

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
LAKE MANAGEMENT PLANNING GRANT PROGRAM

Application Materials

***Porters Lake AIS Monitoring and
Prevention Project***

Prepared By:

Porters Lake Management District

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INTRODUCTION

Porters Lake, Waushara County, is a 68-acre spring lake with a maximum depth of 18 feet. It is located in the Town of Mount Morris. Porters Lake Management District (PLMD) has not had to address a pioneer AIS population, has not previously had an early response project and has not had to address any prohibited species. Recently we were advised banded mystery snails are in the lake but apparently there is no treatment plan for this AIS. There are no other aquatic non-native plant species known to be present in Porters Lake. Due to their presence in many nearby waterways (Johns Lake is within 1 mile and contains Eurasian water milfoil, while Irogami and Mount Morris Lakes are within 2 miles and each contains curly-leaf pondweed), the (PLMD) is concerned. At this time, they are interested in obtaining funding through the WDNR's AIS grant program to help preserve the integrity of their lake.

As part of a 2007 Management Plan, many characteristics of the lake were surveyed including the lake's watershed and water quality, as well as the aquatic plant community. A fisheries summary of WDNR survey data was also included in this plan. The watershed was found to be in great condition, with little phosphorus export to the lake. In turn, the water quality was found to be in very good shape, with exceptional Secchi disk clarity values and little to moderate algal production. Thirty-six native aquatic plants, including northern wild rice and hardstem bulrush, were found in this small lake, which is exceptional compared to other lakes in the state and ecoregion. The high Floristic Quality Analysis (FQI=38) indicates the plant community of Porter's Lake is much like that of a relatively undisturbed system. Purple loosestrife, located sparsely along the lake's shoreline, is the only AIS found.

In 2006 surveys undertaken as part of the 2007 Lake Management Plan were aimed at detecting potential AIS in the lake. Additionally, Ed Hernandez, with the Waushara County Land Conservation Department, and Paul Skawinski of Golden Sands RC&D out of UW – Stevens Point scoured the lake in 2010 searching for AIS. Their survey did not turn up any encounters of AIS.

Porters Lake has a single public boat landing with parking opportunity for 5 car-trailer units plus additional parking alongside of the road. Although the landing into the lake is paved it is fairly steep and does not experience significant use by transient boaters. As defined by NR 1.91, the lake exceeds minimum public boating access by having one or more access sites with a total of more than 5 car-trailer parking spaces. This provides more than enough public access for the small, "no-wake" lake.

Porters Lake Management District initiated a "no wake" limitation in the early 1970's. This limitation was subsequently codified as an ordinance by the Town of Mount Morris. As a result of the "no wake" ordinance water skiing and the use of jet skis is never seen on the lake. The "no wake" provision was initiated to protect the extensive shallow areas of the lake against damage due to prop wash from fast running, large horsepower motors, to protect emergent and submergent plants from destruction, protect the shoreline against erosion due to large waves and to reduce the amount of water and sound pollution emitted by large motors.

PROJECT SCOPE

In addition to the efforts put forth in 2006 and 2010 surveys, members of the PLMD have been working diligently to protect their lake from the threat of AIS in a number of ways. The six projects the PLMD are involved with include:

- Patrolling, monitoring the boat landing with a Clean Boats/Clean Waters- (CBCW) trained employee
- Scuba-based monitoring for submergent AIS
- Manually controlling stands of purple loosestrife

- Manually controlling terrestrial invasive species, including buckthorn, garlic mustard and oriental bittersweet, from the shoreline to the average high water mark
- Attending Wisconsin Lakes Conventions
- Participate in the Citizens Lake Monitoring Network (CLMN) sampling for phosphorus and chlorophyll and performing Secchi disk measurements

PLMD plans on providing “Wisconsin Wildcards”, including cards for Eurasian water milfoil and curly leaf pondweed, to all district property owners and make them available at their newly installed sign at the public boat landing. They plan on issuing regular press releases to the local newspaper describing their efforts to control AIS. PLMD will interact with other local lake associations and lake districts to coordinate AIS education efforts in the area.

In May, 2011 PLMD volunteers erected a new sign at the public boat landing emphasizing Clean Boats Clean Waters, indentifying Eurasian water milfoil and curly leaf pondweed and identifying the lake as a “no wake” lake. In addition to this sign PLMD will install new State AIS (rev 2010) signage at the boat landing. This signage will be installed in a highly visable area closer to the shoreline as an additional reminder to boaters about our Clean Boats Clean Waters program.

In 2008 PLMD established a “no wake” and AIS enforcement partnership with the Waushara County Sheriff. PLMD donated sonar equipment for the boat the Sheriff uses for law enforcement, search and rescue activities in Waushara County. The Sheriff periodically patrols the lake. The Sheriff’s phone number is listed on the sign at the boat landing to report violators.

A trash can is provided at the boat landing for proper disposal of unused bait by transient boaters.

PLMD plans on providing a boat washing area at the public boat landing. Property owners adjacent to the boat landing will extend hoses from their property to the boat landing to allow boaters to wash their boats before entering the lake.

The design of this project is to continue to fund these effective projects for the next two years (2012 and 2013).

Clean Boats Clean Waters Inspections

In summer of 2009 (Memorial Day weekend through Labor Day weekend), a paid college student, fully trained by CBCW personnel, spent 12 hours per weekend monitoring the public boat landing. Unfortunately, this time was not documented within the WDNR’s Surface Water Integrated Monitoring System (SWIMS) as is common protocol for approved CBCW programs. It was, however, an expense the PLMD incurred directly and they continued the program in 2010 and 2011..

The scope of this project includes allotment of a wage and workers compensation insurance for this student to resume monitoring in 2012 and 2013. This time commitment will exceed 200 hours, and all efforts will be entered into SWIMS for official documentation. Specifically, the student will work 3-eighteen hour weekends, 12-twelve hour weekends, 3 extra evenings at 4 hours each for a total of 210 field hours. This student will spend 8 more hours logging time and boating activities into SWIMS, for a total of 218 hours per year. This student will go to Mount Morris Lake to discuss and observe activities this lake undertakes to mitigate their AIS invasion.

In addition to these activities PLMD will invite the local newspaper, The Waushara Argus, to attend our July 4th blitz to further publicize our CBCW and AIS activities at the lake.

ASI Monitoring & Education

Another activity occurring at the boat launch is the publishing of educational AIS material. A new sign, warning boaters and recreationalists of the spreading dangers of AIS was purchased and installed by the PLMD volunteers in May, 2011.

Besides monitoring the boat launch for AIS, over the years several lake residents have volunteered their time to perform dive surveys of the lake for submersed invasive plants and animals. The divers check submersed plants within the lake for signs of AIS, with special consideration given to the near-boat launch area. Any suspicious plants are harvested by the divers, placed in sealed plastic bags, and their locations marked with numbered buoys. The sample bags are transported via kayak to pontoon boats where volunteers trained to indentify AIS examine the suspicious plants under a microscope. In all, six people take part in this effort. As part of a management action related in the 2007 Lake Management Plan, volunteers from the PLMD attended a training session conducted by Dr. Susan Knight at the 2007 Wisconsin Lakes Convention to properly identify native and non-native aquatic plants.

PLMD plans to enhance their CLMN program by training additional volunteers, including year round lake residents, to actively monitor for AIS. Such training will provide opportunities for others to become involved in AIS monitoring that are not certified scuba divers.

Purple Loosestrife & Other Invasives Management

The purple loosestrife control program implemented by PLMD members has been a great success in controlling the spread and density of this AIS along the shorelines of Porters Lake. Dave Hansen has been monitoring and facilitating control efforts of purple loosestrife for over 10 years. The control program centers around use of *Galerucella* beetles to reduce the growth and reproduction of the plants. Dave raises the beetles then releases them in early summer within areas noted by the PLMD.

On July 23, 2011 Dave Hansen surveyed the lake to determine where to release beetles he raised this spring. Hansen found only four areas with more than one or two purple loosestrife plants. Hansen last released beetles in 2009. He found the four areas with numerous plants had significant beetle populations that survived over the past two winters. PLMD will continue to monitor purple loosestrife but does not anticipate we will incur expenses to control it over the next two years



Photo: Dave Hansen releases beetles to combat Purple Loosestrife.

Property owners around the lake participate in removing other invasive plants such as buckthorn (*Rhamnus cathartica*) and garlic mustard (*Alliaria petiolata*). PLMD members gather for a day to manually remove buckthorn from its established stands. Garlic mustard is pulled or cut off near the base, and the exposed stem may be covered with glyphosate product using a paintbrush. Recognizing the importance of native vegetation in a shoreland buffer area, this project scope budgets for the PLMD members to spend one day a year managing

these invasive plants to limit their density and spread along the shoreline of Porters Lake to the average high water mark.

Wisconsin Lakes Convention Attendance

One of the best ways for lake stakeholders to stay up-to-date on AIS knowledge, management and prevention strategies, and other related education is to network with researchers, industry professionals, and other lake stakeholders in a large conference setting. The scope of this project provides registration fees, travel and lodging for 2 members of the PLMD to continue to attend the Wisconsin Lakes Convention in 2012 and 2013. These individuals will then report back to the PLMD at the summer annual meeting on educational topics, research findings, and products that will be of interest to and pertain to Porters Lake.

Shoreline Restoration

As part of their ongoing educational efforts PLMD plans on providing educational opportunities and information to shore land property owners on shore land restoration and habitat protection from the shore line to the average high water mark. PLMD is proposing to assist property owners to undertake shoreline restorations on two properties each year and four properties over two years. These properties will be those where the owners currently mow to the shore line or where there is minimal diversity of native plants. The goal of this project will be to improve the shore line habitat for amphibians, turtles, insects, birds and fish.

Each property restoration will constitute approximately 900 square feet from the shore line to the average high water mark. The areas will be prepared by layering newspapers on the ground covered with mulch to eliminate existing plant growth. Native shore line plants, including Bergamot, False Sunflower, Button Snakeroot and Swamp Milkweed will be transplanted through the covering mulch to help assure better survival.

The plant bulbs or plugs will be purchased from J & J Transplant Aquatic Nursery in Wild Rose, Wisconsin. All plants purchased from J & J Transplant Aquatic Nursery are native and found within fifty miles of Porters Lake. PLMD will use 100 bulbs or plugs per property and the current price for the bulbs and plugs averages \$2 apiece plus tax.

2007 Lake Management Plan Update

Comprehensive Aquatic Plant Surveys: Point-Intercept Survey

Onterra LLC will be retained to update our 2007 lake management plan. A comprehensive survey of aquatic macrophytes is used to characterize the existing communities within the lake and includes inventories of emergent, submergent and floating leaved aquatic plants within the lake. The point-intercept method as described in Recommended Baseline Monitoring of Aquatic Plants in Wisconsin: Sampling Design, Field and Laboratory procedures, Data Entry, and analysis, and Applications (WDNR PUB-SS-1068 2010) will be used to complete this study. Based on guidance from the WDNR a point spacing of 40 meters will be used on Porters Lake resulting in approximately 207 sample locations. These point locations will be the same as those used in 2006 to complete the point-intercept survey discussed in Porters Lake 2007 management plan.

The data collected will be analyzed by Onterra LLC and will include comparisons with the 2006 data. To characterize spatial distribution, *relative frequency of occurrence* will be calculated for each species found in the lake. In addition the plant communities of the lake will be compared to those of other lakes in the ecoregion and the state using the Floristic Quality Assessment (FQA) procedures described in Nichols (1998). In general

the FQA evaluates the species found in a lake with those found in a natural, undisturbed system indicating the health of the current plant community in the lake.

Representatives of all plant species located during the point-intercept and community mapping surveys will be collected and prepared for vouchering by the University of Wisconsin – Stevens Point Herbarium. A set of samples will be provided to the PLMD.

Native and Exotic Plant Community Mapping

The aquatic vegetation community types within Porters Lake (emergent, submergent and floating leaved vegetation) will be mapped using sub-meter GPS technology and will be based on dominant species including soft-stem bulrush, common arrowhead and large-leaf pondweed. The primary mapping unit will be the community type but a secondary classification based on dominant species will be included on the vegetation maps. The final map will show the location of each vegetation type in the lake in relation to the lake's bathymetry. Comparisons will be made with the results of the community mapping completed during the summer of 2006. If applicable the results of the 2012 and 2006 results will be displayed on the same map to graphically demonstrate differences.

Additional maps will indicate the areas of the lake inhabited by exotic/invasive species such as purple loosestrife (*Lythrum salicaria*) and Eurasian water milfoil (*Myriophyllum spicatum*) if this or other AIS are found in Porters Lake.

PROJECT DELIVERABLES

The proposed projects listed above are proactive, ongoing efforts by the PLMD to protect their lake. The methodologies are well established, and volunteer base strong. At the conclusion of calendar years 2012 and 2013 an annual report will be published by the PLMD board and submitted to both the WDNR and PLMD general membership. These reports will provide an overall summary of the funded efforts, as well as detailed accounts of the project including:

- General methodology (if applicable)
- Achievements from project
- Actual budget / expenses occurred
- Plan for upcoming year

Additionally, a summary report will be published on the Porters Lake Management District website.

TENTATIVE PROJECT SCHEDULE

Members of PLMD had a pre-application grant scoping consultation to discuss our grant application with DNR representatives Danielle Sippel and Brenda Nordin on May 31, 2011. This consultation has lead PLMD to conclude our grant request is consistent with DNR goals and objectives. The following provides an approximate timeline for completion of the tasks. The schedule needs to be flexible to accommodate for weather, scheduling conflicts, etc., but it provides a general indication of the dates for completing the proposed projects.

Task	2012												2013											
	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
CBCW Inspections																								
Printed Bait Shop Supplies																								
Scuba Surveys																								
Purple Loosestrife and Other Invasives Mgmt Efforts																								
Wisconsin Lakes Convention																								
Annual Summary Report																								
Shore Line Resoration																								
Aquatic Plant Surveys																								

COST BREAKDOWN TABLE

Porters Lake AIS Monitoring and Prevention Project 2012-2013	Cash Costs	Donated Value
Clean Boats Clean Waters Inspections		
Paid CBCW Inspector (2 years)	\$5,232.00	
Printed Supplies for Local Bait Shops	\$500.00	
AIS Monitoring & Education		
Scuba Surveys -2 dives per year with 2 divers @ 2 hours each dive		\$192.00
Scuba Equipment Rental and Supplies (\$125 per year)	\$250.00	
Surface Support - 4 people each dive		\$384.00
Purple Loosestrife & Other Invasives Management		
Purple Loosestrife Management Efforts		\$0.00
Purple Loosestrife Management Supplies	\$0.00	
Other Invasive Management Efforts (20 hours per year)		\$480.00
Other Invasive Management Supplies (\$100 per year)	\$200.00	
Wisconsin Lakes Conference Attendance		
Conference Fees for Two District Members (2 years)	\$720.00	
Mileage (250 miles round trip @ \$.50/mile - 2 years)	\$250.00	
Lodging (2 nights per year @ \$100/night - 2 years)	\$400.00	
Shore Line Restoration (400 Bulbs @ \$2.10 each)	\$840.00	
2007 Lake Management Plan Update		
Project Communication & Administration	\$405.00	
Aquatic Plant Surveys	\$2,695.00	
Data Analysis & Report Creation	\$575.00	
Printing, Shipping, Plant Vouchering Materials	\$80.00	
Travel (130 miles @ \$.50/mile)	\$65.00	
<i>Subtotal</i>	\$12,212.00	\$1,056.00
Total Project		\$13,268.00
State Share Requested		\$9,951.00

State of Wisconsin
Department of Natural Resources

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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 http://165.189.139.210/WAML/ Type in complete address, next screen shows information.
Senate	Assembly	
14	41	

Section II: Applicant Information

Applicant PORTERS LAKE MANAGEMENT DIST		Type of Eligible Applicants	
Waterbody Name PORTERS LAKE		<input type="checkbox"/> County	<input type="checkbox"/> Tribe
Project County/Township/Section/Range WAUSHARA/TIEN/RIE/520		<input type="checkbox"/> City	<input type="checkbox"/> Sanitary Dist.
Authorized Representative Named by Resolution PAT DOYLE		<input type="checkbox"/> Village	<input checked="" type="checkbox"/> Dist.
Authorized Representative Title COMMISSIONER		<input type="checkbox"/> Town	<input type="checkbox"/> Assoc.
Address W132 N11466 FOREST DR.		<input type="checkbox"/> Other Gov't Unit	<input type="checkbox"/> Federal
City GERMANTOWN		<input type="checkbox"/> Nonprofit Org.	<input type="checkbox"/> State
State WI		<input type="checkbox"/> College, School, etc.	<input type="checkbox"/> Other
ZIP Code 53022		Project Contact Name PAT DOYLE	
Daytime Phone (area code) 262 703 0890		Project Contact Title COMMISSIONER	
Evening Phone (area code) 262 512 9377		Address W132 N11466 FOREST DR.	
E-mail Address pdoyle@aquapoly.com		City GERMANTOWN	
Mail Check to: (if different from applicant)		State WI	
Name and Title		ZIP Code 53022	
Organization		Daytime Phone (area code) 262 703 0890	
		Evening Phone (area code) 262 512 9377	
		E-Mail Address pdoyle@aquapoly.com	

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

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Section III: Project Information

Project Title PORTERS LAKE AIS MONITORING AND PROTECTION PROJECT		Proposed Ending Date 12/31/2013	
Other Management Units	Letter of Support	Other Management Units	Letter of Support
1. TOWN OF MT. MORRIS	<input checked="" type="checkbox"/>	4.	<input type="checkbox"/>
2. WAUSHARA COUNTY LAND CONSERVATION	<input checked="" type="checkbox"/>	5.	<input type="checkbox"/>
3.	<input type="checkbox"/>	6.	<input type="checkbox"/>

Section IV: Public Access

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites: **9**

Number of Public Access Sites Including Boat Launches and Walk-ins: **1**

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	\$ 5,232.00		
2. Consulting services LAKE MGMT PLAN UPDATE	\$ 3,820.00		
3. Purchased services—printing and mailing	\$ 500.00		
4. Other purchased services (specify): SCUBA DIVES FOR AIS	\$ 250.00	\$ 576.00	
5. Plant material	\$ 540.00		
6. Supplies (specify) SHORELINE INVASIVE CONTROL	\$ 200.00	\$ 480.00	
7. Depreciation on equipment			
8. Hourly equipment use charges			
9. State Lab of Hygiene (SLOH) Costs			
10. Non-SLOH Lab Costs			
11. Other (specify) LAKES CONFERENCE	\$ 1,370.00		
12. Subtotals (sum each column)	\$ 12,212.00	\$ 1,056.00	
13. Total Project Cost Estimate (sum of column 1 plus sum of column 2)	\$ 13,268.00		
14. State Share Requested (up to 75% of total costs may be requested)	\$ 9,951.00		

- 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

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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)
- 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 DAT DOYLE	Title of Authorized Representative COMMISSIONER
Signature of Authorized Representative 	Date Signed 7/24/2011