

This newsletter is dedicated to Eurasian Water Milfoil that has been found and treated in Duck Lake. In this special edition you will find information on what EWM is, what it can do to a lake if left unmanaged, treatment options, what has been done to address the situation, and how you can help. Please take the time to thoroughly read through this important information. Questions and concerns can be directed to GreenDuckLakes2015@yahoo.com

Ed Dewey – Editor

Presidents Letter

In December of last year, I became President of our Association. I am grateful for the opportunity and humbled to serve in this capacity. After all the EWM activity over the past few months I understand how focused and dedicated the board members are to our mission “**KEEP OUR LAKES HEALTHY**”. To that end your board has been focused on the EWM issue since July of last year when the invasive species was discovered on Duck Lake during our plant sampling of the lakes, a process we’ve been doing for over 8 years. Confirmation by Mark Breederland, Michigan Sea Grant Ext., Al Steinman, GVSU, and Syndell Parks, GVSU – Milfoil Testing Program followed. At this time EWM has not been found in Green Lake. The body of the newsletter provides more detailed information regarding EWM and more can be found on our Facebook page <https://www.facebook.com/pages/Green-Duck-Lakes-Association/1642508239318965>.

Studies done in Washington State comparing properties on lakes with EWM compared to lakes without EWM found that property values on lakes with EWM were 19% lower on average than

comparable values of properties on non-infested lakes.

<https://www.youtube.com/watch?v=yIgyS5Hho8>

Please take the time to gain an understanding of EWM and what we are facing together.

While there are many components to addressing the EWM issue there are a couple of components I’d like to bring to your attention.

The first step in maintaining the health of our lakes is the processing of permission letters sent to Riparian’s under Green Lake Township Letterhead. The vendor, (PLM Lakes and Land Management), selected by the Association to treat the invasive species cannot treat identified infestations without the Riparian owners written permission.

The second step in maintaining the health of our lakes is strong Riparian membership in the GLDL Association. Each year our Winter Newsletter includes a request for membership renewal of only \$15. We are asking for your help in gaining membership in the organization, so if you know of neighbors, new residents, summer residents that may not know or be members of our Association please encourage them to join in helping us “**KEEP OUR LAKES HEALTHY**”.

Please understand EWM is a problem that becomes much worse the longer we wait to act. Your GLDL Association has taken the necessary steps to get us started. Now we need your support to make the treatment of EWM a reality

(continued on last page)

GREEN LAKE AND DUCK LAKE ASSOCIATION
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EURASIAN WATER MILFOIL FOUND IN DUCK LAKE

SO WHAT IS EURASIAN WATERMILFOIL (EWM)

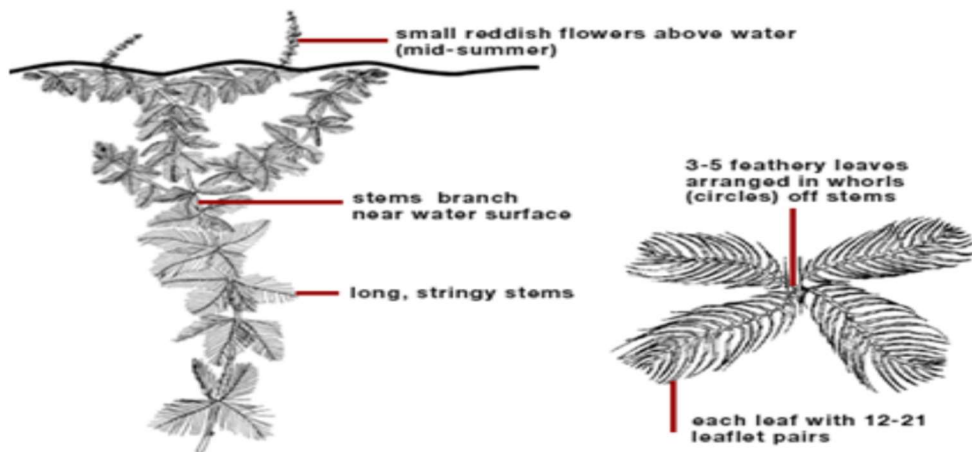
EWM is an invasive species that first came to North America over 60 years ago. It is an aggressive aquatic plant that grows and spreads rapidly. It has an earlier growing season than native aquatic plants which allows it to **out-compete** other plants for photosynthesis often resulting in killing of native plants.

EWM spreads easily through **fragmentation**. Pieces of a plant break off and easily root in a new location. These fragments can also become entangled on prop shafts or boat trailers. If not caught and removed, the EWM fragment can be easily deposited into another (EWM-free) lake by the unsuspecting boat owner.

EWM grows in water up to depths of 20 feet making shallow lakes more susceptible to widespread infestation. When left unmanaged, EWM will grow, creating extensive and thick matting on the lake surface. These dense mats make the infested area un-navigable to boat traffic, swimming and other recreational water activities.

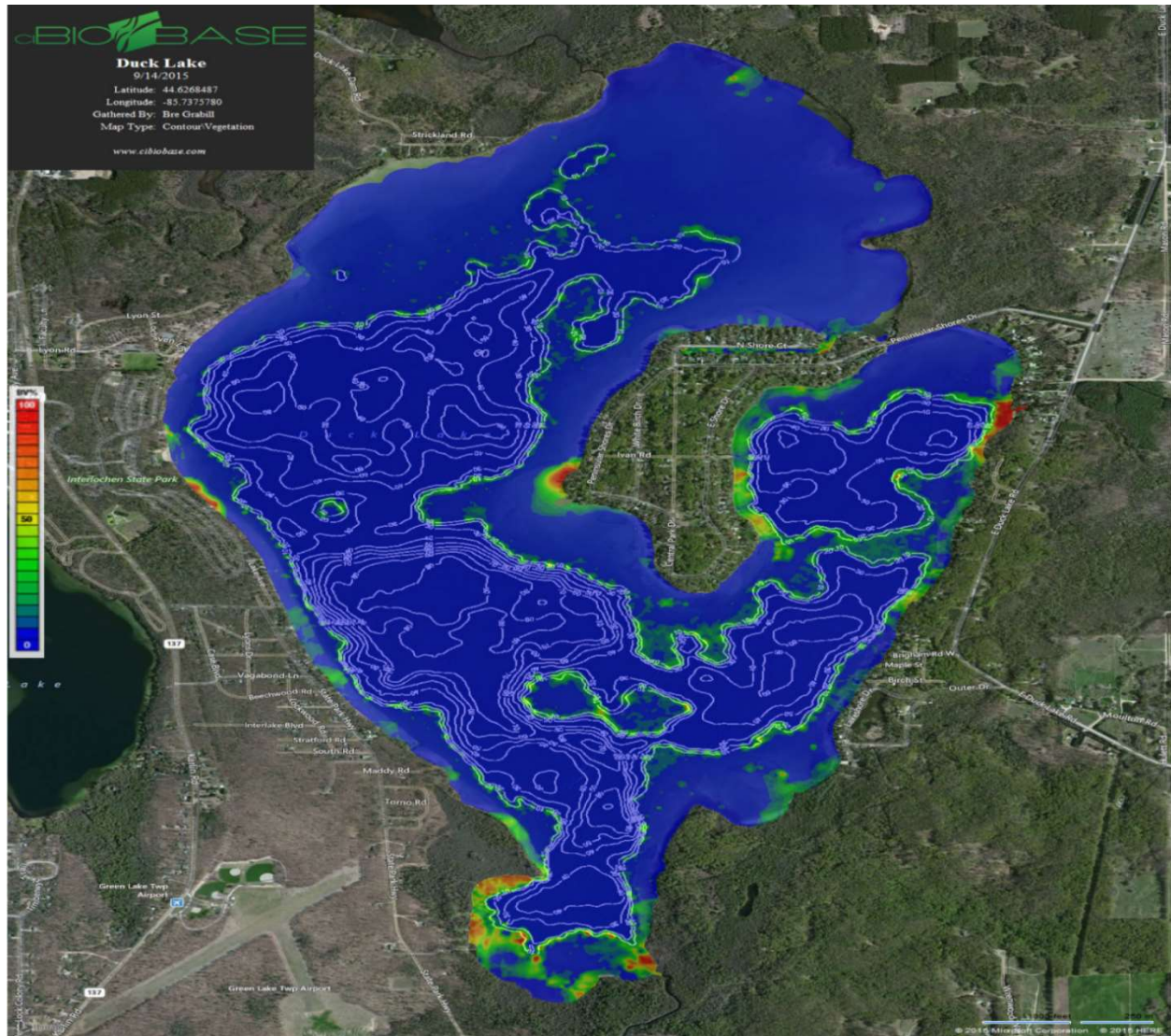
Once in a lake's aquatic plant community, **EWM can never be completely eradicated**, but only managed. Today EWM is located in many of Michigan's most popular lakes. And now it's found its way to Duck Lake.

EWM Characteristics



The sketch above diagrams the plant's components. EWM is often confused with our native Northern Watermilfoil, a plant found in both Green and Duck Lakes, and is completely healthy for our lakes. Unfortunately, EWM easily mates with Northern Milfoil creating a hybrid version of EWM. The hybrid version is far more difficult and costly to treat.

Unfortunately, the spread of EWM has hit us very hard in Michigan. Many lakes are currently infested with EWM. Black Lake, Houghton Lake, Long Lake, Silver Lake, Lake Mitchell, Lake St. Helen, /Wixom Lake, just to name a few. All these lakes and many others are engaged in a perennial battle of managing a plant that can never be completely eradicated.



GLDLA Action Plan (Detailed)

At our August 2015 meeting the GLDLA identified a sub-committee to work over the winter to develop a strategy to fund and treat EWM. To that end we developed and executed the following project plan;

- Met to review/revise/identify steps and responsibilities with each high level task
- EWM team meeting with PLM to review recommendations and project plan
- Review permit docs
- Review Treatment Quote
- Review fund raising examples
- Develop Special Assessment District (SAD) Scope Statement
- Township review of Scope
 - Township determines SAD district
 - Identify Ownership rights
 - Develop Benefit Formula
 - Develop SAD impact address list
 - "Township to hold ""Hearing of Necessity"""
 - Schedule & publish meeting
 - Send postcards to participants
 - Hold Meeting
- Determine content of permission letter
- Draft permission letter
- Township review of permission letter
- Distribute permission letter using impact address list
- Monitor returns, calculate % approval
- Township Prepares Plans Costs
- Township Holds Public Hearings
- Township Determines Payment
- Develop Treatment Area Impact Permission Plan
- Create treatment area address list
- Develop treatment area permission letter
- Mail treatment area permission letter
- Monitor/confirm permission approval
- Recontact non-responses
- Identify townships involved
- Review findings with Township Supervisors
- Develop Initial Funding Comm. Plan
- Put information in winter newsletter
- Mail Informative/impact letter to riparian's
- Post Information on Social Media
- Get Treatment Cost Est/Timing
- Identify Ongoing Funding Plan strategy
- Begin State permit process
- Review Progress with Board

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Since the GLDLA did not have the funds in our account to cover treatment, and has no authority to collect funds, the first thing we did was petition our Green Lake township board to create a “Special Assessment District” (SAD) to address funding for treatment. The creation of a SAD is a lengthy process that we could not get it in place for treatment in 2016. Due to our desire to prevent the additional spread of this invasive plant in 2016, and lack of funds in our GLDLA account, we met with Green Lake Township to request financial help for 2016 treatment.

High-level Steps in a nutshell

2016 Treatment

- Selected treatment vendor
 - Worked with other Lake Associations to identify treatment vendors
 - Submitted RFQ to three vendors for pricing
 - Selected PLM Lakes & Land Management as treatment vendor
- Identified funding sources
 - We have collected approximately \$10,000 from lake residents toward the \$29,600 first year treatment and survey costs
 - Engaged Green Lake Township officials in an effort to make up the shortfall. The shortfall and treatment vendor selection (PLM Land & Lakes Management) was unanimously approved by the township board
 - The sub-committee circulated a petition to engage the township to act on our behalf
 - Because the township is providing a significant amount of the funding the contract with PLM for 2016 treatment will be between PLM and the township
 - Gained approval from the board to spend the \$10,000 in the Duck Lake Budget
- Obtained required state permits
- Obtained treatment permissions from property owners
- First treatment June 2016 – follow-up survey and treatment August 2016

2017 Forward Treatment and Funding

- The Green Lake Township board unanimously approved initiation of a SAD to fund the treatment of exotic invasive species on Duck Lake
- Township determined equitable assessments for property owners on Duck Lake
- Held first public meeting July 2016 and second August 2016

We owe a great deal of thanks to our township officials for recognizing the problem and helping develop a solution to address it.

WHAT ARE THE TREATMENT OPTIONS?

There are some options that exist in the fight against EWM. The following is a brief summary of each option ending with the approach selected for Duck Lake

1. DOING NOTHING

The first option is to do nothing and allow EWM to run its course. In 1996 EWM was first discovered in Houghton Lake. At 22000 acres, it is Michigan's largest inland lake. For whatever reasons for several years nothing was done to fight back against the spread of EWM, and by 2002 EWM covered approximately 11,000 acres making huge areas un-navigable. Today, EWM is under control at Houghton Lake but because of delays in treatment it cost over a million dollars to get it under control



2. MECHANICAL HARVESTING

A couple options fall into this category. First is cutting plants just as you mow your lawn. This option is usually effective only in clearing paths through EWM for boating traffic. Unfortunately, it is impossible to capture all the fragments created and the problem is easily exacerbated. Dredging is another mechanical option but it is only effective if the water depth can be brought to greater than 20 feet. As such these are not viable options for Duck Lake.

3. SUCTION HARVESTING

Suction Harvesting is a relatively new approach to combat EWM. Scuba divers dig out plants and suck them into a giant "shop vac" like machine located above the surface (usually on a boat). This method can negatively impact macro invertebrates and the native plant community.

4. BIOLOGICAL

A native insect called the **Milfoil Weevil** has been used to fight EWM. The process occurs after the weevils lay their eggs on the stems of milfoil plants. Once hatched the larvae eat the plant stem. Although this approach has been used (Long Lake initially used this approach) the results have been largely unpredictable. Finding a source of insects is problematic and includes the potential for introducing other unwanted parasites to the environment. Lastly, Weevils often have a problem surviving the cold Michigan winters.

5. CHEMICAL

There are two types of chemicals currently being used to fight EWM, Contact and Systemic. Contact Herbicides act on contact killing the plant quickly, but re-growth usually occurs within a few weeks. Systemic Herbicides are taken up by the root and often provide control throughout the entire growing season.

Three systemic herbicides are presently being used to treat EWM; 2-4D, Fluridone, and Triclopyr. Fluridone is generally reserved for lake-wide treatment which in the case of Duck Lake is not required. Triclopyr and 2-4D are both effective herbicides approved by the EPA, Department of Agriculture and Michigan Department of Environmental Quality. They have been used in many lakes in Michigan and are the treatment being used for Duck Lake.

NEXT STEPS – HOW YOU CAN HELP PRESERVE OUR LAKES

The board has received unanimous support from Green Lake Township and has selected PLM Lake and Land Management to be the licensed applicator. We have sent out and gained permission for treatment for most of the selected areas, and we began treatment in June.

As stated earlier, once EWM is established it can never be eradicated, only controlled. Consequently, we expect annual costs for treatments, testing, and surveys to be recurring in coming years. To cover those costs, the board has requested and the township has passed a SAD for Duck Lake Riparian's to cover the ongoing costs of treatment.

The good news:

We've caught this problem on Duck Lake very early. Less than 2% of Duck Lake is infested with EWM at this time keeping our costs relatively low, while we don't have it in Green Lake "yet", our lakes are connected so we must remain vigilant.

The bad news:

EWM can never be completely eradicated and we will have to be forever vigilant on our lakes.

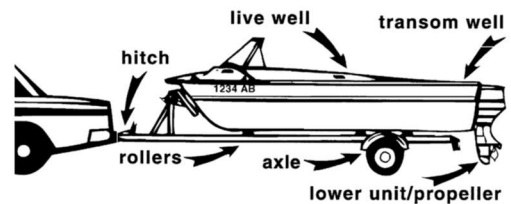
How you can help?

- Be a promoter of GLDL Association and encourage your neighbors who do not belong to join!
- Educate yourself on aquatic plants
- Take photos of any questionable aquatic plants and send them to GreenDucklakes@yahoo.com for identification

- Make sure guests, renters, neighbors practice CBCW



WATERCRAFT CHECK POINTS



- | | | |
|---------------------------------------|--|---|
| <input type="checkbox"/> Anchor | <input type="checkbox"/> Ladder | <input type="checkbox"/> Spare tire |
| <input type="checkbox"/> Axle | <input type="checkbox"/> Landing net | <input type="checkbox"/> Tackle |
| <input type="checkbox"/> Bait bucket | <input type="checkbox"/> License plate | <input type="checkbox"/> Tow rope |
| <input type="checkbox"/> Bunks | <input type="checkbox"/> Motor | <input type="checkbox"/> Trailer |
| <input type="checkbox"/> Bow line | <input type="checkbox"/> Wheels | <input type="checkbox"/> Transducer |
| <input type="checkbox"/> Fishing line | <input type="checkbox"/> Live well | <input type="checkbox"/> Transom well |
| <input type="checkbox"/> Floor | <input type="checkbox"/> Lights/wiring | <input type="checkbox"/> Trolling motor |
| <input type="checkbox"/> Hull | <input type="checkbox"/> Rollers | |
| <input type="checkbox"/> Intake pipe | <input type="checkbox"/> Prop | |

Thanks for your interest, your dedication and feedback. It is important to us and genuinely sought – send feedback and or comments to GreenDuckLakes2015@yahoo.com or via mail to Green Lakes and Duck Lakes Association
P.O Box 23
Interlochen, Mi. 49643

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**And now, a word about membership in
OUR lake association**

If you will indulge me as I put on my "sales hat" I would appreciate it! Those of you who know me know I am not a salesperson. Nevertheless, I look at our current and future needs, and have a few thoughts.

Our association is for the benefit of our lakes, and the individuals and families that own land or homes on Duck Lake and Green Lake. The intrinsic value, and financial value of clean, healthy lakes is immeasurable. We have been fortunate to have many of our current and former neighbors contribute time, research, and commitment to our lakes for decades. We are all stewards of our lakes, and certainly we would like our lakes to be healthy for the generations yet to come!

The ANNUAL dues for our association is a very minimal \$15. Many of our members contribute additional amounts above the \$15 for the benefit of our lakes which is very generous of them. I am hoping that many of our neighbors who are not members are just not aware of the association, and maybe many have been planning to join but have just not done so yet. SO THIS IS YOUR OPPORTUNITY!

As president of our association, I have a goal of increasing our membership significantly. It is easier to come up with more members willing to "invest" \$15 per year than to face larger financial requests in the future if needed for known or unknown needs of our lakes! Our dues are the lowest of any lake association that I have been able to find information on.

So I respectfully request that you consider membership now in our lakes association for the direct benefit of our and lakes if you

are currently not a member. And a sincere thank you to all of our current members who faithfully contribute Year after year. Thanks to all of you as you consider my request this year. I appreciate it.