



Lake Ripley Management District

Management Plan for the control of non-native
Phragmites (Phragmites australis ssp. australis)



Problem:

Lake Ripley is a Wisconsin Department of Natural Resources (WDNR) long term trend monitoring lake. During a boat monitoring event on May 29, 2014, Jeanne Scherer and Katrina Punzel of the WDNR, along with Lake Ripley Management District (LRMD) Lake Manager Lisa Griffin, visually noticed a stand of phragmites located on the east inlet of Vasby's Channel. Vasby's channel is located on the southernmost bay of Lake Ripley, and was originally created via dredging by an earlier landowner.

This invasive plant threatens adjacent wetland habitat. Should control not be maintained, it would negatively affect water quality, plant and animal diversity, lake health, and could pose a fire risk to property within the area. The potential to spread to adjacent wetland areas is immediate if control measures and monitoring are not conducted.

Non-native phragmites is a restricted plant species listed under the Wisconsin Administrative Code NR40. This nuisance plant and is not considered an important wildlife food. It shades native plants and forms dense monotypic patches, reducing plant and animal diversity. Lake Ripley Management District has no knowledge of other known stands of phragmites and considers it a pioneer stand to Lake Ripley.

Identification:

After obtaining landowner permission, Dr. Nicholas Tippery of the University of Wisconsin-Whitewater, Jeanne Scherer, and Lisa Griffin conducted a site visit. During the site visit, samples were obtained for morphological and genetic analysis. Stand size and density were also loosely evaluated.

Access to the site is available via Island Drive located in the Town of Oakland. Additional wetlands are within close proximity to the pioneer stand across Island Drive. A second site visit was conducted in early August by Lisa Griffin. The plant stand was more defined now that plant growth is much larger than in early spring. Some areas within the stand are monotypic of phragmites where outer areas have native plants interspersed. A map is included to show the boundaries of the stand.

The WDNR and LRMD are joint holders of a Deed of Conservation Easement recorded with Jefferson County Register of Deeds on October 20, 1995 as document number 946049, Vol. 929, Pg. 612. This conservation easement was established to assure water quality protection, scenic and habitat values of the property.



Image 1: Map of Phragmites stand. Phragmites is located east of the channel and stand boundaries are marked in red.

Species confirmation:

Site and plant characteristics were noted at the time of the site visit. Dr. Tippery and Jeanne Scherer reviewed morphological and growth profile characteristics and stated that the plants were likely the non-native phragmites. Dr. Tippery conducted a DNA test on samples obtained from Lake Ripley, targeting the diagnostic sequence differences identified by Saltonstall (2003) in the chloroplast trnL gene. Plants from Lake Ripley failed to show the presence of the native gene sequence, which we interpret to support their identification as non-native.

Control measures:

The following measures will be used to control phragmites. Type of treatment will depend on time of year, stage of plant growth, and site conditions.

- **Chemical Treatment:** Chemical treatment will include the application of herbicides and supporting surfactants to live plants. All guidelines put forth in the Chemical Aquatic Plant Control application and Permit will be followed. Spray will be applied to wet the leaves and/or flower plumes, but not to the point where herbicide is dripping from the plant. A certified category 5 herbicide application contractor will be hired for all chemical spraying.
- **Mechanical Treatment:** mowing or hand cutting and the removal of seed heads will be conducted and manually removed preventing seed disbursement in the treatment area. This will also help reduce shading and allow for the reestablishment of native species. A contractor specializing in wetland restoration will assist with the mechanical treatment.
- **Native Plantings:** once the phragmites stand has been treated and conditions are favorable, native wetland plants will be planted or seeds manually dispersed to stabilize soils and increase natural habitat. Restoration work will be contracted and under the supervision of a wetland restoration professional.

Long term maintenance:

Few techniques used alone are effective in suppressing the population. Long term management is essential for the control of phragmites. A combination of mechanical treatments, chemical treatments, possible prescribed burns, along with seasonal monitoring and replanting of native wetland plants will be used to control the population and rehabilitate the area. A timeline of treatment is listed below:

Late summer/early fall 2014:

Define the size and density of the stand, prepare a management plan, apply for grant funding, and all necessary permits. Designate a contractor for the manual removal, chemical treatment,

restoration, and surveying the site and adjacent sites for the first 3 years. Information will be relayed to the Lake Manager for review of any amendments that may be needed to the control plan. Updates will be provided to the LRMD board of directors via the Lake Manager during monthly meetings held during the growing season. Citizen outreach will include informational material on the plant and what to look for in surrounding areas. Information will be provided in the *Ripples* newsletter which is provided to all landowners within the district.

Note: Due to time constraints, herbicide application may not be performed prior to first frost during fall of 2014. Application before first frost is highly recommended as the plant has stopped active stem growth and is translocating nutrients to its rhizomes. If fall herbicide application is not feasible, manual removal of seed heads will be performed and herbicide will commence in spring when plant growth has sprouted and conditions are favorable for herbicide application.

Fall to first frost 2014:

Due to height and stage of plant growth, manual removal of seed heads and cutting plants to a height of less than three feet is desirable. This will weaken plant and allow for easier access to the site the following spring for herbicide treatment. If permission is given, a prescribed burn may commence instead of manual cutting to reduce dead standing plants further allowing for easier access and also decreasing the amount of dead matter to the area. This decision will be based on landowner review, proximity to residence and structures, and seasonal conditions.

Spring 2015:

Herbicide treatment will be used once germination of the plant has occurred and leaves have unfurled. All conditions of the Chemical Aquatic Plant Control Application and Permit will be followed.

Summer 2015:

Visual site surveys will continue to verify the stand has not grown outside the target area. Surveys will be conducted by the contracted entity and Lake Manager to ensure containment. Inspection of the earlier herbicide treatment will occur to verify treatment of the entire stand. Any new growth will be chemically treated.

Fall 2015:

Visual site surveys will continue to verify the stand has not grown outside the target area. Manual removal of dead material will occur. Planting of native vegetation will commence for rehabilitation efforts of the area. Depending on soil conditions, a wetland seed mix will be used in areas of moist soil and are devoid of herbaceous vegetation. Submerged bare areas should

be seeded when water levels have drawn down later in the season producing a mud flat. A seed mix will be mixed with a spreading agent for easier and more uniform hand dispersal.

Spring/Summer/Fall 2016:

Visual site surveys will continue to verify the stand has not grown outside the target area. Surveys will be conducted by contracted entity and Lake Manager to ensure the containment of the stand. Spot treatments of herbicide will be used with any new growth shoots. Verification that fall plantings have survived will be noted and any bare areas will be replanted with native vegetation.

Spring/Summer/Fall 2017-2019:

Visual site surveys will continue to verify the stand has not grown outside the target area. The Lake Manager, other staff, or volunteers will monitor any additional growth and any new areas that may have arisen. Spot herbicide treatments would continue with the certified contractor should they be necessary.

Additional control measures:

All equipment used on site will be cleaned according to Aquatic Invasive Species regulations to eliminate the potential of transfer of seeds to adjacent areas. Burning of collected seed heads would be ideal. Rubber bottomed boots or waders will be worn to prevent the risk of spreading new invasive to outlying areas, which may occur with other types of foot wear.

Grant outcomes:

Community outreach and awareness is one of five goals set forth in the LRMD Management Plan (Lake Ripley Management District Management Plan, 2009). In 2013 and 2014 Lake Ripley participated in the Clean Boats, Clean Waters initiative to educate boats on laws associated with aquatic invasive species. The district is dedicated to the prevention and spread of aquatic invasive species and will continue our education efforts. Communication of current efforts will be relayed to citizens in our newsletter, *Ripples*, which is mailed out to approximately 1000 landowners. A yearly report will be submitted to the WDNR on the control efforts completed in the preceding year. A copy of news releases or *Ripples* articles will be included. Numerous photos will be taken before, during, and after control and restoration have occurred. A final report of the project will be submitted at the end of the grant period.

Funds available and community support:

The Lake Ripley Management District is in full support of the control of this invasive non-native stand of phragmites. Funds are available for the 25% match should the grant be awarded. The

Town of Oakland supports this project and a letter of support is provided. The Jefferson County Land and Water Conservation Department has also provided a letter of support. The Cambridge/Oakland Sanitary District will allow vehicles to park by a sanitary lift station to help defer vehicle congestion of the road.

We are requesting an Aquatic Invasive Species early Detection and Response Grant from the WDNR to assist in the financial obligations of this project. Resolution 2014-4 was adopted by the LRMD board of directors on August 16, 2014 and is enclosed with other supporting documentation.

On behalf of the LRMD board and staff, we thank you for your consideration of our grant request.



JEFFERSON COUNTY
LAND & WATER CONSERVATION DEPARTMENT
COURTHOUSE — 320 S MAIN ST
JEFFERSON WI 53546-1700
PHONE (920) 674-7110



January 21, 2015

Susan Graham
Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

Dear Sue,

I fully support Lake Ripley Management District's Early Detection and Response AIS grant application to the Department of Natural Resources.

The District is applying for the grant in order to control the phragmites found on land adjacent to Lake Ripley. This work is important both to ensure that the phragmites population doesn't increase in size in the area where it is currently found and to prevent it from being spread to other nearby areas.

Sincerely,

Patricia Cicero
Water Resources Management Specialist

August 30, 2014

Ms. Susan Graham
Wisconsin Department of Natural Resources
3911 Fish Hatchery Rd.
Fitchburg, WI 53711

Dr. Ms. Graham,

On behalf of the Town of Oakland, I am writing to offer full support of the Lake Ripley Management District's request for grant assistance to control a pioneer stand of non-native phragmites. This project will protect Lake Ripley and surrounding wetlands from further impact and restore those wetland areas affected.

The Lake District will coordinate all work to be done with a knowledgeable contractor specializing in invasive control. Follow up surveys will be conducted to ensure the control of this non-native plant. The Town believes this work is essential to preservation of wetland areas surrounding Lake Ripley, and will contribute to increased water quality, species diversity, and an overall healthier lake.

Sincerely,



Gene Kapsner, Chair
Town of Oakland