

FOURTH ANNUAL PROGRESS REPORT

**GILMORE LAKE EURASIAN WATERMILFOIL
EARLY DETECTION AND RESPONSE PROJECT
AIRR-071-10**

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 northern Washburn County, receives heavy recreational use. Three nearby lakes have been infested with Eurasian watermilfoil (EWM) for years, and Horseshoe Lake was added this year, putting Gilmore Lake at risk. A program of education, lake monitoring, and boat inspection (CBCW) was begun in 2007 and continues to the present time with support of DNR grants.

Despite these efforts, EWM was discovered in Gilmore Lake August 10, 2009 near the south shore (See Figure 1). This discovery triggered implementation of the GLA Early Detection, Rapid Response Plan. The apparent boundaries of the stand were marked with buoys with buoys. The GLA filed a EDRR grant application and a chemical treatment permit application on August 29. Both applications were approved in early September. The EDRR grant originally extended through 2012. However, approximately \$8,000 of project funds remained unexpended. The GLA applied to the DNR for and received a one-year extension of this project. These funds were used to continue to meet:

PROJECT GOAL AND OBJECTIVES

The goal of this project is to control and if possible eradicate Eurasian watermilfoil from Gilmore Lake. In support of that goal, the project has the following objectives:

1. Detection- To determine and map the full extent of EWM in Gilmore Lake and its response to control treatments.
2. Control – to use appropriate means to effectively remove EWM colonies.

SUMMARY OF WORK TO DATE

This report summarizes activities and events for 2009-2010 (First Annual Progress Report), 2011 (Second Annual Progress Report) 2012 (Third Annual Progress Report) as well as results in 2013 (this report) and future plans. It is being submitted in conjunction with the third Request for Reimbursement. The first reimbursement request covered only 2009-2010 and the second 2011-2012.m

2009-2010

Despite three consecutive years of CB/CW boat inspections,, EWM was discovered along the southwest shore of the main lake in August 2009 (see Figure 1). The pioneering colony was about 200 feet in length in ~4-8 ft. of water. The Rapid Response Plan was implemented, the area marked with warning buoys, and a three-year Early Detection, Rapid Response grant sought and quickly rewarded. The 2-acre bed was delineated and treated with 2,4- D (Navigate) by Northern Aquatic Services September 29, 2009. Post-treatment inspection showed the plants dying back. A whole-lake survey for EWM was performed by Matt Berg of Endangered Resource Services in September. No EWM was found outside the pioneer bed.

No new infestations were found in 2010 in monthly boat surveys of the Gilmore Lake littoral zone. Mr. Berg conducted a whole-lake point-intercept (PI) survey in July. Plants (47 species) were found at 237 of 538 sites, but EWM was not found outside the original bed, where regrowth of EWM was evident. Treatment was limited to manual removal by diving on three dates; 540 plants were removed.

2011

Manual removal was also used in 2011 with good results until late summer. The pioneering colony rebounded in late August, although total acreage was reduced to 1.0 acre but a new bed ~100 feet in length (0.61 acres) was discovered at the north end of Little Gilmore in September (Figure 1). To be eligible for future AIS control grants, an Aquatic Management Plan was required for Gilmore Lake. The Gilmore Lake Association (GLA) contracted with SEH, Inc. to prepare the five-year Plan. Costs were funded by this project.

2012

The draft Aquatic Plant Management Plan was submitted to the WDNR June 1, 2012 and approved in August. It included results of a survey of the GLA membership that indicated > 90% approval of the EWM control program. Both established beds were treated with Navigate June 13, 2012 by Northern Aquatic Services. No EWM was evident in either treated area through July. However, lake surveys May-September 2012 indicated the further spread of EWM in the nearshore area of the lower bay of Big Gilmore and along the eastern shore of Little Gilmore (Figure 1). These infestations do not yet constitute defined beds but rather small numbers of plants mixed in with northern milfoil and other native vegetation. Given past experience, it must be considered probable that these sites will also tend toward dominance and expansion by EWM without persistent control efforts. To that end, the GLA submitted a AIS control grant application to the WDNR on July 30, 2012, *Gilmore Lake AIS Established Population Project*. This five-year project will allow the GLA to meet the threat of EWM expansion with an integrated program of manual and chemical removal. The project (ACEI-127-13) was funded in October. Key components include:

Detection by monthly boat survey and training of ~ 20 volunteers to recognize and report EWM locations.

Control by a combination of manual removal by trained snorkelers and herbicide treatment. Defined beds (up to 5 acres/yr) will be treated by a commercial applicator. Spot treatment will be done by GLA members with pesticide applicator licenses.

Prevention of import of other AIS and export of EWM to other waters via continuation of the CBCW program (funded under a separate grant) assisted by educational efforts.

Education via workshops, newsletters, and other means of Gilmore Lake riparian landowners in ecosystem function and management.

This project will also provide support for a whole-lake point intercept plant survey in 2015 and a new 5-year Aquatic Plant Management Plan in 2017.

RESULTS FOR 2013

As in past years, we surveyed Gilmore Lake to map the distribution of EWM monthly, May through September. Surveys were conducted from our pontoon boat, the *Milfoil Marauder* and included all shallow areas of the lake. Water clarity was low in May and June due to inflooding from the Totagatic River, but was better for the rest of the growing season. In addition, Matt Berg (Endangered Resource Services) dove to locate EWM on July 15 prior to herbicide treatment and returned for a post-treatment dive September 2 (see attached report). He found no EWM in the original pioneer bed (once almost 2 acres) along the western shore of the southern basin of Big Gilmore (BG) in either survey. However, two small beds totaling 0.21 acres were found in lower BG, one on the offshore bar in the southwest segment and the second near the south shore. On both dives, Berg reported EWM plants concentrated in Little Gilmore (LG) near the culvert connection to BG and sporadically along the eastern shore as well as scattered in the bed at the north end that was treated in 2012. Berg's findings were consistent with our surveys.

The two beds in Big Gilmore were treated with 2,4-D (Navigator) on July 16 by Dale Dressel of Northern Aquatic Services. On September 2, Matt Berg observed that a few plants remained on the offshore bar bed but none were evident in the second BG bed. Mr. Dressel was unable to access little Gilmore for treatment as planned. However, Russ Robinson of the GLA earned his pesticide applicator license (no small feat) in May and put it to work, spot treating EWM plants in both LG and BG multiple times.. He used a hand spreader to distribute Navigate as well as an innovative technique using "depth charges". These consisted of several ounces of herbicide in plastic bags weighted with gravel that dissolved within one minute in water. The bags sank immediately to the bottom where Navigate could attack the EWM roots. The spot treatment approach was successful in checking the spread of EWM, particularly in Little Gilmore.

The Gilmore Lake public boat landing was included as part of the Minong Town Lakes CBCW boat inspection program. A total of 453 boats were inspected in 360 hours. No EWM or other AIS was found on boats or trailers using our landing.

PLANS FOR 2014

We are encouraged by the 2013 campaign. Eurasian water milfoil appears to be under control, as evidenced by the apparent eradication of the pioneer colony in Big Gilmore. However, the persistence of EWM in Little Gilmore is troubling and will require persistent treatment. Also, we recognize that 2013 may have been an unusual year, as poor water clarity due to floods could have limited EWM growth.

We plan to use much the same approaches to detection and control of EWM in 2014. It is our intent to move commercial herbicide treatment to the Spring, when EWM is actively growing, provided receipt of the aquatic plant control permit is received and water conditions allow. We will also continue an aggressive program of spot treatment. Established beds will be again marked by buoys to warn boaters. The Rapid Response grant has been extended through 2014. We will use remaining funds, supplemented by the GLA in volunteer effort and cash, to fund this effort. If additional support is needed, we will begin using the Established Population grant funds designated for these purposes.