

**Long Lake Preservation Association  
AIS EXi WU]cbžD`Ubb]b[ žUbX`DfYj Ybh]cb  
Grant Application**

*3-Year AIS Gfwecwqp.'Rrcppkpi 'čpf'Rt gxgpwqp  
Project*

Washburn County, Wisconsin

SEH No. LONPA 123004

OE \*~ •c1, 2013

Cwi wuv1, 2015"

RE: 3-Year Project  
Long Lake Preservation Association AIS Grant Application  
Request for Proposal

SEH No. LONPA 123004

Ms. Pamela Toshner, Northern Region Grant Coordinator  
Wisconsin Department of Natural Resources  
810 W. Maple Street  
Spooner, WI 54501

Dear Pamela:

Please accept this 3-year AIS Established Infestation Control grant application on behalf of the Long Lake Preservation Association. The purpose of this project is to implement recommendations made in the Long Lake Aquatic Plant Management Plan to support AIS education and prevention efforts, and AIS management in Long Lake. The APM Plan was approved by the WDNR in 2012.

Please rank it accordingly.

Sincerely,



Dave Blumer  
Lake Scientist

DLB

\\sehr\projects\ko\lonpa\123004\1-gen\18-grant app\long lake preservation association ais control grant application\_1.21.13.docx

Long Lake Preservation Association AIS Control Plan \* Executive Summary Grant Application

3-Year AIS Established Infestation Control Project

Prepared for:  
Long Lake Preservation Association  
Washburn County

Prepared by:  
Short Elliott Hendrickson Inc.  
1701 West Knapp Street, Suite B  
Rice Lake, WI 54868-1350  
715.236.4000



---

Dave Blumer  
Lake Scientist

1/13/2015

Date

## Distribution List

No. of Copies

Sent to

1

Pamela Toshner, Northern Region Grant Coordinator  
Wisconsin Department of Natural Resources  
810 W. Maple Street  
Spooner, WI 54801

2

.....Dctt{"Q\$Hpcp, President  
Long Lake Preservation Association  
4; 37"P'I qh'Tqcf  
Uctqpc, WI 54892

---

## Table of Contents

Letter of Transmittal  
Certification Page  
Distribution List  
Table of Contents  
Aquatic Invasive Species (AIS) Established Infestation Control Grant Application

## List of Appendices

Appendix A	Authorizing Resolution
Appendix B	Letters of Support
Appendix C	Map of Project Location and Boundaries/Lake Map
Appendix D	Itemized Breakdown of Expenses
Appendix E	Project Scope/Description
Appendix F	Other Information in Support of Project

# Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

**Notice:** Use of this form is required by the DNR for any application filed pursuant to ch. NR 198, Wis. Adm. Code. Personal information 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 may be made accessible to requesters under Wisconsin's Open Records laws (s. 19.32-19.39, Wis. Stats.) and requirements.

## Section I: Application Type

Check one:

- Education, Prevention & Planning
  Early Detection & Response
  Established Infestation Control

Legislative District Numbers		To determine your legislative district, go to <a href="http://165.189.139.210/WAML/">http://165.189.139.210/WAML/</a> Type in complete address, next screen shows information.
Senate	Assembly	
25	75	

## Section II: Applicant Information

Applicant Long Lake Preservation Association			Type of Eligible Applicants		
Waterbody Name Long and Mud Lakes			<input type="checkbox"/> County	<input type="checkbox"/> Tribe	<input type="checkbox"/> Other Gov't Unit
Project County/Township/Section/Range Washburn/Long Lake, Madge, Birchwood			<input type="checkbox"/> City	<input type="checkbox"/> Sanitary Dist.	<input type="checkbox"/> Nonprofit Org.
Authorized Representative Named by Resolution Barry O'Flanagan			<input type="checkbox"/> Village	<input type="checkbox"/> Dist.	<input type="checkbox"/> College, School, etc.
Authorized Representative Title President			<input type="checkbox"/> Town	<input checked="" type="checkbox"/> Assoc.	<input type="checkbox"/> Federal
Address 2915 N. Golf Road			Project Contact Name same		
City Sarona			Project Contact Title		
State WI			Address		
ZIP Code 54870			City		
Daytime Phone (area code) (715) 635-4642			State		
Evening Phone (area code)			ZIP Code		
Daytime Phone (area code)			Daytime Phone (area code)		
Evening Phone (area code)			Evening Phone (area code)		
E-mail Address barry049@gmail.com			E-Mail Address		

### 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 (AIS/LC/RC)	AIS/Lake /River 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	Research / Demo Project <input type="checkbox"/> Yes <input type="checkbox"/> No
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

# Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Page 2 of 3

**Section III: Project Information**

Project Title 2014-16 APM Plan Implementation Project	Proposed Ending Date 06/30/16
--	----------------------------------

Other Management Units	Letter of Support	Other Management Units	Letter of Support
1. Town of Long Lake	<input checked="" type="checkbox"/>	4. Friends of Hunt Hill Audobon Sanctuary, Inc	<input checked="" type="checkbox"/>
2. Holy Island Property Owners Association	<input checked="" type="checkbox"/>	5. Town of Birchwood	<input checked="" type="checkbox"/>
3. Washburn Co. Plan., Land & Res Mngt. Dept.	<input checked="" type="checkbox"/>	6.	<input type="checkbox"/>

**Section IV: Public Access**

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites: 100

Number of Public Access Sites Including Boat Launches and Walk-ins: 14

**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	17,700.00	10,440.00	
2. Consulting services	12,943.00	0.00	
3. Purchased services--printing and mailing	0.00	0.00	
4. Other purchased services (specify): <del>Herbicide Application</del>	0.00	0.00	
5. Plant material Plant Survey Work	4,500.00	0.00	
6. Supplies (specify) AIS Monit., Public Event, GPS units	1,500.00	100.00	
7. Depreciation on equipment	0.00	0.00	
8. Hourly equipment use charges <i>LLPA Boat Use</i>	0.00	4,050.00	
9. State Lab of Hygiene (SLOH) Costs <i>Residual Testing</i>	2,880.00	0.00	
10. Non-SLOH Lab Costs	0.00	0.00	
11. Other (specify) WDNR Permit Application Fees	435.00	0.00	
12. Subtotals (sum each column)	39,958.00	14,590.00	
13. Total Project Cost Estimate (sum of column 1 plus sum of column 2)	54,548.00		
14. State Share Requested (up to 75% of total costs may be requested)	<del>40,911.00</del> <i>\$39,958.00</i>		

Subject to the following maximum grant amounts:

- Education, Prevention and Planning Projects--up to \$150,000
- Early Detection and Response Projects--up to \$20,000
- Established Infestation Control Projects--up to \$200,000

Use of Federal funding as match: (check box below if applicable)

We are using or planning to apply for Federal funds to be used as match.

If known, indicate source of funding:

**Section VI: Attachments (check all that are included)**

**A. For all applicants: (Refer to Instructions for applicability.)**

- 1. Authorizing resolution
- 2. Letters of support
- 3. Map of project location and boundaries
- 4. Lake map or river segment with public access sites identified (per Section IV of this application and page 20 of the guidelines)
- 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), River Management Organizations (RMOs) or Qualified Non-profit Organizations:**

- 1. For first time applicant LMOs/RMOs only: A completed Form 8700-226 (Lake Association Organizational Application) or 8700-287 (River Management Organization Application)
- 2. For first time applicant Qualified Nonprofit Organizations 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. Brochures, newsletters, annual reports or other information about your organization

**C. Education, Prevention and Planning Projects: (No additional attachments required.)**

**D. Early Detection and Response Projects:**


- 1. APM Permit application

**E. Established Infestation Control Projects:**

- 1. Management Plan
- 2. APM Permit application

**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 Barry O'Flanagan	Title of Authorized Representative President
Signature of Authorized Representative 	Date Signed 7-31-2013



---

## **Appendix A**

Authorizing Resolution

**Aquatic Invasive Species Grants  
Resolution**

RESOLUTION OF LONG LAKE PRESERVATION ASSOCIATION, INC.

County of Washburn

WHEREAS, Long Lake is an important resource used by the public for recreation and enjoyment of natural beauty; and

WHEREAS, public use and enjoyment of Long Lake is best served by protection of Long Lake from infestation of aquatic invasive species; and

WHEREAS, we recognize the need to provide information or education about aquatic invasive species; and

WHEREAS, we are qualified to carry out the responsibilities of an aquatic invasive species control project.

NOW, THEREFORE, BE IT RESOLVED THAT the Long Lake Preservation Association, Inc. requests grant funding and assistance available from the Wisconsin Department of Natural Resources under the "Aquatic Invasive Species Control Grant Program" and hereby authorizes the corporate president to act on behalf of Long Lake Preservation Association, Inc. to:

- submit an application to the State of Wisconsin for financial aid for aquatic invasive species control purposes;
- sign documents;
- take necessary action to undertake, direct, and complete an approved aquatic invasive species control grant; and
- submit reimbursement claims along with necessary supporting documentation within six months of project completion date.

BE IT FURTHER RESOLVED THAT the Long Lake Preservation Association, Inc. will meet the obligations of the aquatic invasive species control project including timely publication of the results and meet the financial obligations of an aquatic species grant, including the prompt payment of our 25% commitment to aquatic invasive species control project costs.

Adopted this 17th day of December, 2012

By a vote of:   10   in favor   0   against   0   abstain

BY: Barbara Sabatke  
Secretary of the Long Lake Preservation  
Association, Inc.

---

## **Appendix B**

Letters of Support

**TOWN OF LONG LAKE in WASHBURN COUNTY, WISCONSIN**

Clerk's address: N1609 Schnacky Rd., Birchwood, Wisconsin 54817 715-354-3048

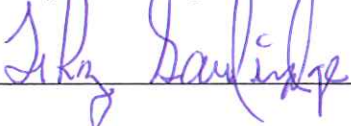
**Chairman LeRoy Sandridge**  
**Supervisor Ed Olund**  
**Supervisor Brett Westphal**

**Clerk Marcia Kampf**  
**Treasurer Ruth Ann Dinga**  
**Assessor Mark Hafferman**

January 8, 2013

This is to register the support of the Town of Long Lake for the invasive species management and education efforts of Long Lake Preservation Association, Inc. This includes support of any grant application which may be made by LLPA to the Wisconsin Department of Natural Resources.

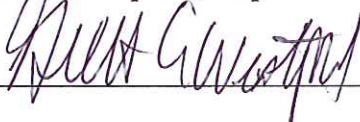
LeRoy Sandridge, Chairman

  
\_\_\_\_\_

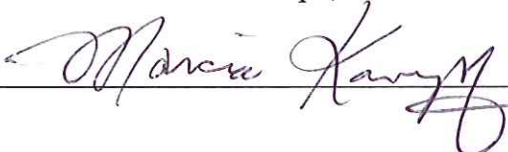
Ed Olund, Supervisor

  
\_\_\_\_\_

Brett Westphal, Supervisor

  
\_\_\_\_\_

Attest: Marcia Kampf, Clerk

  
\_\_\_\_\_

December 18, 2012

For the attention of Granting Agencies:

The Holy Island Property Owners Association (HIPOA) of Long Lake, WI fully supports the Long Lake Preservation Association in their invasive species control and education of the public on relevant issues. This includes our support of LLPA's grant applications to Wisconsin's Department of Natural Resources.

HIPOA is made up of the 34 owners of cabins and full-time residences on Holy Island. We have a history going back almost 30 years of working with LLPA on their many lake-management activities.

Robin Kinkead, President 2012/2013.

A handwritten signature in black ink, appearing to read "Robin Kinkead", with a long, sweeping horizontal stroke extending to the right.



Washburn County  
*Planning, Land & Resource Management Department*

December 21, 2012

Pamela Toshner  
DNR Lake Coordinator  
810 West Maple Street  
Spooner, WI 54801

Dear Pamela,

This is a letter of support for the Long Lake Preservation Association and their submission of an AIS Control Grant for curly leaf pondweed for the February, 2013 grant cycle.

Long Lake is one of the most recreated lakes in Washburn County. Achieving long term goals to reduce curly leaf and restoring the native plant community, is key. The association has demonstrated their commitment and efforts to protecting the water resource which in turn, has helped implement goals and objectives in the Washburn County Land and Water Management Plan and AIS Strategic Plan:

*"Protect and restore aquatic and near shore fish and wildlife habitats and encourage their appreciation."*

*"Eradicate and or/control aquatic invasive plant and animal species"*

*"Participate in aquatic invasive species prevention efforts"*

Many association members and volunteers have been through the CBCW workshops, which in turned has helped prevent the curly leaf from leaving and other invasives from entering. Many members have also been through the AIS CLMN workshop and have a good team of people monitoring the infestation size and watching for new invaders.

As AIS Coordinator, I will continue to lend assistance to the project as opportunities develop. I encourage State support of the Long Lake Preservation Association's grant application.

Sincerely,

A handwritten signature in blue ink that reads "Lisa Burns".

Lisa Burns  
Washburn County AIS Coordinator



FRIENDS OF THE HUNT HILL AUDUBON SANCTUARY, INC.  
N2384 Hunt Hill Road, Sarona, Wisconsin 54870  
715-635-6543 or [www.hunthill.org](http://www.hunthill.org)

"A nature preserve and learning center, open to all, dedicated to fostering understanding, appreciation, and protection of the environment."

Joe Thrasher, President  
Long Lake Preservation Association  
N1599 Schnacky Road  
Birchwood WI 54817

December 18, 2012

Dear Joe,

This letter is from the Friends of the Hunt Hill Audubon Sanctuary to register our support for aquatic invasive species management and education efforts of the LLPA - Long Lake Preservation Association, Inc. Please pass this along to the DNR. This includes support of any grant application which may be made by LLPA for such efforts to the Wisconsin Department of Natural Resources, especially for control of curly leaf pondweed in our watershed.

We are a 501(c) (3) non-profit corporation in the state of Wisconsin with over 600 registered members and families in this northwest part of our state. Additionally, we annually conduct programs for over 5,000 attendees – folks who are interested in learning more about nature and how to ensure its protection.

You have our complete support.

Sincerely,

Storme Nelson  
Executive Director

TOWN OF BIRCHWOOD  
1549 CO. HWY T  
BIRCHWOOD, WI 54817  
715-354-7047

Romaine Quinn, Chairman

Richard Stowe - Supervisor  
John Nelson - Supervisor

January 14, 2013

This is to register the support of Town of Birchwood for the invasive species management and education efforts of Long Lake Preservation Association, Inc.

This includes support of any grant application for control of Curly Leaf Pond weed which may be made by LLPA to the Wisconsin Department of Natural Resources.

A handwritten signature in black ink, appearing to read 'R. Quinn', with a long horizontal flourish extending to the right.

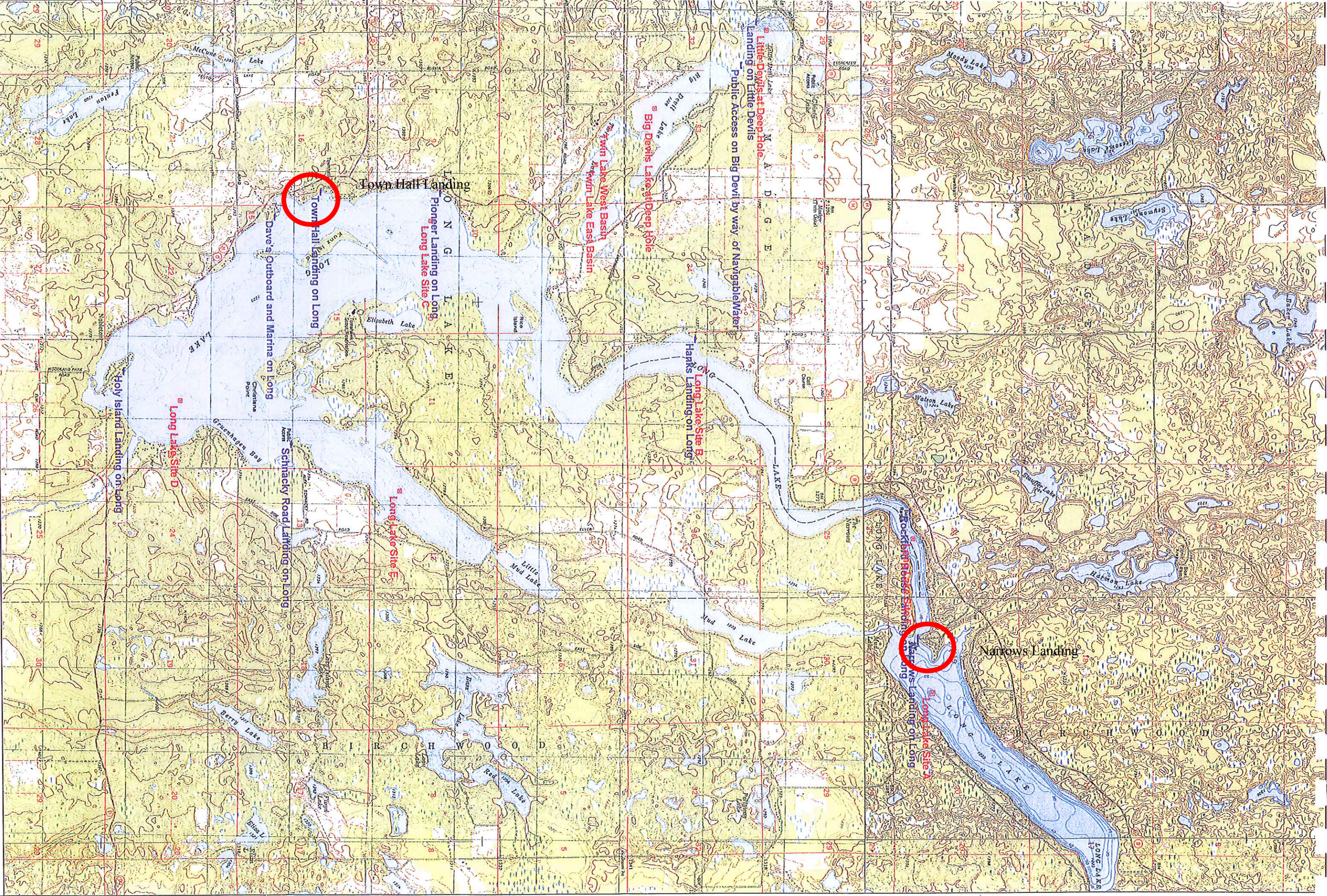
Romaine Quinn  
Chairman - town of Birchwood



---

## **Appendix C**

Map of Project Location and Boundaries/Lake Map



Name: NOBLETON  
Date: 7/26/2010  
Scale: 1 inch equals 3333 feet

Location: 045° 43' 41.63" N 091° 41' 09.89" W

---

## **Appendix D**

### Itemized Breakdown of Expenses

Total Project Cost: Long Lake				
Task	SEH	Vol/Don Ser	Reimb Exp	Total
Plant Monitoring	\$4,320.00	\$982.00	\$11,115.00	\$16,417.00
AIS Monitoring and Education	\$960.00	\$13,608.00	\$15,900.00	\$30,468.00
Technical Support	\$7,663.00			\$7,663.00
	<b>\$12,943.00</b>	<b>\$14,590.00</b>	<b>\$27,015.00</b>	<b>\$54,548.00</b>
				\$54,548.00

**Total Project Cost**

Total Project Cost	\$54,548.00	
Total Sponsor Match	\$14,590.00	26.75

**State Share Request**                      **\$39,958.00**                      73.25

WDNR Grant Application Form

Line 1	\$17,700.00	\$14,490.00
Line 2	\$12,943.00	\$0.00
Line 3	\$0.00	\$0.00
Line 4	\$0.00	\$0.00
Line 5 - Plant Survey	\$4,500.00	\$0.00
Line 6 - AIS, Pub. Event, GPS Units	\$1,500.00	\$100.00
Line 7	\$0.00	\$0.00
Line 8	\$0.00	\$0.00
Line 9 - SLOH Residual Testing	\$2,880.00	\$0.00
Line 10	\$0.00	\$0.00
Line 11 WDNR Permit Fees	\$435.00	\$0.00
Line 12	\$39,958.00	\$14,590.00
Line 13	\$54,548.00	
Line 14	\$39,958.00	

**Project Name: 2014-2016 Long Lake APM Plan Implementation Project**

**Project Year: 2014-2016 (7-24-2013 AIS AEPP Budget)**

Task	Sub-tasks	SEH		Lake Association (time)		Equipment/Paid Services		Sub-Total	Comments
		Time	Dollars	Time	Dollars	Who/What	Dollars		
<b>CLP Monitoring and Management</b>									
Curly-leaf Pondweed Survey	Pre and Post Treatment Survey (40 pts annually)	12	\$960.00			ERS	\$4,500.00	\$5,460.00	\$1500 per year for pre and post treatment survey and reporting
	CLP Bed Mapping	12	\$960.00			CWC	\$1,500.00	\$2,460.00	\$500 annually for 3 years
Residual Testing	Planning	12	\$960.00					\$960.00	
	Sample Collection					CWC	\$1,500.00	\$1,500.00	\$500 annually for 3 years
	Analysis	12	\$960.00			SLOH	\$2,880.00	\$3,840.00	5 sites x 8 testing periods x \$24/test x 3 years
WDNR Permit Fees	Annual Herbicide Application Permit						\$435.00	\$435.00	CLP Chemical application fee (\$145.00 annually)
Wild Rice	Monitoring and mapping	6	\$480.00	36	\$432.00			\$912.00	2 people x 6 hrs x 3 years
	LLPA Boat Use				\$450.00			\$450.00	6 hours x 1 boat x 3 years x \$25/hr
GPS Tracking (CLP & WR)	GPS Units				\$100.00	Garmin 78cs	\$300.00	\$400.00	1 units at \$400/unit
<b>AIS Monitoring and Education</b>									
Long & Mud Lakes (eight monitoring teams)	Training and Support			20	\$240.00	Supplies	\$450.00	\$690.00	1.0 hr training x 2 people x 8 teams
	Monitoring time (once a month, June -Sept)			288	\$3,456.00			\$3,456.00	2 people x 1.5 hrs x 4 dates x 8 teams x 3 years
	LLPA Boat Use				\$3,600.00			\$3,600.00	1.5 hours x 4 dates x 8 boats x 3 years x \$25/hr
Watercraft Inspection (500 hrs annually)	Hunt Hill Intern, AIS/CBCW Coordination summer only			30	\$360.00		\$6,300.00	\$6,660.00	\$2100 annual Intern costs x 3 years
	Boy Scouts					1050 hrs	\$8,400.00	\$8,400.00	350 hrs annually at \$8.00/hr for 3 years
	LLPA Volunteers			450	\$5,400.00			\$5,400.00	150 hrs annually at \$12/hr for 3 years
Public Education	Education Events (at least one annually)	12	\$960.00	30	\$360.00	Supplies	\$600.00	\$1,920.00	Lake Fair, Ice Cream Social, AIS Workshop, Cakes on the Lake, Etc
Bait Dealer Initiative	Involve bait dealers within 20 miles of Long Lake in a public media campaign			16	\$192.00	Supplies	\$150.00	\$342.00	2014
<b>Technical Support</b>									
Planning and Assessment	Annual treatment planning (2014-15)	24	\$1,920.00					\$1,920.00	
	Project summary reporting (2014-15)	24	\$1,920.00					\$1,920.00	
	Printing/Reproduction		\$225.00					\$225.00	
Project Support	Project coordination (2014-15)	24	\$1,920.00					\$1,920.00	
	1 meeting annually (4 hrs prep and 2 hr meeting)	18	\$1,440.00					\$1,440.00	
	Mileage (\$0.56/mile)		\$238.00					\$238.00	
		<b>156</b>	<b>\$12,943.00</b>	<b>870</b>	<b>\$14,590.00</b>		<b>\$27,015.00</b>	<b>\$54,548.00</b>	

**\$54,548.00**

Long Lake	Reimbursable Expenses	\$39,958.00	73.25
	Sponsor Match	\$14,590.00	26.75
	<b>Total Project Cost</b>	<b>\$54,548.00</b>	

---

## **Appendix E**

Project Scope/Description

## **1.0 Description of Project Area**

Long Lake and Mud Lake are located in southeast Washburn County at the headwaters of the Brill River in northwest Wisconsin. Long Lake, the largest lake in Washburn County, covers 3,290 acres and has 44 miles of shoreline. Mud Lake, which drains into Long Lake, covers 126 acres and has 4.4 miles of shoreline. The lakes are a top-quality resource providing exceptional recreational opportunity and possessing outstanding fish, wildlife, and water quality resources. Long Lake is listed as an Outstanding Water Resource by the Wisconsin Department of Natural Resources (WDNR). The watershed, with 117 lakes of 5 acres or more, is also an ecological gem where land and water resources support a diverse wildlife community.

Locally, the Long Lake Preservation Association (LLPA) is the most actively engaged NGO in the watershed. They work with and are supported by the Washburn County Lakes and Rivers Association (WCLRA) and the Long Lake Chamber of Commerce as well as more specialized NGOs such as the Western Wisconsin Land Trust, the Boy Scouts of America and the Friends of the Hunt Hill Audubon Sanctuary.

Long Lake has eight public boat launching sites, with two (Narrows and Town Hall) receiving most of the public launching pressure. There are at least three active resorts on Long Lake: Lincolnwood, Pioneer, and Sunset. Tomahawk Scout Reservation, operated by the BSA Northern Star Council of Minnesota, is located in the center of the “fish hook” on Long Lake. Encompassing more than 2,500 acres of woodland area and over eight miles of shoreline, Tomahawk is home to the council’s summer Boy Scout and Webelos resident camps as well as the Snow Base Winter Camp.

A collaborative agreement between LLPA and Hunt Hill Audubon Sanctuary and Nature Center involves Hunt Hill as our partner in watershed education, hosting our Cakes at the Lake programs and Fall Watershed Fairs, as well as for various committee meetings. Hunt Hill is also the location of the LLPA office.

The Lake hosts multiple bass and walleye fishing tournaments each year, and a huge ice fishing tournament each winter.

As a popular destination lake, Long Lake is at high risk for the introduction of new AIS, particularly EWM which is present in many nearby lakes including the Minong Flowage, Nancy Lake, Gilmore Lake, and Beaver Dam Lake. This proximity makes the lake a candidate for the introduction of EWM via boat traffic. Although EWM was not identified in Long and Mud Lakes during recent survey work, it remains a concern because of its close presence in nearby lakes

Long Lake is a unique and important natural resource in north-west Wisconsin. The lake is considered a highly desirable destination for residents and vacationers alike who participate in lake-centered activities year round. Popular activities include swimming, fishing (and ice-fishing), boating, snowmobiling and Nordic skiing, and enjoying the lake aesthetic while picnicking, walking and biking.

## **2.0 Aquatic Plant Management Plan**

In 2012, the LLPA completed a 5-yr. Aquatic Plant Management (APM) Plan based on survey work completed in 2011 and 2012. This plan was approved by the WDNR in 2012 and stated the following goals:

1. Protect, preserve, and enhance the native plant species community in and around the lakes while maintaining riparian access to open water for recreational use.
2. Maintain navigation for fishing and boating and riparian access to open water for recreational use in problem areas.
3. Monitor and manage curly-leaf pondweed, purple loosestrife, Japanese knotweed and other AIS in and around the lakes and adjacent wetlands.
4. Prevent the introduction of new aquatic invasive species and the spread of existing invasive species from the lakes to other lakes by implementing monitoring, inspection and education programs.
5. Educate and inform the lake community about the importance of aquatic plants in the lake ecosystem and about management alternatives and appropriate management actions.
6. Instill an appreciation for aquatic ecosystems and habitat in the Long and Mud Lake community.
7. Develop a better understanding of the lakes and the factors affecting lake water quality through continued and expanded monitoring efforts.
8. Coordinate water level management with other impoundments in the Red Cedar River watershed.

This project seeks funding to continue AIS education and planning activities and to support aquatic invasive species monitoring and management recommended in the APM Plan.

### **3.0 Description of Problem to be Addressed by Project**

At the present time, Long Lake is not known to have Eurasian water milfoil present. It does have curly-leaf pondweed, first being noted in a field inspection performed by WDNR on June 6, 1990. The bed was found near Holy Island within 70 feet of shore and covered an area of less than one-tenth of an acre. Prior to the early 1990s curly-leaf was considered only a minor threat to waterbodies in Wisconsin and was therefore often not managed; however, with the development of management strategies for EWM, resource professionals started to look at CLP as a manageable AIS.

In 2011 distribution and bed mapping survey found CLP widely scattered throughout the lake; however, growth at nuisance levels was found in less than 5 acres (0.1% of the entire littoral zone). The majority of the CLP plants were found in the northern portion of the Long Lake Narrows. Less dense beds of CLP were also found along the southern end of Holy Island in the south part of the lake, along the western shore near Kunz Island, and near along the eastern shore near the Sunset Bay Road boat launch.

Curly-leaf pondweed has been present for many years without presenting significant problems. The intent of curly-leaf management at this time is not eradication but closely monitoring distribution and limited control efforts in areas where CLP impairs navigation and/or negatively impacts the growth of native plants.

In 2013, the LLPA began chemical treatment of CLP, starting in the Narrows. Physical removal is also included in management efforts. Because Long Lake has several areas with wild rice, a condition of the permit that was awarded by the WDNR in 2013 was to complete



herbicide concentration/residual testing to determine the fate of the herbicide applied. Furthermore, due to conditions that presented themselves in the spring of 2013, it proved difficult for the LLPA to determine whether they should or should not move forward with proposed CLP treatment. It was the desire of the LLPA to have better pre-treatment data than was available in 2013. The LLPA also wishes to know what happens to the herbicide, and if the treatment is effective. Both pre and post treatment point-intercept surveys are planned in each year of CLP management. In addition, CLP distribution and bed-mapping will be completed each year to support management efforts.

Costs for actual management is not included in this grant application, only the resource monitoring and support tasks that make management easier.

Although Eurasian watermilfoil (EWM) has not been identified in Long Lake, it remains a concern because of its presence in nearby lakes including the Minong Flowage, Nancy Lake, Gilmore Lake, and Beaver Dam Lake. This proximity makes the lake a candidate for the introduction of EWM via boat traffic. Continuing watercraft inspection and in-lake monitoring is necessary to prevent the introduction of EWM and other new aquatic invasive species.

#### **4.0 Endangered, Threatened, Special Concern, Sensitive Area Designation, and Wild Rice**

The WDNR completed a Lake Sensitive Area Report on Long Lake in 1998. The sensitive areas survey identified 32 areas that merited special protection and fall into two basic categories: aquatic plant communities providing important fish and wildlife habitat (27 in total), and gravel and coarse rock rubble substrate which provide important walleye spawning habitat (5 in total). Wild rice was documented in ten of the fish and wildlife habitat sensitive areas. Long Lake is listed as “Outstanding” Resource water in Wisconsin.

##### **4.1.1 Rare and Endangered Species and Habitat**

The Natural Heritage Inventory database contains recent and historic observations of rare species and plant communities. Each species has a state status including Special Concern (SC), Threatened (THR) or Endangered (END). Species are listed by township; the lakes are located in the Townships Madge (T38N, R11W), the north part of Birchwood (T38N, R10W), and Long Lake (T37N, R11W)

No endangered species are listed for these townships, but threatened and special concern species are present (Table 3). Full descriptions of the plants and animals on the NHI list are on the WDNR website at <http://dnr.wi.gov/topic/EndangeredResources/biodiversity.html> (last accessed 2012-05-10). The 2011 aquatic plant survey of the lakes found no additional federally listed plant species. It is important for lake management to consider impacts to these valuable species, nearly all of which can be directly affected by aquatic plant management. Choosing the proper management techniques and the proper timing of management activities can greatly reduce or prevent negative impacts.

The Natural Heritage Inventory Program also tracks examples of all types of Wisconsin's natural communities that are deemed significant because of their undisturbed condition, size, what occurs around them, or for other reasons. Natural communities located around Long and Mud Lake can also be found in Table 1.

**Table 1  
Natural Heritage Inventory Listing for Long and Mud Lakes**

Scientific Name	Common Name	State Status	Group Name	T37N R11W	T38N R10W	T38N R11W
<i>Buteo lineatus</i>	Red-shouldered hawk	THR	Bird	X		
<i>Haliaeetus leucocephalus</i>	Bald eagle	SC/P	Bird	X	X	X
<i>Lycaena dione</i>	Gray Copper	SC/N	Butterfly	X		
<i>Gomphus graslinellus</i>	Pronghorned clubtail	SC/N	Dragonfly	X		
<i>Etheostoma microperca</i>	Least darter	SC/N	Fish	X		
<i>Notropis anogenus</i>	Pugnose Shiner	THR	Fish	X		
<i>Notropis nubilis</i>	Ozark minnow	THR	Fish	X	X	
<i>Notropis texanus</i>	Weed shiner	SC/N	Fish	X		
<i>Canis lupis</i>	Gray Wolf	SC/FL	Mammal	X	X	X
<i>Arabis missouriensis</i>	Missouri rock-cress	SC	Plant		X	
<i>Crotalaria sagittalis</i>	Arrow-headed rattle-box	SC	Plant			X
<i>Emydoidea blandingii</i>	Blanding's turtle	THR	Turtle	X		
<i>Lake—deep, hard, drainage</i>			Community	X		
<i>Lake—soft bog</i>			Community	X	X	X
<i>Southern dry-mesic forest</i>			Community	X		
<i>Lake—deep, soft, seepage</i>			Community		X	
<i>Northern mesic forest</i>			Community		X	X
<i>Northern wet forest</i>			Community			X
<i>Open bog</i>			Community			X
THR, threatened; SC, special concern; /FL, federally protected as endangered or threatened /P, fully protected; /N, no laws regulating use, possession or harvest. Data current as of 2011-11-04						

## 5.0 Public Access to the Lake

With at least 5 boat launching sites providing 70 or more vehicle-trailer parking sites (including roadside parking on just about all the landings, public access in Long Lake exceeds the minimum requirements for such as defined in Wisconsin Administrative Code 1.91(4). According to this rule, for a lake system with a total surface area of 1,000 to 4,999 acres at least 1 car-trailer units must be available per 50 acres of surface area. At 3,290 acres, Long Lake is required to have at least 66 sites.

## 6.0 Previous and On-going Actions to Improve the Lake

The LLPA has implemented many programs to help educate lake users and protect this pristine body of water. Through an annual calendar, several Cakes on the Lakes events, and a public lake fair/ice cream social event, AIS education is being promoted continuously. In the last project, planning work was done to implement shoreland improvement projects at the Town Hall landing, and several private landowners. Hunt Hill is the permanent site of a green and growing collaboration between LLPA, the Audubon Sanctuary and UW-Extension. With the help of Master Gardeners, and others who attended the free how-to sessions, three impervious surfaces there now drain into rain gardens. Seven kiosks were built and placed at various watershed landings, including five on Long Lake. The additional kiosks are at Slim Creek Landing and on Little Devil's Lake.

The structures are designed with a large display area for posters and information pertaining to DNR rules and regulations. Below is an area designated for informative pamphlets and cards

identifying various exotic species. This LLPA project will provide updated and timely information for watershed visitors and riparian owners through the years, as people take advantage of the literature displayed.

The Watershed Protection and Enhancement Committee of the LLPA lists the following actions as part of their responsibilities:

- Improve Compliance with Existing Resource Related Regulations
- Minimize Development Impacts Through Zoning and Subdivision Standards
- Promote Long Lake Area Resource Reserves and Corridor System
- Creating a Prioritized Inventory of Impaired Shorelands and Fisheries Habitat
- Formulating Specific Restoration Strategies for High Priority Restoration Sites
- Increasing Tree and Shrub Planting Efforts

## **7.0 Discussion of Project Goals and Objectives**

The purpose of this project is to implement AIS management recommendations and provide education about AIS and available management alternatives to the Long Lake community. The goals of this project, which are derived from goals set forth in the Long and Mud Lakes Aquatic Plant Management Plan, are as follows

1. Protect, preserve, and enhance the native plant species community in and around the lakes while maintaining riparian access to open water for recreational use.
2. Maintain navigation for fishing and boating and riparian access to open water for recreational use in problem areas.
3. Monitor and manage curly-leaf pondweed, purple loosestrife, Japanese knotweed and other AIS in and around the lakes and adjacent wetlands.
4. Prevent the introduction of new aquatic invasive species and the spread of existing invasive species from the lakes to other lakes by implementing monitoring, inspection and education programs.
5. Educate and inform the lake community about the importance of aquatic plants in the lake ecosystem and about management alternatives and appropriate management actions.
6. Instill an appreciation for aquatic ecosystems and habitat in the Long and Mud Lake community.
7. Develop a better understanding of the lakes and the factors affecting lake water quality through continued and expanded monitoring efforts.
8. Coordinate water level management with other impoundments in the Red Cedar River watershed.

## **8.0 Description of Methods and Activities**

### **8.1 Curly-leaf Pondweed Monitoring and Management**

The purpose of the activities included in this task is to monitor the distribution and density of CLP in the lakes and to perform management activities following the WDNR approved Aquatic Plant Management Plan. Activities will also track positive or negative impacts on the native plant community caused by CLP management.

#### **8.1.1 Pre and Post Treatment Aquatic Plan Survey**

It is anticipated that approximately 3-5 acres of CLP will be chemically controlled each year in Long Lake. Currently, this management is proposed to be early season application of an endothall-based liquid herbicide (Aquathol K). Pre-treatment survey work is planned to ensure the presence of CLP before treatment. Post-treatment survey work will be done within 4-5 weeks of herbicide application to determine changes to both the target and non-target plants after treatment. Approximately 40 points will be surveyed by an independent plant survey consultant in each year of treatment. Pre- and post-treatment surveys will be completed following WDNR-approved methods.

#### **8.1.2 Curly-leaf Pondweed Bed Mapping**

Annual curly-leaf pondweed bed mapping will be completed to track the expansion and yearly variability of CLP growth. Data collected will be transferred to their consultant, who will add it as an ArcGIS layer from which to make yearly comparisons and set up future treatments. The entire visible littoral zone of the lakes will be surveyed. A CLP bed is defined to be any area where visually estimated CLP makes up greater than 50% of the plants in an area, is generally continuous with clearly defined borders, and is canopied or close enough to being canopied that it would likely interfere with boat traffic. After a bed is located, surveyors will motor around the perimeter of the area, take GPS coordinates at regular intervals, and estimate the average rake fullness rating of CLP within the bed. These data are then mapped using a GIS for use in developing future treatment plans.

#### **8.1.3 Herbicide Concentration/Residual Testing**

In 2013, herbicide residual testing was required as a condition of a chemical application permit being approved. In 2013, this testing was set up by the WDNR and Army Corp of Engineers (USACOE), and all water samples were collected by the LLPA. Lab analysis was completed by the USACOE. If the USACOE and the WDNR still offer this service in 2014 and beyond, the LLPA will work with them. If not, funding has been requested in this grant application to support water sampling and sample analysis through the Wisconsin State Lab of Hygiene. Residual sampling guidelines established by the USACOE and WDNR will be followed. Residual samples results will be used to help improve management efforts.

#### **8.1.4 Technical Support – Treatment Planning and Summary Reporting**

The LLPA will work with their consultant to facilitate annual CLP management planning and end-of-season summary reporting including annual treatment planning, establishing survey points, analyzing bed mapping results and providing oversight and quality control.. Their consultant will provide project oversight and guidance to insure smooth and efficient completion of the actions proposed in this project.

### **8.2 AIS Education, Monitoring and Prevention**

The purpose of AIS monitoring is to provide opportunity to discover new AIS that may enter the system. Currently Eurasian watermilfoil (EWM) has not been identified in Long Lake, but it is in nearby lakes. The total time included in this project for these events is tracked in the budget that accompanies this grant application.

The purpose of AIS education is to continue efforts to have an educated and informed lake community that supports and participates in AIS monitoring efforts.

### **8.2.1 Bait Dealer Initiative**

In 2011, several live bait dealers around Long Lake including Long Lake Bait and Tackle, Lincolnwood Resort, and Triple A Sports in Spooner participated in an AIS Bait Vendor Outreach and Behavior Case Study. As a result these businesses were recognized as businesses that are “partners in protecting local lakes”. These businesses were provided with handout materials including a floating keychain, bait bucket stickers, a brochure for customers, and a FAQ card to provide answers to basic questions about the program. There are several other local bait dealers in the area, including The Bear Paw, Farm and Fleet, and Rainbow Home Center in Rice Lake, and Seasonal Power Toys in Birchwood. The LLPA will contact these and other bait dealers identified within 20 miles of Long Lake and solicit their participation in a similar effort, and if the business is willing, provide similar materials (assuming they are available) for distribution to the public.

Once this grant has been awarded, the LLPA will work with the Washburn County AIS Coordinator to develop a contact plan for area businesses. Then in early 2014 these businesses will be contacted with the intent to make materials available to the public by the fishing opener in early May.

### **8.2.2 Watercraft Inspection**

This project includes 500 hours of watercraft inspection time annually. At least 200 hours each will be put in at the Narrows and Town Hall Landings, with an additional 100 hours put in at other landings on the lake. Time will be generated by LLPA volunteers and time put by the Scout Camp. The LLPA will make a donation to the Camp based on the time put in. Much of this time will be put in while participating in the annual 4<sup>th</sup> of July Landing Blitz sponsored by the WDNR.

### **8.2.3 AIS Monitoring**

At least eight teams of volunteer AIS Monitors will be trained to monitor for EWM and other AIS including purple loosestrife, zebra mussels, and rusty crayfish. Citizen Lake Monitoring Network guidelines for AIS monitoring will be followed and appropriate records kept and entered into the WDNR SWIMS database by the end of the each year of this project. In addition to the standard AIS included in the CLMN program, volunteer monitors will look for Japanese knotweed and giant reed grass. These teams will complete at least 4 regularly scheduled monitoring events during the open water season each year of this project.

### **8.2.4 Public AIS Education Events**

The LLPA will sponsor at least one public education events to involve the lake community in its efforts at management and monitoring. The event could be a lake fair, public training event, or AIS focused presentation by a resource professional. In addition, management updates will be provided in its bi-annual newsletter and annual meeting.

### **8.2.5 Hunt Hill Intern/AIS Coordinator**

To help coordinate the volunteer monitors, an intern hired by Hunt Hill will utilized as an AIS Monitoring Coordinator. Nearly all of the time this person puts in on behalf of the LLPA will be related to AIS monitoring and Clean Boats Clean Waters. The intern will also help with data entry and providing educational support through various programs sponsored both by the LLPA and Hunt Hill. The intern will be responsible for contacting volunteer and

paid watercraft inspection monitors, AIS monitors, and others in order to fill the required expectations of this project. The Coordinator is expected to fulfill the following obligations:

- Be responsible for gathering data coming in from at least eight teams of monitors.
- Establish at least 4 official monitoring dates between June and September and make sure volunteers are prepared and follow through.
- Be Responsible for confirming that each team and each monitoring event has been completed
- Be responsible for timely entry of the data from the appropriate forms into the DNR's SWIMS website
- Training provided by Washburn County will occur in the spring and attendance by this coordinator is recommended but not mandatory.

#### **Additional Tasks**

- Help organize Curly Leaf Pondweed (CLP) bed mapping and organize teams to manually pull CLP
- Write monthly emails to update all volunteers on activities each month. Attend LLPA board meetings
- Coordinate work done by Hunt Hill employees on behalf of the LLPA AIS program. The LLPA has an agreement with Hunt Hill to reimburse them for time put in by their employees on behalf of the LLPA

### **8.3 Water quality monitoring**

Citizen Lake Monitoring Network sampling efforts currently include Secchi disk readings and expanded chemistry monitoring on several sites. The established monitoring program will not be changed.

### **8.4 Native Species Preservation, Protection and Enhancement**

#### **8.4.1 Wild Rice Mapping and Education**

Long Lake is wild rice water. According to GLIFWC, Long Lake has supported rice beds for a very long time. The harvest of rice on the lake is date-regulated. Rice occurs in several locations, but the biggest bed is usually west of Rice Island (Figure 17). Although rice accounts for a fairly small portion of the surface area of the lake, these beds are quite important ecologically, and are frequently harvested. Peter David, GLIFWC Wildlife Biologist, would welcome more information on the annual abundance of the smaller beds on this lake.

To help collect this information, LLPA volunteers will map the rice distribution in Long and Mud Lakes annually in August. Mapping data will be transferred to their consultant who will add it as an ArcGIS layer from which to make yearly comparisons. This information will be used with CLP density mapping to identify any impacts CLP may be having on the wild rice growth. The rice mapping will also provide valuable information for plant management planning, particularly with regards to methods employed and the timing of management activities. An informational meeting will be held in 2014 covering wild rice identification and its cultural and ecological importance. Result of annual mapping will be presented at another meeting in 2014 or 2015.

## **8.5 Garmin Mapping Hand Held GPS**

A Garmin Mapping GPS Unit will be purchased to support bed mapping activities for wild rice and CLP. The Garmin Mapping GPS Unit is the most common handheld GPS device used by the industry and is capable of transferring data points to and from the device to a GIS with relative ease. Consultant time to analyze the data points will be minimized if the data points collected are fully capable of being integrated with other industry standards.

## **9.0 Description of Project Products or Deliverables**

Annual treatment plans, summary reports, plant survey results, management records, volunteer monitoring records, maps and GIS files will all be deliverables. Copies of the main documents will be shared with the LLPA, WDNR, and Washburn County. All documents will be in both paper and digital format for ease of sharing. Programs, schedules, and participation lists will be generated and included with annual summary reports.

## **10.0 Description of Proposed and Existing Partnerships**

Support for this project has been offered by Washburn County, the Town of Long Lake, the Holy Island Property Owners Association, Hunt Hill Audobon Sanctuary, and the Town of Birchwood. These partnerships have been in effect for many years. The LLPA may partner with the USACE for herbicide residual testing.

## **11.0 Discussion of the Role of this Project in Lake Management Planning**

This project implements recommendations made in the Aquatic Plant Management Plan for Long and Mud Lakes. This AIS education grant will allow the LLPA to move forward with implementation of the activities recommended to protect and preserve Long and Mud Lakes.

## **12.0 Timetable of Activities**

This project covers a time period of three years. All actions in this project will be completed by June 30, 2017. Annual summary reports will be completed by March 31 of the year after the given year. All watercraft inspection and AIS monitoring data will be submitted to the WDNR SWIMS database prior to the end of the given year.

## **13.0 Plan for Sharing Results**

All required records, data results, and other information will be part of the deliverables. Annual meetings and newsletters will keep the community and stakeholders up to date on the progression of this project and offer numerous educational opportunities. Treatment plans and summary reports will be made available to the LLPA, Hunt Hill, WDNR, and Washburn County. Digital versions of reports and plans will be available upon request. Annual Pesticide Application Permits will be prepared by the chosen Applicator and the LLPA with input from their chosen lake consultant. GIS files related to this project will be archived by the LLPA and their consultant and will be provided upon request.

## **14.0 Final Request for Funds through the Aquatic Invasive Species Education, Planning, and Prevention Grant Program**

Please accept this AIS education, planning and prevention grant application for the Long and Mud Lakes on behalf of the Long Lake Preservation Association. The LLPA and their partners will provide a 25% sponsor match to support funding awarded by the state. If you have any questions please don't hesitate to ask the LLPA representative for this project or to contact me.

## **15.0 Specific Ranking Questions**

Project Ranking for Subchapter II – Education, Prevention and Planning Projects

**Section A: (6 points)**

The LLPA will be participating in the 4<sup>th</sup> of July Landing Blitz in each year of this project. The LLPA will be implementing the Bair Dealer Initiative for area resorts and community businesses that sell bait.

The LLPA will sponsor training events for CBCW and AIS monitoring through UW-Extension Lakes and the Citizen Lake Monitoring Network AIS Monitoring Program. Eight teams of AIS Monitors will survey Long and Mud Lakes at least four times each open water season. Additional monitoring time will be completed in front of all public and private, marked and unmarked accesses to the lake.

This project will deliver professional level monitoring maps and reports for curly-leaf pondweed, wild rice, and other native plants through pre and post treatment aquatic plant surveys and bed mapping efforts following approved WDNR methods.

The LLPA does conduct a CBCW watercraft inspection program. Currently in 2013 they have logged close to 300 hrs of paid and volunteer inspection time. Long Lake currently has CLP present in the waters adjacent to most of the public access points. They plan to log a minimum of 500 hours annually during this new project.

The LLPA is not offering other complimentary source containment activities.

**Section B: (4 points)**

Long Lake is not listed as Statewide AIS Source Water. It is however a CLP source water with high public use, and is greater than 500 acres, and it exceeds minimum boating access criteria.

**Section C: (2 points)**

An APM Plan has already been completed for Long Lake, and approved by the WDNR, so this project implements actions listed in that plan.

Long Lake is listed as outstanding resource water, has had a sensitive areas survey completed, and has several species that are on the threatened or special concern list. The aquatic plant FQI is more than double the eco-region average.

**Section D: (0 points)**

CLP in Long Lake is not considered a pioneer population, even though its total population in Long Lake is well under 5% of the littoral zone. An early response project has never been applied for or awarded.

**Section E: (2 points)**

The LLPA completed a larger AIS education, prevention and planning project that was focused on the writing of an Aquatic Plant Management Plan.

Although in this most recent grant application time frame the LLPA did not meet with the WDNR, it did meet with them earlier in the year when it was determined that the AIS Established Control grant application submitted in February 2013 was not valid. At that time the WDNR believed this to be a better AIS education project. Based on these discussions, changes have been made to the original AIS Established Infestation grant to have it better fit the mold of an AIS Education grant application.



**Section F: (2 points)**

Long Lake provides more than the minimum required access for a lake its size. There are at least three private resorts still in operation on Long Lake, and the Tomahawk Boy Scout Camp covers 2500 acres in the watershed and more than 8 miles of shoreline.

**Section G: (0 points)**

This project does not create or improve any local ordinances or new lake rules, nor does it include developing plans for shoreland restoration, habitat protection, and or nutrient control. It is not a Green Tier community.

**Section H: (2 points)**

The LLPA is requesting a little over 73% of the total costs to implement this project from the state. There is no other entity at the present time that is contributing 10% of the project costs with cash.

The LLPA sponsored and paid for 3.5 acres of CLP control near the Narrows Landing using aquatic herbicides. It intends to continue this management, covering the costs for actual treatment themselves.

Hunt Hill has committed to working with the LLPA on many projects including the hiring of an intern, Cakes on the Lakes, and other projects. Hunt Hill serves as the office and meeting place for the Board of Directors that oversees the daily operations of the LLPA.

**Section I: 0 points**

The LLPA did previously receive and AIS education grant.

**Section J: 1 point**

A summary report of actions taken will be completed at the end of each year of this project. This report will be completed by a consultant hired by the LLPA. In addition, if the herbicide residual monitoring programs sponsored by the WDNR and USACOE are still valid in each year of this project, the LLPA will be working with them.

**Total Score = 19 points**

Dave Blumer | Lake Scientist  
SEH | 1701 West Knapp Street, Suite B | Rice Lake, WI 54868  
715.861.4925 direct | 715.651.7174 cell | 715.234.4069 fax  
dblumer@sehinc.com  
www.sehinc.com  
SEH—Building a Better World for All of Us™

---

## **Appendix F**

Other Information in Support of Project



Matthew S. Berg, Research Biologist  
[saintcroixdfly@gmail.com](mailto:saintcroixdfly@gmail.com)  
 572 N. Day Road  
 St. Croix Falls, WI 54024  
 715-483-BUGS (2847) 715-338-7502 (cell)



*Specializing in Aquatic Plant, Mussel, Dragonfly and Bird Surveys  
 Habitat Assessment and Endangered Species Mitigation*

This document is to serve as an itemized contract proposal between Short Elliott Hendrickson Inc. (SEH) and Endangered Resource Services, LLC (ERS). At the request of SEH, we propose completing a 2013 Curly-leaf pondweed (*Potamogeton crispus*) pre-herbicide application, post-herbicide application, and Ponar dredge turion surveys using the methods outlined by the Wisconsin Department of Natural Resources on Long Lake, Washburn Co.

Details of the contract are as follows:

A. GIS to Generate Pre-survey points	SEH generated
B. Pre-treatment survey of CLP beds – 40 points 2 person crew for 1 day (6 hours at \$75/hr + 50 mileage) Including map generation of the day's data	\$ 500
C. Post-treatment survey of CLP beds – 40 points 2 person crew for 1 day (6 hours at \$75/hr + 50 mileage) Including map generation of the day's data	\$ 500
D. Turion survey of 45 points in the fall	<del>\$1,250</del>
E. Statistical Analysis of Data 1 person for 20 hours @ \$25/hr	\$ 500
F. Final Reports of Surveys 1 person for 20 hours @ \$25/hr	<del>\$ 500</del> \$250.00
<hr/>	
Total Cost for Surveys	<del>\$3,250</del> \$1,750

Detailed Description of Cost Breakdown:

- A. SEH will generate survey grids of all planned treatment beds.
- B. A pre-treatment survey of CLP plants using the Point/Intercept methods established by the WDNR will be conducted. A preliminary report of this data will be generated and distributed to SEH, and the Long Lake Preservation Association. A preliminary bill will be presented at this time.
- C. A post-treatment survey to determine the effectiveness of the herbicide treatment and an updated report of this data will be generated and distributed to SEH, and the Long Lake Preservation Association.
- D. ~~Using a petite Ponar dredge sampler, we will take sediment grabs at 30 points to determine the density of latent CLP turions throughout the treatment area. This data will be used to determine if or where treatment might be considered in 2014.~~
- E. All data collected in the field will be entered into an Excel spreadsheet, and uploaded into ArcView for the purpose of generating species distribution maps. All ArcView files will be burned to a cd and presented to SEH, the Long Lake Preservation Association, and the WDNR as part of the final report. This data may be used in any further planning as needed by SEH/the Long Lake Preservation Association now or in the future, or the WDNR to assist SEH to that end. This data remains the intellectual property of ERS, and may not be sold, published or distributed by a party other than SEH, or the WDNR without the expressed written consent of ERS.
- F. A final report that includes study background and rationale, a detailed explanation of the methods used, highlights of pertinent results, and suggestions for the Long Lake Preservation Association to consider as they move forward in the management of their resource will be included in the body of the paper. Appendices will include copies of data sheets, pre and post CLP maps, turion map, and a copy of all raw data in spreadsheet form.

Payment in full is expected approximately 30 days following the delivery of the final report by ERS, and the satisfied acceptance of said report by SEH. It is understood by both parties that the acceptance of the final report by SEH may take time due to unavoidable 3<sup>rd</sup> party time constraints tied to availability of reviewing board members, grant funds, etc. Both parties further understand that a good faith effort will be made to bring the contract to completion as soon as possible. If payment will be later than 30 days past delivery/acceptance of the final report due to unexpected 3<sup>rd</sup> party constraints, it is requested that SEH notify ERS.

Signature below indicates that both parties understand the services to be rendered at the costs outlined and agree to all provisions as stated. No change to this contract shall be made without written approval and acceptance by both parties.



1/9/2013

\_\_\_\_\_  
Matthew S. Berg  
Endangered Resource Services, LLC

\_\_\_\_\_  
Date:

\_\_\_\_\_  
Dave Blumer  
SEH

\_\_\_\_\_  
Date:

**Long Lake, Washburn County, Herbicide Sample Plan, 2013**  
**John Skogerboe**

A map with the herbicide sample site locations is attached and the coordinates are provided with the map. Data are in degrees and the datum is WGS84. The coordinates can also be emailed to you. Samples will need to be collected at different intervals throughout the project and are listed below.

Long Lake Herbicide Sample, 2013		
Interval	Samples/interval	Total Samples
1 HAT	5	5
3 HAT	5	10
6 HAT	5	15
24 HAT	5	20
48 HAT	5	25
72 HAT	5	30
96 HAT	5	35

- **Water samples can be collected using an integrated water sampler. An example of how to construct an integrated sampling device using a sump pump check valve, a 2" to 1 1/2" coupler, and an 8 to 10 ft section of PVC pipe is provided below. I can provide one if necessary, but shipping the PVC is cumbersome. The materials can be purchased at a hardware store and are inexpensive. Water is collected by pushing the pipe straight down to within 1 ft of the bottom or as far as it will go in deep water. The pipe is brought to the surface and emptied into a bucket using a screw driver to push open the check valve.**
  1. **If you already have a water sampling device that you feel comfortable with, please use that instead of the integrated sample device.**
  
- **Samples should be collected at each point using a GPS at each interval listed above. Sample bottles and labels will be provided. If you need a GPS please let us know. Write the name of the lake, date, sample location and sample interval on the label. Please print and fill out a data sheet for each sample interval.**
  
- **Please record daily water temperatures if possible, and record the approximate wind direction and speed (ie 5 to 10 mph, W SW) on the data sheet.**
  
- **After the days sampling is complete, place 3 to 4 drops of Muriatic acid in each bottle with the eye dropper (acid and eye dropper provided). I recommend that you wait until you get back to shore. The acid fixes the herbicide and prevents any degradation of the herbicide. The samples can then be placed in a refrigerator or freezer until shipped to our lab in FL.**

- **Samples may be shipped at any time during the project. Some people prefer to ship every week or two and some prefer to wait until the project is complete. Please include the data sheets or copies when the samples are shipped. A copy of a FedEx shipping label is provided with our appropriate account numbers. Please ship standard overnight and check "bill to receiver". We do not have shipping accounts with other shippers. When ready, ship to the following address.**

**Shipping location:**

**Mike Netherland**

**US Army Engineer Research and Development Center**

**Center for Aquatic and Invasive Plants**

**7922 NW 71<sup>st</sup> Street**

**Gainesville, FL 32653**

**352-392-0335**

**mdnether@ufl.edu**

**Please notify me by e-mail when you are going to ship samples. The sample intervals are not set in stone. If the weather is bad or you need to be else where on a particular day the samples can be collected on the following day. If you have and questions, please call me or contact me by email. I can be reached at the following:**

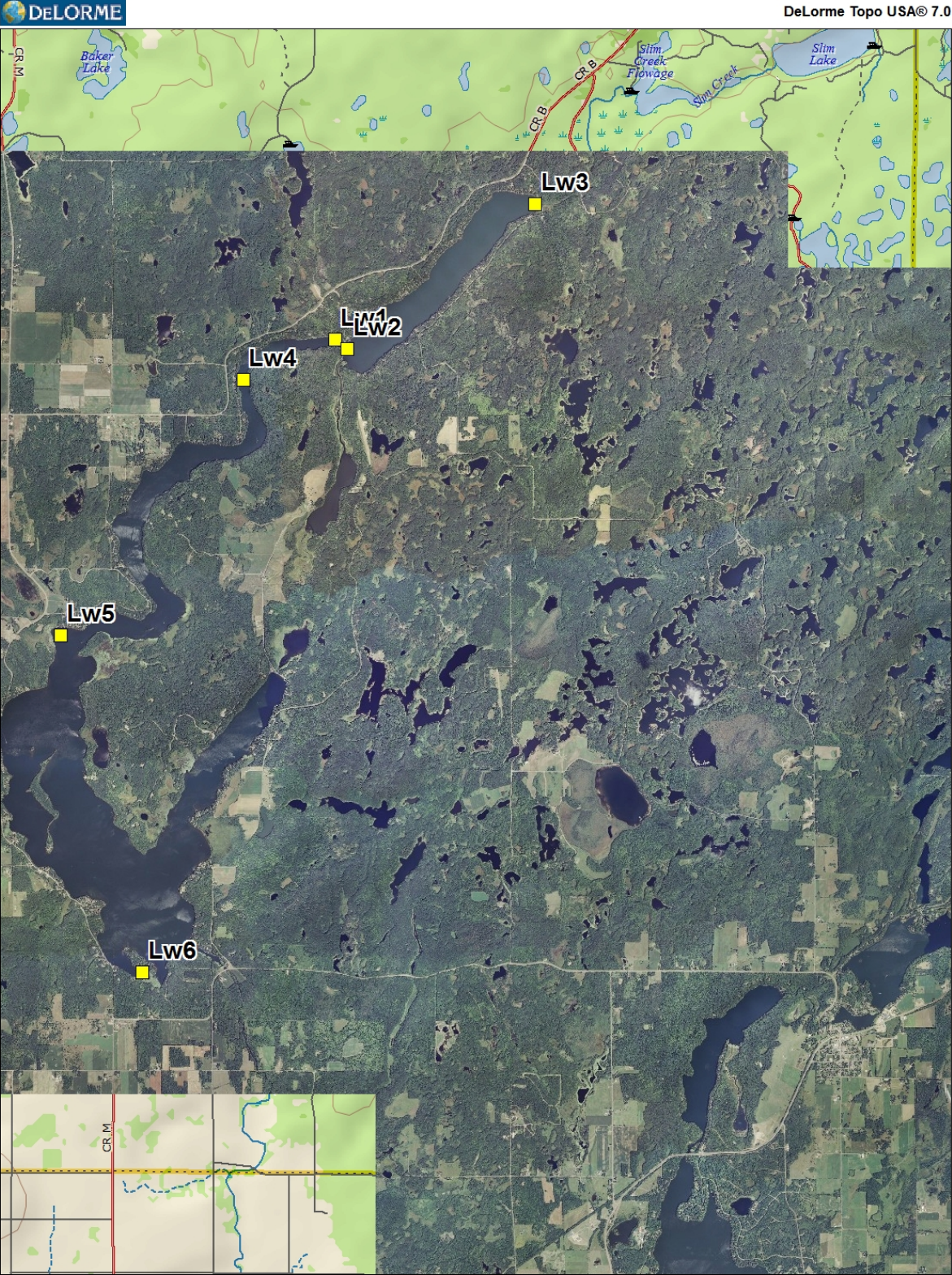
**[jskogerboe@comcast.net](mailto:jskogerboe@comcast.net)**

**651-328-0769 (cell phone/voice mail)**

# Long Lake Herbicide Sampling Data Sheets, 2013

<b>Sample Interval</b>			
<b>Site</b>	<b>Sample Depth</b>	<b>Time</b>	<b>water temp., wind</b>
<b>Lw1</b>	<b>Integrated</b>		
<b>Lw2</b>	<b>Integrated</b>		
<b>Lw3</b>	<b>Integrated</b>		
<b>Lw4</b>	<b>Integrated</b>		
<b>Lw5</b>	<b>Integrated</b>		
<b>Lw6</b>	<b>Integrated</b>		Not Applicable

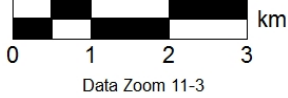
# Long Lake Herbicide Sample Locations, 2013



Data use subject to license.

© DeLorme. DeLorme Topo USA® 7.0.

[www.delorme.com](http://www.delorme.com)





## Long Lake Herbicide sample site coordinates

North	West	Site
45.756595,	-91.658100,	Lw1
45.755280,	-91.655666,	Lw2
45.775716,	-91.617703,	Lw3
45.714798,	-91.713779,	Lw5
45.750933,	-91.676766,	Lw4

## Integrated Water Sample Device



Integrated sampler requirements,  
2" Pvc pipe, sump pump check valve, and 2" x 1 1/2" coupling



Assemble integrated sampler with a flathead screw driver.

# Copy of FedEx Shipping Label

**FedEx** US Airbill  
Express

Tracking Number: 8750 2564 4570

1 From *Please print and press hard.*  
Date: \_\_\_\_\_ Sender's FedEx Account Number: **SENDER'S FedEx ACCOUNT NUMBER 5017**  
Sender's Name: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

2 Your Internal Billing Reference **Netherland Projects**  
To Recipient's Name: **Mike Netherland** Phone: **352-392-0335**  
Company: **USAERDC Center for Aquatic and Invasive Plants**  
Address: **7922 NW 71<sup>st</sup> St**  
City: **Gainesville** State: **FL** ZIP: **32653**

**Try FedEx® QuickShip at fedex.com**  
Access the shipping tools you need directly from Microsoft® Office Outlook.®

0200 Sender's Copy

4a Express Package Service *1 to most locations*  
 FedEx Priority Overnight  
 **FedEx Standard Overnight**  
 FedEx 2Day  
 FedEx Express Saver

4b Express Freight Service *2 to most locations*  
 FedEx 1Day Freight  
 FedEx 2Day Freight  
 FedEx 3Day Freight

5 Packaging *1 to most locations*  
 FedEx Envelope®  
 FedEx Pak®  
 FedEx Box  
 FedEx Tube  
 **Other**

6 Special Handling and Delivery Signature Options  
 SATURDAY Delivery  
 **Signature Required**  
 Direct Signature  
 Indirect Signature

7 Payment Bill to:  
 Sender  
 **Receiving**  
 Third Party  
 Credit Card  
 Cash/Check

Total Packages: \_\_\_\_\_ Total Weight: \_\_\_\_\_ Total Declared Value: \_\_\_\_\_

606



# Executive Summary

Bait shops are on the front lines in the battle to stop the spread of invasive plants, animals and diseases in Wisconsin's lakes and rivers. Research indicates that bait shop owners and employees are considered “opinion leaders” by the transient boaters and anglers they interact with on a daily basis.

In 2011, qualitative research was conducted in ten bait shops in three Wisconsin communities: Spooner, Minocqua and Shawano. Bait business owners were interviewed in a semi-structured format, and unstructured conversations occurred with several customers. Interactions between bait shop owners and their customers were also observed. On average, each visit lasted 45 minutes. Several important points emerged from the interviews regarding perceived opportunities and obstacles among bait shop owners and employees in terms of encouraging their customers to adopt practices that prevent the spread of AIS.

## Challenges

### Uncertainty about the issue

There appeared to be a lack of understanding among bait business employees about what many invasive species are, and why they are problematic. Most people expressed the sentiment that the issue is “too far gone” and AIS prevention efforts are somewhat futile. Another obstacle to communication is a lack of awareness of prevention efforts on behalf of the DNR. Some felt uncertain about what efforts have been made to control AIS, or how donated money in the form of segregated fees is being spent.

### Lack of Self-efficacy

Although interview participants agreed AIS are a problem, most felt that certain actions, such as washing their boats, are impractical and don't serve much purpose. Emphasizing how the actions of each boater can impact AIS prevention efforts will increase self-efficacy, or the belief that their efforts can make a difference.

### Time

During the fishing season, when bait shops are the busiest, time is the greatest obstacle to addressing the issue of AIS with customers. The top priority for bait shops is to make a profit, and during these peak times, conversations about AIS take time away from sales.

## Opportunities

### Bait Shop owners are willing to help

Despite their concerns, bait shop owners recognize that AIS are problematic and have the potential to harm their businesses. Bait shop owners and employees are willing to share information with customers by placing informational materials in their store and answering customers' questions.

### Point of sale is prime opportunity to share info

There appear to be several natural opportunities for bait shop employees to address the problem of AIS with customers, such as during the sale of fishing licenses. Most bait business owners stated that customer questions most often arise during the point of sale. This interaction also provides a targeted opportunity to hand out informational materials or giveaways.

### Customers appreciate giveaways

When asked for ideas to reach out to customers, bait business owners stated that customers appreciate “freebies” and giveaways. Most people interviewed said giveaways are a great way to get a message out. As customers are usually happy to receive these items, it may make them more receptive to additional information about AIS. Most bait businesses are willing to hand them out for free with the purchase of a license or bait.

## Recommendations

Based on our research, we will create and distribute a toolkit building on social marketing principles to share with bait businesses:

### ENCOURAGING PUBLIC COMMITMENT

Research suggests that when individuals are encouraged to publicly express commitment to a behavior, they are more likely to adopt an identity that is consistent with that behavior. Building on this social marketing strategy, the following materials have been developed:

Item: Bait Shop Certificate

Target Audience: Bait shop owners

Description: Upon agreeing to place AIS prevention materials in their stores, bait shop owners will be presented with an official certificate of recognition identifying their store as a partner in protecting local lakes. The professionally designed certificate will be displayed in the store to demonstrate their public commitment to AIS prevention.

Item: Media Relations

In order to further encourage bait shop owners and employees to adopt an identity that is consistent with their public commitment to be partner in community-wide efforts to prevent the spread of AIS, coordinators will send out customizable press releases that are provided to them to local newspapers and media outlets that highlights specific bait shops' participation in this initiative.

Item: Advertising

All participating bait shops will also be recognized in a one-time advertisement published in the Wisconsin Outdoor News, the state's primary news magazine targeting Wisconsin anglers and hunters, acknowledging their involvement.

### PROVIDING 'PROMPTS'

Social marketing emphasizes the value of providing 'prompts' or reminders to target audience members about following a particular behavior that have explicit, self-explanatory instructions, preferably as close as possible to when people are likely to practice a particular behavior. The items listed below leverage this concept:

Item: Floating key chain

Target Audience: Bait shop customers

Description: A round floating keychain featuring the Stop Aquatic Hitchhikers! logo on one side, and the important steps on the other. This item will serve as a conversation prompt in the bait shop. The key chain will also provide a continuous reminder to anglers of the important steps for AIS prevention.

Item: Bait bucket stickers

Target Audience: Bait shop customers

Description: Bait bucket stickers from the DNR will be provided as an extension of current outreach efforts. These stickers will remind anglers of the four steps when they are fishing or in their boats to practice behaviors that prevent the spread of AIS.

Item: Brochure

Target Audience: Bait shop customers

Description: Bait shop owners indicated that existing literature about AIS contains too much information and text, which ultimately detracts from the main message. The brochure in this toolkit features the four main steps for AIS prevention and emphasizes the importance of prevention-related behavior. The brochure also presents information about the dangers of AIS in a way makes the issue more personal to customers than existing literature.

Item: Bait Vendor "Talking Points" Document

Target Audience: Bait shop owners and employees

Description: This document is designed to supplement the brochure by providing bait shop employees with additional information that will enable them to answer frequently asked AIS-related questions that customers may have.

## Appendix 1

### Participating Bait Businesses

#### Spoooner

- ›AAA Sports Shop, N5765 Bear Path Lane, Spooner, WI 54801 (715) 635-3011
- ›Lincolnwood Resort, N 1075 East Side Road, Birchwood, WI 54817 (715) 354-3533
- ›Long Lake Bait & Tackle, W2477 CR-B, Sarona, WI 54870
- ›Stone Lake Bait & Tackle, 5528N County Hwy BB, Stone Lake, WI 54876

#### Minocqua/Woodruff

- ›Kurt's Island Sportshop, 824 N Hwy 51 PO Box 1144, Minocqua, WI (715) 356-4797
- ›Captain Hook's, 7251 Bradley St, Lake Tomahawk, WI 54539 (715) 277-2405
- ›Rollie & Helen's Musky Shop, 7542 US Highway 51, Minocqua, WI 54548 (715) 356-6011

#### Shawano

- ›Kuhn's Bait & Tackle Palace, 202 Airport Road, Shawano, WI 54166 (715) 524-5252
- ›Wolf River Bait and Tackle, 1148 S. Main Street, Shawano, WI 54166 (715) 526-7696
- ›Hacker Bait & Tackle, W5560 Lake Drive, Shawano WI 54166-1460 (715) 526-3339

## Appendix 2

### Semi-Structured Interview questions

Note: Interviews were conducted in an open-ended format and questions varied based on content of individual conversations.

- 1.) What barriers do you encounter when trying to talk to your customers about fishing issues?
- 2.) Do your employees address any of the problems related to AIS and VHS with your customers? If so, how?
- 3.) How much would you say your business emphasizes the problem of AIS and VHS to your customers?
- 4.) Thinking about your customers, how aware do you think they are about AIS and VHS?
- 5.) Would your business/employees be willing to work with us to help spread the word about AIS and VHS?
- 6.) What types of reactions do you observe when addressing the topic of AIS with customers?
- 7.) How often do you ask customers to donate money to AIS research during the sale of fishing licenses?
- 8.) How often are customers willing to donate money when prompted?
- 9.) What types of reactions do you observe when you ask this question?
- 10.) We would like to pilot test several items that communicate a message about AIS prevention. Can I get your feedback on a few of our ideas?
- 11.) If we were to provide any of these items to you to place in your store, what would you do with them? (prompts: sell them with other merchandise? hand them out? Put out somewhere so customers can take them? etc)
- 12.) Do you have any suggestions for what message we should use?
- 13.) Do you have any other ideas for items or materials?

Authors:

**Bret Shaw, Ph.D.**

Environmental Communication Specialist  
University of Wisconsin-Extension

**Allison Howell**

Department of Life Sciences Communication  
University of Wisconsin-Madison



# Long Lake Preservation Association

To preserve and protect Long Lake, its watershed and its ecosystems

Home

Who We Are

Our Picture Book

Events

Projects

Partners

Wild Life Inhabitants

Current Lake Conditions

Lake Friendly Living

Lake Info and Maps

Volunteer

Donations

61°F  
Feels like 61°F  
Overcast



Today:  
72°F / 58°F



Tomorrow    Thursday    Friday  
          
74° / 56°    72° / 54°    70° / 50°

Data powered by



## Who We Are



### ***Our Mission: To Preserve and protect Long Lake, its watershed and ecosystems.***

The mission of the Long Lake Preservation Association is to maintain, protect, and enhance the quality of the lake and its surroundings for the collective interests of the members and the general public, to carry out educational programs, and to make representations on behalf of its members. The LLPA is an organization of standing committees structured around priorities and strategies intended to benefit the Long Lake Watershed.

Funding of LLPA operation, activities, events and projects comes from membership dues and donations, and currently from a Lake Management Grant. These grant funds come from a pool of money set aside from gas taxes collected on fuel used for boats and other watercraft. Funds from your dues and donations, together with volunteer hours form our share of the matching grant.

Get Involved! All activities and actions of the LLPA and its lake partners are volunteer driven. We encourage anyone with a passion for protecting Long Lake to email us at [volunteer@longlakellpa.org](mailto:volunteer@longlakellpa.org). Your involvement in our efforts will be very welcome.

### **Board of Directors**

- [Barry O'Flanagan](#), President [[president@longlakellpa.org](mailto:president@longlakellpa.org)]
- [Joe Thrasher](#), Past-President
- [Barb Sabatke](#), Secretary
- [Chuck Lawrence](#), Treasurer
- [Brad Ray](#), Past President
- [Marsha Stelzer](#), Board Member – Town of Birchwood
- [Tom Vonasek](#), Board Member – Town of Birchwood
- [Brian Hollerman](#), Board Member – Town of Long Lake
- [Wayne Sabatke](#), Board Member – Town of Long Lake
- [Dave Bergh](#), Board Member – Town of Long Lake
- [Rod Smith](#), Board Member – Town of Long Lake
- [Bill Lennox](#), Board Member – Town of Madge
- [Vic Sacco](#), Board Member – Town of Madge
- [Barb Sabatke](#), Webmaster [[web@longlakellpa.org](mailto:web@longlakellpa.org)]

### **Committees**

#### **Executive Committee**

This committee is comprised of the officers of the board (President, Vice-president, Secretary and Treasurer) as well as the two non-officer committee chairs. This committee prepares board meeting agendas and coordinates with committee chairs to prepare and monitor the annual budget.

## **Watershed Environmental Monitoring Committee**

Chair: **Joe Thrasher**

This committee carries out the environmental monitoring functions of the LLPA, focusing on:

- Citizen Monitoring for Invasive Species
- Citizen Water Quality Monitoring

Other monitoring actions listed in the 2004 State of the Watershed Report may be addressed by this committee, depending on availability of resources and enthusiasm.

## **Education, Communication and Outreach (ECO) Committee**

Chair: **Marsha Stelzer and Vic Sacco**

This committee develops and delivers a variety of communication pieces to accomplish the educational strategies in the priority plan, including the LLPA website, newsletter, and direct "action alert" mailings. The ECO committee also plans and implements more direct educational programs including workshops and presentations. The activities of this committee are targeted to the high priority items within the three education strategies:

- Promote "Lake Friendly Living" Through Watershed-wide Stewardship Education & Outreach
- Long Lake Boater & Visitor Education
- Groundwater and Drinking Water Education



YES – Youth Education Scholarships

## **Watershed Protection and Enhancement Committee**

Chair: **Wayne Sabatke**

This committee addresses efforts to protect and enhance the watershed by working on and advocating policy strategies that:

- Improve Compliance with Existing Resource Related Regulations
- Minimize Development Impacts Through Zoning and Subdivision Standards
- Promote Long Lake Area Resource Reserves and Corridor System

This committee also carries out resource improvement strategies that will benefit the lake and the watershed by:

- Creating a Prioritized Inventory of Impaired Shorelands and Fisheries Habitat
- Formulating Specific Restoration Strategies for High Priority Restoration Sites
- Increasing Tree and Shrub Planting Efforts

## **Membership Committee**

Chair: **Brad Ray**

This committee works on improving the LLPA's ability to achieve its mission. This includes recruiting new members, retaining existing members, and developing donors for major future undertakings. Capacity building opportunities for the LLPA board and committees (training, conferences, etc.) are identified and coordinated through the Membership Committee. This committee maintains the LLPA membership and mailing databases and assists in annual budget preparation.





# Long Lake Preservation Association

To preserve and protect Long Lake, its watershed and its ecosystems

- Home
- Who We Are
- Our Picture Book
- Events
- Projects
- Partners
- Wild Life Inhabitants
- Current Lake Conditions
- Lake Friendly Living

## Lake Info and Maps

Volunteer

Donations

## Lake Info and Maps



Located in the headwaters of the Brill River in southeastern Washburn County, Long Lake is the largest lake in the county. Long Lake is known as one of the premier, high quality fisheries in the northwestern part of Wisconsin, and has been designated by the State of Wisconsin as the "Walleye Capitol of Wisconsin." In ancient times, the Long Lake basin consisted of at least three glacially formed lakes and their interconnecting streams. In the late 1800s, a dam was constructed to raise the water level approximately 8 feet, fusing these separate bodies of water into one whole. Loggers then used the lake to transport logs downstream. The raised water level created the complex multi-basin body of water that we enjoy today.

### Long Lake Facts

- 19 miles long
- 99 mile total shoreline
- 3,290 acre surface area
- 74 foot maximum depth
- 26 foot average depth
- 38,000 acre watershed

### Contributing Watershed Lakes

- Bass Lake
- Big Devil Lake
- Harmon Lake
- Lazy Island Lake
- Little Devil Lake
- Loyhead Lake
- MacRae Lake
- Mud Lake
- Nick Lake
- Slim Creek Flowage
- Slim Lake

### Maps

- [Long Lake- Washburn County WI](#)
- [Long Lake Map by Google](#)
- [Lakes of Washburn County](#)

### Where to purchase WI Fishing License on the lake

- [Lincolnwood Resort](#)

61°F  
Feels like 61°F  
Overcast



Today:  
72°F / 58°F



Tomorrow    Thursday    Friday





74° / 56°    72° / 54°    70° / 50°

Data powered by 



Fishing at Lincolnwood Resort

- [Long Lake Bait and Tackle](#)
- [Pioneer Resort](#)
- [Sunset Resort](#)

*(Please contact us if you know of other locations on the lake that sell WI fishing license so we can list them on our site.)*

## **Long Lake Dam Operation**

The Long Lake Dam is owned and operated by the Washburn County Highway Department. During the summer months the Department operator adjusts the dam gates to maintain an operating level within a range of +/- one foot of the summer operating level. Weather (rainfall or lack of it) has a great effect on lake levels. As the lake level increases due to rain, the gate is opened to allow more water to pass to return the lake to the normal operating level. In years like 2005, when rainfall is scarce, the dam must still pass a required "minimum flow" to the Brill River. Therefore, the lake water level will drop below the target summer operating level.

In the fall of the year, beginning after labor day, a lake level draw down is started. A target level at one foot below the summer operating level is the goal of the draw down. The draw down typically ends on November 1st. Any later draw down would freeze aquatic life wintering buried in the shoreline below the water level. The draw down on Long Lake has occurred since sometime in the 1960's, and quite possibly even before that time. It is an effective tool in protecting the lake habitat and shoreline.

The draw down creates storage space for spring run-off from winter thaw. Without a fall draw down, the spring lake level would raise the ice sheet well above the normal water line, allowing wind push to cause much damage to the shoreline, as well as to docks and other structures. The most compelling reason for the draw down is shoreline protection. As the spring run-off occurs, the dam cannot pass enough water to keep the level from rising. By beginning with a lower lake level, the potential damage to the shoreline zone can be limited.



# Long Lake Preservation Association

To preserve and protect Long Lake, its watershed and its ecosystems

- Home
- Who We Are
- Our Picture Book
- Events
- Projects
- Partners
- Wild Life Inhabitants
- Current Lake Conditions
- Lake Friendly Living
- Lake Info and Maps
- Volunteer
- Donations

## Events



### LLPA Events

On five Saturdays of the summer LLPA offers Cakes at the Lake, pancake breakfasts starting at 8 a.m. followed by free educational programs at 10 a.m. A Curly-leaf Pondweed Removal Day is planned for June, and the Ice Cream Social and Toxic Tackle Exchange will return in July 2013.

In case you're new to the watershed or need a reminder, Cakes at the Lake environmental programs begin at 10 a.m. on select Saturdays at Hunt Hill Audubon Sanctuary in Sarona. They are free and open to the public. The amazing full breakfasts cooked up by Hunt Hill staff and volunteers (5-star pumpkin pancakes in September!) are served starting at 8 a.m. for a nominal fee and are free to children under the age of 5.

### Calendar of Upcoming LLPA Events

**SCHEDULE CHANGE: If you have a 2013 LLPA Calendar or spring newsletter, please note that our JUNE and AUGUST topics have switched. The schedule below is correct.**

Also note that at our last Cakes of the Lake on June 15, we collected approximately 5 lbs of lead tackle at our "[Get the Lead Out](#)" tackle exchange! Thanks to all who contributed. Next tackle exchange will be at our ice cream social on July 27th. Hope to see you there!

#### July 27, 2013

- **LLPA Ice Cream Social @ [Greener's Reel Em Inn](#)** on Long Lake
- Noon – 3 p.m.
- Free ice cream cones for everyone
- Come check out the booths with information on invasives and treatment of curly leaf pond weed on our lake.
- **Silent Auction**- some of the many items you may bid on...
  - Butternut Hills Golf – 18 hole golfing for two with cart
  - Culver's of Rice Lake – custard for a year
  - Dave's Outboard – water tube
  - Placid Bay Resort – one week stay in one-bedroom cabin
  - DHH Designs – wooden flower vase and candle holder
- Save a Loon/Eagle – Please bring in your toxic lead tackle to exchange for lead free tackle
- Free loon posters
- Come for fun and social time with friends in our watershed and meet with members of the LLPA board

#### August 17, 2013




- **Cakes at the Lake @ [Hunt Hill Audubon Sanctuary](#).**
- Join us for pancakes from 8:00 – 10:30 a.m.

61°F  
Feels like 61°F  
Overcast



Today:  
72°F / 58°F



Tomorrow	Thursday	Friday
		
74° / 56°	72° / 54°	70° / 50°

Data powered by



- 10:00 a.m. Free presentation on “**The Lives of Wolves, Coyote and Fox**“ by Stan Tekiela
- Shop for LLPA clothing and hats from 8:30 – 10:30
- Save a Loon/Eagle – Please bring in your toxic lead tackle to exchange for lead free tackle.
- [Map – Hunt Hill](#)

#### September 7, 2013

- **Cakes at the Lake @ [Hunt Hill Audubon Sanctuary](#).**
- Join us for pancakes from 8:00 – 10:30 a.m.
- 10:00 a.m. Free presentation on “**Rafter of Turkeys**” by WDNR’s Scott Walter
- Shop for LLPA clothing and hats from 8:30 – 10:30
- Save a Loon/Eagle – Please bring in your toxic lead tackle to exchange for lead free tackle.
- [Map – Hunt Hill](#)

### **Cakes at the Lakes 2012 Concludes with Raptor Review - by Marsha Stelzer**



Chris Cold with his hawk at Cakes at the Lake

Cakes at the Lake ended its season on Sept. 8 with DNR wildlife educator Chris Cold, who lead “who cooks for you-awh” barred owl practice calls; shared power point images of Wisconsin’s aerial predators; and pointed out markers to identify raptors in flight. Participants saw how you can tell by looking at their bodies what different raptors eat. Those with long, thin talons and rudder like tails are built to snake through trees at high speed and snag other birds. Taxa with thick claws and broad wings are able to carry off fat rabbits, domestic cats and young raccoons. Some beaks are designed for deboning flesh, others for snapping up dragonflies. Chris also explained the benefits of sexual dimorphism. The larger size of most female raptors allows mated pairs to hunt different size prey and thus increase available food in a given territory.

After his presentation, young and old viewed up close Chris’ 22-year old Red-tailed hunting hawk and a young owl he’s trained for classroom visits. The Ladysmith-based mobile specialist and certified falconer spoke to 100+ people for LLPA’s last outdoor education breakfast program until spring 2013. Next year, Cakes at the Lake is excited to bring back two beloved programs: a visit from the National Eagle Center in Wabasha and music and stories from the past, with Kevin McMullin. A new Cakes program will address butterflies, including monarch migration. Other topics are to be determined.

Lake people love their birds! In July, [Loon Watch Northland College](#), [Sigurd Olson Institute of Environmental Monitoring](#) and LLPA’s toxic tackle exchange drew the largest Cakes crowd of the summer. Over 200 came to hear Barb Sabatke’s program that included loon calls and updates about Long Lake nesting successes and challenges. She reports that LLPA collected more than 3 lbs of killer lead tackle, which was traded for safe steel sinkers and jigs. Thanks to all who helped reduce dangerous lead levels in our waters. And special thanks to John Haack, Jamison Wendel, and John Olson, who presented on reptiles, amphibians, the fishery and water world fur-bearers, respectively, during a successful Cakes ‘12.

# Long Lake Preservation Association

To preserve and protect Long Lake, its watershed and its ecosystems

- Home
- Who We Are
- Our Picture Book
- Events
- Projects
- Partners
- Wild Life Inhabitants
- Current Lake Conditions
- Lake Friendly Living
- Lake Info and Maps
- Volunteer

## Donations

61°F  
Feels like 61°F  
Overcast



Today:  
72°F / 58°F



Tomorrow Thursday Friday  
74° / 56° 72° / 54° 70° / 50°



Data powered by



## Donations



### Become a member

Click on the link below to print the membership form. Complete and mail it to our office with your payment. Annual Membership Dues (June 1 – May 31) are \$25.00 per household.

[Long Lake Preservation Membership Form \(pdf\)](#)

### Donation Opportunities

Other opportunities to contribute are listed on the form and are as follows:

- **General Operations Fund**
  - This fund includes membership dues plus revenues collected for general operations that are not otherwise designated for the fund categories 2 thru 8 as defined below.
- **Lake Preservation & Land Conservation Fund**
  - LLPA partners with landowners, assisting them in land preservation and conservation practices that are in tune with the environment and the improvement of the water quality of the Long Lake. Funds are used for matching grants, habitat restoration, fundraising, promotion, conservation easements, etc.
- **Water Quality & Testing Fund**
  - This fund supports the identification of pollution sources, water testing analysis, and monitoring of invasive species.
- **Memorials & Bequests**
  - Property owners have the opportunity to recognize long term owners and loved ones by giving donations in the form of memorials and bequests. The LLPA will work with donor to identify worthy projects that match the mission of the LLPA.
- **Walleye Fund**
  - This fund is used to support activities pertaining to stocking efforts and spawning habitat improvements to the Long Lake fishery.
- **First Responders Fund**
  - The Long Lake watershed has trained volunteers serving as First Responders. These people are part of the emergency medical team working with the Birchwood, Rice Lake, and Spooner ambulance services. These funds are used for training of personnel, restocking of medical supplies and equipment.
- **Fireworks Fund**
  - Each 4th of July, area residents and visitors can view from Kuntz Island, by boat or from shore, a fireworks display put on by area people. These funds are used to help purchase the fireworks.
- **Scholarship fund**
  - This fund was established to send instructors of grades K – 12 to environmental educational programs, and student groups to daylong eco-learning opportunities at Hunt Hill. Recipients are selected from school districts in or near the Long Lake watershed.



# Long Lake Preservation Association

To preserve and protect Long Lake, its watershed and its ecosystems

Home

Who We Are

Our Picture Book

Events

Projects

Partners

Wild Life Inhabitants

Current Lake Conditions

Lake Friendly Living

Lake Info and Maps

Volunteer

Donations

## Partners



Tomahawk Scout Reservation, operated by the BSA Northern Star Council of Minnesota, is located in the center of the "fish hook" on Long Lake. Encompassing more than 2,500 acres of woodland area and over eight miles of shoreline, Tomahawk is home to the council's summer Boy Scout and Webelos resident camps as well as the Snow Base Winter Camp.

LLPA and the Long Lake Chamber of Commerce have agreed to a partnership relationship to work together for the betterment of the Long Lake watershed. This agreement establishes the framework for the implementation of future projects that will benefit the water quality of the lake and the watershed wide stewardship programs. The first major effort in looking at the restoration of spawning habitat, and improving the overall fishery of the Lake is the restocking of the local walleye population. The Walleye Project was initiated in the spring of 2004 using a "walleye wagon" portable hatchery.

A collaborative agreement between LLPA and Hunt Hill Audubon Sanctuary and Nature Center involves Hunt Hill as our partner in watershed education, hosting our Cakes at the Lake programs and Fall Watershed Fairs, as well as for various committee meetings. Hunt Hill is also the location of the LLPA office. Three demonstration rain gardens were designed, constructed and planted at Hunt Hill in 2005 as part of a two year hands on program to educate the public in the control of residential run-off. Several additional rain gardens will be added as the education program continues in 2006.

### Partners List and Links

- Hunt Hill – <http://hunthill.org/>
- Long Lake Chamber – <http://www.longlake99.com>
- Red Cedar Lakes Association – <http://www.redcedarlakes.com/>
- Slim Lake Association
- Tomahawk Scout Camp – <http://www.camptomahawk.org/>
- Walleyes for Tomorrow – <http://www.walleyesfortomorrow.org/>
- Washburn Cty Extension - <http://washburn.uwex.edu/>
- WCLRA / Washburn County Lakes and Rivers – <http://www.wclra.org/>
- WI DNR - <http://dnr.wi.gov/>
- Wisconsin Assoc. of Lakes – <http://www.wisconsinlakes.org/>

61°F  
Feels like 61°F  
Overcast



Today:  
72°F / 58°F



Tomorrow    Thursday    Friday





74° / 56°    72° / 54°    70° / 50°

Data powered by 

Garmin GPSMAP 78SC Marine Handheld GPS

[PRINT THIS PAGE](#) [EMAIL THIS PAGE](#)



**Garmin GPSMAP 78SC Marine Handheld GPS**  
 The Garmin GPSMAP 78SC is a rugged marine handheld GPS that floats. The 78SC has detailed marine charts for the coastal US and Great Lakes installed so it is perfect for your main source of navigation or as a backup for your ditch bag.

SKU#: GA008642 MAN#: 010-00864-02  
 ID#: 2389  
 Our Price: \$419.95  
 Availability: In Stock  
 Condition: Brand New [Add to Cart](#)

[\[+\] ★★★★★ Product Reviews](#)

**Garmin GPSMAP 78SC Details**

**Each GPSMAP 78SC comes with:** GPSMAP 78SC with pre-loaded worldwide basemap and Americas BlueChart, USB cable, wrist strap, quick start manual, and a One-Year Warranty.  
**Unit Size:** 6.0"H x 2.6"W x 1.2"D  
**Condition:** Brand New  
**Display Size:** 1.6" x 2.2"  
**Weight:** 8 oz.  
[Click here, to view the online Users Manual.](#)

**Garmin GPSMAP 78SC Special Features**

- Preloaded with Bluechart G2 Coastal mapping.
- Waterproof to IPX7 Standards & FLOATS!
- Accepts BirdsEye Satellite Imagery.
- Barometric Altimeter & Electronic Compass.
- Ability to Wirelessly Share Information.

**Garmin GPSMAP 78SC Specifications**

# Of Way-points	# Of Routes	Max battery life / # of batteries	PC Interface Capability	External Antenna	Plotter Type
2,000	200 Rev.	20 Hrs./2 AA	Cable Included	Optional	Full Mapping
Speed Limitation 999 MPH.					

**Rugged, Waterproof, Floating Handheld Marine GPS.**

You have found it with the Garmin GPSMAP 78SC. The GPSMAP 78sc with HotFix technology allows for quick acquisition and satellite reception even in the densest of areas and features a bright sunlight viewable 2.6" LCD Color display preloaded with coastal mapping for the entire US including Alaska and Hawaii and explorer chart detail for the Bahamas. The 78SC is rugged, waterproof to IPX7 standards and even floats!

**Altimeter, Compass & Wireless Sharing**

The 78sc comes with a built in 3 axis tilt compensated electronic compass

which will show your heading even when standing still, as well as the Barometric altimeter all pinpointing your precise altitude and track and plot changes in pressure to watch for changing weather conditions. If that's not enough the 78 will also allow you to wirelessly share your waypoints routes and tracks with other compatible Garmin device users – want your friend to know your favorite spot, all it takes is the touch of the send button and they will have that information at their fingertips.

**More than just a Marine unit!**

With the MicroSD card slot located safely inside the waterproof battery compartment, your 78SC is more than just a marine unit. Add to it any of Garmin's optional MapSource software – from City Navigator for turn by turn routing on roads, to Topo mapping for terrain contours and topo elevations. The 78 also accepts BirdsEye Satellite Imagery providing you downloads to an unlimited amount of Satellite and aerial imagery. With almost 20 hours of battery life with just 2 AA batteries the 78SC is the perfect unit for any outdoor enthusiast.

Supports - Lat/Lon, TD's, UTM/UPS, MGRS , Plus other Grids Including Maidenhead.











**Garmin MapSource Topo on MicroSD**














For more information on the plug and play Garmin MapSource Topo MicroSD cards [click here](#) for a full list of the available regions.

[SHOP »](#)

**Garmin GPSMAP 78SC Marine Handheld GPS Accessories**

 <p><a href="#">Garmin carrying case</a> \$9.95 Garmin carrying case for handheld GPS units <a href="#">» ADD TO CART</a></p> <p>GAX10117</p>	 <p><a href="#">Gilsson RB Hardwire Power/Data Cable</a> \$13.95 Gilsson RB Hardwire Power/Data Cable for Garmin III,V,12xI,48/76/60/72H/78/78S/78SC series <a href="#">» ADD TO CART</a></p> <p>GL0324</p>
 <p><a href="#">Mini USB Interface Cable</a> \$7.95 Mini USB Interface Cord fits select Garmin, Magellan, Tomtom and other USB Capable GPS units. 40" Long. <a href="#">» ADD TO CART</a></p> <p>USUSBMINI</p>	 <p><a href="#">Gilsson R12V - 12-volt power cable</a> \$12.95 Gilsson R12V - 12-volt Cigarette Lighter Adapter for Garmin III,V,12xI,48/76/60/78/78S/78SC/72 series. <a href="#">» ADD TO CART</a></p> <p>GL0348</p>
 <p><a href="#">Garmin MapSource City Navigator NT N. America microSD/SD</a> \$77.95 Garmin MapSource City Navigator North America NT on microSD/SD. Preprogrammed with version 2013 maps you will have the latest street-level detail and searchable points of interest for the U.S., Canada and Mexico. <a href="#">» ADD TO CART</a></p> <p>GAX11551</p>	 <p><a href="#">Garmin Marine Mount for 78 series</a> \$19.95 Garmin Marine Mount for 78 series <a href="#">» ADD TO CART</a></p> <p>GAX11441</p>
 <p><a href="#">Garmin Automotive Mount for 78 series</a> \$17.95 Garmin Automotive Mount for 78 series with Adhesive base <a href="#">» ADD TO CART</a></p> <p>GAX114411</p>	 <p><a href="#">Garmin AC to 12V Power Adapter</a> \$19.95 Garmin AC to 12V Power Adapter. Plug the 110v adapter into a wall outlet and use the 12v female outlet for any 12v cigarette power cords. <a href="#">» ADD TO CART</a></p> <p>GAX107238</p>
 <p><a href="#">Garmin Cigarette Lighter Adapter</a> \$19.95 Garmin Cigarette Lighter Adapter for II+, III,V,12xI,48/76/72/78/78S/78SC series <a href="#">» ADD TO CART</a></p> <p>GAX10085</p>	 <p><a href="#">Gilsson MCX amplified antenna w/9' cable</a> \$29.95 Gilsson MCX remote antenna with 9' cable, magnetic &amp; suction cup mounts. For Garmin &amp; Navman units w/MCX connectors. <a href="#">» ADD TO CART</a></p> <p>GL0034</p>
<p><a href="#">Garmin 24K Topo U.S. North Central DVD</a> \$119.95</p>	<p><a href="#">Garmin 24K Topo U.S. Northeast DVD</a> \$119.95 Garmin 24K Topo U.S. Northeast DVD</p>



 <p>GAX11316</p>	<p>Garmin 24K Topo U.S. North Central DVD. <a href="#">▶▶ ADD TO CART</a></p> <p><b>North Central Region</b> Including coverage of Idaho, Montana, Wyoming, North Dakota, South Dakota, Minnesota, Nebraska and Iowa.</p>	 <p>GAX11318</p>	<p><b>Northeast Region</b> Including Coverage of Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine. <a href="#">▶▶ ADD TO CART</a></p>
 <p>GAX11317</p>	<p><a href="#">Garmin 24K Topo U.S. South Central DVD</a> \$119.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Garmin 24K Topo U.S. South Central DVD <b>South Central Region</b> Including Coverage of Texas, Oklahoma, Kansas, Missouri and Arkansas</p>	 <p>GAX11319</p>	<p><a href="#">Garmin 24K Topo U.S. Southeast DVD</a> \$119.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Garmin 24K Topo U.S. Southeast DVD <b>Southeast Region</b> Including Coverage of Delaware, Maryland, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Louisiana, Mississippi, Alabama, Georgia and Florida.</p>
 <p>GAX11315</p>	<p><a href="#">Garmin 24K Topo U.S. Southwest DVD</a> \$119.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Garmin 24K Topo U.S. Southwest DVD. <b>Southwest Region</b> Including coverage of Utah, Colorado, Arizona and New Mexico.</p>	 <p>GAX11314</p>	<p><a href="#">Garmin 24K Topo U.S. West DVD</a> \$119.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Garmin 24K Topo U.S. West DVD <b>West Region</b> Including Coverage of Washington, Oregon, California and Nevada.</p>
 <p>GAXC10182</p>	<p><a href="#">Garmin Bluechart G2 USA &amp; Western Canada Chart on microSD/SD - HXUS039R</a> \$149.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Garmin Bluechart G2 USA &amp; Western Canada Chart on microSD/SD - HXUS039R</p>	 <p>GAX11543</p>	<p><a href="#">Garmin BirdsEye Satellite Imagery Card</a> \$29.95 <a href="#">▶▶ ADD TO CART</a></p> <p>With Garmin's new BirdsEye Satellite Imagery, you can transfer an unlimited amount of satellite and aerial images to your compatible Garmin handheld unit.</p>
 <p>GAX11423</p>	<p><a href="#">Garmin HomePort Marine Trip Planning Software</a> \$27.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Before heading out on the open water, plan your voyage with HomePort marine trip planning software that lets you plan and organize routes from the convenience of your computer.</p>	 <p>SDM4000</p>	<p><a href="#">4GB microSDHC Card with SD Adapter Blank</a> \$13.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Blank 4GB microSDHC with an SD card Adapter Datacard for programming.</p>
 <p>GAXC1073</p>	<p><a href="#">Garmin Lakes US microSD/SD card</a> \$93.95 <a href="#">▶▶ ADD TO CART</a></p> <p>Garmin Lakes US microSD/SD card.</p>		

**Store Links**

[About Us](#)  
[Help Center](#)  
[Links](#)  
[SiteMap](#)

**GPS Units and Marine Electronics**

[Chart Plotters](#)  
[Fishfinders](#)  
[GPS-Fishfinders](#)  
[Garmin GPS](#)

[Automotive GPS](#)  
[Handheld GPS](#)  
[Laptop/PC GPS](#)  
[Marine Electronics](#)

**Contact:**

**The GPS Store, Inc.**  
6899 Beach Drive  
(910) 575-9544  
Ocean Isle Beach, NC

[Blog](#)  
[View Catalog Online](#)

[GPS Accessories](#)  
[Fitness, Sports & Golf](#)

[Radars](#)  
[VHF Radios](#)

28469  
Questions about Units  
or Accessories?  
Email  
[info@thegpsstore.com](mailto:info@thegpsstore.com)



