WISCONSIN DEPARTMENT OF NATURAL RESOURCES
AQUATIC INVASIVE SPECIES GRANT PROGRAM

Application Materials

Lake Metonga EWM Control & Prevention Project: 2014-2015

Prepared for the

Lake Metonga Association

February 1, 2014

Onterra LLC
Lake Management Planning

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INTRODUCTION

Lake Metonga, Forest County, is a 1,991-acre drainage lake with a maximum depth of 79 feet and a mean depth of 25 feet (Photo 1.0-1, Map 1). Outlet Creek, Lake Metonga's outlet, leads to the Swamp Creek which flows through Rice Lake on its way to the Wolf River. Rice Lake, one of the few lakes located on the Sokaogon Chippewa Reservation, is a valuable resource for the Native American Community which harvests wild rice on its waters.

Photo 1. Lake Metonga, Forest County, Wisconsin. Taken from north boat landing.

First officially documented within the system in 1994, Eurasian water milfoil (EWM) has been actively managed by the Lake Metonga Association (LMA) to reduce its amount and density through 2,4-D chemical applications and biological control introductions since 1998. Between 2005 and 2007, the management activities were conducted under the auspices of a Wisconsin Department of Natural Resources (WDNR) Aquatic Invasive Species (AIS) Gant. The LMA created an approved lake management plan in December 2007 and received additional WDNR Grants to cover the costs of an EWM Control & Prevention Project spanning treatments between 2008 and 2013.

Lake Metonga, by virtue of its size, is a popular recreational lake and tourist destination. Arguably, it is this factor which has caused Lake Metonga to become infested with invasive species such as rusty crayfish, zebra mussels, and EWM. As defined by NR 1.91(4d), Lake Metonga exceeds minimum public boating access by having more than one access site with a total of more than 40 car-trailer parking spaces. The lake contains 2 large public access sites and together are estimated to be capable of handling over 50 car-trailers. On the north side of the lake, located in the City of Crandon, there is a large public beach (with lifeguards) and a nearby is a large handicapped accessible fishing pier. Veteran Memorial County Park is located on the south side of Lake Metonga and numerous camping and recreational facilities in addition to a large public beach. This landing also contains a boat washing station with signage alerting boaters to clean their boat before and after entering the lake.

PROBLEM IDENTIFICATION

Figure 1 displays EWM treatment area summaries from 2007 to current. In 2007, granular 2,4-D (Navigate®) was the primary treatment strategy used to control EWM in northern Wisconsin. The early treatments did not meet treatment expectations and application rates increased each year. The largest treatment occurred in 2009 and was thought to be highly successful except for a few areas (targeted in 2013 as C-13 and D-13/E-13). These areas were retreated in 2010, with the deep site out from Farmer's Bay being targeted with a dual liquid

2,4-D treatment, spaced 24 hours apart. The 2010 treatment was not overly effective and all areas required retreatment in 2011. The mixed results from using granular 2,4-D in the past (2007-2010) coupled with new research indicating little or no difference between measured granular and liquid 2,4-D treatment resulted in liquid 2,4-D being used in 2011. This herbicide is also less expensive, allowing the LMA to target more areas of the lake. Mixed treatment results occurred in 2011 and again in 2012. A trail set of treatments occurred in 2013, resulting in better control than in previous years.

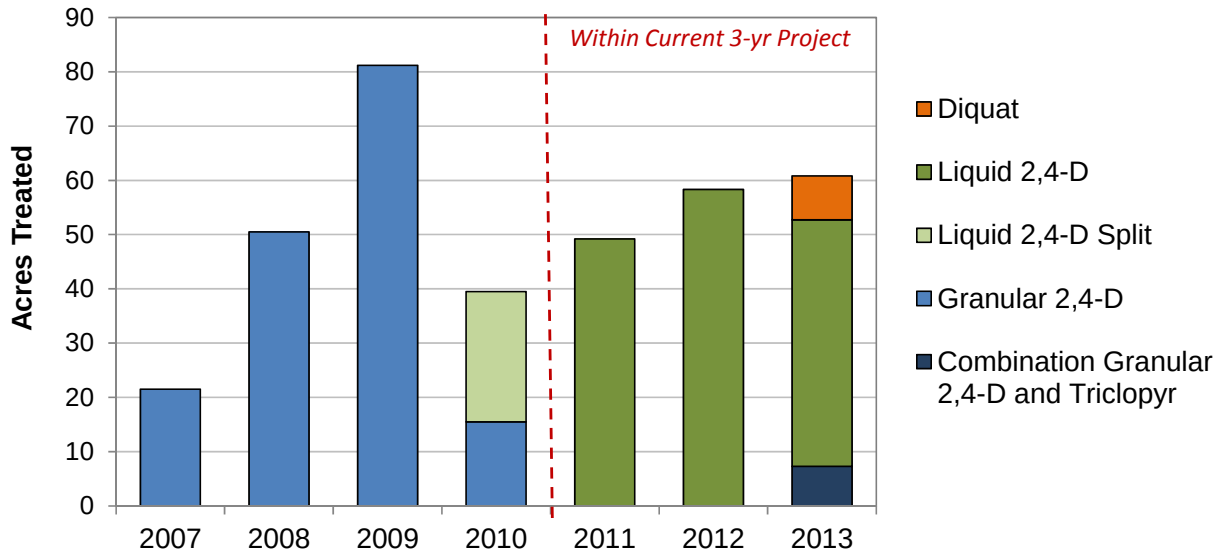


Figure 1. Lake Metonga annual EWM treatment history, 2007-2013. Figure from 2013 final AIS-EPC Grant-funded project report.

The association would like to continue objectively developing a successful EWM control strategy, building off the partial successes of the 2013 treatment strategy. Numerous management options and alternatives have been, and continue to be, discussed by Onterra and the LMA. The 2014 preliminary control strategy prioritizes four areas for herbicide control and two areas near the main boat landings for professional hand-harvesting (Map 2). Sites B-14 and D-14 are proposed to be targeted with granular 2,4-D at its maximum application rate (4.0 ppm). Site A-14 is located in a more-protected part of the lake than the other treatment sites and therefore would be targeted with liquid 2,4-D at its maximum application rate (4.0 ppm).

While measured herbicide concentrations within the water column have not been shown to be significantly different between granular and liquid 2,4-D formulations, unpublished data suggest that granular 2,4-D concentrations in the pore-water (sediment-water interface) are much higher than observed within the water column. It is unclear if these higher pore-water 2,4-D concentrations correlate with increased treatment efficacy. The LMA would like to partner with the US Army Corps and the WDNR during this 2-year trial period to gain additional information regarding this concept.

Site C-14 has been targeted numerous times in the past for control, continually falling short of success expectation. The exposed position of this site within the lake may result in higher water exchange and therefore faster herbicide dissipation rates. This site is proposed for

control in 2014 using a combination liquid 2,4-D and endothall. This herbicide cocktail has proven successful in whole-lake situations, but not fully tested in spot-treatment situations.

Based upon the dye testing that was done on C-13 last spring, the herbicide (diquat) was almost completely dissipated in 2 hours within this exposed part of the lake. Of the aquatic herbicides typically used for EWM control, diquat requires the shortest exposure time to be effective. Since even this herbicide proved ineffective in 2013, a treatment is not being proposed for this site.

As elaborated on within each year's annual treatment report, having successful treatments when targeting small areas (< 5 acres) is difficult and inconsistent due to the rapid effects of dilution. EWM populations near the lake's two main public access locations are proposed to be targeted with professional hand-harvesting services. The LMA has identified two firms that can carry out these activities. Similar to the herbicide treatment sites, the professional hand-harvesting areas would be objectively monitored to understand success and limitations of this strategy, as well as the applicability of expansion to additional areas in the future.

PROJECT GOALS

The chief goal of this management project is bring EWM occurrences within Lake Metonga to levels that minimally affect the aquatic ecosystem of the system. The impacts to native submersed species are believed to occur when the non-native species, in this case, EWM, reaches an aerial coverage of approximately 50% (*dominant*). Therefore, by minimizing the occurrence of these dense stands, the exotic's impact on the lake's ecology would also be minimized. Because the primary goal is to better the lakes' ecological state, control actions must implemented to maximize impact on the target species while minimizing impacts on non-target, native species. Although all of the impacts are undesirable, the potential impacts to Lake Metonga's native community is of special concern because of the high floristic quality (FQI=30.2) and large number of native species (N = 24, 35 including incidentals). To accomplish this, both target and non-target species must be monitored closely.

PROJECT TIMELINE

Table 1 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 components.

Table 1. Approximate Project Schedule

	2015				2016				2017				
Task	**W**	**Sp**	**Su**	**F**	**W**	**Sp**	**Su**	**F**	**W**	**Sp**	**Su**	**F**	**W**
Pretreatment Confirmation & Refinement Survey													
Point-intercept Sub Sampling													
Herbicide Treatment													
GPS Basemap Upload													
Professional Hand-Harvesting													
EWM Peak-biomass Survey													
Annual Treatment Reporting													
Whole-lake Point-intercept Survey													
Planning Committee Meeting													
Updated Aquatic Plant Management Plan													

PROJECT SCOPE

Spring Pretreatment Confirmation & Refinement Survey (Early-Spring 2014 & 2015)

A qualitative assessment would be completed prior to implementing the early-season herbicide treatment to verify treatment area extents and to inspect the condition of the target species. Proposed treatment areas would be verified through the use of a combination of surface surveys, rake tows, and submersible video monitoring.

Upon completion of the inspections, Onterra would provide a brief email letter report to the LMA and WDNR describing the results of the assessment and any recommended changes to that year's treatment strategy. If changes are suggested, Onterra would provide the updated treatment areas to the applicator once the updated strategy is approved by the WDNR and LMA.

Chemical Applications (Spring 2014 & 2015)

It would be the responsibility of LMA to contract with a commercial aquatic pesticide applicator, certified with the Wisconsin Department of Agriculture and Consumer Protection and licensed by the WDNR to perform the *early season* treatment of EWM per the specifications outlined on Map 2. The treatment would occur before June 1 and/or water temperatures reach 60°F, preferable closer to 55°F. Onterra would create the treatment areas in the form of polygons within their Geographic Information System (GIS) and then transmit them to the applicator in native shapefile format or similar format recognized by the applicator's GPS technology. If applicable, the applicators treatment paths would be included in the annual and final reports.

Professional Hand-Harvesting

The LMA has attempted to conduct volunteer-based hand harvesting in prior years, only to be met with insufficient volunteerism for a successful control effort to occur. The proposed project initiates professional hand-harvesting efforts in 2014 and 2015 at two locations out from the main public access locations (Map 2). For budgeting purposes, the proposed project includes $3,000 worth of hand-harvesting each year. The amount of hand-harvesting effort will be dependent on the firm hired, the equipment used, and the number of divers in the water at a time.

EWM Peak-Biomass Survey (Late-Summer 2014 & 2015)

As the name implies, the EWM peak-biomass survey is completed when the plant is at its peak growth, allowing for a true assessment of the amount of this exotic within the waterbody. This survey would include a complete meander survey of the littoral zone by professional ecologists. All incidences would be mapped with a sub-meter GPS data collector using either points or polygons, depending on the size of the finding. Large colonies over 40 feet in diameter would be mapped using polygons (areas), while small colonies, clumps of plants, and single plants would be mapped using points. Colonies marked with polygons would also be designated using a 5-tiered density scale from *Highly Scattered* to *Surface Matting*.

The result of the EWM peak-biomass survey will be documentation of the EWM population with the lake each year. These data will be compared against those collected during the previous year to allow a qualitative understanding of how the EWM population changed within areas treated and not treated. Qualitatively, a successful treatment would include a reduction of EWM density within the treatment area as demonstrated by a decrease in two density ratings (e.g. *Highly Dominant* to *Scattered*).

Quantitative Aquatic Plant Monitoring (Early-Spring 2014 & Late-Summer 2014, 2015)

The 2014 treatment monitoring strategy will implement quantitative methods using a modified point-intercept methodology consistent with the Appendix D of the WDNR Guidance Document, *Aquatic Plant Management in Wisconsin* (WDNR 2010). In general, a sub-sample point-intercept grid will be placed over treatment sites to yield approximately 200 sampling locations.

During the 2014, these sub-sample locations would be sampled the spring (April-May) before the treatment (pretreatment) and the late-summer following the treatment (post treatment). Data collected at these locations would be analyzed in terms of EWM treatment efficacy (statistical difference in pre and post EWM presence). Unfortunately, the quantitative methodology described above will not allow an understanding of how non-target native plants were impacted by the treatment strategy due to these species being at different life-cycle phases during early-spring (likely not sprouted) and late-summer (at their peak growth stage). As part of the 2013 treatment monitoring, data was collected at numerous point-intercept sub-sample locations that will allow an understanding of native plant changes within a sub-set of the treatment areas.

As a part of the proposed project, sufficient pretreatment sub-sample data would be collected during the late-summer of 2014 such that spring 2015 sub-sample data collection is not warranted.

Quantitatively, a successful treatment would include a statistically valid reduction in EWM frequency following the treatments as exhibited by at least a 75% decrease in exotic frequency from the pre- and post-treatment point-intercept sampling.

Volunteer-based Herbicide Concentration Monitoring *(Spring 2014 & 2015)*

In conjunction with the WDNR and US Army Corps of Engineers (USACE), herbicide concentration monitoring at strategic locations throughout the system would take place to understand the concentration/exposure time of the herbicide at different time periods and locations following the treatment. This information would indicate whether or not the amount of herbicide applied is sufficient for causing EWM mortality and if any adjustments in treatment strategy need to be made in the future.

Water samples would be collected by trained volunteers from the LMA. The properly preserved samples would be sent to the USACE for laboratory analysis. Under the current program, there would be no analysis costs for the USACE to run the samples. Coupling the herbicide concentration data with the point-intercept data will be valuable for assessing the trial treatment.

As eluded to above, the LMA would encourage the WDNR to give consideration to monitoring herbicide pore-water within the granular 2,4-D treatment sites in either 2014 or 2015.

Point-intercept Survey Pretreatment Survey *(Summer 2015)*

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) would be used to complete this study. Based on guidance from the WDNR, a point spacing of 80 meters would be used resulting in approximately 1311 sample locations.

The point-intercept survey would be completed during the summer of 2015 and would be compared to the 2005 and 2013 point-intercept surveys. A Chi-square distribution analysis (alpha = 0.05) would be used to determine which plant abundances are statistically different (increase or decrease) between the two surveys. The alpha value is set such that we consider the results statistically significant when the test is 95% confident that the results are truly different and non-random.

After this multi-year control plan, the LMA's Aquatic Plant Management Plan will need to be updated to account for the knowledge learned during the control project. The proposed project would include an update to the aquatic plant-related components of the management plan. If the LMA decides to also update water quality, watershed, shoreland habitat, and stakeholder perception components, they would require additional funding through the

WDNR Lake Planning Grant program or the AIS Education, Planning, and Protection program.

STAKEHOLDER PARTICIPATION

Partnerships

The City of Crandon provides the LMA with $5,000 annually. In addition to all the efforts the Mole Lake Chippewa Community provides to Lake Metonga, they continue to annually support the LMA with a $3,000 contribution. The Town of Lincoln provides $3,000 annually and Forest County provides $3,500 each year.

Together, the LMA receives annual contributions from these entities that greatly exceed 10% of the local share cash costs of the project

Complementary Management Efforts

Bullhead Harvest

Since 2008, approximately 25,000 bullheads have been removed from Lake Metonga by the Mole Lake Chippewa Community with significant volunteer efforts by Lake Metonga stakeholders. These fish are being removed from the system in efforts to balance the system after AIS establishment.

Restricted Area

Through the Township of Lincoln, the LMA has implemented an ordinance that protects the integrity of a small isolated bay of the lake. This bay contains numerous valuable native aquatic plants that could be impacted by disturbance and boating activity. A buoy is placed in front of the bay deterring lake users from entering the bay.

Loon Nest Platforms

The LMA maintains and monitors two loon nest platforms on the lake. One is placed within the restricted area discussed above and the second is in a similar bay in a different part of the lake.

Shoreland Restoration Demonstration Site

Cindy Gretzinger (Forest County) has grant money for shoreland restoration and the LMA has a meeting planned with her to find locations to implement a shoreland restoration demonstration site. A preliminary site has been proposed at a private residence.

Clean Boats Clean Waters Program

The intent of the boat inspections would not only be to prevent additional invasives from entering the lake through its public access points, but also to prevent the infestation of other waterways with invasives that originated in Lake Metonga. The goal would be to cover the landing during the busiest times in order to maximize contact with lake users, spreading the word about the negative impacts of AIS on lakes and educating people about how they are the primary vector of its spread.

The two main public boats landing on Lake Metonga are monitored through training provided by the Clean Boats Clean Waters (CBCW) program. The LMA has applied for a stream-lined CBCW WDNR Grant to cover over $7,300 of watercraft inspections occuring in 2014 at both landings.

Boat Decontamination

In 2003, the LMA was granted approximately $1,800 through the BoatU.S. Foundation's Clean Water Grants Program to erect multiple educational bulletin boards and power washers to aid in the prevention of AIS. Dovetailing with the watercraft inspections, the Forest County Veterans Memorial Park installed and currently maintains the boat washing station, offered to lake visitors free of charge. Boat owners are encouraged to power wash their watercrafts prior to entering the lake, limiting Lake Metonga's exposure to new AIS. Boats should also be power washed after visiting Lake Metonga, to ensure the AIS from Lake Metonga are not transported to other lakes.

Planning Committee Meeting

Following the completion of the data collection during the summer of 2015 and subsequent analysis of that data, a single meeting would be held in order to present the project's results and preliminary recommendations to a sub-committee (Planning Committee) of the LMA and to complete a prioritized implementation plan as it pertains to aquatic plant management. This would be a very important meeting because it would facilitate the combination of the technical aspects of the project and the prioritized goals of the lake stakeholders. The result of this combination would be the updated aquatic plant management plan for Lake Metonga (aquatic plant section and related aquatic plant implementation plan).

Because the planning meeting involves a smaller group of people, we suggest that these meetings be held during a weekday afternoon or evening, preferably Monday – Thursday. Often, these meetings are held on a Thursday afternoon at a residence or other location on or near the lake. Onterra would facilitate the meeting by making the necessary contacts and by supplying result summaries in the form of hardcopy maps and narratives along with projected presentations.

PROJECT DELIVERABLES

Annual Reports

During the winter months of 2014 and 2015, a letter report would be provided that would include an assessment of that year's control program as well as guidance for the following year. A map depicting the EWM peak-biomass survey results and recommended hand-harvesting and herbicide treatment areas would be included within the report. All reports would be presented in electronic format via email.

Lake Metonga Aquatic Plant Management Plan Update

The final product for this project would be a single report that would include the methodologies and results of the tasks described above; a discussion concerning those results as they apply to the current health, rehabilitation, and protection of Lake Metonga; and the full-color maps described in the Project Scope. Management, protection, enhancement

alternatives and recommendations would be presented along with continued public education issues. This report would use the 2013 final AIS-EPC project report as a general template, updating information relating to the EWM surveys conducted in 2014 and 2015, as well as the 2015 whole-lake point-intercept data. As discussed above, the results of the planning committee meeting discussions would be incorporated into an updated Implementation Plan Section as it pertains to aquatic plant management on Lake Metonga.

Upon finalization of the report and acceptance by the WDNR, two hard copies and two electronic copies on CD would be provided to the LMA. The report would be made available electronically via email or other suitable venue for the WDNR and other interested parties.

Stakeholder Participation

The LMA would be responsible for providing the necessary deliverables for those components listed within the Stakeholder Participation Section. The deliverables for these activities include entering the appropriate information within the WDNR's Surface Water Integrated Monitoring System (SWIMS).

PROJECT COST BREAKDOWN

	Cash Costs	Donated Value
Monitoring and Stakeholder Participation		
Project Administration & Communication	$760.00	
2014 EWM Monitoring (Year 1)		
T2014 Spring Pretreatment Confirmation & Refinement Survey - Spring 2014	$1,235.00	
Point-intercept Sub-sampling Survey - Spring 2014	$840.00	
Hand-removal Coordination & GPS Basemap Creation	$300.00	
Point-intercept Sub-sampling Survey - Late-Summer 2014	$1,105.00	
2014 EWM Peak-biomass Survey - Late-Summer 2014	$1,765.00	
T2014 Letter Report and T2015 Planning - Winter 2014/2015	$970.00	
2015 EWM Monitoring (Year 2)		
T2015 Spring Pretreatment Confirmation & Refinement Survey - Spring 2015	$1,365.00	
Hand-removal Coordination & GPS Basemap Creation	$300.00	
Point-intercept Sub-sampling Survey - Late-Summer 2015	$1,105.00	
2015 EWM Peak-biomass Survey - Late-Summer 2015	$1,765.00	
T2015 Letter Report and T2016 Planning - Winter 2015/2016	$970.00	
Aquatic Plant Management Planning		
Whole-lake Point-intercept Survey - Summer 2015	$3,845.00	
Planning Meeting - Winter/Spring 2016	$350.00	
Aquatic Plant Management Plan Update	$1,060.00	
Travel - Mileage (0.58/mile) & Incidentals - all reduced by 20%	$1,610.00	
Monitoring and Stakeholder Participation Subtotal	*$19,345.00*	*$0.00*
Herbicide Application and Related Fees		
2014 Herbicide Treatment Costs	$54,200.00	
2014 WDNR Permit Fees	$1,270.00	
2015 Herbicide Treatment Costs	$54,200.00	
2015 WDNR Permit Fees	$1,270.00	
Herbicide Application and Related Fees Subtotal	*$110,940.00*	*$0.00*
Professional Hand-Harvesting Services		
2014 Professional Hand-Harvesing	$3,000.00	
2015 Professional Hand-Harvesing	$3,000.00	
Professional Hand-Harvesting Subtotal	*$6,000.00*	*$0.00*
Volunteer Efforts		
Herbicide Concentration Monitoring		
12 Sample Events x 4hr/Event x 2 yrs		$1,152.00
Clean Boats Clean Waters		
Paid Monitors	*Within Separate Grant*	
Volunteer Monitors (25 hrs x 2 yr)		$600.00
AIS Surveillance Monitoring & Hand Removal		
Volunteers (20 hrs x 2 yr)		$480.00
Volunteer Watercraft Use (2 days @ $70/day x 2 yr)		$280.00
Grant Administration		
Volunteers (20 hrs x 2 yr)		$480.00
Volunteer Efforts Subtotal	*$0.00*	*$2,992.00*
Project Subtotals	***$136,285.00***	***$2,992.00***
Total Project	**$139,277.00**	
State Share Requested (65%)	**$90,530.05**	

State of Wisconsin
Department of Natural Resources

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 will 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 Population Control

Legislative District Numbers	
Senate	Assembly
12	36

To determine your legislative district, go to
http://165.189.139.210/WAML//
Type in complete address, next screen shows information

Section II: Applicant Information

Applicant: Lake Metonga Association, Inc.

Waterbody Name: Lake Metonga

Project County/Township/Section/Range: Forest/T35N/R13E/S18

Type of Eligible Lake or River Applicants

☐ County ☐ Tribe ☐ Other Gov't Unit ☐ Federal
☐ City ☐ Sanitary Dist. ☐ Nonprofit Org. ☐ State
☐ Village ☐ Dist. ☐ College, School, etc. ☐ Other _____
☐ Town ☒ Assoc.

Authorized Representative Named by Resolution	Project Contact Name
Lester Schramm	Tim Hoyman
Authorized Representative Title	**Project Contact Title**
Board Member	Aquatic Ecologist; Onterra, LLC
Address	**Address**
4884 Strawberry Bluff Lane	815 Prosper Road
City / State / ZIP Code	**City / State / ZIP Code**
Crandon / WI / 54520	De Pere / WI / 54115
Daytime Phone (area code)	**Evening Phone (area code)**
715.478.5197	(715) 784-2494
920.338.8860	
E-Mail Address	**E-Mail Address**
lesschramm@gmail.com	thoyman@onterra-eco.com

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 ☐ Yes ☐ No	Environmental Grants Specialist Approval / Date	
Eligible Project ☐ Yes ☐ No	**Eligible Applicant** ☐ Yes ☐ No	**Project Priority Rank**	**Research / Demo Project** ☐ Yes ☐ No
Prior Grant Award(s) ☐ Yes ☐ No	**Fiscal Year(s)**	**Amount Received to Date** $	**Project Awarded** ☐ Yes ☐ No

State of Wisconsin
Department of Natural Resources

Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Section III: Project Information

Project Title	Proposed Ending Date
Lake Metonga EWM Control & Prevention Project: 2014-2015	December 31, 2016

Other Management Units	Letter of Support	Other Management Units	Letter of Support
1. Forest County LCD	☐	4. Forest County Parks	☐
2. Mole Lake Sokaogon Chippewa Community	☐	5. Town of Lincoln	☐
3. City of Crandon	☐	6.	☐

Section IV: Public Access

Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites:	40
Number of Public Access Sites Including Boat Launches and Walk-ins:	5 (2 main landings, 1 additional landing, 2 beaches, 1 handicap fishing pier)

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			
2. Consulting services (includes shipping/voucher materials)	$19,345.00		
3. Purchased services: Herbicide Applications	$108,400.00		
4. Other purchased services (specify) : WDNR Permit Fees	$2,540.00		
5. Plant material			
6. Supplies (specify): Professional Hand Harvesting	$6,000.00		
7. Depreciation on equipment			
8. Hourly equipment use charges			
9. State Lab of Hygiene (SLOH) Costs			
10. Non-SLOH Lab Costs			
11. Other (specify): Volunteer In-kind Labor		$2,992.00	
12. **Subtotals** (Sum each column)	*$136,285.00*	*$2,992.00*	
13. **Total Project Cost Estimate** (sum of **column 1** plus sum of **column 2)**	**$139,277.00**		
14. **State Share Requested (up to 75% of total costs may be requested)**	**$90,530.05**		

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

65% State Share Requested

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:

Aquatic Invasive Species (AIS) Control Grant Application

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 with public access sites identified (per Section VI 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 goal 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 no 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

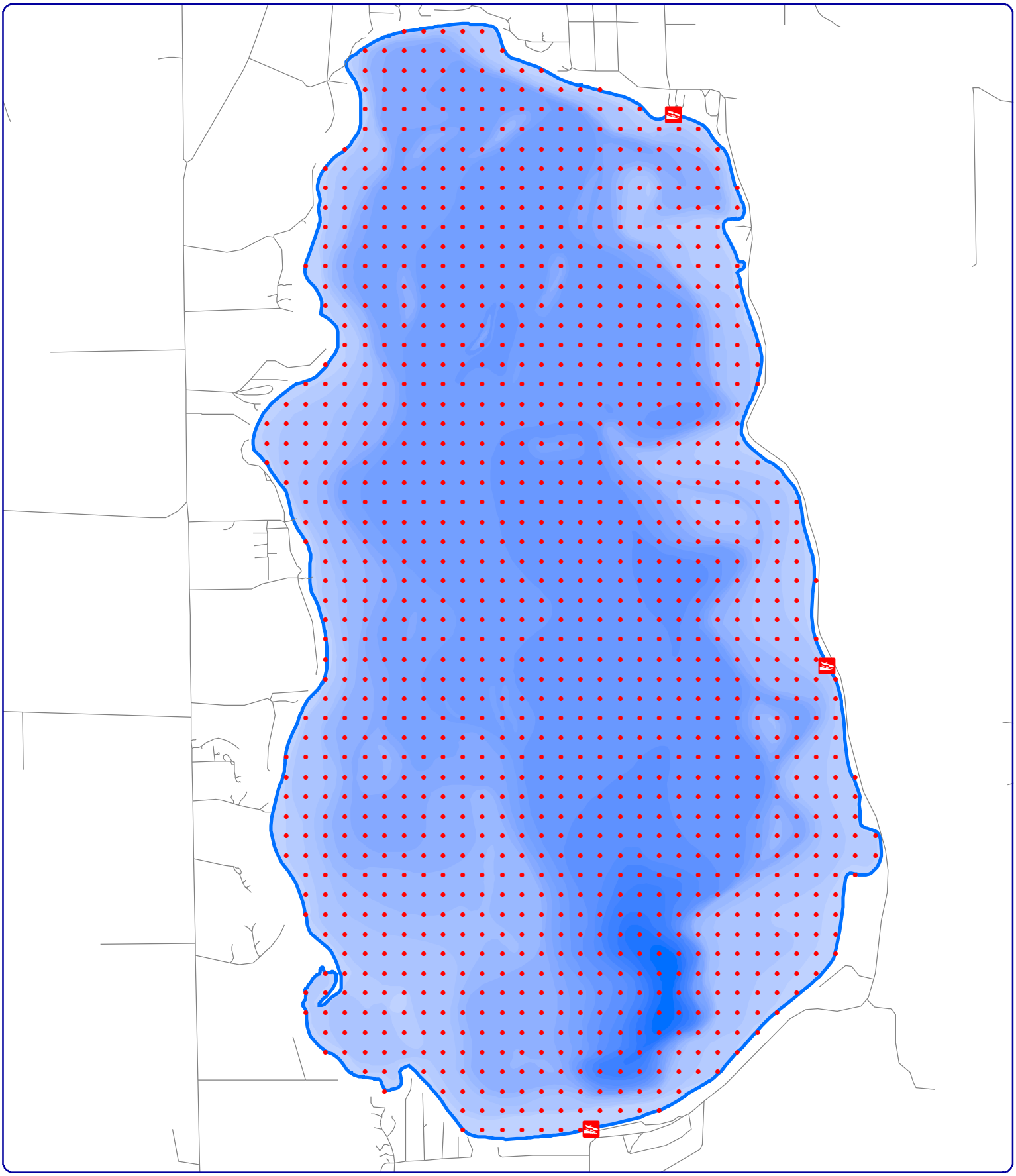
E. Established Infestation Control Projects:

- ☒ 1. Management Plan
- ☐ 2. APM Permit

Section VII: Certification

I certify that information on this application and all its attachments are true and correct and in conformity with applicable Wis. Statutes

Print/Type Name of Authorized Representative	Title of Authorized Representative
Lester Schramm	Board Member
Signature of Authorized Representative	Date Signed



N
W E
S

1,700
Feet

Onterra LLC
Lake Management Planning
815 Prosper Rd
De Pere, WI 54115
920.338.8860
www.onterra-eco.com

Sources:
Roads and Hydro: WDNR
Bathymetry: WDNR, digitized by Onterra
Aquatic Plant Survey: Onterra, 2013
Map Date: January 8, 2014
Filename: *Map2_Metonga_EWM_T2014_Prelim1.mxd*

Project Location in Wisconsin

Legend

Lake Metonga ~ 2,157 acres
WDNR Definition

Point-Intercept Survey Location
80-meter spacing, 1,311 total points

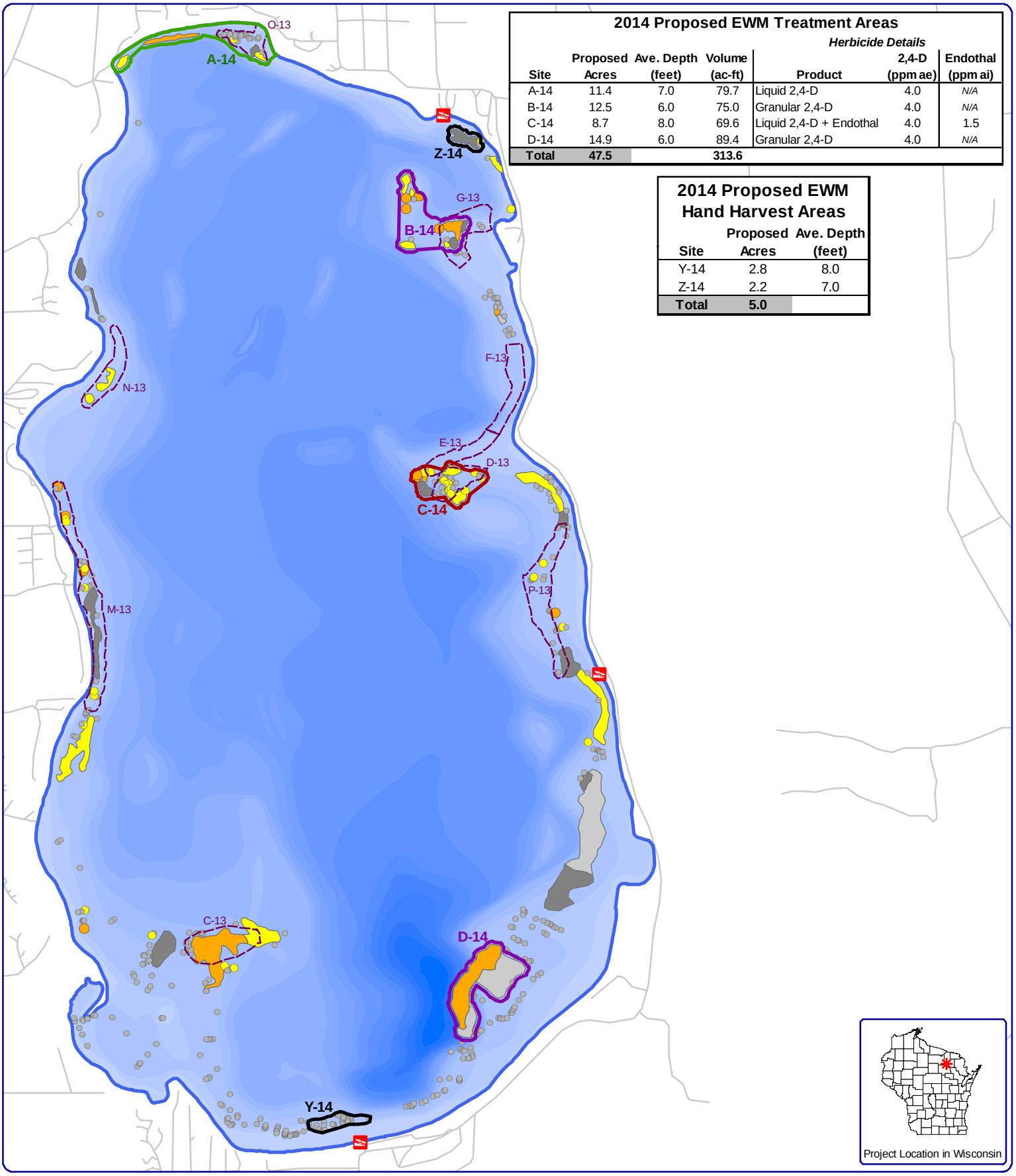
Public Boat Landing

Map 1

Lake Metonga

Forest County, Wisconsin

Project Location & Boundaries



2014 Proposed EWM Treatment Areas

Site	Proposed Acres	Ave. Depth (feet)	Volume (ac-ft)	Herbicide Details: Product	2,4-D (ppm ae)	Endothal (ppm ai)
A-14	11.4	7.0	79.7	Liquid 2,4-D	4.0	*N/A*
B-14	12.5	6.0	75.0	Granular 2,4-D	4.0	*N/A*
C-14	8.7	8.0	69.6	Liquid 2,4-D + Endothal	4.0	1.5
D-14	14.9	6.0	89.4	Granular 2,4-D	4.0	*N/A*
Total	**47.5**		**313.6**			

2014 Proposed EWM Hand Harvest Areas

Site	Proposed Acres	Ave. Depth (feet)
Y-14	2.8	8.0
Z-14	2.2	7.0
Total	**5.0**	

Project Location in Wisconsin

1,700 Feet

Onterra LLC
Lake Management Planning
815 Prosper Rd
De Pere, WI 54115
920.338.8860
www.onterra-eco.com

Sources:
Roads and Hydro: WDNR
Bathymetry: WDNR, digitized by Onterra
Aquatic Plant Survey: Onterra, 2013
Map Date: January 8, 2014
Filename: *Map5_Metonga_EWM_T2014_Prelim1.mxd*

Legend

2013 EWM Survey Results (September 2013)

- Highly Scattered
- Scattered
- Dominant
- Highly Dominant
- Surface Matting *(None)*
- Single or Few Plants
- Clumps of Plants
- Small Plant Colony
- 2013 Treatment Areas

2014 Preliminary Treatment Areas

- Liquid 2,4-D
- Liquid 2,4-D + Endothal
- Granular 2,4-D
- Professional Hand Harvest

Map 2

Lake Metonga

Forest County, Wisconsin

2014 Preliminary EWM Control Strategy v1

Wisconsin Department of Natural Resources
Grant Project
Resolution

RESOLUTION OF Lake Metonga Association, Inc.
Forest County, Wisconsin

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

WHEREAS we recognize that a well-planned and holistic lake *and* aquatic invasive species management project will better the lake now and for future users, and

WHEREAS the control and prevention of aquatic invasive species are important to the health and well-being of the lake; and

WHEREAS we are qualified to carry out the responsibilities of the planning project

IT IS, THEREFORE, RESOLVED THAT:

The **Lake Metonga Association, Inc. (LMA)** requests the funds and assistance available from the Wisconsin Department of Natural Resources under and

HEREBY AUTHORIZES **Les Schramm** to act on behalf of the **LMA** to: submit an application to the State of Wisconsin for financial aid for monitoring, planning and education purposes; sign documents; and take necessary action to undertake, direct, and complete an approved grant.

BE IT FURTHER RESOLVED THAT the **LMA** will meet the obligations of the planning project including timely publication of the results and meet the financial obligations under this grant including the prompt payment of our **35%** commitment to project costs.

We understand the importance of a continuing management program for **Lake Metonga** and intend to proceed on that course.

Adopted this _____ day of _____, 20____

By a vote of: _____ in favor _____ against _____ abstain

BY: _____
(Signature)

Printed Name: _____

Title: _____

TOWN OF LINCOLN
5376 COUNTY ROAD W
CRANDON, WI 54520
Town Hall Phone: 715-478-2985

Lynne M. Black, Chairwoman
Michael Wilson, Supervisor
Larry Sommer, Supervisor
Tressa Votis, Clerk / Treasurer

January 27, 2014

RE: Lake Metonga Association AIS Grant Application 2014

Dear Mr. James Kreitlow, Wisconsin Department of Natural Resources,

Lake Metonga is a pristine water resource used by tourists as well as local and area residents who significantly contribute to the economy of the community.

The Lake has beautiful sand beaches on the North end (City Beach) and South end (Forest County Memorial Park). Growth of EWM into these areas (which was evident in the September 2013 aquatic plant survey, performed by Onterra,) would discourage public use of these beaches and the use of 65 tourist camping sites at the Forest County Memorial Park. Also, infestation into the swimming area would create a safety hazard for swimmers and fishermen.

It is vital that the Association remain proactive in the control and prevention of the spread of AIS in Lake Metonga and to other water bodies; therefore, we suggest that you support and honor their grant request.

Sincerely,

Lynne M. Black, Chairwoman
Town of Lincoln – Forest County

Aquatic Invasive Species Control Grants **Established Population Control Ranking Questions** **36** Maximum Points	**Ranking Points**	**Score**	
A. The degree to which the project includes a prevention and control strategy. **(6 points possible)**			
1) The water being controlled has, or the project includes, a Clean Boats, Clean Waters watercraft inspection program per the requirements of s. NR 198.22 (1)(d) or an approved Alternative Equivalent (see guidance).	2 points	2	Need to outline that 200 hours are occuring
2) The project will conduct other complimentary source containment activities that go above and beyond minimum level of inspection and signage e.g. boat washing or cleaning stations, augmented enforcement.	2 points	2	power washing station at county boat landing, paid CBCW monitors have an enclosed trailer at boatlanding w/ CBCW message
3) The water being controlled has, or the project will train, volunteers to identify AIS and conduct water body surveillance monitoring for early detection using accepted WDNR or citizen-based monitoring (CLMN/Project RED, etc) protocols where data is being entered into SWIMS.	2 points	2	Volunteers have been trained in past by Onterra. This would be a coordinated program by Onterra with volunteers, association-owned GPS, and actions addressed within annual treatment report
B. The degree to which the project will prevent the spread of aquatic invasive species. (7 points possible)			
1a) The control activity will take place on a Statewide AIS Source Water listed on the following table.	5 points	got 1b	
OR			
1b) The control activity will take place on a major AIS source water with high public use (lakes greater than 500 acres and all boat-able rivers that meet or exceed the minimum boating access criteria in NR 1.91(4) or wetlands greater than 500 acres in public ownership) or the project includes a Statewide AIS Source Water where less than 50% of the activities are directed.	4 points	4	Is greater than 500 acres and has adequate public access.
OR			
1c) The control activity takes place on a significant AIS source water with high public use (lakes between 500 and 100 acres and all rivers that meet or exceed the minimum boating access criteria in NR 1.91(4); wade-able streams with public access or wetlands between 500 and 100 acres in public ownership.	3 points	got 1b	
OR			
1d) The control activity takes place on an a minor AIS source water (lakes less than 100 acres that meet or exceed the minimum boating access criteria in NR 1.91(4); any river or stream with public access or wetlands less than 100 acres in public ownership).	2 points	got 1b	
2) The project will control a NR40 prohibited species e.g. Hydrilla, yellow floating heart, spiny water flea, red swamp crayfish, etc.	2 points	0	EWM is a restricted species, not a prohibited species
C. The degree to which the project protects or improves the aquatic ecosystem's diversity, ecological stability or recreational uses. (3 points possible)			
1) Project plan implementation includes stocking or planting to reintroduce native (plant) community species or implements other actions or changes in management strategies that will provide added protection to native species beyond herbicide treatments alone.	2 points	0	
2) Project area has a high degree of native biodiversity or is critical habitat, as expressed by: ● an above eco-region average aquatic or wetland plant FQI ● the presence of a listed aquatic species (NHI endangered, threatened or watch) ● is an ERW or ORW water ● has a Sensitive Area or Critical Habitat designation ● is within or adjacent to a State Natural Area, State Park, other publicly owned unique natural area or such an area owned/managed by a nonprofit conservation organization (e.g., Nature Conservancy).	1 point	1	high floristic quality (FQI=30.2) and large number of native species (N = 24, 35 including incidentals).
D. The stage of the infestation in the water body. (4 points possible)			
1) Project addresses a pioneer population (as defined by s.198.12 (8)), or was a past early response project.	2 points	0	Neither
2) The target species is low in density and still at a controllable level as determined by being found in 25%, or less, of the colonizable area of the project water body (e.g. only the littoral zone of a lake can be colonized by EWM).	1 point	1	much less than 25%, EWM reduced from 7.6% in 2005 to 2.1% in 2013
3) It is well documented (P/I surveys or GIS mapping, verified) that the target species is a rapidly expanding population (doubling annual increase in areal coverage or FOO). Population is still under 25% threshold above.	1 point	0	We can show expansion, but not to the level that will garner this point
E. The degree to which the project will be likely to result in successful long-term control. (4 points possible)			
1) As also included in the approved management plan, the project employs multiple strategies (for the same species) to achieve and maintain control objectives. [e.g. hand pulling in combination with chemical treatment and biocontrol, draw downs, etc.]	2 points	2	Professional hand-harvesting
2) The sponsor has had a pre-application grant scoping consultation with the Department and the application is consistent with the results of those discussions.	1 point	1	Numerous correspondences
3) There is a low risk of reestablishment and spread after control activity occurs. All of the following apply: the project site is not impounded; is not tributary to or connected to any other AIS populated water and; the entire AIS population is being targeted for control.	1 point	1	Contains a very small water control structure, but wouldn't be considered an impoundment as only a small portion of its volume is caused by the dam. Downstream systems do not have EWM

Aquatic Invasive Species Control Grants **Established Population Control Ranking Questions** **36** Maximum Points	**Ranking Points**	**Score**	
F. The availability of public access to, and public use of, the water body. (2 points possible)			
1) Any lake of 100 surface acres or greater and any boat-able river that has more than the minimum public boating access as defined in s. NR 1.91(4) or any wetland greater than 50 acres in public ownership.	1 point	1	has adequate access
2) The water provides significant alternative public access and use opportunities that include <u>two</u> of the following at separate locations: public swimming beach; park or other public land with accessible frontage; public fishing pier or wildlife observation area; two or more private resorts, youth camps or sportsmen clubs; or where more than 50% of the lake or river shore in the project area is in public ownership.	1 point	1	Multiple Resorts, two swimming beaches, 1 fishing pier, 1 ADA fishing pier
G. The degree to which the proposed project includes or is complemented by other management efforts including watershed pollution prevention and control, native vegetation protection and restoration and other actions that help control aquatic invasive species or resist future colonization. (2 points possible)			
Applicant demonstrates that they have implemented, or been a significant participant in, or the project proposes, a shoreland restoration, habitat protection, sediment and nutrient control, water level management or other substantial lake stewardship activity (not including education or planning) that protects the lake ecosystem. (Score 1point per action, provide documentation).			
Activity 1	1 point	1	the LMA's reole in the bullhead harvesting project by the Mole Lake Tribe
Activity 2	1 point	1	ordinance for town of lincoln for buoy to be place to keep people out of area to prevent disutrubance of aquatics & Loon nest
Activity 3		extra	Cindy Gretzinger (Forest County) has grant money for shoreland restoration and the LMA has a meeting planned with her to find locations to implement.
Activity 4		extra	loon nest platforms - one in farmers bay & one in peterson's bay
2) The sponsor is a Green Tier Community Charter Member. (City of Middleton, Bayfield, Fitchburg, Appleton, Weston, Monona, Eau Claire, La Crosse, & the Village of Bayside)	1 point	0	
H. Community support and commitment, including past efforts to control aquatic invasive species. (5 points possible)			
1) This is demonstrated by requesting less than the maximum state share cost rate (cash costs) for the total project costs. No more than 25% of the project match can be in-kind or donated labor. The sponsor is requesting:			
65% State Share (1 point)	1 point	1	Selects this lesser state share
OR			
50% State Share (2 point)	2 points	0	
2) The project has financial support from additional management units, interest groups or organizations committing > 10% of the **hard cash local match**.	1 point	1	$5K from City of Crandon, $3K from Mole Lake, $3.5K from Forest County, $3K from town of Lincoln
3) The sponsor conducted AIS control, consistent with their Department-approved plan, in the previous season ***without*** financial assistance from the State. They may have begun implementation without a grant or received grants in past but not the past season.	1 point	0	2013 herbicide treatment was under an AIS Grant
I. Whether the sponsor has previously received a grant for a similar project for the same water body. (2 points)			
1) There has not been an AIS Established Population Control grant for the same species in the same waterbody in the last five years.	2 points	0	This project is a continuation of a previously funded AIS Grant
J. The degree to which the project will advance the knowledge and understanding of the prevention and control of aquatic invasive species. (1 point possible)			
1) Project has an evaluation component that will be conducted by an objective outside entity to assess project outcomes or is a participant in a Department-sponsored research and demonstration project on the AIS research priority list.	1 point	1	will be monitored as a part of joint WDNR & USACE herbicide concentration monitoring project. Has third-party evaluation component.
		23	

Overview

	Category	**Points**
The degree to which the project includes a prevention and control strategy.	A	6 / 6
The degree to which the project will prevent the spread of aquatic invasive species.	B	4 / 7
The degree to which the project protects or improves the aquatic ecosystem's diversity, ecological stability or recreational uses.	C	1 / 3
The stage of the infestation in the water body.	D	1 / 4
The degree to which the project will be likely to result in successful long-term control.	E	4 / 4
The availability of public access to, and public use of, the water body.	F	2 / 2
The degree to which the proposed project includes or is complemented by other management efforts including watershed pollution prevention and control, native vegetation protection and restoration and other actions that help control aquatic invasive species or resist future colonization.	G	2 / 3
Community support and commitment, including past efforts to control aquatic invasive species.	H	2 / 5
Whether the sponsor has previously received a grant for a similar project for the same water body.	I	0 / 2
The degree to which the project will advance the knowledge and understanding of the prevention and control of aquatic invasive species.	J	1 / 1
		23 / 37