

Final Report

Gilmore Lake Education and Monitoring Project, Year 2

Project AEPP-137-08

Submitted to the
Wisconsin Department of Natural Resources

By the

Gilmore Lake Association
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Introduction

Gilmore Lake, a 389-acre groundwater drainage lake in northwestern Washburn County, is at risk of invasion by Eurasian watermilfoil (EWM) as two nearby waters, Nancy Lake and the Minong Flowage, are heavily infested, and boaters frequently trailer their craft among area lakes. Gilmore Lake receives heavy recreational use from its lakeshore residents as well as visitors.

In recognition of the ecological, recreational, and economic threats posed by EWM, the Gilmore Lake Association (GLA) applied for and received its initial Wisconsin Department of Natural Resources (WDNR) Aquatic Invasive Species Education, Planning, and Prevention grant for the period April 1-December 31, 2007 and a second grant for the period April 1-December 31, 2008. The latter grant was matched 25% (3:1) in money and donations by the GLA. The objectives of the 2008 project were:

1. Education: To inform lake users of the threat posed by EWM and teach them procedures to prevent its introduction.
2. Boat Inspection: To prevent the introduction of EWM by boaters using the public landing.
3. Lake Monitoring: To thoroughly survey Gilmore Lake to enable the detection and control of any pre-existing colonies of EWM.
4. Planning: To develop an Early Detection, Rapid Response plan.

This report details the methods and results pertaining to these objectives. Because EWM is a continuing peril, the report concludes with recommendations and plans for future work pursuant to these objectives.

Education

Education of all lake users is the single best tool to prevent an EWM invasion. The boat inspection program has a strong educational component, but other educational efforts are required. To that end, The GLA's Milfoil Committee (Bill Doeden, Burt King, John Ney, Russ Robinson and Ron Tracy) undertook several actions as described in the project application. These include:

1. Mailings: The Spring and Fall 2008 GLA newsletter, which is sent to all Gilmore Lake property owners, contained articles about EWM and this project (Attachments A and B). Membership in the Gilmore Lake Association increased 27% in 2007 and remained stable in 2008 at about 60 % of property owners. Although funds in support of EWM activities were not solicited in 2008, 13 GAL members made spontaneous donations to our reserve fund totaling \$540.
2. Workshop: An EWM identification and control workshop was held in conjunction with the annual meeting of the Gilmore Lake Association June 28, 2008. John Ney updated members on the continuing EWM project, and provided both live and preserved specimens of EWM and look-alike natives, northern milfoil and coontail.

Attendees were also informed of how to take samples of suspected EWM and bring them to the Milfoil Committee for initial confirmation.

Bill Doeden then gave an overview of the Early Detection, Rapid Response protocol under development for Gilmore Lake. Forty-five members were in attendance at the workshop.

3. Kiosk: An informational kiosk was constructed by Russ Robinson and Burt King and installed at the public boat landing in late April 2007 and maintained as well as updated in 2008. The kiosk supplements the AIS/EWM warning signs provided by the WDNR. It includes a two-sided 4'x4' board posted with boat inspection procedures, photos of local EWM infestations, and a contour map of Gilmore Lake highlighting areas of potential infestation. The kiosk is stocked as well with brochures about AIS in general and EWM in particular. The kiosk is a source of interest to many landing users, particularly while waiting for their boats to be trailered into or out of the lake (personal observation).

Boat Inspection

Methods

GLA's Milfoil Committee members attended several WDNR-sponsored workshops in 2007 to learn boat inspection procedures and EWM sampling and identification techniques so that they could train both paid and volunteer inspectors. Jim Hoyt was our primary paid inspector in 2007, and our sole paid inspector in 2008, totaling 380 hours.

The inspection schedule was designed to intercept periods of high launch activity, i.e. weekends and major holidays. The weekend inspection schedule included five 4-hour periods: Friday p.m., and Saturday and Sunday, both a.m. and p.m. for a total of 20 hours per weekend. Hours were adjusted in the attempt to coincide with peak usage periods; however, this resulted in a mid-day gap in coverage Saturdays and Sundays. Jim Hoyt worked weekends and holidays from early May through Labor Day (Table 1).

Volunteer inspectors were used to supplement paid inspectors during the extended July 4 and Labor Day holiday periods. Six volunteers worked a total of 24 hours as boat inspectors (Table 1). Volunteer inspectors were trained by John Ney. The performance of all volunteer boat inspectors was monitored daily and that of Jim Hoyt on a frequent basis by one or more members of the Milfoil Committee.

All inspectors followed a consistent and rigorous procedure of inspection and communication as detailed in CB/CW instructions. They distributed AIS informational materials provided in CB/CW kits and recorded data on the WDNR Watercraft Daily Work Diary form.

Results

Daily diary worksheets were entered into the Aquatic Invasive Species section of the Surface Water Integrated Monitoring System (SWIMS) database and are not included in this report in lieu of summary statistics. A total of 673 boat inspections were conducted involving 1,540 boaters at the Gilmore Lake public landing in 400 hours of contact inspection time in 2008. These numbers represent increases of 21% and 29%, respectively over 2007 (409 contact hours), which is surprising in light of high gasoline prices (Table 2). Fishing boats comprised more than three-quarters of all watercraft inspected. Inspectors found vegetation on only 11 boats entering the lake. However, one of these was found to have EWM clinging to the anchor rope. Thirty-nine (5.8%) of entering boats had last visited either the Minong Flowage or Nancy Lake, the nearest waters with EWM infestations. Twenty-one boats had last visited another lake known to us to have an EWM infestation. The majority of boaters claimed prior knowledge about EWM. No boaters refused inspection.

The weekend pattern of boat traffic was not surprising over the spring-summer inspection period, with peak activity on holiday weekends (Figure 1). However, the daily pattern of inspections indicated that the mid-day period (11 a.m.-1 p.m) warranted inspection effort in the future, (Figure 2).

Lake Monitoring

Monitoring for EWM was conducted by boat one day per month, May through September around the shallow perimeter of the lake and in offshore waters <15' deep. The two-person crew received EWM identification and sampling training in 2007 and followed *Aquatic Invasive Species Monitoring Procedures* (Laura Herman, Citizens Lake Monitoring Program 2006). Survey of the nearshore area was done by visual inspection of littoral vegetation as the boat moved at low speed. Offshore monitoring of vegetated areas was performed at 30 stations using a two-headed rake attached to a rope. Stations were chosen for their potential to host EWM and were distributed throughout the lake (Figure 3). The rake was thrown 2-3 times per station per trip. Retrieved vegetation was visually inspected for the presence of EWM.

As in 2007, no EWM was found during the 2008 lake monitoring season. Gilmore Lake has abundant aquatic vegetation at many locations. The native northern milfoil, coontail, elodea and broadleaf pondweed were consistent components of the rake collections.

Planning

The Gilmore Lake Association strongly believes that we must be prepared for the possible discovery of EWM in our lake; we must be ready to take immediate and decisive action to control (and possibly eradicate EWM while it is at the pioneer colony stage. To that end, our Rapid Response protocol (Attachment C) was developed under the leadership of Bill Doeden of the GLA Milfoil Committee. The protocol incorporates

WDNR recommended procedures and is presented as a flow chart in four successive steps Highlights include:

1. Suspected EWM found.
2. EWM identification confirmed:
 - warden notified
 - warning buoys placed
 - grant application submitted
3. WDNR determines management strategy:
 - area of infestation defined (most likely a pioneer colony)
 - grant approved
 - treatment operator contracted
 - treatment initiated
4. post-treatment follow-up:
 - monitor to confirm eradication
 - develop aquatic management plan.

Burt King is designated as the GLA Response Coordinator. Mr. King is a year-round resident on Gilmore Lake. The protocol also lists WDNR and GLA contacts, aquatic plant control services, and aquatic plant management consultants. The protocol will be updated as necessary regarding contacts and response actions/options.

Grant Administration and Services

Volunteers, including grant administrators, recorded a total of 209 hours on this project in 2008 (Table 3). Grant administration and services included the May meeting of the Milfoil Committee, training and supervising inspectors, lake monitoring and the June 28 workshop as well as data entry and report preparation.

Recommendations and Future Plans

1. The GLA will apply for an AIS EPP grant for 2009. This will essentially be a renewal application, with most of the requested funds for boat inspection.
2. The GLA will continue its efforts to raise funds for a cash reserve for immediate use in implementation of the Rapid Response plan if and when EWM is discovered in Gilmore Lake.
3. Obviously, not all boats that used our public landing during the spring-summer season were inspected. Members of the Milfoil Committee drove past the landing frequently. We concluded that weekday usage was highly erratic; some days, no boats were trailered in. It is not practical to monitor the landing with paid or volunteer inspectors on weekdays (except those near holidays). However, the mid-day period on Saturdays and Sundays consistently received high usage. While we shifted the hours of our paid inspector, we

still had a gap between 11 a.m. and 1 p.m. most weekends, with the exception of holidays, which were covered by volunteer inspectors. We will endeavor to better cover the mid-day time period in 2009, by further shifting paid hours and adding more paid and volunteer effort.

4. Because we cannot inspect every entering boat, education remains a priority. We were encouraged that most boaters claimed to know about EWM and its prevention, but we will continue our educational efforts in 2009. It would also be most helpful if the proposed statewide rule is adopted to ban vehicle transportation of any aquatic vegetation, as has been recently done in Washburn County.

Acknowledgements

We are grateful for advice from Jane Malischke, Environmental Grant Specialist, concerning the financing and application of this project and Pam Toshner, Northwest Lake Management Coordinator, for her support in all phases.

Table 1. Boat Inspection Contact Hours.

Month	Paid	Volunteer	Total
May	96	-----	96
June	88	-----	88
July	88	10	98
August	100	10 (14)*	110 (114)
September	8	-----	8
Totals	380	20(24)	400(404)

*() hours when two volunteers were present

Table 2. Boat Inspection Summary.

Month	Inspections	Boaters
May	165	378
June	151	354
July	158	361
August	184	407
September	12	40
Totals	673	1540

Table 3. Summary of Volunteer Effort (hours).

Category	Total Hours
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Training/Supervision	40
Volunteer Inspectors	24
Rapid Response Plan	20
EWM Monitoring	40
Kiosk Maintenance	5
Data Entry	15
Report Preparation	20
Other: 6/28 Workshop Attendance (45 people@ 1hr. each	45
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Totals	209

Figure 1. Weekend Boat Inspections, Gilmore Lake 2008

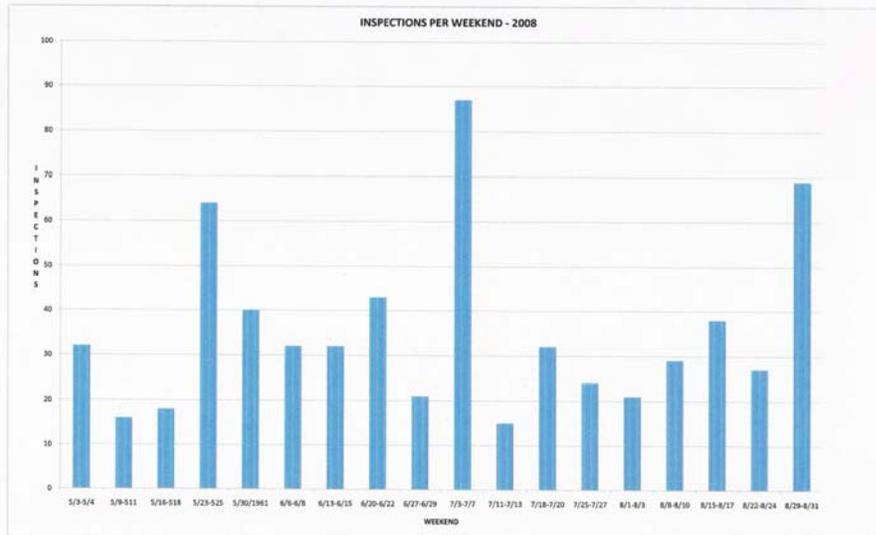
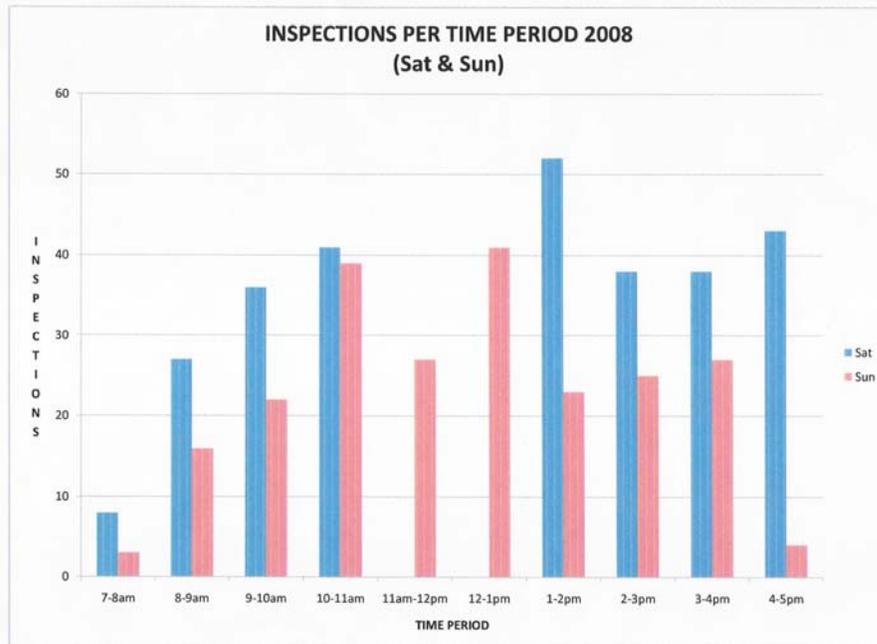


Figure 2. Pattern of daily boat inspections by hour, Gilmore Lake, 2008



ps://weboutlook.vt.edu/exchange/jrey/Inbox/Emailing%20Gilmore%20Lake-2_EML/1_multipart_xF8FF_2_Gilmore%20La... 12/6/2007

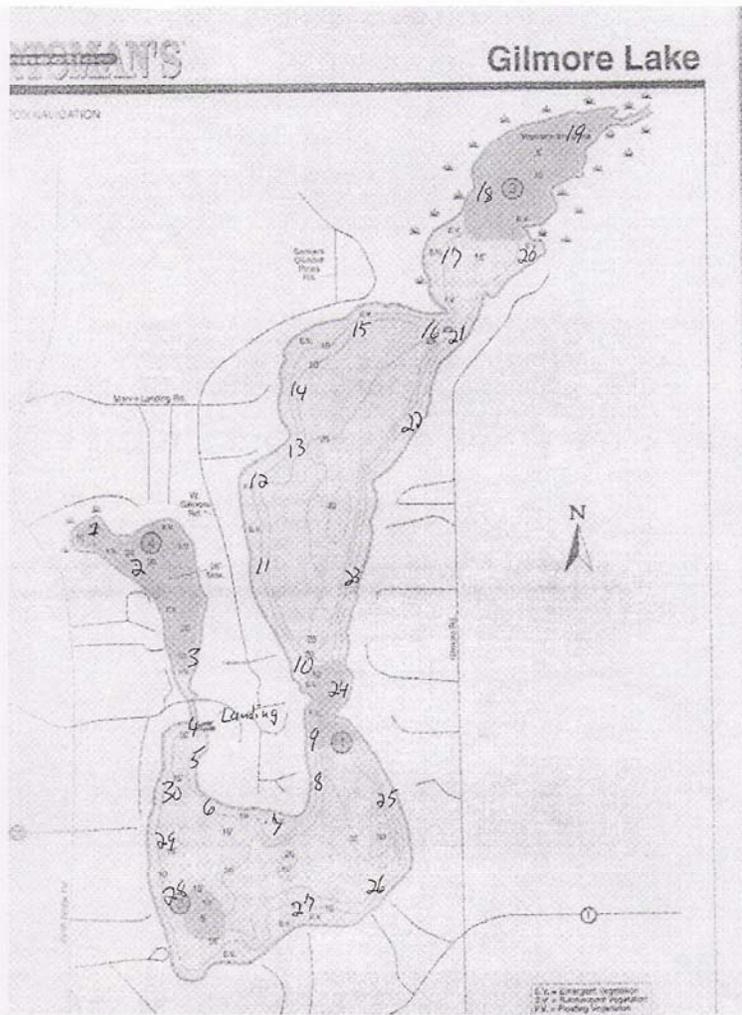


Figure 3. Gilmore Lake EWM Sampling Stations, 2008.

Attachment A. From Spring 2008 Gilmore Lake Association Newsletter

Greetings from President Jim Holmes Spring, 2008

Another year has passed and it's time for my spring newsletter. It has been a long winter with lots of snow in December and not much since then, although there was enough snow for enjoying the winter sports. Gilmore froze over, then it snowed and that made ice fishing difficult because of the slush on the lake. Mother Nature took care of that. Cold weather froze the lake to where it still was in late March. Dave Neumaier told me that the ice was thirty-eight inches thick.

As far as I know, there have not been any fires or cabins broken into this winter. That is one good thing about early winter snows. It does almost stop people from an easy access to your property.

Chris Tracy, who always does a wonderful job putting this letter together, will tell all about the dates for the spring clean-up, the annual picnic and the boat parade. It is rumored that this is Chris's last letter. I hope not. She will be extremely hard to replace.

* The Eurasian Watermilfoil Committee will be hard at work again this spring and summer. They have been helped by the Wisconsin Assembly who passed stronger boating inspection laws. One new law passed by the Natural Resources Board is to prevent the spread of viral hemorrhagic septicemia (VHS). This is already in many of the southern lakes and is deadly to all fish. Our lake does not have Eurasian Milfoil in it but the Minong Flowage, St. Croix Flowage and Nancy Lake all have beds of this milfoil. Always inspect your boat and trailer to make sure nothing is brought from one lake to another.

Think Spring!

Jim Holmes

Attachment B. From Fall, 2008 GLA Newsletter.

EWM/AIS COMMITTEE NOTES 2008

By John Ney, Chairman

The 2008 project to prevent Eurasian watermilfoil (EWM) from becoming established in Gilmore Lake is now completed. As in 2007, the project included components of boat inspection, education, and lake monitoring. The boat inspection totals (2007 numbers in parentheses) were **hours of inspection:** 380 paid and 24 volunteer (380 + 43); **boats inspected:** 673 (557); **persons contacted at boat landing:** 1540 (1191). Jim Hoyt was our sole paid inspector and is now well known to most of us. Jim was always reliable, personable, and helpful, doing a lot of extra work to keep the landing spruced up. Jim also intercepted one boat (from Nancy Lake) with EWM clinging to the anchor rope. We hope to have him back next year. And thanks to our volunteer inspectors: Bill Doeden, Howie Guttschow, Mick Kjelstad, Marta McCormick, John and Cathy Ney.

The boat inspection program is also a key part of our educational effort. In 2008, the great majority of boaters had taken steps to remove aquatic vegetation (it is now illegal in Washburn County to transport a boat and/or trailer with any aquatic vegetation on them) and also empty their live wells and bilge water, as required by DNR regulations to prevent the spread of the fish disease VHS. Education to recognize and report possible EWM was also featured at the 2008 annual meeting/picnic.

Finally, monthly lake monitoring May-September of our aquatic vegetation detected no EWM in Gilmore Lake. Thanks to Burt King and Russ Robinson for their diligence.

All good news – so far. The 2008 project was funded by \$2,700 from a DNR grant matched by ~\$600 from our EWM fund plus volunteer time. We will apply for a DNR competitive grant funding for 2009. The Aquatic Invasive Species Grant Program administered by the DNR has been increased from \$1.5 million to \$4.3 million/yr statewide. However the maximum funding cap for AIS projects has been increased a like percentage, and the list of potential grantees has been greatly expanded to include universities, technical schools, NGO's, state as well as federal agencies and even hydroelectric utilities. Thus the impact on the availability of future grants is uncertain.

The biggest unknown is whether EWM will ever show up in Gilmore Lake. If it does, we must be ready to initiate control steps immediately, and at considerable expense. Bill Doeden previewed our Rapid Response plan at the annual meeting. Expect more on the plan in the Spring newsletter.

The Association would also like to extend a special thanks to those members who contributed extra money to the EWM/AIS project.

EMW/AIS SAMPLING PROJECT

By Burt King

Monitoring for EWM is a simple process. All that is required is a boat, a "two-headed" lawn rake with a rope attached (and most of the wooden handles removed) and a "First mate" to share 2 1/2 to 3 hours of time on Gilmore Lake. The contents of the rake are then examined for any evidence of EWM. While one notes the sampling count and location on a map, the other

A Hachment B-continued

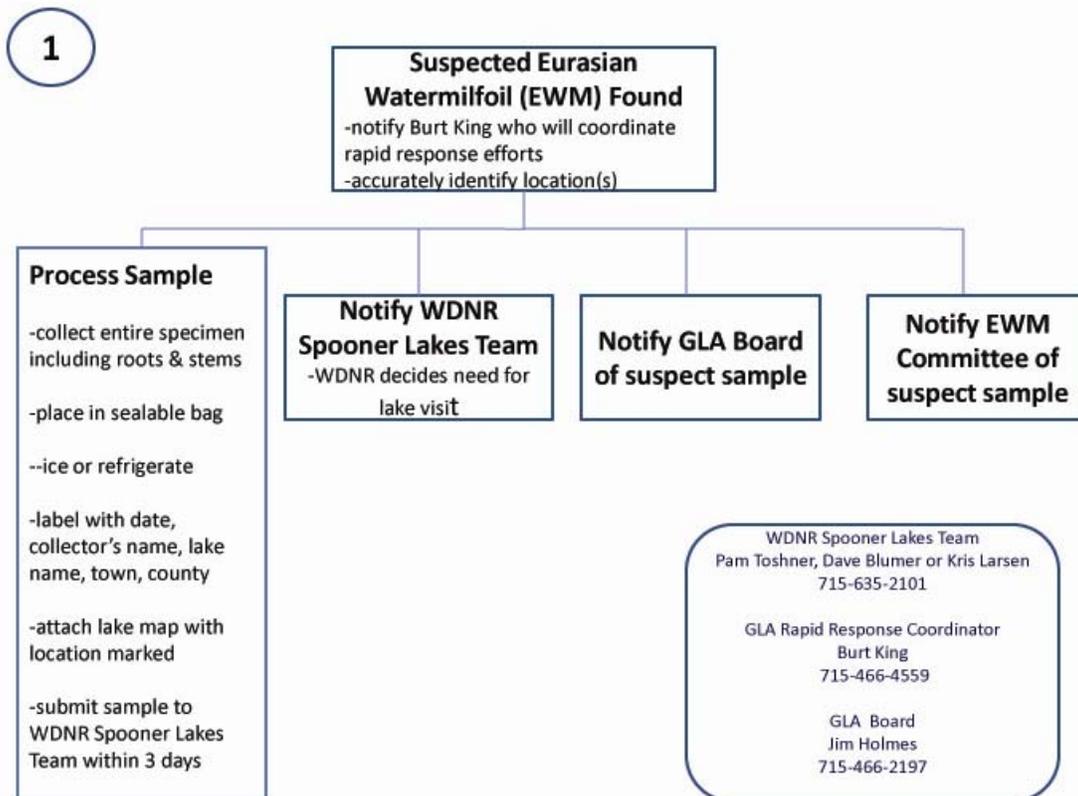
rows and pulls the rake, hopefully containing non-invasive aquatic plants only.

Each month from May through September during the 2008 monitoring season, 30 to 32 sampling locations were checked for EWM. At each location there were two "pulls" with the rake. This procedure was used in 2007 as well. In both sampling years, no EWM was detected! In May 2009 will be the third year of monitoring for EWM and hopefully with the same results. Kurt King, Russ Robinson, Ron Tracy, and Kathy King, assisted in the monthly monitoring project.

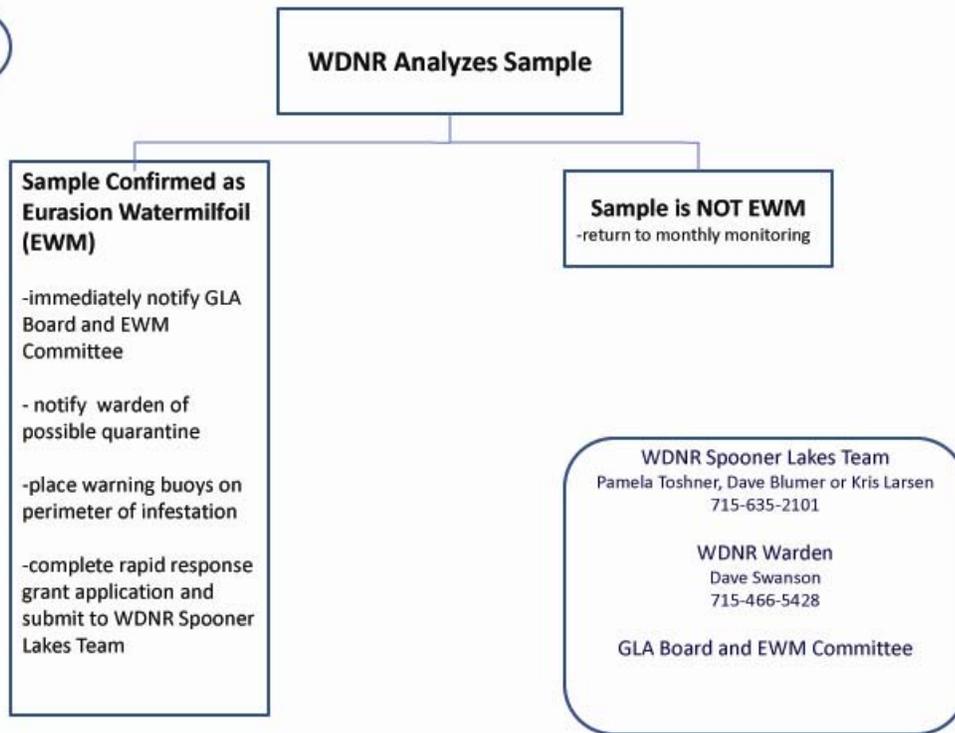
EURASIAN WATERMILFOIL (EWM) RAPID RESPONSE PROTOCOL

Prepared by the Gilmore Lake Association
2008

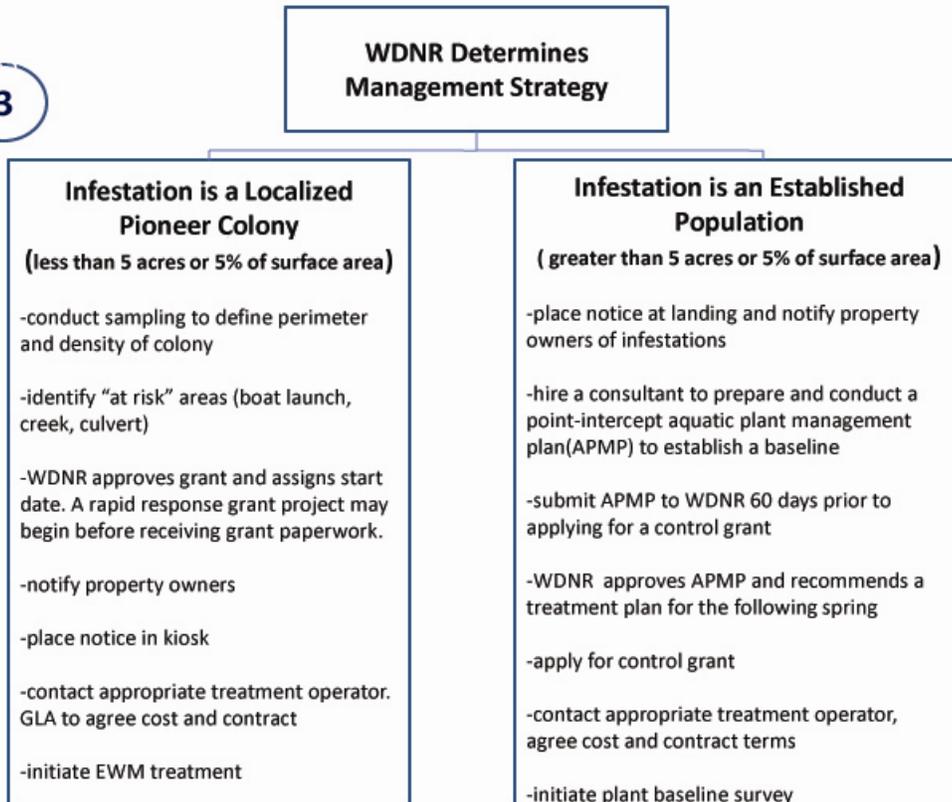
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Post Treatment Follow-up

Localized Pioneer Colony (less than 5 acres or 5% of surface area)

- perform rake sampling of treated area monthly for at least one season year after EWM is no longer detected
- keep buoys and landing signage in place
- continue monthly lake monitoring, education and inspection programs
- develop an aquatic plant management plan

Established Population (greater than 5 acres or 5% of surface area)

- consultant conducts a post treatment plant survey in mid-July to mid August
- compare results with pre treatment survey
- WDNR assesses effectiveness of treatment and recommends next steps

Aquatic Plant Control Services

Lake Management, Inc
10400 18th St North
Marine on the St Croix, MN 55047

Phone: 651-433-3283
Fax: 651-433-5316
Email: info@lakemanagementinc.com

Aquatic Engineering, Inc
P.O. Box 3634
LaCrosse, WI 54602

Phone: 866-781-8770
Fax: 608-781-8771
Email: info@aquaticengineering.org

Lake Restoration, Inc
12425 Ironwood Circle
Rogers, MN 55374

Phone: 763-428-9777
Fax: 763-428-1543
Email: lrmal@lakerestoration.com

Midwest Aqua Care
10001 Great Plains Blvd
Chaska, MN 55318

Phone: 877-430-0143
Email: support@midwestaquacare.com

Northern Aquatic Services, Inc
1061 240th St
Dresser, WI 54009

Phone: 715-755-3507

Aquatic Plant Management Plan Consultants*

Northern Environmental
330 South 4th Avenue
Park Falls, WI 54552

Phone: 800-498-3913
Website: www.northernenvironmental.com
Email: rwatkins@northernenvironmental.com

Onterra, LLC
135 S Broadway, Suite C
DePere, WI 54115

Phone: 920-338-8860
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Email: thoyman@onterra-eco.com

Aquatic Engineering
LaCrosse, WI

Phone: 866-781-8770
Website: www.aquaticengineering.org
Email: info@aquaticengineering.org

*** The APMP consultant should not be the same company that is providing the control (treatment) service**

CONTACTS

WDNR Spooner Lakes Team Phone: 715-635-2101
Pamela Toshner, David Blumer or Kris Larsen

WDNR Warden – Dave Swanson Phone: 715-466-5428 (office); 715-466-5358 (home)

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**rapid response coordinator -in his absence another coordinator is to be identified by the EWM Committee

