



March 15, 2013

Dear Residents of Les Cheneaux Islands,

Over the past few months I have had an opportunity to listen to concerned residents, business owners and local township officials regarding the Eurasian watermilfoil (EWM) infestation plaguing the Les Cheneaux Islands. Over the years you have implemented a variety of management tools such as hand pulling, Weevils and mechanical harvesting to address this growing problem. In recent weeks additional communication efforts have been made regarding remaining EWM management options.

However, before those management options are discussed, it is important for residents to understand the severity of the problem at hand and negative ecological impacts of an EWM infestation.

### Eurasian watermilfoil



EWM, an exotic species, is an extremely aggressive submerged aquatic plant that has the abilities to form a monoculture among vegetation. EWM spreads by fragmentation (every inch of plant can sprout new growth) and has a very strong root system. EWM forms a canopy above native plants, choking out the competition. EWM also has the ability to overwinter underneath the ice, allowing it to be present throughout the winter. This gives the plant a head start in growing during the spring and chokes out native plants very quickly. EWM should be controlled as soon as it is found within a waterbody to prevent further infestation and loss of native plant diversity. Left unmanaged this invasive species can negatively impact fisheries by promoting stunted prey fish populations and reduced size in predator species. EWM will negatively impact overall ecological stability.

Areas of the lake that support vegetation will grow plants, despite intense efforts to remove them. Aquatic vegetation provides important benefits to a lake, including stabilizing sediments, providing habitat for fish and other aquatic organisms, and slowing the spread of exotic plant species. In general, native plants interfere less with recreation and other human activities than exotic species. The non-native plant species, Eurasian watermilfoil concentrates its' biomass at the water surface where it strongly interferes with boating, swimming and other human activities. This growth form also allows exotic plants to displace native plants and form a monospecific (i.e., single species) plant community. The dense surface canopies of Eurasian watermilfoil provide a lower quality habitat than that provided by a diverse community of native plants. Control of exotic plant species minimizes interference of plant growth with human activities and protects the native vegetation of the lake. The goal of environmentally responsible aquatic plant management is not to remove all vegetation, but to control the types of plants that grow in the lake and ensure ecological stability. Aquatic plant management should preserve species diversity and cover of native plants sufficient to provide habitat for fish and other aquatic organisms.

Once a native plant is lost in a lake, there is no guarantee it will return. By prolonging the control of EWM, the infestation will continue to expand exponentially. Cost of management will also exponentially increase over time. In addition, short and long-term/permanent ecological changes impacting your fisheries, lake biology, recreation, property values and overall quality of life within the Les Cheneaux Islands will occur.

Interestingly, residents tend to make assumptions regarding the results of implementing a specific EWM management tool. Or they presume that each individual has a unique interest that is much different from their own. EWM does not have any ecological benefit. By controlling EWM, the fisherman, recreational boater, beach-goer and the typical property owner will benefit.

It is important that EWM control techniques meet the needs and expectations of lake users. Each technique has advantages and disadvantages:

**Mechanical harvesting** is best suited for native plant species. PLM Lake & Land Management Corp (PLM) is one of the largest most experienced harvesting contractors in the state of Michigan and has been providing services since the late 80's. Most native plant species have a higher tolerance to aquatic herbicides and require higher dosage rates (increased cost and reduced selectivity). Mechanical harvesting can be used to provide relief from native plant species if they are causing a recreational nuisance. Harvesting does not kill the plants, but simply reduces it's stature, leaving lower growth for fish habitat and sediment stabilization. Mechanical harvesting of Eurasian watermilfoil is not typically recommended as it provides an opportunity to spread EWM throughout a lake through fragmentation. (This control technique is currently being used in isolated areas of Les Cheneaux Islands.)

**Biological control** options for nuisance aquatic vegetation are limited. Grass carp, which indiscriminately devour aquatic vegetation, have been restricted in many states because of their nonselective grazing and fear they may escape into nonintended waters. The use of the milfoil weevil (*Euhrychipsis lecontei*) to control Eurasian watermilfoil has been implemented in many Michigan lakes. PLM Lake & Land Management Corp has many years of experience participating in weevil stocking, evaluations and long-term observations related to their performance and sustainability. Although the milfoil weevils may impact EWM populations in certain situations, the use of this tool remains unpredictable and EWM spreads faster than weevils populations. (This control technique is currently being used in isolated areas of Les Cheneaux Islands.)

**Chemical control**, or use of aquatic herbicides, is the most common strategy for controlling exotic plant species such as EWM. Aquatic herbicides currently represent the most reliable, effective, selective means for controlling Eurasian watermilfoil. Also, there is a plethora of research and data regarding the use of aquatic herbicides. Every aquatic herbicide is registered with the Environmental Protection Agency, Michigan Department of Agriculture and the Michigan Department of Environmental Quality. Initially three herbicides options were being discussed for the Les Cheneaux Islands. One of the products that was being considered has the active ingredient 2,4-D. The active ingredient, 2,4-D, is one of the most commonly used herbicides in the world. Common uses include; agriculture, lawn/landscape industry, over counter sales for homeowners controlling broad leaf weeds in their yards and aquatic plant managers selectively controlling EWM in lakes. Unfortunately, there is a misconception regarding this product. People tend to confuse it with the carcinogenic compound, 2,4,5-T that was found in Agent Orange. Based on these unfortunate misconceptions and other influences, 2,4-D will not be proposed for the selective control of EWM within the Les Cheneaux Island. Another herbicide, with the active ingredient Fluridone, which is also commonly used for the selective control of EWM is also not being considered for use during the 2013 season. Both of these products (2,4-D and Fluridone) are safe, selective, systemic products (attack root sytem of plant) that are used commonly through out Michigan, USA and the world.

If an herbicide is used for EWM control in 2013 it will be Renovate OTF, active ingredient Triclopyr. This product is also approved by the EPA, Dept of Agriculture and MDEQ. Renovate OTF (Triclopyr) can be used safely to achieve long-term, selective control of Eurasian watermilfoil. Systemic herbicides are capable of killing the entire plant. Systemic herbicides control EWM with little or no impact on most native plant species. Under ideal conditions, several consecutive annual applications of these herbicides can reduce EWM to maintenance (low) abundance, such that only relatively small spot treatments are required to keep it under control. For this strategy to succeed, it is necessary to treat large infestations or most of the Eurasian watermilfoil in the lake each time.

**Integrated Pest Management (IPM)** approaches to aquatic plant control emphasize spending more effort evaluating the problem, so that exactly the right control can be applied at just the right time to control the pest. IPM approaches minimize treatment costs and the use of chemicals. Lake management planning ensures the most appropriate, cost-effective treatment for your area of concern. Planning is an essential phase of Integrated Pest Management and includes lake vegetation surveys, water quality evaluation and a detailed, written lake management plan. Having the plan in place helps lake users know what to expect from lake management. Survey results provide a permanent record of conditions in the lake and the impact of

management practices. The Les Cheneaux Island Foundation Task Force has been intensely researching and implementing management tools with the environment and resident's best interest in mind. Past IPM practices including weevils and harvesting are not meeting expectations and/or offering protection to the environment. Therefore, predictable, effective, safe herbicides should be considered for implementation to ensure EWM is controlled. As new technology develops, i.e. fungus, bacteria and other management tools, consideration to incorporate them into the Les Cheneaux Islands management plan must be considered.

### Summary

The EWM infestation that you are facing is critical. Developing a plan, educating the public, securing funding and implementing a management program is challenging but the rewards are priceless. Protecting the environment, maintaining property values, allowing for safe recreation and ensuring a high quality of life are just a few of the rewards that come from proper EWM management.

Although each management plan is unique due to community interest and the fact that every water body is different, all communities go through this development, education and implementation process. The reassuring news is that all lakes go through the same process and in the end find a way to implement programs best suited for their specific environmental needs. EWM must be controlled! Not addressing EWM is not an acceptable option! The sooner an effective management plan is implemented within the Les Cheneaux Islands the better it will be for the environment and your community. A brief note; if Renovate OTF is used during the 2013 season it will be done on a limited evaluation basis. This evaluation process will further increase educational opportunities, expectations and a better overall understanding of a lake management program incorporating the use of herbicides.

In order to consider the incorporation of herbicides into this integrated management approach during the 2013 season, a permit with the Michigan Department of Environmental Quality has been submitted for review. The intent of this submission was to allow time for the community to take part in ongoing management discussions while we also addressed potential DEQ permit questions. Once a permit application is submitted it can take several months before DEQ approval. Our hope is to have an established integrated management plan within the next two months to allow for the option to perform treatment this spring.

Examples of other lakes that share your interest and have implemented effective EWM management programs are found in the list provided. All of these lakes have used Renovate OTF safely and effectively for the selective control of EWM. None of these lakes have experienced negative environmental impacts to their fisheries, aquatic ecosystems, wildlife or human health.

I look forward to working with and meeting concerned entities and residents of Les Cheneaux Islands in the near future. A public open forum meeting is currently being established for this spring to discuss Les Cheneaux EWM infestation, prior to DEQ permit approval. Please make notes regarding your questions, comments, concerns and support. This will be a constructive opportunity for all of us to work together and accomplish our goal of EWM control.

If you have immediate questions, comment or concerns please contact.

Sincerely,



Jason Broekstra, Biologist  
Vice President of Great Lake Operations  
PLM Lake & Land Management Corp.  
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LAKE NAME	COUNTY
BEAR LAKE	KALKASKA
LONG LAKE CLARE	CLARE
LOUISE, LAKE	OTSEGO
COWAN	KENT
BEAR LAKE	MUSKEGON
BIG WHITEFISH LAKE	MONTCALM
ALGONQUIN LAKE	BARRY
BIG BROWER LAKE	KENT
DOSTER, LAKE	ALLEGAN
ARNOLD LAKE	CLARE
MONTEREY LAKE	ALLEGAN
FINE LAKE	BARRY
LITTLE CROOKED LAKE	CASS
ST. MARYS LAKE	CALHOUN
SELKIRK LAKE	ALLEGAN
SADDLE LAKE	VAN BUREN
MILL LAKE	VAN BUREN
INDIAN LAKE	CASS
ACKLEY LAKE	VAN BUREN
PICKEREL LAKE	KENT
MILLENNIUM PARK LAKE	KENT
WOODARD LAKE	IONIA
CONTOS, LAKE	GLADWIN
BERTHA	CLARE
SHINGLE	CLARE
GEORGE, LAKE	CLARE
INDIAN LAKE	MONTCALM
PETTIT LAKE	NEWAYGO
NEGAUNEE LAKE	OSCEOLA
LILY LAKE	CLARE
MORLEY MILL POND	MECOSTA
ROBINSON LAKE	NEWAYGO
BUDD LAKE	CLARE
UPPER SPRINGWOOD Lk	CLARE
LOWER SPRINGWOOD	CLARE
DODGE LAKE COMPLEX	CLARE
BIG PINE ISLAND	KENT
MUSKELLUNGE LAKE	MONTCALM
HUTCHINS LAKE	ALLEGAN
SANFORD LAKE	MIDLAND
WIXOM LAKE	GLADWIN
EAGLE LAKE	KALAMAZOO
MISSAUKEE	MISSAUKEE

LAKE NAME	COUNTY
BLANCH LAKE	NEWAYGO
PETERSON LAKE	NEWAYGO
WINDOVER LAKE	CLARE
BASS LAKE	KENT
CONNAMARA	LAKE
CRAWFORD LAKE	KENT
HUNTER LAKE	MONTCALM
LITTLE BROWER Lk	KENT
LITTLE PINE ISLAND	KENT
LITTLE WHITEFISH Lk	MONTCALM
ROUND LAKE	JACKSON
GILLETTS LAKE	JACKSON
LEPLEY LAKE	SAINT JOSEPH
BALDWIN LAKE	MONTCALM
COMO LAKE	MONTCALM
DODGE LAKE	CLARE
BLUE GILL LAKE	CLARE
CAMPAU/KETTLE Lks	KENT
MIRAMICHI	OSCEOLA
TITTABAWASSEE RIV	GLADWIN
CROCKERY LAKE	OTTAWA
DEAN LAKE	KENT
ARCADIA LAKE	MANISTEE
PENTWATER LAKE	OCEANA
CADILLAC, LAKE	WEXFORD
HOUGHTON LAKE	ROSCOMMON
CRAIG LAKE	BRANCH
MESSENGER LAKE	BRANCH
MORRISON LAKE	BRANCH
SOUTH LAKE	BRANCH
DUNCAN LAKE	BARRY
GUN LAKE	BARRY
BELLA VISTA LAKE	KENT
UPPER SILVER LAKE	OCEANA
TURK LAKE	MONTCALM
CRYSTAL LAKE	NEWAYGO
WATERFRONT LAKE	OTTAWA
COBB LAKE	BARRY
FISH LAKE	SAINT JOSEPH
ROSE LAKE	OSCEOLA
STONY LAKE	OCEANA
SAPPHIRE LAKE	MISSAUKEE
BARLOW LAKE	BARRY

LAKE NAME	COUNTY
SUGAR LOAF LAKE	WASHTENAW
LEACH LAKE	BARRY
MAGICIAN LAKE	CASS
MIDDLE LAKE	BARRY
WEST LAKE	MUSKEGON
MIDDLE LAKE	MUSKEGON
NORTH LAKE	MUSKEGON
SAND LAKE	NEWAYGO
KIMBALL LAKE	NEWAYGO
PICKERAL LAKE	NEWAYGO
BRIGHTON LAKE	LIVINGSTON
GITCHEGUMEE	WEXFORD
LONG LAKE	BRANCH
UPPER SILVER	OCEANA
VAN ETTEN	IOSCO
ELIZABETH LAKE	OAKLAND
GRASS LAKE	JACKSON
BIG BLUE LAKE	MUSKEGON
SHELDON LAKE	OTTAWA
ROUND LAKE	CLINTON
CENTER LAKE	JACKSON
GENEVA, LAKE	CLINTON
LANSING, LAKE	INGHAM
SAND LAKE	LENAWEE
WABASIS LAKE	KENT
SAND LAKE	MONTCALM
WHITE LAKE	MUSKEGON
THORNAPPLE LAKE	BARRY
GRASS LAKE	CLARE
LONG LAKE NW	MASON
TODD LAKE	OSCEOLA
RATTAIL LAKE	OSCEOLA
BIG LAKE	OSCEOLA
GREEN LAKE	ALLEGAN
ROUND LAKE	VAN BUREN
CUB LAKE	KALKASKA
VERSLUIS LAKE	KENT
SYLVAN LAKE	NEWAYGO
EMERALD LAKE	NEWAYGO
HART LAKE	OCEANA
PERCH LAKE	HILLSDALE
SILVER LAKE	LIVINGSTON
CRYSTAL LAKE	HILLSDALE

LAKE NAME	COUNTY
LITTLE ASYLUM LAKE	KALAMAZOO
FISK LAKE	KENT
JORDAN LAKE	BARRY
BIG MYERS LAKE	KENT
LITTLE MYERS LAKE	KENT
NEVINS	MONTCALM
PINE LAKE	KENT
REEDS LAKE	KENT
ROUND LAKE	KENT
SILVER LAKE	KENT
STANTON, LAKE	MONTCALM
THORNAPPLE RIVER	KENT
THOMAS LAKE	KENT
BANKS LAKE	KENT
WOODBEEK LAKE	KENT
HALFMILE LAKE	KENT
HORSESHOE LAKE	KENT
NORTH LAKE	MUSKEGON
WEST LAKE	MUSKEGON
MORRISON LAKE	IONIA
LONG LAKE	KENT
MIRAMICHI, UPPER Lk	OSCEOLA
GILLIGAN LAKE	ALLEGAN
FAWN LAKE	BARRY
BOSTWICK LAKE	KENT
MILL LAKE	BARRY
PAYNE LAKE	BARRY
BIG CROOKED LAKE	KENT
PAW PAW LAKE	BERRIEN
GOGUAC LAKE	CALHOUN
CAMP	KENT
CEDAR LAKE	VAN BUREN
WALL LAKE	BARRY
WAMPLERS LAKE	JACKSON
VICTORIA LAKE	CLINTON
SCENIC LAKE	SHIAWASSEE
SPRING LAKE	OTTAWA
INDIANHEAD LAKE	MONTCALM
JEHNSEN LAKE	MECOSTA
LONG LAKE	IONIA