

**SECTION 1 – Residency**

Where you live and how long you have been a part of Horseshoe Lake will influence your answers to this survey. These first few questions will provide logistical information about survey respondents.

1. Do you own or rent property on Horseshoe Lake?

- I own and rent property
- I rent property

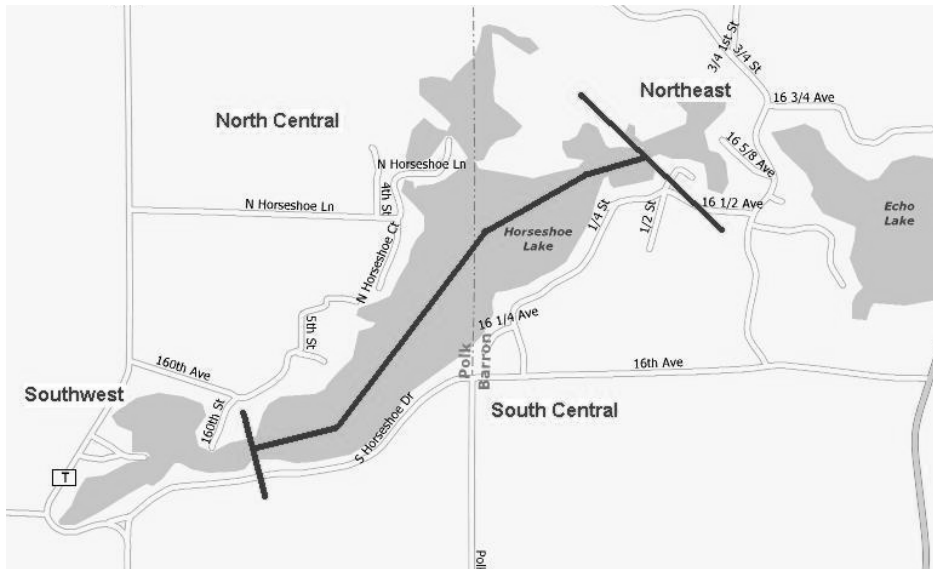
- I own property
- no (*skip to Section 3*)

2. What type of property do you have on Horseshoe Lake? If you have more than one type of property, please report on only the property you have owned or rented the longest. (*please select one*)

- permanent residence
- less than seasonal dwelling
- business
- other (please specify) \_\_\_\_\_
- seasonal residence
- undeveloped land
- second home

3. The map included with this survey shows four different basins of Horseshoe Lake. Please indicate in which basin you own or rent the property indicated in Question 2.

- North Central
- Northeast
- South Central
- Southwest



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. 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. Is a commercial fertilizer used on any portion of your lake property at any time during the year?

- yes, I apply it myself and I hire someone       yes, I apply it myself  
 yes, I hire someone to apply it                       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     Native flower/tree planting  
 Shoreline buffers                                       Natural shoreline restoration  
 Water diversion                                         Native prairie restoration  
 Other (*please describe*) \_\_\_\_\_  
 No water quality/landscaping practices have been used.

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

- Rain garden     Native flower/tree planting  
 Shoreline buffers                                       Natural shoreline restoration  
 Water diversion                                         Native prairie restoration  
 Other (*please describe*) \_\_\_\_\_  
 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 Horseshoe 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 Question 7*)

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 \_\_\_\_\_ and \_\_\_\_\_ would be the most influential.

7. What type of septic system do you have on your property? (*select all that apply*)

\_\_\_ Mound System    \_\_\_ Holding Tank    \_\_\_ Other    \_\_\_ Unsure  
\_\_\_ At-Grade System    \_\_\_ Conventional System    \_\_\_ None (*skip to Section 3*)

8. How many years ago was your septic system last inspected? (*please provide your best recall*)

\_\_\_ 1-5 years    \_\_\_ 6-10 years    \_\_\_ 11+ years    \_\_\_ Never    \_\_\_ Not Sure

9. When was your septic system last 'pumped' or 'sewered'? (*please provide your best recall*)

\_\_\_ 1-5 years    \_\_\_ 6-10 years    \_\_\_ 11+ years    \_\_\_ Never    \_\_\_ Not Sure

### **SECTION 3 – Lake Use & Lake Issues**

1. From the list below, check all activities on Horseshoe Lake that you, your family, or guests participate in.

\_\_\_ A. fishing from the shore    \_\_\_ F. ice fishing    \_\_\_ J. wildlife viewing  
\_\_\_ B. fishing from a boat    \_\_\_ G. speed boating    \_\_\_ K. rest/relaxation  
\_\_\_ C. pontoon boating    \_\_\_ H. jet skiing    \_\_\_ L. water skiing/tubing  
\_\_\_ D. canoe/kayak/paddle boat    \_\_\_ I. sailing    \_\_\_ M. other (please list) \_\_\_\_\_  
\_\_\_ E. swimming/wading    \_\_\_ I don't participate in activities on the lake (*skip to Question 3*)

2. Which 3 activities from the above list do you or members of your family participate in most often? (*write the letters of the corresponding activities in the spaces below*)

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

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

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



\_\_\_ increased      \_\_\_ decreased      \_\_\_ stayed the same      \_\_\_ unsure

2. Thinking about aquatic plant growth in Horseshoe Lake, would you say there is too little, too much, or about the right amount of aquatic plant growth?

\_\_\_ definitely too little      \_\_\_ just the right amount      \_\_\_ probably too much  
\_\_\_ probably too little      \_\_\_ definitely too much

3. How often, if at all, has aquatic plant growth in Horseshoe Lake kept you, your family, or your guests from using the lakes for any of 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"/>	<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"/>	<input type="checkbox"/>
swimming/wading	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
motorized boating	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
jet skiing	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>

4. At what time period during the year do you consider the aquatic plant growth in Horseshoe Lake to be **excessive**?

\_\_\_ April – June      \_\_\_ I don't know  
\_\_\_ July - September      \_\_\_ aquatic plant growth is excessive throughout open water season  
\_\_\_ October – December      \_\_\_ aquatic plant growth is never excessive

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**)

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

- Local township government                       The land owner  
 County government                                 "Mother Nature" (i.e. no management)  
 Wisconsin DNR                                       I don't know  
 Horseshoe Lake Improvement Association    Other (please specify) \_\_\_\_\_

8. Since you have owned or rented your property on Horseshoe 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 Horseshoe 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 Horseshoe Lake and do not belong there.**

**Eurasian Watermilfoil (EWM)**

A hybrid version of Eurasian watermilfoil has been found in Horseshoe Lake. 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.

1. Before responding to this survey, did you know Eurasian watermilfoil is present in Horseshoe Lake?

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

2. 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

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

- definitely yes                       probably yes                       unsure                       probably not                       definitely not

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

- large problem                       moderate problem                       unsure                       small problem                       no problem

**Curly-leaf pondweed (CLP)**

Curly-leaf pondweed has been documented in Horseshoe Lake. CLP can create early season (May, June) nuisance conditions by forming dense beds of vegetation that interfere with many lake uses.

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

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

6. 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

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

definitely yes       probably yes       unsure       probably not       definitely not

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

large problem       moderate problem       unsure       small problem       no problem

### **Other Aquatic Invasive Species**

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

9. 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

10. Would you be willing to take part in a training session to help you identify aquatic invasive species in the lake?

definitely yes       probably yes       unsure       probably not       definitely not

### **SECTION 6 – Eurasian Watermilfoil and Curly-leaf Pondweed Management**

**Aquatic invasive plants like EWM and CLP can be managed in many different ways. In most cases management is ongoing and long-term. Sometimes no management may be the best option.**

1. Do you feel that some form of aquatic plant management is necessary to control EWM in Horseshoe Lake?

definitely yes       probably yes       unsure       probably not       definitely not

2. Do you feel that some form of aquatic plant management is necessary to control CLP in Horseshoe Lake?

definitely yes       probably yes       unsure       probably not       definitely not

### **Aquatic Plant Management Results**

Below are several possible results for aquatic plant management of EWM and/or CLP in Horseshoe Lake. Total removal or eradication of EWM and/or CLP is not possible due to the nature of these plants.

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

No management of any kind. Eurasian Watermilfoil (EWM) and Curly-leaf Pondweed (CLP) are left to run their natural course in the lake.

EWM and CLP 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

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

EWM and CLP growth in designated areas of the lake is reduced seasonally to provide nuisance and navigation relief

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

EWM growth in designated areas of the lake 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 could be used to control EWM and/or CLP in Horseshoe 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 Horseshoe 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 (more than 10 acres) mechanical weed removal (weed harvesting machines)

Biological control (using one live species to control another)

Removal by scuba divers or snorkelers

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 EWM and/or CLP 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.

5. Assuming that these management activities could be used in Horseshoe 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.

Whole-lake, or very large-scale (50 acres or more) chemical treatment to greatly reduce EWM and 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 to remove plant seeds, roots, and other growth structures.

Manipulation of the different biological levels of Horseshoe 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 Horseshoe Lake, or have another outcome in mind, we would like to know about them. Please use the space below to describe.

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### **SECTION 7 –Community Support**

**Local, county, state, and federal resources will be tapped into to implement management recommendations for Horseshoe 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 monitoring boat launch areas, removing EWM and CLP, and in-lake monitoring of 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 days a year

a few hours a year

longer periods of time

I have already and will continue to donate volunteer time to support these activities

I have already donated volunteer time and do not wish to continue to do so.

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.

3. The Horseshoe Lake Improvement Association (HLIA) is the sponsor of this project and spearheading efforts to control EWM and CLP growth in the lake. Membership is voluntary, but does require payment of dues. Are you or anyone else in your household a member of the Horseshoe Lake Improvement Association? (*check one*)

- I didn't know of the Association (*skip to Question 6*)       Yes  
 No (*skip to Question 6*)       Unsure

4. How satisfied are you with the HLIA activities to date? (*check one*)

- Completely satisfied     Unsure, but I've heard of the HLIA     Somewhat unsatisfied  
 Somewhat satisfied       Completely unsatisfied

5. What would increase your attendance at HLIA meetings? (*check all that apply*)

- Weekend morning meetings       Weekend evening meetings  
 Weekday morning meetings       Weekday evening meetings  
 More speakers/presentations     Refreshments or meals  
 Lower HLIA dues       I'm not interested in HLIA meetings

6. Financial support for current and future management activities is important. Please indicate in what ways, if any, you would be willing to provide financial support. (*check all that apply*)

- cash donations  
 increased annual Lake Association dues  
 fundraising efforts (raffles, bake sales, etc) as a consumer  
 fundraising efforts (raffles, bake sales, etc) as a participant  
 I do not wish to provide any additional financial support other than what I already contribute  
 other (please specify) \_\_\_\_\_

7. Would you support the formation of a Lake District or 'taxing authority' for Horseshoe Lake? (A Lake District is a special purpose governmental body with authority to levy a tax and impose special assessments to those living within the District. A Lake District may be in a better position to deal with other units of government and has some powers that a Lake Association may not.)

- Definitely yes     Probably yes     Unsure     Probably not     Definitely not

8. Please add any additional comments you might have regarding aquatic plant management or related topics in Horseshoe Lake (optional):

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**Congratulations! You have successfully completed this survey. Thank you for your time and your answers! Providing your contact information is optional, but if you wish to, please do!**

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City, State, & zip code: \_\_\_\_\_  
Phone number: \_\_\_\_\_ Email address \_\_\_\_\_