

Clam Lakes Aquatic Plant Management Plan & WDNR Lake Management Planning Grant

Project Understanding

The Clam Lakes Protection and Rehabilitation District (CLPRD) is interested in updating their current Aquatic Plant Management Plan initially drafted in 1992, with several minor updates since then. The current plan is centered on large-scale harvesting of curly-leaf pond (CLP), an aquatic invasive species in the spring and early summer, and some harvesting of nuisance level native plant growth later in the season. At this time, Eurasian water milfoil (EWM) is not known to inhabit either Upper or Lower Clam Lake. The Lake District owns several plant harvesters which it uses to remove both native and invasive aquatic plant growth that interferes with navigation and public use throughout the growing season.

While this current management strategy has met the needs of the Lake District to date, they realize that it is time to revisit their existing Aquatic Plant Management Plan (APMP) and update it where necessary. Recent changes in WDNR philosophy regarding management of native plants are making it increasingly difficult to treat native plants in any form. A thorough evaluation of the existing plants in the two lakes both native and non-native is needed to develop appropriate plant management recommendations. Full lake plant surveys done according to WDNR guidelines will be completed on both lakes. Wild rice continues to be a major concern in this system, both good and bad. The old plan reflects the importance of wild rice in the system. A new plan would update what is known about wild rice in the two lakes and continue to recognize it as an important natural resource.

New knowledge has been gained related to the management of CLP and other nuisance aquatic plants besides harvesting. Harvesting may still be the best management practice for the Clam Lakes, but a thorough evaluation of all management alternatives needs to be completed to ensure this.

General lake and watershed characteristics also need to be considered when making best management recommendations for aquatic plant treatment. A better understanding of the plant community in the Clam Lakes, water quality conditions, fisheries and wildlife use, public expectations for the two lakes, and the impacts that the current aquatic plant management approach has had on all of these is important.

A Lake User Survey addressing such areas of concern as lake use, aquatic plant management, aquatic invasive species, wild rice, shoreland protection and rehabilitation, and lake and water quality will be conducted. A Lake Education Fair will also be presented by the Lake District to further educate and inform lake residents and lake users about many of the issues pertaining to the whole lake system.

The St. Croix Band of the Chippewa Nation currently completes a plethora of water quality testing on the two lakes and the Clam River. This project seeks to develop a partnership between the Tribe and the Lake District to continue and expand existing water quality monitoring, learn more about the wild rice in the system, and to gather greater knowledge about the fishery and wildlife in the system.

It is the goal of this project to gain a better understanding of the lakes and their issues, and then use this information to update the Management Plan for Aquatic Plants in the Clam Lakes.

The project will be divided into four phases.

Phase 1-Point Intercept Plant Surveys & Education (\$13,328.78)

The first phase would be completed during the 2009 open water season with an end date of February 1, 2010 and would include:

- a whole-lake point-intercept aquatic plant survey both in the spring to identify the extent and density of curly-leaf pondweed growth, and a late summer survey to identify the extent and density of native plant species on both Upper and Lower Clam Lakes,
- expanded water quality testing on both lakes via the CLMN with some additional testing above and beyond the CLMN,
- an education component including a watercraft inspection program, aquatic invasive species training and monitoring, and good lake stewardship information, and
- a Kick-off Meeting with the entire Lake District in the spring to get the activities in this project started.

Phase 2- Lake User Survey, Lake Education Fair, and Turion Sampling (\$12,210.00)

The second phase of this project would be completed during the 2009 open water season with an end date of February 1, 2010 and would include:

- a Lake User Survey to be completed in the early summer,
- a Lake Education Fair in the early fall, and
- a Turion Sampling Survey to be completed in the late fall.

Phase 3- Shoreline Survey, Water Quality, Eurasian Watermilfoil rapid Response Plan, and Fisheries Evaluation (\$10,298.92)

The third phase of this project would be completed during the 2010 open water season with an end date of February 1, 2011 and would include:

- a Shoreline Survey of both lakes,
- additional water quality information,
- a fisheries survey done by the St. Croix Tribe to better understand the carp interaction in the system, and
- development of an Eurasian Watermilfoil Rapid Response Plan.

Phase 4: Aquatic Plant Management (APM) Plan for Both Lakes, Education, and Wild Rice Survey (\$12,476.00)

The final phase of this project would be completed in the Fall of 2010 with an estimated end date of July 31, 2011 and would include:

- a completed (updated) 5-yr APM Plan would be presented to the Lake District and the DNR for approval by December 1st, 2010. The Final Plan would include:
 - Analysis of physical characteristics of the Clam Lakes and their watershed
 - Evaluation of existing lake data
 - Compilation of current and past management history
 - Analysis of aquatic plant surveys for both lakes
 - Evaluation of fisheries and wildlife habitat
 - Analysis of water quality data
 - Documentation of aquatic plant problems and their severity
 - Evaluation of all possible aquatic plant management alternatives
 - Incorporation of Lake User survey results into the management plan
 - Aquatic plant management recommendations
 - Rapid-response plan for new invasive species (specifically EWM)
 - 5 year outline of Aquatic Plant Management Control Work
- Wild Rice Surveying and Mapping to be completed by the St. Croix Tribe,
- an education component including a watercraft inspection program, aquatic invasive species training and monitoring, and good lake stewardship information, and
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- a Final Presentation to members of the Lake District and other interested parties to discuss all management recommendations.

Lake User Survey, Curly-leaf Pondweed (CLP) Turion Sampling, and Shoreline Survey

Several different surveys will be conducted over a two year time frame. The first is an aquatic plant survey of both lakes. This survey includes an early season CLP survey to identify the extent of CLP growth in the two lakes. It also includes a summer survey covering both lakes to identify all native and non-native aquatic plants present in the lake and determine their density, frequency, and location in the system.

A Lake User Survey will be completed in the early summer 2009 to include all lake residents and be made available to other interested parties. The purpose of this survey is to seek a better understanding of the many feelings and attitudes of lake residents and users related to their current plant management plan and possible alternatives, lake use, water quality, knowledge of aquatic invasive species, wild rice, and best management practices for lake protection. This survey will be followed up with a Lake Education Fair with guests from the DNR, Burnett County, and the St. Croix Tribe.

CLP turion sampling will be completed in the fall of 2009. Turions are produced in mass by mature CLP plants and are essentially the seed that starts new growth every year. While the total mass of CLP growth can vary in any given year, the turion base should remain fairly constant. An evaluation of the total numbers of viable turions, locations of turion banks, and other factors affecting turion growth can be a valuable tool in determining the best management techniques to follow.

A Shoreline Survey will be conducted in the early summer 2010. This survey will help determine what portion of the shoreline on both lakes could benefit from restoration activities. Burnett County has a very good Shoreland Restoration incentive program. The purpose of the survey would be to identify those parcels that may benefit from the programs Burnett County has

to offer. Other parcels may be improved by simple measures the land owner may not be aware of. Results will be used to help target an educational campaign.

Finally, the St. Croix Tribe may complete a Carp Population Survey on the two lakes. Many residents and lake users have perceived notions that the carp population in the lake has increased in recent years and are negatively affecting the lake, including wild rice production which has historically been the highest in the state.

Education/Training Programs

Phase 1, 2, and 4 all include educational activities designed to improve the knowledge base of lake residents and users regarding aquatic invasive species, protecting the lake from new introductions of AIS, shoreline restoration, the importance of wild rice and other native plants, and other good Lake Stewardship activities. Volunteer training for the Wisconsin Clean Boats, Clean Waters and CLMN Aquatic Invasive Species “Watch” program will be completed by DNR or UW-Extension Lakes personnel as required by each of these programs. SEH will help volunteers incorporate their training into on-lake action.

SEH will train volunteers from the Lake District to collect samples and complete additional water quality monitoring at the two lake sites according to the CLMN guidelines and provide support when and if it is needed. Volunteer time helps offset expenses incurred by the Lake District, and insures active involvement by lake owners throughout the entire aquatic plant management plan development project. If volunteer time can not be enlisted or only covers a portion of the time needed to complete this testing, then it will be necessary to amend this proposal to include more SEH time and less volunteer time. The overall budget may need to be amended as well.

Project Funding

Funding for all phases of this project would come from the WI-DNR Lake Management Planning Grant program. Individual grant projects in this program are capped at \$10,000 state share based on a 75/25% cost share. The state will reimburse 75% expenditures incurred by the project up to \$10,000.00 provided the sponsor has met the 25% match required with donated time and services, cash outlays, or any combination of these or other eligible contributions. A project larger than \$10,000.00 state share can be “phased” up to a total of \$100,000 lifetime per sponsor. One organization can apply for up to two lake management planning grants during a single grant eligibility period. It is expected for this project that the four phases will cover two eligible grant periods.

February 1, 2009 Grant Eligibility Period

Phase 1 – \$13,328.78 (\$9,996.59 state share, \$3,332.19 match)
Phase 2 – \$12,210.00 (\$9,157.50 state share, \$3,052.50 match)

August 1, 2009 Grant Eligibility Period

Phase 3 - \$10,298.92 (\$7,724.19 state share, \$2,574.73 match)
Phase 4 - \$12,476.00 (\$9,357.00 state share, \$3,119.00 match)

Total Project costs would be \$48,313.70 over two grant periods and two years. Total Lake District costs would be \$12,078.43 over two years, but it is assumed that most of this cost could be offset by volunteer time and donated services.

At the time of the first grant eligibility period the entire four-phased project will be evaluated and awarded or not. If it is awarded by the state, then all four phases will receive DNR Lakes Grant Coordinator approval and funding for each phase in each grant period will also be approved. Should the entire project not be funded in the first grant eligibility period, then revisions and modifications to the project will be made and resubmitted in the next grant eligibility period.

Key Stakeholders

Key Stakeholders for the Clam Lakes Aquatic Plant Management Planning Project include:

Clam Lakes Protection and Rehabilitation District
WI-DNR
Burnett County
St. Croix Tribe
Great Lakes Indian Fish and Wildlife Commission (GLIFWC)
Meenon Township
Siren Township

Work Plan

Phase 1 (April 1, 2009 – February 1, 2010)

- Task 1** – Point-intercept plant surveys (both lakes)
(SEH sub-consultant)
- Task 2** - CLMN water quality sampling on one site in each lake with additional sampling in October and increased DO/Temperature Profile monitoring
(Lake District, WI-DNR, and SEH)
- Task 3** - Watercraft Inspection at public access points
(Lake District)
- Task 4** - In-lake monitoring for EWM
(Lake District and SEH)

Phase 2 (April 1, 2009 – December 31st, 2010)

- Task 1** – Lake User Survey
(SEH and Lake District)
- Task 2** – Lake Education Fair
(SEH, Lake District, Burnett County, WDNR, & St. Croix Tribe)
- Task 3** – Improved Signage at public access points
(Lake District and SEH)
- Task 4** – Curly-leaf Pondweed Turion Survey in both lakes
(SEH and SEH sub-consultant)

Phase 3 – (October 1, 2009 – June 30, 2011)

- Task 1** – Shoreline Survey (both lakes)
(SEH and Lake District)
- Task 2** – CLMN water quality sampling on one site in each lake with additional sampling in October and increased DO/Temperature Profile monitoring
- Task 3** – Eurasian Watermilfoil Rapid Response Plan
(SEH)
- Task 4** – Carp Survey
(St. Croix Tribe)

Phase 4 – (October 1, 2009 – July 30, 2011)

Task 1 – Aquatic Plant Management Plan for both lakes, submitted for approval by the Lake District and the WDNR by December 1, 2010.

(SEH)

Task 2 – Watercraft Inspection at public access points

(Lake District)

Task 3 - In-lake monitoring for EWM

(Lake District and SEH)

Task 4 – Wild Rice Survey and Mapping

(St. Croix Tribe)

Task 5 – Lake User and Landowner Education Plan

(SEH)

Project Time Line

November 2008 – December 2008

The Lake District accepts project proposal from SEH and signs accompanying Contract Letter.

December 2008 – January 2009

SEH and the Lake District prepare a large-scale four-phased Lake Management Planning Grant.

February 1, 2009

Lake District and SEH submit a large-scale four-phased Lake Management Planning Grant application and Project Description to the WI-DNR. If awarded, Phases 1 & 2 would begin in April 2009.

April – February 2010

SEH sub-consultant completes Phase 1 of this project.

April 2009 –February 2010

SEH and the Lake District complete Phase 2 of this project.

August 1, 2009

SEH and Lake District submit Phases 3 and 4 for grant funding.

October 2009 – June 30, 2011

SEH and SEH sub-consultant completes Phase 3 of this project.

October 2009 –June 30, 2011

SEH completes Phase 4 of this project. The actual Aquatic Plant Management Plan would be submitted to the DNR by December 1, 2010.

*The entire project is considered completed once a new Aquatic Plant Management Plan for the Clam Lakes has been approved by the DNR.