

Dear Lake Resident or User:

September 2, 2009

The following “**Lake User Survey**” was constructed as a part of the final phase of the **Big Chetac Chain Lake Association (BCCLA)** “Getting Rid of the Green” lake and plant management planning project funded in part through the Wisconsin Department of Natural Resources Lake Management Planning Grant Program. The end goal of this project is to determine how best to manage Big Chetac Chain resources to maintain or improve overall lake conditions. Results from this survey will help to determine the final plant and lake management recommendations made to maintain or improve the lake. All recommendations made must meet the following criteria:

- Based on a determined need and sound science
- Meet all requirements set forth by the State of Wisconsin for all public waters
- Supported by the majority of lake residents and users.

Lake management recommendations that do not meet all these criteria will likely not be successful in accomplishing the goals set for them. As Lake Users, your input and participation are important to the overall success of this project. Please take the time to complete this survey and return it in the envelope provided.

Additional copies of this survey can be requested by emailing protectthelake@skcable.com or by contacting the person listed here. Hard copies can be picked up at the Birchwood Laundry Mat.

Please complete and return this survey by **October 10, 2009**. A public hearing will be held on **Saturday, October 24th** at 2 pm at the Birchwood Town Hall to discuss lake and plant management alternatives and recommendations and preliminary results of this survey. Completed surveys can be returned by mail, fax, in person, or by email (with attachment) to:

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SECTION 1 – Residency

These first few questions will help to determine who is responding to this survey.

1. Do you own or rent property on Big Chetac Lake?

I own and rent property

I rent property

I own property

no (*skip to Section 3*)

2. What type of property do you have on Big Chetac Lake? If you have more than one type of property, please report on only the property you have had the longest. (*please select one*)

permanent residence

less than seasonal dwelling

undeveloped land

other (*please specify*) _____

seasonal residence

business

second home

3. How long have you used the property indicated in Question 2? (*If less than 1 year, please write '1' in the space provided*)

I have used the property for _____ year(s).

4. During a 12-month period (Jan. 1 – Dec. 31) how many days are you, members of your family, or guests at the property indicated in Question 2? (*please provide your best estimate in the space below*)

There are people at the property approximately _____ days a year.

5. On average, about how many people are at the property each time it is being used? _____

SECTION 2 – Lake Stewardship

This section of the survey will provide information about the lake stewardship practices of lake property owners and renters.

1. Is a commercial fertilizer used on any portion of your lake property at any time during the year? A commercial fertilizer is one purchased “over the counter” or applied by a professional landscaper. It does not include manure, mulch, or other organic substance.

yes, I apply it myself and I hire someone

yes, I hire someone to apply it

Yes, I apply it myself

No (skip to question 3)

2. If a commercial fertilizer is used, is it a “phosphorous free” fertilizer?

yes

no

I don't know

3. Are any of the following water quality/landscaping practices currently in place at the property indicated in Section 1-Question 2? (*check all that apply*)

Rain garden

Shoreline buffers

Water diversion

Other (*please describe*) _____

No water quality/landscaping practices have been used.

Native flower/tree planting

Natural shoreline restoration

Native prairie restoration

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4. Which, if any, of the following water quality/landscaping practices hold potential interest for you? (*check all that apply*)

- | | |
|--|--|
| <input type="checkbox"/> Rain garden | <input type="checkbox"/> Native flower/tree planting |
| <input type="checkbox"/> Shoreline buffers | <input type="checkbox"/> Natural shoreline restoration |
| <input type="checkbox"/> Water diversion | <input type="checkbox"/> water diversion |
| <input type="checkbox"/> Native prairie restoration | |
| <input type="checkbox"/> Other (<i>please describe</i>) _____ | |
| <input type="checkbox"/> No water quality/landscaping practices are of interest to me. | |

5. Which, if any, of the following outcomes would motivate you to install a water quality/landscaping practice on your property? (*check all that apply*)

- A. Increasing the natural beauty of my property
- B. Improving the water quality of Big Chetac Lake
- C. Improving the water quality around my property's shoreline
- D. Providing better habitat for fish
- E. Providing better habitat for birds and wildlife
- F. Setting an example for other lake residents
- G. Less lawn mowing time
- H. A property tax rebate
- I. Financial assistance that pays a portion of the cost/installation
- J. Technical assistance that would evaluate my property for water quality concerns
- K. Technical assistance that would identify appropriate practices to install
- L. Other (*please describe*) _____
- M. I have no interest in installing a water quality/landscaping practice on my property (*skip to Section 3*)

6. Which **two** items from the above list would be the most influential in your decision to install a water quality/landscaping practice? (*write the letters of the corresponding items in the spaces below*)

Items ___ & ___ would be the most influential.

SECTION 3 – Lake Use & Lake Issues Specific to Big Chetac Lake

1. From the list below, check all activities on Big Chetac Lake that you, your family, or guests participate in. (*check all that apply*)

- | | | |
|---|---|---|
| <input type="checkbox"/> A. fishing from the shore | <input type="checkbox"/> F. water skiing or tubing | <input type="checkbox"/> K. swimming/wading |
| <input type="checkbox"/> B. fishing from a boat | <input type="checkbox"/> G. snorkeling/scuba diving | <input type="checkbox"/> L. rest/relaxation |
| <input type="checkbox"/> C. pontoon boating | <input type="checkbox"/> H. canoe/kayaking | <input type="checkbox"/> M. ice fishing |
| <input type="checkbox"/> D. speed boating | <input type="checkbox"/> I. wildlife viewing | <input type="checkbox"/> N. sailing |
| <input type="checkbox"/> E. jet skiing | <input type="checkbox"/> J. other (please list) _____ | |
| <input type="checkbox"/> I do not participate in any activities on the lake (<i>skip to Question 3</i>) | | |

2. Which 3 items from the above list do you, your family, or guests participate in most often? (*write the letter of the corresponding items in the spaces below*)

I (We) participate in _____ most often, _____ second most often, and _____ third most often.

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3. Below are numerous issues that may negatively affect your use of Big Chetac Lake. From the list below, please check all issues that are of concern to you.

- A. poor quality fishing
- B. too much public use
- C. overdevelopment of the shoreline
- D. poorly maintained boat access
- E. low water level in the lake
- F. foul or offensive odor
- G. excessive or uncontrolled water skiing or use of personal watercraft
- H. introduction of undesirable aquatic plants and animals (invasive species)
- I. nuisance wildlife (please specify) _____
- J. there are no issues affecting my use of the lake (*skip to Question 5*)
- K. too much weed growth
- L. not enough weed growth
- M. "icky" or "green" water
- N. too much shoreline lighting
- O. high water level in the lake
- P. floating vegetation

4. Which **two** issues from the above list are of the most concern to you? (*write the letters of the corresponding issues in the spaces below*)

I am most concerned about issues ___ & ___.

5. During the open-water (no ice) season, how frequently do you, your family, or guests use a boat or other watercraft on the lake?

- never
- 1 or 2 times/season
- 1 or 2 times/month
- 3 or 4 times/month
- several times/week
- daily

6. During the open-water (no ice) season, how frequently are you, your family, or guests swimming or wading in the lake?

- never
- 1 or 2 times/season
- 1 or 2 times/month
- 3 or 4 times/month
- several times/week
- daily

7. In your opinion, water quality (nice & clear vs. icky & green) in Big Chetac Lake has:

- gotten better
- gotten worse
- remained the same
- I don't know

8. In your opinion, the water quality in Big Chetac Lake is:

- excellent
- good
- fair
- poor
- very poor

9. How often, if at all, has water quality in Big Chetac Lake kept you, your family, or your guests from using the lake for the following activities? If you, your family, or guests have no interest in the activity, please mark 'N/A'.

	Never	Rarely	Sometimes	Often	N/A
fishing	<input type="checkbox"/>				
water skiing or tubing	<input type="checkbox"/>				
swimming/wading	<input type="checkbox"/>				
snorkeling/scuba diving	<input type="checkbox"/>				
motorized boating	<input type="checkbox"/>				
non-motorized boating	<input type="checkbox"/>				
jet skiing	<input type="checkbox"/>				
enjoying the "view"	<input type="checkbox"/>				

SECTION 4 – Aquatic Plant Growth

Aquatic plants (rooted and floating) are an important part of any healthy lake system. However, excessive aquatic plant growth can sometimes interfere with or prevent certain lake activities and even impact water quality. This section of the survey evaluates how lake users feel about the aquatic plant growth in Big Chetac Lake.

1. Since you have been using Big Chetac Lake, the amount of aquatic plant growth in the lake has:

- increased decreased stayed the same unsure

2. How much of a problem, if at all, do you consider aquatic plant growth in Big Chetac Lake to be?

- large problem unsure small problem
 moderate problem no problem

3. To what extent does aquatic plant growth in Big Chetac Lake affect decisions to use the lake for the following activities? If you, your family, or guests have no interest in the activity, please mark 'N/A'.

	Great effect	Some effect	Little to no effect	N/A
fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
water skiing or tubing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
swimming/wading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
snorkeling/scuba diving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
motorized boating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
non-motorized boating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
jet skiing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
enjoying the "view"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. At what time period during the year do you consider the aquatic plant growth in Big Chetac Lake to be the worst?

- April – June I don't know
 July - September aquatic plant growth is equally bad all season
 October - December aquatic plant growth is never that bad

5. Have you made any attempts to remove or control aquatic plants in the lake by your lake shore property? (**check one**)

- yes, I did some myself and I hired someone
 yes, I did some myself
 yes, I hired someone
 no (**skip to Question 7**)
 I do not own or rent lake shore property (**skip to Question 7**)

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6. Which of the following method(s) have been used to remove or control aquatic plants in the lake by your lake shore property? (*please check all that apply*)

- Physical removal by hand-pulling or raking
- Personal application of a chemical herbicide with a permit
- Personal application of a chemical herbicide without a permit
- Professional application of a chemical herbicide
- Physical removal aided by a boat, ATV, lawn-mower, or similar machine
- Other (please specify) _____

7. Since you have been familiar with the lake, would you say the amount of algae growth (both the small green particles suspended in the water and the longer, green slimy stuff attached to rocks, docks, and other plants) has:

- increased stayed the same decreased I don't know

SECTION 5 – Aquatic Invasive Species in Big Chetac Lake

This section of the survey seeks to determine how much lake users know about aquatic invasive species. Aquatic invasive species are plants and animals that are foreign to Big Chetac Lake and do not belong there. Some of these species can be detrimental to the overall quality of the Big Chetac lake system.

Curly-leaf pondweed (CLP)

More than 600 acres of curly-leaf pondweed have been documented in Big Chetac Lake. CLP creates early season (May, June) nuisance conditions in Big Chetac Lake by forming dense beds of vegetation that interfere with many lake uses, destroy healthy habitat, and harm water quality.

1. Before responding to this survey, did you know that curly-leaf pondweed is present in Big Chetac Lake?

- yes no I have heard about it before, but did not know for sure

2. How much do you know about CLP and the problems it can cause in a lake?

- a lot some very little just what I have read here

3. Do you think you would recognize CLP in the lake if you saw it?

- definitely yes unsure probably not
 probably yes definitely not

4. How much of a problem, if at all, do you consider CLP growth in Big Chetac Lake to be?

- large problem unsure small problem
 moderate problem no problem

Eurasian Watermilfoil (EWM)

Eurasian watermilfoil has not yet been found in Big Chetac Lake but it is a likely threat in the future. In some lakes EWM becomes just another “weed”. In other lakes it can form dense beds of vegetation present all season that can interfere with many lake uses, destroy healthy habitat, and harm water quality.

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5. How much do you know about EWM and the problems it can cause in a lake?

a lot some very little just what I have read here

6. Do you think you would recognize EWM in the lake if you saw it?

definitely yes unsure probably no
 probably yes definitely no

Other Aquatic Invasive Species

None of the following aquatic invasive species are known to be in Big Chetac Lake. However, at some point any of them could be accidentally introduced into the lake, or may be there already but not formally identified.

7. Please check all of the following aquatic invasive species that you have heard of before.

zebra mussels rusty crayfish spiny waterflea
 Chinese mystery snail banded mystery snail hydrilla
 New Zealand mudsnail freshwater jellyfish purple loosestrife

8. Would you be willing to take part in free 3-hour training to help you identify aquatic invasive species in the lake?

definitely yes unsure probably not
 probably yes definitely not

SECTION 6 – Aquatic Plant Management

Excessive or problematic aquatic plant growth in a lake can be managed in many different ways. In most cases management is ongoing and long-term. Sometimes no management is the best option. The total price tag for the individual management options mentioned in this section ranges from almost no cost, to several hundred thousand dollars, should be considered “safe”, and would not be used unless approved by the state. When replying to the following questions please assume that not all these costs would be “out of pocket” costs for residents.

1. Do you feel that some form of aquatic plant management is necessary for Big Chetac Lake?

definitely yes unsure probably not
 probably yes definitely not (*skip to Section 7*)

2. Who do you feel should be responsible for managing aquatic plant growth in Big Chetac Lake? (*check all that apply*)

Local township government The land owner
 County government “Mother Nature” (no management)
 Wisconsin DNR I don’t know
 Big Chetac Chain Lake Association Other (*please specify*) _____

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Aquatic Plant Management Results

Below are several possible results for aquatic plant management in Big Chetac Lake. Total removal or eradication of CLP is not possible due to the nature of this invasive species.

3. Please place a 1 and a 2 in order of preference by the two outcomes you would most accept for Big Chetac Lake. If you are unsure about these management results, or would not accept any of them, please check the appropriate blank.

No management, the vegetation in the lake is left to run its natural course.

All aquatic plant growth, lake-wide, is reduced seasonally to provide nuisance and navigation relief

CLP growth, lake-wide, is reduced seasonally to provide nuisance and navigation relief

All aquatic plant growth in designated areas is reduced seasonally to provide nuisance and navigation relief

CLP growth in designated areas is reduced seasonally to provide nuisance and navigation relief

I am unsure-I need additional information about how the results would be achieved before I can make a decision

I would not accept any of these management results

Common Aquatic Plant Management Methods

Below are several common aquatic plant management methods that either alone or in combination are used regularly to control CLP and/or other aquatic plants in a lake.

4. Please place a 1 and a 2 in order of preference by the two methods you would most accept for aquatic plant control in Big Chetac Lake. If you are unsure about these management methods, or would not accept any of them, please check the appropriate blank.

No management

Continued or increased hand-pulling and raking in shallow waters

Small-scale (less than 10 acres) chemical treatment for nuisance control

Large-scale (more than 10 acres) early season chemical treatment to reduce plant abundance

Large-scale mechanical weed removal by multiple weed harvesting machines

Biological control (using one live species to control another)

I am unsure and need additional information to make a decision

I would not accept any of these management alternatives

Uncommon Aquatic Plant Management Methods

The following aquatic plant management methods are not used as often to control aquatic plant growth in a lake, however, they can be effective under the right circumstances. These alternatives are much larger-scale and would cause greater disturbances to the lake overall than those presented in Question 4.

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5. Assuming that these management activities could be used in Big Chetac Lake, please place a 1 and a 2 in order of preference by the two methods you would most accept. If you are unsure about these management methods, or would not accept any of them, please check the appropriate blank.

___ Lowering the lake level by several feet in the fall to expose aquatic plant beds to drying out and freezing temperatures (This would likely have to be repeated every 3-5 years to be effective long-term. The lake level would be brought back up again the following spring or early summer.)

___ Whole-lake, or very large-scale (150 acres or more) chemical treatment to greatly reduce CLP (This would likely have to be completed several years in a row to be effective long-term.)

___ Large-scale dredging (removing bottom sediments) by mechanical means, **with** drawdown (lower lake levels), to remove plant seeds, roots, and other growth structures

___ Large-scale dredging (removing bottom sediments) by mechanical means, **without** drawdown (lower lake levels), to remove plant seeds, roots, and other growth structures

___ Manipulation of the different biological levels of Big Chetac Lake including the fishery, aquatic insects, microscopic critters, and the food structure that supports them

___ I am unsure and need additional information to make a decision

___ I would not accept any of these management alternatives

6. If you have other suggestions for managing aquatic plants in Big Chetac Lake, or have another outcome in mind, we would like to know about them. Please use the space below to describe.

SECTION 7 –Community Support

Local, county, state, and federal resources will be tapped into to implement management recommendations for Big Chetac Lake. However, community support including all lake users (be they lake property owners or renters or not), businesses, community or civic groups, and others will be asked to share the burden. Donations of volunteer time, services, materials, equipment, and cash will further help to implement and maintain management recommendations. The following questions will help to determine your willingness to support future projects involving the implementation of management recommendations.

1. Volunteer time used for watercraft inspection at boat landings and monitoring of aquatic invasive species, wildlife, and water quality can be used as a direct source of match for state funding. How much time, if any, would you be willing to contribute to support these activities?

___ no time ___ a few hours a year ___ a few days a year ___ longer periods of time

2. Service, material, and equipment needs are varied and somewhat unknown but could include boat use, construction, educational materials design, web services, legal services, building materials, plants and planting services, etc. Under the right circumstances, do you think you would be willing to provide assistance for any of these or other services and materials that may be necessary?

___ yes ___ no ___ maybe ___ I'll wait and see what is needed.

