

“Manitowoc County Lakes Association’s County – Invasives Species Management Plan”



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“Manitowoc County Lakes Association’s County – Invasives Species Management Plan”

Project Period: July, 2010 thru June 30, 2013

Background of Invasive Species in the County:

Manitowoc County’s lakes and rivers have been impacted by the introduction of invasive species due in part to our proximity to Lake Michigan and south east Wisconsin metropolitan corridor of Chicago and Indiana where many of our invasives historically have and continue to enter Wisconsin.

Historically most of our County lakes that are connected by watercourses to Lake Michigan have been infested by common Carp introduced in the last century, possibly threatened by the Asian Carp in the next century. The Silver Lake rehabilitation project in which rotenone was used to eradicate the fish population found many thousands of non native fish species that migrated into the lake from Lake Michigan including carp and gizzard shad. Rusty Crayfish have destroyed vegetation and replaced native crayfish in most of our County’s river systems.

Additionally other AIS invaders have impacted inland lakes and rivers. Zebra mussels are already present in Cedar, Wilke and Pigeon lakes. Eurasian Milfoil has been identified in Harpts, Horseshoe, Hartlaub, Silver, Big Long, Pigeon, Rockville flowage, Carstens, Tuma and Wilke lakes. As a result of trained AIS monitors it has been identified in English and Hartlaub lakes. The newest invasive Curly Pond Weed has been found in Carstens, English, and Bullhead. The Mystery banded snail in Pigeon and Bullhead.

Purple Loosestrife and Phragmites are quickly spreading into native cattail wetland habitats and flood plains of our County watersheds threatening native wildlife species and obstructing agricultural drainage systems. These infestations are currently small enough in size to warrant eradication.

Already many Manitowoc citizens have begun to combat invading species. Pigeon Lake chemically treated Eurasian Milfoil and desires to protect their investment from reintroduction of this invasive. English Lake treated Curley Leaf Pond Weed the same year. Nearly a million dollars has been invested in the rehabilitation of Silver Lake. In Silver Lake native aquatic plants have not become established since the fish eradication, creating a lake environment vulnerable to invasive species infestation.

New invasives are lining up to invade already infested lakes as well as water bodies that have escaped the current invasion. These invasives include a number of animal species such as the Round Goby; Spiny & Fish hook waterfleas; Quagga Mussels and Eurasian Ruffe; plant species that include European Marsh Thistle, European Frog-bit, Hydrilla, and Water Chestnut and viruses such as VHS. Most recently identified in 2009 is Giant Hogweed.

Manitowoc County residents and Lake User communities prior to the MCLA’s most recent AIS grant had a very low knowledge base of aquatic invasive species prevention methods, as demonstrated by the boat inspection data. Only **35% of the boaters inspected by the paid boat inspector new how to inspect their boats for invasives in 2009. Prior to the project the knowledge level of boaters about the AIS law was 53% compared to the State average of 91%.** The general public and the sportsman communities were aware of AIS issues but were skeptical about the ability to prevent and control these aquatic invaders.

Stakeholders Affected By Aquatic Invasive Species & Contributors to This Plan

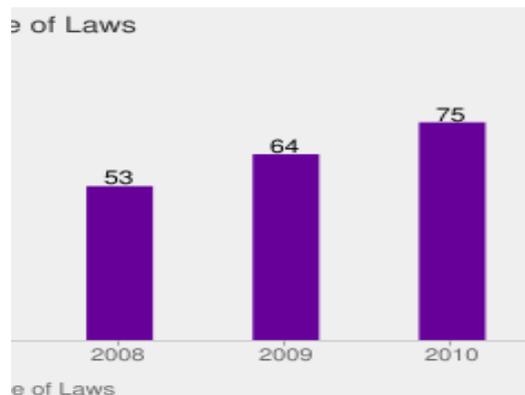
1. *Manitowoc County Fish & Game Protective Association: 30 Sportsman Club Members*
2. *Pigeon Lake Sportsman's Club*
3. *English Lake Protection and Rehabilitation District*
4. *Pigeon Lake Association*
5. *Hartlaub Lake Association*
6. *Friends of the Branch River*
7. *Woodland Dunes Nature Center*
8. *Master Gardner's*
9. *Silver Lake College*
10. *Silver Lake Park Restoration Committee*
11. *Big Long Lake Association*
12. *Cedar Lake Association*
13. *Hartlaub Lake Association*
14. *Wilke Lake Association*
15. *LNRP Lakeshore Natural Resource Partnership Inc.*
16. *Manitowoc County Highway Department*
17. *Manitowoc County Parks*
18. *Manitowoc County Townships*
19. *Cities of Cleveland, Manitowoc and Two Rivers*
20. *Property owners of Manitowoc county*
21. *Recreational boaters*
22. *Anglers*
23. *All those who value and enjoy natural ecosystems*
24. *For the next 7 Generations*

Project Accomplishment at the end of 2010:

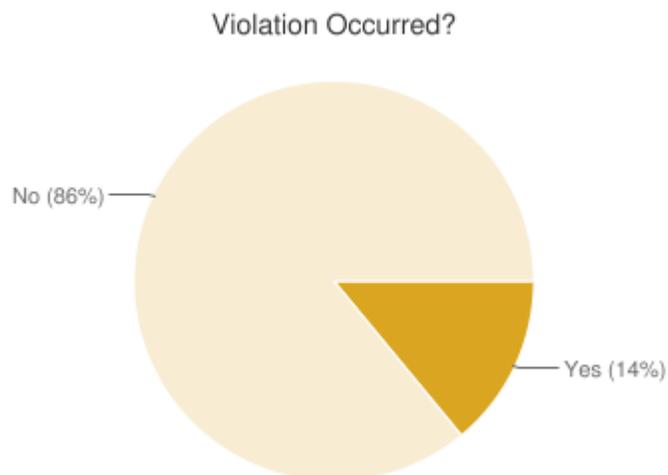
The 2008-2010 MCLA AIS grant project has been very successful with establishing an invasive species program in Manitowoc County.

- The general knowledge level of boaters awareness of the law rose from 53% 2008 to 67% 2009 and 75% at the end of 2010. Boat inspectors were rated very high as a tool to increase knowledge levels of boaters.

Boater Knowledge Level of Boat Inspections



- Violations by boaters being inspected dropped to 14% in 2010 compared to 31% in 2009.



- Our joint Billboard project with Calumet County raised the boaters knowledge from the State average (3% to 11%) to 36% for signage in Manitowoc County, based on the boat inspection data. This data source demonstrated the need and effectiveness of an AIS program in the County.



- The Fish & Game Protective Association which is an association of Sportsman clubs provided the 25% match for our \$9,000 Billboard grant project. This demonstrated their commitment to the AIS program
- The volunteer boat inspection program took off in 2009 with over half of our boat landings staffed by volunteers on the opening day of Fishing Season in May. This presence helped set the standard for the year that people were serious about AIS prevention in 2009.
- We also trained **53 AIS monitors** adopting a majority of our public access lakes to monitor for AIS. This set of many eyes on these lakes in 2009 identified two new out breaks of EWM and a number of lakes with Banded Mystery Snail. Many citizens were also recognizing and reporting the Phragmites and Japanese Knotweed locations.



Phase II Project Proposal

- This phase II project proposal will continue the momentum of developing an AIS program in the County and region as we work closely with Calumet and surrounding Counties.
- It will team the strengths of the Manitowoc County Lakes Associations (MCLA) and its networking capability with various county organizations to develop a strong county wide volunteer network. The MCLA will contract to assess current invasive species problems, implement a clean boats program, and develop invasive species monitors on all public access lakes.
- Phase II will expand the volunteerism momentum to youth groups who can build on the boat inspection, monitoring, mapping and AIS control activities.
- Implement NR 40 by helping to train rights-of-way managers and public land managers; and develop strategies to control AIS and wetland invasive species on these properties.
- Facilitate discussions with Town and County government officials responsible for road right-of-ways, regarding eradication of known infestations; incorporate prohibited and restricted plant species in **NR 40** with town ordinances which help establish standards for control on private properties.
- Build a constituency of citizens and land managers to organize a local or regional Weed Cooperative.
- Encourage creative signage on road access to the public landings to include AIS prevention signage on garbage cans.
- This project will expand monitoring activities through implementation of a Project RED to map and inventory riparian areas of the County: expand the IS monitoring project funded with DNR funds thru Woodland Dunes; partner with Lake Shore Natural Resource Partnership projects on AIS programming.
- Expand the Clean Boats Inspections and AIS monitoring to public access points along Lake Michigan to include the village of Cleveland, Fischer and Point Creek Parks.
- Include a shoreland restoration project on Weyers Lake to improve in-lake habitat.
- Fund an AIS plant management plan for Carstens Lake, a source lake for Hartlaub, English and Weyers lakes.

Description of Project Area:

What lakes have boat ramp or public access?

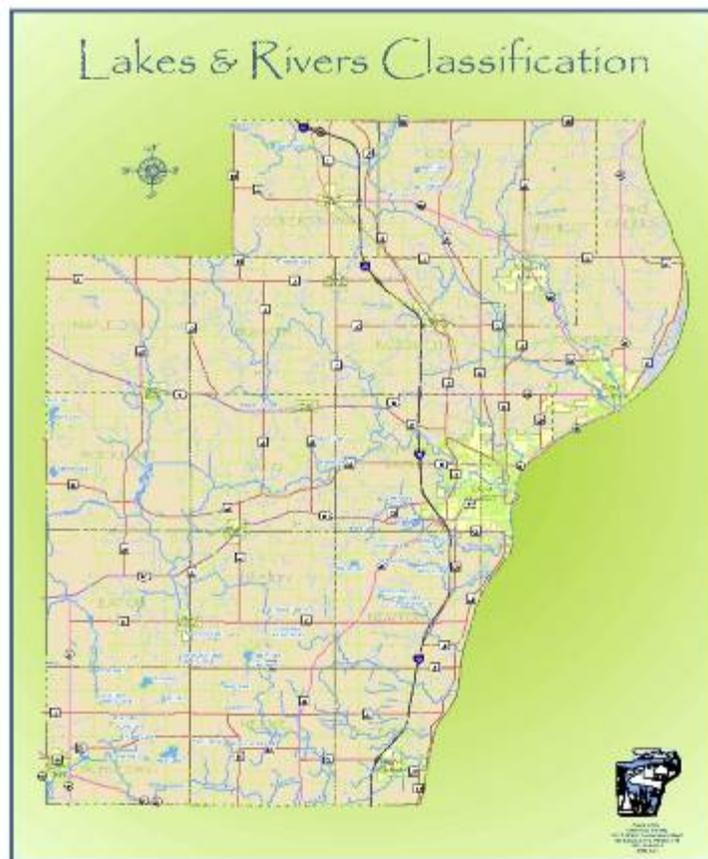
19 lakes have boat ramp or public access of those 7 have handicap access.

Lake Name	Pulbic Access	Handicap Access
Boot Lake	boat ramp	
Bullhead Lake	boat ramp	
Carstens Lake	boat ramp	
Cedar Lake	boat ramp	X
English Lake	boat ramp	X
Gass Lake	boat ramp	
Harpt Lake	boat ramp	
Hartlaub Lake	boat ramp	
Horseshoe Lake	boat ramp	X
Long Lake	boat ramp	
Pigeon Lake	boat ramp	X
Shoe Lake	boat ramp	
Silver Lake	boat ramp	X
Spring Lake	boat ramp	X
Tuma Lake	boat ramp	
Weyers Lake	boat ramp	
Wilke Lake	boat ramp	X
Grosshuesch Lake	roadside	
Waack Lake	roadside	

Table of Lakes by Township

Township	Section	Lake Name	USGS Quadrant
Cato	3	Hempton	Whitelaw
Cato	13	Schisel	Clarks Mills
Cooperstown	8	Hidden	Denmark
Eaton	36	Eaton-Twin-N	School Hill
Eaton	36	Eaton-Twin-S	School Hill
Eaton	25	Oschwald	Valders
Franklin	3	Kellners	Whitelaw
Gibson	17	Harpt	Larrabee
Gibson	17	Mott	Larrabee
Gibson	17	Tuma	Larrabee
Liberty	33	Little Pigeon	School Hill
Liberty	33	Pigeon	School Hill
Manitowoc Rapids	33,34	Silver	Manitowoc
Manitowoc Rapids	28	Teek	Clarks Mills
Meeme	20	Horseshoe	School Hill
Meeme	5	Spring	School Hill
Meeme	8	Unnamed	School Hill

Meeme	17	West	School Hill
Newton	17	Carstens	Clarks Mills
Newton	7	English	Clarks Mills
Newton	3	Gass	Manitowoc
Newton	4	Glomski	Manitowoc
Newton	21	Grosshuesch	Clarks Mills
Newton	10	Hartlaub	Manitowoc
Newton	3	Kasbaum	Manitowoc
Newton	16	Waack	Clarks Mills
Newton	10	Weyers	Manitowoc
Rockland	19	Bullhead	Potter
Rockland	6,7	Long	Brillion
Schleswig	24	Cedar	School Hill
Schleswig	15	Graf	School Hill
Schleswig	9	Mud - N	School Hill / Kiel
Schleswig	9	Mud - S	School Hill / Kiel
Schleswig	15	Praeder	School Hill
Schleswig	16	Shoe	School Hill
Schleswig	12	Sy	School Hill
Schleswig	23,26	Unnamed	School Hill
Schleswig	4	Unnamed	School Hill
Schleswig	2	Wilke	School Hill



Problem Statement

Since 1999, invasive species management has been identified as a priority by a number of governmental and citizen groups. However, little had been done to manage invasive species in Manitowoc County. Seven of our 20 lakes had EWM in 1999; in 2009 six more lakes have become infested with EWM or more than half of our public access lakes. The following list shows what has been and hasn't been done during this time period and illustrates the need for these grants.

- Manitowoc County Land & Water Resource Management Plan of 1999 with Citizen input, identified Exotic Plant control as a priority Goal, however County policy makers failed to fund or staff the plans identified objectives.
- The Manitowoc County Land Conservation Committee's 2007 citizen's survey identified a priority for invasive species management.
- A stake holders meeting of County groups concerned with local natural resources was conducted on April 19, 2007 that identified needs regarding invasive species.
- The Manitowoc County Land & Water Resource Management Plan developed in 2007 for the years 2008 – 2012, identified the need for invasive species control **but did not approve invasive species management as a priority for staffing or funding.**
- On June 18, 2007 a meeting between local County Government Departments, agencies and other conservation organizations stake holders **failed to arrive at a consensus to develop a County Invasive species Program.**
- *In 2008 and 2009 Manitowoc County has all but eliminated its County Park Work Force, reduced County Highway staff, implemented reduction in services that has made it all but impossible for County personnel to work on invasive species.*

On July 26th 2007 the Manitowoc County Lakes Association was approached to initiate leadership to develop and apply for a County Aquatic Invasive Species Grant that will set motion a Citizen based comprehensive approach, partnered with Manitowoc County to address aquatic invasive species threatening our aquatic ecosystem and quality of life.

Discussion of project goals and objectives:

1. **GOAL: Develop a Citizen based program to prioritize invasive species threats; provide early detection and identification of invasive species and provide man power or resources to control the spread of invasive species.**

OBJECTIVES:

- a. Continue to engage sportsman clubs, lake associations, municipalities and civic organizations to educate their membership about the threat of invasive species and to help provide a source of leadership and volunteerism for a county program.
 - *Sportsman clubs have been the primary contributor of funds and staffing towards our current AIS program. Continue to conduct AIS updates and presentation to these groups.*
- b. Create a Corp of trained monitors to identify early infestations of aquatic invasives through out the county; complete a cadre of monitors for the remaining lakes.
 - *53AIS monitors have been trained and are monitoring on more than half of our public access lakes.*
 - *Actively recruit monitors on the remaining public access lakes.*
- c. Develop a model of volunteerism that will develop citizen expertise and energy, foster the political will and knowledge needed to devote time and labor to effectively control invasive species out breaks.
 - *Build on existing relationships with monitors by sponsoring more volunteer events and recognition in Phase II.*
 - *Target more youth groups such as ecology clubs, scouts, hunter and boater safety in AIS activities.*
- d. Continue the small scale aquatic plant demonstration project on Silver Lake to identify species and methods to expediently and economically restore a lake aquatic plant community. Silver Lake's aquatic plant community has not revived after the carp restoration project.
 - *Jute mats from Mullen lake containing native aquatic plants were placed in Silver Lake in 2009 to encourage restoration of native plant colonies.*
 - *Phase II will continue evaluation of restoration and now monitor the recent invasion of Eurasian Water Milfoil.*

2. GOAL: Continue to conduct a Clean Boats Program on priority lakes to reduce the spread of invasives species; educate and train boaters on steps to take to prevent the spread of invasives and conduct water craft inspections;

OBJECTIVES:

- a. Raise the knowledge level of the law by boaters from the 2008 level of 58% to the State average of 91% by the end of this project period.
- b. Increase the skill level of lake and river users, to conduct water craft inspection and implement steps to prevent the spread of invasives, from the current 35% application to 80% by the end of the project period.
 - *Measured by the number of people observed conducting their own boat inspections before or after leaving the boat landing.*
- c. Continue to encourage Lake Associations, sportsman groups, civic organizations and youth groups to take an active part in conducting boat inspections.
 - *Over 1100 people were contacted or inspected at boat landing in 2009.*

3. GOAL: Reach the Public, Private Landowners, County and Town officials thru education to create an understanding that everyone needs to act and give priority to prevent the spread of invasive species.

OBJECTIVES:

- a. Identify responsibilities and actions that private landowners, general Public and Town & County Officials can do to prevent the spread of invasive species.
 - *Over 1300 riparian landowners, Town & County Officials, State legislators are receiving a newsletter and events mailing regarding AIS activities.*
- b. Incorporate the identified responsibilities in presentations, training and educational materials.
 - *A bus tour is being conducted annually to highlight AIS activities and witness testimony from volunteers and groups conducting AIS projects.*
 - *Attend numerous activities a year to staff displays and expose the general public to AIS programming.*
 - *Continue to release news articles that identify responsibilities and action items for the general public.*
- c. Conduct presentations and training on right-of-way BMPs with municipalities to encourage control and prevention of AIS.
 - *Town road crews and county highway road crews need education on the identification, early detection and control of aquatic invasive species in*

road ditches/wetland areas. Annually, a hands-on education session shall be presented to the County Unit of the Wisconsin Towns Association, and one for the County Highway Department. Adopt-a-Highway volunteers will be given educational opportunities annually to help them identify species in the ditches and educate them on the proper control for such species.

- d. Meet with Town Boards to discuss amending their noxious weed ordinances or developing new ordinances to include AIS species listed in NR-40 or identified in the County AIS Plan.

4. GOAL: Continue a County wide program to identify and map known out breaks of invasives; coordinate a County wide control plan for the Citizen Stakeholder group's identified priorities; conduct demonstrations on invasive species control methods; and provide training for volunteers on invasive species management.

OBJECTIVES:

- a. Complete the mapping (GIS layer) and Identification of infestation of aquatic invasive species in the County.
 - *MCLA has partnered with Woodland Dunes and received a grant to train volunteers to map invasive species in the county. Involve this group with AIS monitors and foster their participation in future activities.*
 - *The River group Friends of the Branch conducted a River walk to map invasives in the winter. Expand this activity to provide fun, hands on opportunities when learning about AIS.*
 - ***Project RED (Riverine Early Detectors) will be implemented in this application phase II to close the gap of mapping on our riparian corridors and the Shoreline of Lake Michigan.***
- b. Coordinate and facilitate the fund raising and grant applications of our partners and stakeholders to control and reduce the spread of AIS species identified in our County wide control plan and to reduce the abundance of aquatic invasive species in local ecosystems.
 - ***The AIS coordinator facilitated a Great Lakes Restoration Initiative grant with Gathering Waters in a 6 county area to chemically treat Phragmites and Japanese Knotweed***
 - ***Coordinator will identify potential funding source to commercially treat critical locations of mapped AIS colonies.***
 - ***Coordinator will continue to assist lake groups with submitting Early Response Grant applications.***
 - ***Partnered with Glacial Land RC&D to expand AIS programming in surrounding counties of Calumet and Kewaunee where transient***

boaters move between neighboring lakes. Seek future opportunities to fund AIS control such as the Fish & Wildlife Services GLRI grants.

- c. Enter all mapped locations of AIS by County partners in a centralized mapping data base system, to assess the spread of invasives in the County and monitor control or eradication efforts.
- d. Coordinate the efforts with municipalities to better implement measures to prevent spread of invasives on public properties or right-of- ways and conduct eradication measures at larger scales than smaller citizen groups can accomplish.
 - *Target treatment of AIS colonies identified by the mapping, that are threatening Conservation Opportunity Areas (COAs) of Point Beach and Woodland Dunes; Legacy places of Fisher & Point creek parks; public wildlife management areas of Collins and Killsnake Marsh; Glacial Land Conservancy properties; and the multi agency Wetland Restoration areas in the Towns of Two Rivers and Two creeks.*
 - *Work with the Friends of Hika Bay and the village of Cleveland to expand AIS control along the Lake Michigan Shoreline.*
- e. To improve the effectiveness of volunteers, landowners and citizens by providing training and resources to conduct an effective invasive species program.
- f. Demonstrate shoreland habitat development on Weyers Lake to improve the native plant and fish habitat
- g. Inventory the presence of the native beetles that prey on Eurasian Water Milfoil and explore opportunities to utilize the beetles as a non-chemical option for EWM control.

Description of methods and activities:

Project Oversight:

MCLA Board of Directors will provide oversight of the project management. MCLA was formed as a County Lake Association to provide umbrella coverage for county lakes that were not organized as an official Lake Organization or had insufficient number of riparian landowners to function as a Lake Association. **MCLA has had experience managing numerous Lake Planning Grants such as Silver Lakes restoration and Park shoreline restoration, Carstens/Weyers Lake management plans and 6 shore land buffer demonstrations. The Association also partnered with Manitowoc County to conduct a Lake Classification Program. The current AIS grant has facilitated MCLA's networking and partnership role with the many conservation groups in Manitowoc County.**

Financial Management:

Jerry Corfman, MCLA Treasurer will serve as project contact or representative.

Contracted Services:

MCLA will contract with Woodland Dunes Nature Center of Two Rivers to conduct the volunteer training and public education activities. Woodland Dunes Nature Center has previous experience with invasive species programming by serving as a Cella beetle rearing site, conducting Phragmites eradication measures on the West Twin River and currently implementing a DNR volunteer mapping grant.

MCLA will continue to contract with a private consultant (Tom Ward) to do the project management; coordinate the volunteer activities to include clean boat inspections; develop Lake Monitor invasive teams; and develop programming with Town and County highway Departments.

Activities:

1. **To carry out the County AIS plan** and the implementation of this grant project the MCLA will extend the current contract of the Aquatic Invasive species Coordinator (AISC). The AISC will ensure that the comprehensive countywide plan for AIS prevention and control that meets the specifications of NR 198.43 (1) is followed and updated accordingly. The plan outlines county goals and strategies, and will continue to mirror statewide AIS goals. Public participation with the plan will continue to occur.
2. **Volunteer network:**
 - Develop techniques to reach and identify potential volunteers with partnering organizations to include more work with youth organizations as a source of volunteers.
 - Improve volunteer involvement with a monthly phone call during the monitor season; continue sending news worthy information; schedule an on lake outing with each lake's volunteers.
 - Improve volunteer recognition with sponsored events to encourage volunteer networking; include recognition in the newsletter; and encourage attendance to MCLA functions.
 - Schedule and plan volunteers to include a phone tree and dispatch system to schedule and plan the volunteer manned clean boat projects.
3. **Develop Partnerships** with other county and regional organizations to provide volunteers and financial support as well as facilitate educational activities. Continue the partnering with Lake Shore Natural Resource Partnership, Manitowoc Fish & Game Association, Friends of the Branch River, the Manitowoc Maritime Museum, Golden K-Kiwanis club, NE Great Lakes Fisherman, Isaac Walton League, Wild Ones, and Conservation Education Incorporated by attending their functions to report on AIS activities and providing information for incorporation in their newsletters..
4. **Develop Monitoring Teams** for Individual Lakes & Public areas/for early detection of invasive infestations.
 - English, Hartlaub and Harpts lakes have trained multiple residents to generate an improved watch for AIS, after conducting Lake treatments. Encourage this concept on other lakes conducting chemical treatment.
5. **Conduct Clean Boats Program** on priority Lakes.
 - Schedule, coordinate, track, recruit, organize and manage the Clean Boats Program on area Lakes.

- Supervise and schedule paid boat inspectors to target priority lakes.
 - Continue to seek funding sources for paid boat inspectors.
5. **Develop network with Town Governments** to address Public right of way infestations.
- Draft model noxious weed ordinances and review existing individual (18) Town ordinances incorporating NR 40 species lists.
 - GPS Phragmites locations on road right-of-ways by AISC and volunteers
 - Utilize maps with AIS locations to strategize with municipalities on controlling AIS. Utilize the maps to coordinate volunteer mapping exercises.
6. **Contract with Woodland Dunes Nature Center and Lake Shore Natural Resource Partnership** for the following:
- Educational training activities.
 - Edit newsletter and other publications.
8. **Conduct an annual bus tours/field trips** for Stakeholders, public officials, Lake Membership and the public to tour various sites, projects and witness testimony on the impacts and successes of invasive species management.
9. **Continue a regional partnership** with Calumet County and neighboring counties on AIS events to include a **link to the Calumet County Web site that has local AIS information and to publish and encourage attendance to County AIS events form the region. Continue to include Calumet County lake residents with Manitowoc county mailings.** Add Kewaunee County Lake riparian owners on county bordering lakes.
10. **Coordinate and assist organization with fund raising** or developing grants to control AIS. AISC will assist with implementation of these grant activities.
11. **Schedule project RED training** to target monitoring of the Manitowoc, West & East Twin, Point and Fischer creek Rivers.
12. **Continue a newsletter** that is reaching over 1200 riparian landowners and policy makers in the county.
13. **Begin efforts to form a regional Weed Cooperative** as a means of coordinating the multiple municipalities' efforts to control AIS.
14. **Continue the restoration and demonstration** to restore the native plant community on Silver Lake.
15. **Coordinate and assist Manitowoc Fish & Game to develop shoreline and habitat** restoration on Weyers Lake.

16. **Inventory the presence of the native beetles that prey on Eurasian Water Milfoil** and explore opportunities to utilize the beetles as a non-chemical option for EWM control.
17. **Develop and install signage on access roads to the boat landings;** that communicate a public AIS message and rotate the signs and messages between lakes during the boating season.

Other Specific products and deliverables:

- 3 Newsletters a year
- 1 annual Buss tour of projects and sites
- Traveling display at least 3 major public events per year.
- GPS locations of identified Phragmites and Japanese Knotweed infestations on road right of ways in the County and Riverine systems.
- Review of Town noxious weed ordinances
- Project report
- Phragmites control demo's
- Training workshops for volunteers and the public, Rights-of-Way staff.
- Multiple presentations to the partnering organizations annually
- Submission of additional grant for early response projects and control of our priority targeted species.

Description of existing and proposed partnership

MCLA is a County wide Lake Association whose members consist of individuals, sportsman groups and Lake Associations. Members of the 6 County Lake Associations have directors or send representatives to the MCLA Board. This allows an established network of partnering and communication. The City unit of Manitowoc county Fish & Game provides financial support for MCLA to run two Lake Aeration systems. Membership organizations of Wilke & Bullhead Lake erected new kiosks to display AIS information. English Lake is pursuing a Lake Planning grant to develop a AIS plant management plan.

This project's partnership will involve seeking volunteers and donation from the large **County Sportsman club network**, which in the past purchased and donated to the county all 19 public boat landings. Manitowoc Fish & Game Protective Association provided the majority match of the AIS Billboard Grant project. They are donating funds to treat EWM on Pigeon and English Lake this past summer.

Woodland Dunes Nature Center an experienced private nature center has a staff of trained Naturalists and volunteers that have been providing thousands of County School students qualified conservation education programs. Their expertise and resources will provide the facilities and professional instruction for this project. They are working with the AISC on a joint volunteer monitor project to map AIS in the County.

Friends of the Branch River has sponsored River Walk to map invasives this past fall and winter walk with an AIS public presentations to continue the riparian mapping. FOB is including AIS efforts in their programming for the future.

LNRP, Lake Shore Natural Resource Partnership is including AIS programming with their project on the Pine River; co-sponsoring the Friends of the Branch River mapping and including MCLA's AIS information and events in their newsletter.

Silver Lake College has an excellent Biology Science Department that historically has been involved with work on Silver Lake. Erik Hoyer Assistant Professor of the Biology Department, Silver Lake College will provide the professional oversight of Aquatic Plant Propagation project on Silver Lake. MCLA will come to the table with volunteers to make this project a success.

The Maritime Museum has constructed an AIS display at the Museum and with specimens provided by the current AIS grant is conducting student programming on AIS.

The Manitowoc Public Library and Woodland Dunes, through the assistance of the MCLA and Calumet county AISCs will be conducting the Clean Boats, Clean Waters Story Hour Tutorial.

Continue regional & joint programming with Calumet County's AIS program: sharing equipment, materials, knowledge, skills, networking, and AISC time has allowed the MCLA's project to jump start and take off running this past year. It enables covering events with each projects staff and paid boat inspectors; targeting information and training that can be shared with residents in each county without duplication and encourage neighboring lakes to collaborate with their programming.

The Townships that have submitted letters in support of this project have many of the County Lakes in their jurisdiction. Town of Schleswig has been active in treating Phragmites and publicizing the Giant Hogweed out break in their Township Much is to be learned from county highway and town officials regarding their weed spraying and mowing techniques that we will be able to analyze ways to reduce the spread of road right of way infestations. We feel once these officials understand the threat and presence of invasives we can make progress with eradication and prevention efforts.

Manitowoc County Highway Dept. has conducted training with our AISC on the Right-of-Way BMP's and NR 40. Phase II project will include annual training for employees on identification and control of AIS. County Parks will be targeted for more intense mapping of AIS in Phase II.

Description of role of project planning and/or lake management

Lake Associations Pigeon, English and Hartlaub have or will be conducting herbicide treatments of Eurasian Milfoil or Curley Pond weed. We hope the prevention aspect of this project will reduce the need for herbicide application. The establishment of Lake Monitors will allow for early detection and hopefully less aggressive methods of treatment if invasive plants species infestation should out break.

MCLA has sponsored a Lake Planning Grant on Harpts Lake to address waterquality and AIS planning which will be completed in 2011. English Lake will be submitting a Lake Planning grant to address their AIS management and update their waterquality planning.

Timetable for implementation of key activities

Date	Activity	who
Seasonally based on media opportunities	News releases and publication of DNR releases	Contractor
June & August 2011	Monitor the recent invasion of Eurasian Water Milfoil	Contractor Silver Lake college
Report at the 2012 lake management meeting	Evaluate and expand successful techniques.	
On going	Develop volunteer data base; News letter, first mailing to riparian owners & partners to introduce project; design time for money mailing	Woodland Dunes, Contractor
Two sessions per year	Conduct Monitor training	Contractor Volunteers
Annually through the growing season	Provide Monitor support/ contact by phone each monitor during the season; visit and help new monitors with their first inspections.	Contractor Woodland Dunes
Annually	Sponsor a monitor recognition event each year.	MCLA
N/A in 2011 Jan. 2012	Supervise paid boat inspectors if provided Explore contracting for a college intern	Contractor
July – August 2011	Map lake out and video underwater habitat in Weyers lake.	Contacto
October, 2011	Meet with Manitowoc Unit of Fish & Game to do habitat work on Weyers Lake	
August 2010, completed	Pursue contracting an AIS plant management plan for Carstens Lake	Contractor
Annually April & May	Training session for boat inspectors	Contractor Woodland Dunes
June – August Annually	Start boat inspections and run schedule, train volunteers weekly	Contractor
Nov. 2010 March – April annually, June- July 2011	Conduct training with Right-of-Way managers	Contractor Woodland Dunes
July, annually	Plan out buss tour and mail to elected officials & partners	MCLA Contractor
Annually Carstens Lake	Assist organization with response grants or other funding sources as needed.	Contractor
September or Late August annually	Conduct bus tour	MCLA Contractor
August – Sept. Annually	Treat phragmites and JK with partners and volunteers	Contractor Woodland Dunes
June 2011	Presentation to Towns Association	Contractor
September and Oct. annually	Follow up with lake monitors with data base entering	Contractor

2011	Finish driving Town & County road ways to map Phragmites.	Contractor
April, July, October annually	Newsletter mailing	Contractor Woodland Dunes
November 10– April 2011	Review Town ordinances and begin making contacts.	Contractor
On going	Develop displays and schedule	Contractor
January – April Annually	Meet with partners and conduct invasive species presentations at their functions	Contractor
March , June, Sept. annually	Prepare newsletter for mailing	Contractor Woodland Dunes
April annually or in conjunction with events	Training session for boat inspectors and boat owners	Contractor Woodland Dunes
May – September Annually	Implement boat inspections on 10 lakes each year	Contractor Volunteers
August 2011	Conduct Project RED training to map riparian corridors	Contractor
2012	Convene a meeting of Stake holders to explore the formation of a Weed Cooperative	Contractor
2011	Assist Lake Association with developing signage on their access roads and at the boat landings.	contractor
2011	Explore sign design and manufacturing sources for the Associations.	
As needed	Assist with implementation and coordination of GRLI and other grant applications if funded	Contractor
May – June 2013	Finish final report	Contractor

