At least 75% of resorts will have AIS signage installed in five years*
2. Objective 2 – Monitor all three lakes for AIS currently not listed as being present, or that may be present at low levels
 - a. Action – Implement/maintain an AIS monitoring program following WDNR Citizen Lake Monitoring Network (CLMN) AIS Monitoring Guidelines
 - i. *Measurement: BCABLA volunteers will record monitoring events and results annually in the WDNR SWIMS database*
3. Objective 3 – Promote Constituent AIS education and training
 - a. Action – Plan and implement at least one annual AIS education event and include AIS education/information materials in at least one annual mailing to the lake constituency
 - i. *Measurement: Annual documentation of the educational event and mailing(s) that occurred*

Balance various lake uses on Big Chetac, Birch, and Little Birch Lakes so residents and lake users can share in the many recreational opportunities that are available.

1. Objective 1 – Review and report on existing town ordinances regarding lake use on all three lakes
 - a. Action – Work with the Towns of Edgewater and Birchwood to identify existing ordinances regarding lake use and determine if there is a need for additional or modified town ordinances in all three lakes
 - i. *Measurement: Recommendations to either leave the ordinances as they are or make changes*
 - b. Action – Implement recommended changes to ordinances if there are any
 - i. *Measurement: Changes are made*
2. Objective 2 – Actively engage in the support of fishing tournaments on the lakes
 - a. Action – Offer a Lake Association “prize” for use by tournament sponsors who in return will share tournament information and results
 - i. *Measurement: Better communication between tournament sponsors and the BCABLA*
3. Objective 3 – Increase the level of lake stewardship both on the water and on the shores of Big Chetac, Birch, and Little Birch lakes.
 - a. Action – Educate and inform lake residents and users about state and local guidelines, ordinances, and regulations while on the water (no wake, power loading, fishing, AIS prevention, power sports) and encourage abeyance
 - i. Consider sponsoring a seasonal “lake educator” to spend time on all three lakes promoting lake stewardship
 1. Seek town and village support for such a position
 2. Seek local business support (maybe donate the use of a boat?)
 - ii. *Measurement: Less conflict between different lake uses and disregard for negative lake impacts*
 - b. Action – Educate and inform property owner about best management practices that can improve habitat and aesthetics along the shoreline and reduce nearshore runoff and nutrients entering the lakes; and encourage implementation of these practices
 - i. Provide training and workshops to introduce shoreland best management practices and how to implement them
 - ii. Recognize property owners who participate in best management practices to improve lake health.
 - iii. *Measurement: See second goal, Objectives 1 & 3.*
 - c. Action - Encourage lake property owners and lake users to contribute to the protection and enhancement of the lakes through lake association membership,

committee involvement, participation in educational and informational offerings, attendance at lake associated meetings, and dues and donations.

i. Measurement: 25% increase in membership and participation in the BCABLA and BCABLA sponsored activities. An increase in available funds generated by dues and donations.

4. Objective 4 – Provide targeted nuisance and navigation relief from native and non-native aquatic plants for affected property owners (including resorts) on all three lakes

a. Action – Implement a limited harvesting and/or herbicide program that will improve access to open water in areas of all three lakes that are impacted by dense aquatic plant growth

i. Contracted small-scale harvesting in deeper areas of the lakes and in the channel between Birch and Big Chetac lakes

1. CLP through June

2. Native vegetation through August

ii. Small-scale use of herbicides in shallow, stumpy bay areas of the lakes

1. CLP through May

2. Native vegetation through August

iii. Measurement: Access to and from designated parts of the system is improved by management actions

Complete appropriate and on-going tracking, monitoring, and management strategy modification to allow for thorough evaluation of management actions, and to determine if those management actions are on target, on track, on schedule, on budget, and within expected parameters.

1. Objective 1 – Track water quality changes within Big Chetac, Birch, and Little Birch Lakes
 - a. Action - Continue expanded CLMN surface water quality monitoring in the North and Central basins of Big Chetac Lake
 - b. Action – Add regular surface water quality monitoring of TP and Chlorophyll A (ChlorA) in the South Basin of Big Chetac Lake
 - c. Action – Add regular surface water quality monitoring of Secchi, TP, ChlorA, temperature, and dissolved oxygen in Birch Lake
 - d. Action – Add fall TP and ChlorA to all three sites on Big Chetac Lake, and on Birch Lake
 - i. *Measurement: Water quality data is made available from the WDNR SWIMS database for management and comparison purposes*
2. Objective 2 – Track changes in the density, distribution, diversity of native and non-native aquatic plants in Big Chetac, Birch, and Little Birch lakes
 - a. Action – Complete summer littoral (plant growing) zone surveys of density, distribution, and diversity in any year where active aquatic plant management is planned and implemented
 - b. Action – Complete summer littoral (plant growing) zone surveys of density, distribution, and diversity every three years if active aquatic plant management is not planned and implemented
 - c. Action – Complete wild rice mapping annually
 - d. Action – Complete CLP bed-mapping surveys of density and distribution annually
 - e. Action – Complete turion density sampling on Birch Lake in 2018; and on Big Chetac and Birch lakes in 2020
 - i. *Measurement: Aquatic plant survey data will be available to make before and after management comparisons of the aquatic plant community*
3. Objective 3 – Track nutrient and sediment contributions to Big Chetac, Birch, and Little Birch lakes from the three main tributaries (Heron, Benson, and Knuteson Creeks)
 - a. Action – Collect TP, Total Suspended Solids (TSS), flow, and volume data annually four or more times seasonally from each tributary
 - i. *Measurement: Tributary data will be available in the WDNR SWIMS database for comparison and management purposes*
 - b. Action – Collect annual rainfall data from at least two locations on opposite ends of the system by enrolling in the Community Collaborative Rain, Hail, and Snow (CoCoRaHS) precipitation monitoring program

- i. Measurement: Consistent and complete rainfall data will be available for management planning purposes*

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Improve communication and collaboration between public, local governments, WDNR, and the Big Chetac and Birch Lakes Association to support achievement of shared lake management goals.

1. Objective 1 – Increase the amount of community and constituent involvement in lake management and general lake operations
 - a. Action – Form committees to guide different aspects of management, education, recreation, and other activities on the lakes.
 - i. *Measurement: Committees are established and operating within 2 years*
 1. Suggested Committees: Fisheries, AIS, Lake Use & Stewardship, Membership, Communications & Cooperation, and Water Quality
2. Objective 2 – Seek regular community input regarding lake management planning and implementation
 - a. Action – Hold regular and open meetings of the BCABLA
 - b. Action – Hold Stakeholder Forums, Listening Sessions, and Planning Sessions
 - c. Action – Continue to support BCABLA on the web, Facebook, and other social media outlets
 - i. *Measurement: Increased community satisfaction with efforts of the BCABLA to include them in planning and implementation*
3. Objective 3 – Increase the exposure of the BCABLA in the Community
 - a. Action – Sponsor annual events including picnics, parades, open houses, demonstrations, tours, newsletters, etc.
 - i. *Measurement: The BCABLA becomes more recognized and respected in the community*

Implement the Big Chetac, Birch, and Little Birch Lakes Management Plan effectively and efficiently with a focus on community and constituent education, information, and involvement.

1. Objective 1 – Set, evaluate, and modify (if necessary) project priorities annually
 - a. Action – Prioritize project tasks for each year by reviewing the Funding, Priorities, and Implementation Matrix provided as a part of this management plan
 - i. *Measurement: Prioritized projects are completed in the time frame established*
2. Objective 2 – Summarize the results of management actions implemented as a part of this plan.
 - a. Action – Complete annual management summaries, mid-plan summaries, and end of plan evaluations
 - i. *Measurement: Summary Reports are made available to the BCABLA, its constituency, Partners and other Stakeholders, and the WDNR in a timely manner that aides current future management planning*
3. Objective 3 – Keep stakeholders involved in the entire management process
 - a. Action – Complete annual management planning based on the needs of the lakes and available resources (money, time, and people)
 - b. Action – Strive for continuous communication with resource personnel from the BCABLA, WDNR, local Towns and Village, Sawyer and Washburn Counties, Tribal Resources, Red Cedar River Watershed Committee, and Consultants.
 - i. *Measurement: Management actions are implemented with the acknowledgement and support of stakeholders*
4. Objective 4 – Seek outside funding to support management actions
 - a. Action – Discuss grant options with the BCABLA, WDNR, and other grant resources
 - b. Action – Solicit funds from the local Towns, Village, and other community resources
 - c. Action – Explore opportunities to access Federal funds associated with the Red Cedar River Watershed
 - i. *Measurement: Management actions and measurements in this plan are implemented with at least some outside financial support*