

SANFORD LAKE AQUATIC PLANT CONTROL PROGRAM FREQUENTLY ASKED QUESTIONS

PREPARED FOR:
SANFORD LAKE IMPROVEMENT BOARD
MIDLAND COUNTY, MI

The plant control program on Sanford Lake focuses on the control of nuisance plant growth with a combination of aquatic herbicides and mechanical harvesting. The program is administered by the Sanford Lake Improvement Board (SLIB) in Jerome Township and the Village of Sanford (Edenville Township has a separate plant control program). Below are answers to some questions that you may have about the program.

Who oversees the plant control program?

Plant control activities are coordinated under the direction of the SLIB's environmental consultant, Progressive Companies. Scientists from Progressive conduct GPS-guided surveys of the lake to identify problem areas, and detailed plant control maps are provided to the plant control contractor. Follow-up surveys are then conducted throughout the growing season to evaluate the effectiveness of the program.

Who conducts the herbicide treatments and mechanical harvesting?

Herbicide treatments in Sanford Lake are conducted by PLM Lake & Land Management Corp. Mechanical harvesting may be bid out in the fall of 2026 pending lake board approval.

Who determines when and where treatments and harvesting will occur?

The timing and scope of plant control work is based on where nuisance plants are found when scientists from Progressive Companies conduct their surveys.

What plants are targeted for control?

The plant control program on Sanford Lake focuses on invasive plants, such as Eurasian milfoil. Invasive plant species have the potential to spread quickly if left unchecked.

How about a pre-emptive strike?

To be effective, aquatic herbicides must be applied directly to the plant beds when the plants are actively growing. There are no pre-emergence aquatic herbicides like there are for agriculture.

Why are there still plants in the lake following treatments or harvesting?

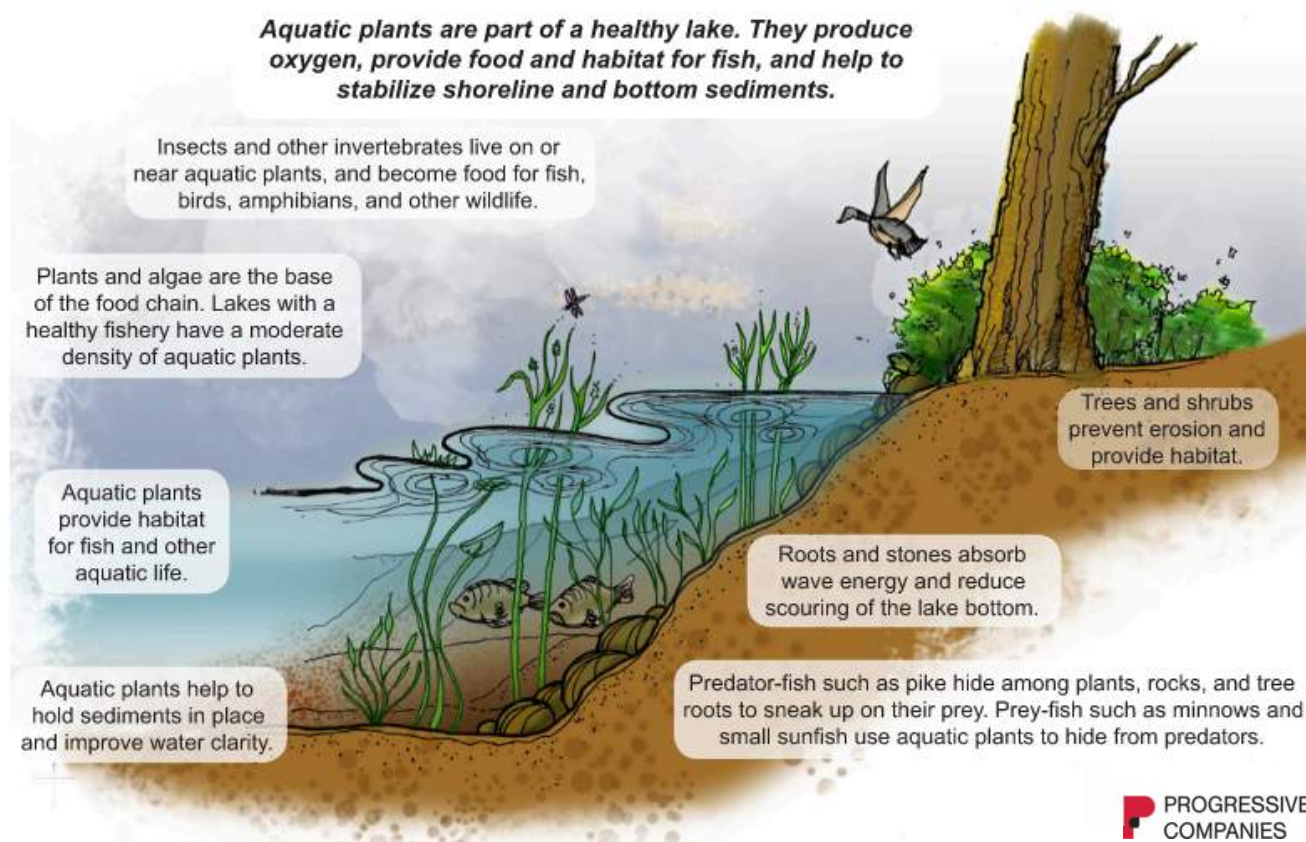
In managing aquatic plants, it is important to recognize that most plants are beneficial. Aquatic plants produce oxygen during photosynthesis, help stabilize shoreline and bottom sediments, and provide cover and habitat for a variety of fish. The main objective of the plant control program on Sanford Lake is to control nuisance, invasive species while maintaining beneficial plants. We do not want to remove all plants from the lake. This would negatively impact the fishery and cause many other problems such as algae blooms.

Are permits required?

In Michigan, a permit must be acquired from the Department of Environment, Great Lakes, and Energy (EGLE, formerly the DEQ), before herbicides are applied to inland lakes. The permit lists the herbicides that are approved for use, dose rates, use restrictions, and indicates specific areas of the lake where treatments are allowed. Permit requirements are designed to protect public health and the environment. No permits are required for mechanical harvesting on inland lakes.

Can I apply herbicides myself?

If you have a permit from EGLE, you can treat your own shoreline, but we don't recommend it. In most cases, it is best to have herbicides applied by a licensed professional applicator rather than attempting to apply herbicides yourself. If applied improperly, herbicides can do more harm than good.



How do herbicide treatments impact swimming and fishing?

All herbicides, except algaecides, have a 24-hour swimming restriction, but only in the area where treatment has occurred as indicated by state-required posting signs. If there are no posting signs, or the sign indicates that only algaecides were applied, there are no swimming restrictions. There are no fishing restrictions for any herbicide treatments.

When can I water my lawn following a treatment?

If you draw water from the lake for irrigation, be sure to read the sign posted along your shoreline at the time of treatment. Most irrigation restrictions do not apply to established lawns. However, if you water flowers or a garden, you should adhere to the irrigation restrictions posted on the sign.

Why didn't my property get a treatment notice sign?

If there is no sign posted along your property, it means your area was not treated and there are no use restrictions. State regulations require that areas within 100 feet of treatment areas be posted with a sign that lists herbicides applied and the associated use restrictions. Not every property gets treated every time; which properties get treatment depends on where the plants are found during lake surveys.

Is there a permanent fix to the problem?

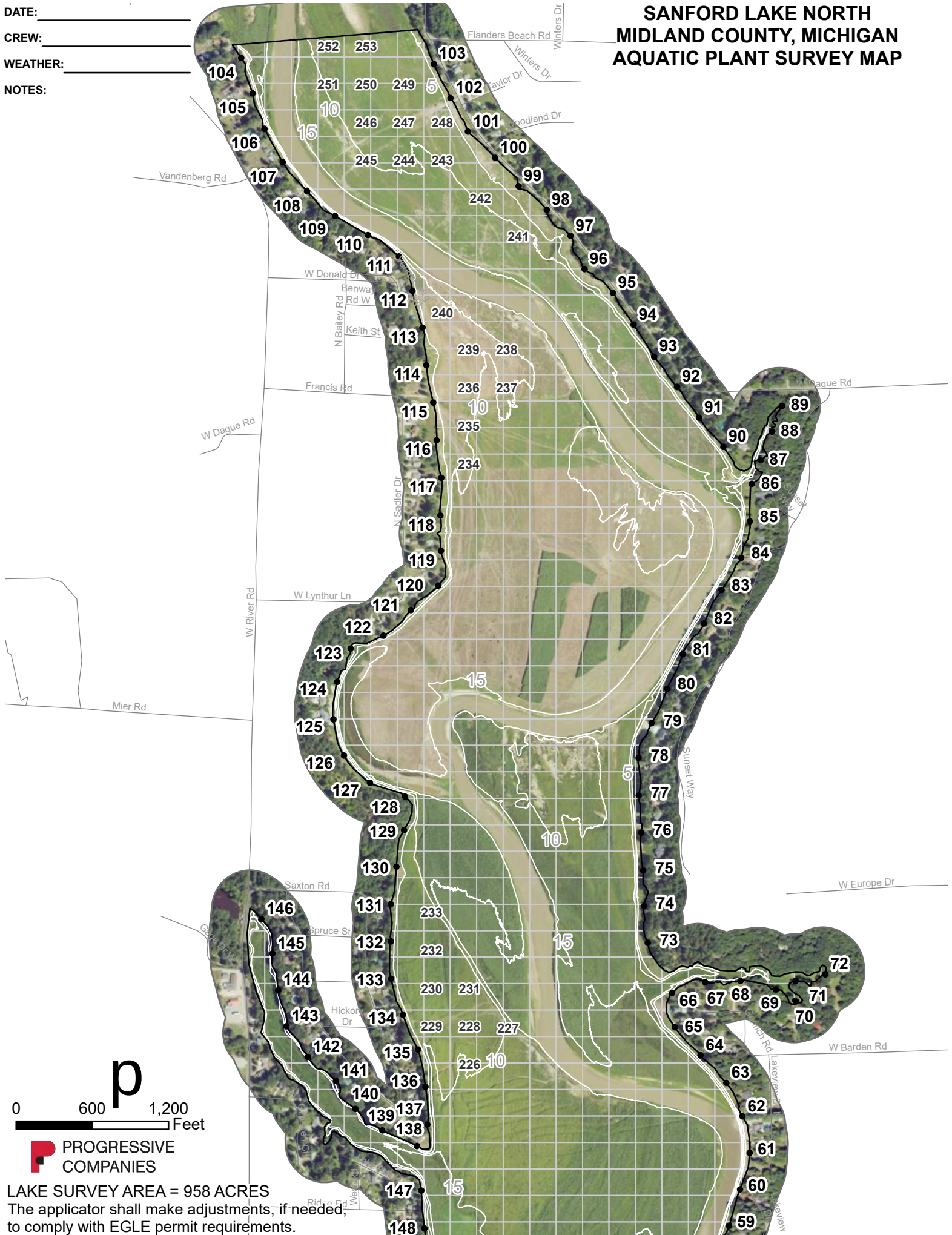
If conditions are favorable, aquatic plants will grow. However, there are steps property owners can take to help minimize plant growth in the lake such as limiting the use of lawn fertilizers and maintaining natural vegetation along the shoreline to prevent nutrients from washing into the lake.

What can I do to prevent the spread of aquatic invasive species in Sanford Lake?

To help prevent the spread of invasive species, state law requires drain plugs to be pulled, water to be drained, and plants and debris to be removed from boats and trailers before trailering. If you trailer your boat to other lakes, be sure to thoroughly wash your boat, motor, and trailer before launching back into Sanford Lake. With invasive species, an ounce of prevention is worth a pound of cure!

DATE: _____
 CREW: _____
 WEATHER: _____
 NOTES: _____

SANFORD LAKE NORTH MIDLAND COUNTY, MICHIGAN AQUATIC PLANT SURVEY MAP



0 600 1,200
 Feet



LAKE SURVEY AREA = 958 ACRES
 The applicator shall make adjustments, if needed,
 to comply with EGLE permit requirements.

DATE: _____
CREW: _____
WEATHER: _____
NOTES: _____

SANFORD LAKE SOUTH MIDLAND COUNTY, MICHIGAN AQUATIC PLANT SURVEY MAP



MANAGING EXPECTATIONS: PLANT & ALGAE CONTROL FACT SHEET

Created by Progressive Companies / Water Resources Group

Managing aquatic plants and algae is often necessary to maintain healthy lake ecosystems and ensure recreational activities like boating and swimming remain enjoyable for lake users. While aquatic herbicides, mechanical removal, or other methods help to control non-native or nuisance plants, it's important to understand the limitations of these approaches.

Lakes are complex ecosystems in which aquatic plants play a key role in maintaining water quality, anchoring sediment, providing habitat for fish and wildlife, and supporting the overall health of the lake. When managing aquatic plant communities, balancing recreational preferences with the needs of the ecosystem is a necessity. A variety of plant and algae control methods are available, each with its own set of regulatory, ecological, financial, and functional considerations, which often limit what is possible in terms of managing aquatic plants.

Aquatic herbicides and algaecides are the most commonly used form of plant and algae control due mostly to the cost-benefit ratio. While herbicides are relatively inexpensive compared to other plant control methods, the regulatory hurdles often exceed those associated with other methods. In Michigan, a permit is required from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to apply herbicides to lakes. The permit lists the herbicides that are approved for use, respective dose rates, use restrictions, and indicates specific areas of the lake where treatments are allowed. Oftentimes, permit restrictions may prevent an herbicide applicator from addressing plant growth to the extent that recreational lake users might prefer. However, these restrictions are in place to protect a lake's ecology. Over-treating the plants in a lake can result in a variety of unintended consequences including algae blooms, non-target species harm, oxygen depletion, and adverse impacts to water quality. When used selectively, herbicides can be a valuable tool for effective lake management.

While herbicides are commonly recommended for their cost-effectiveness, mechanical harvesting is another popular plant control method. When plants are harvested, the biomass is removed from the waterbody along with the nutrients contained within the plant tissues. This prevents the re-assimilation of these nutrients back into the lake and also reduces the risk for oxygen depletion during decomposition. While effective, harvesting has several limitations. It requires at least two feet of water to operate efficiently and cannot be used near obstacles like moored boats or docks due to maneuverability issues and safety concerns. Additionally, harvesting can be expensive, requiring specialized equipment and significant labor. This method also lacks selectivity, as the harvester indiscriminately cuts all plant species in its path, and often leaves behind plants that float or bend back.



Algaecide application.



Herbicide application.

Furthermore, harvesting can inadvertently spread certain non-native plant species via fragmentation. While harvesting effectively removes large amounts of plant biomass, the results may be less manicured than expected.

While common control methods like herbicides and mechanical harvesting can be effective, some plants and algae do not respond well to currently available treatment options. For example, invasive species like starry stonewort may be resistant to common herbicides and can quickly regrow after mechanical removal. These plants and algae present unique challenges, as they may require a combination of methods to manage effectively. As a result, lake management strategies may need to be adapted and continually evaluated to address these persistent species.

Less commonly used plant control methods such as Diver Assisted Suction Harvesting (DASH), benthic barriers, biological control (introducing natural predators to target specific species), and water level drawdowns each offer benefits but are generally less feasible than herbicides or mechanical harvesting. These alternatives often involve more complex regulatory, ecological, and financial considerations, making them more challenging to implement effectively.

So, what can lake residents realistically expect from the plant control programs they invest in? Effective plant and algae management can vary significantly from one lake to another due to the unique physical, biological, and chemical characteristics of each waterbody. Factors such as nutrient levels, sediment composition, lake morphology, and watershed inputs all influence the types and abundance of aquatic plants and algae that thrive in a particular lake. As a result, lake residents should expect that plant control efforts will need to be tailored to the specific conditions of their lake, and that the outcomes may differ depending on these variables. Additionally, it's important to remember that publicly-funded plant control programs are most often established to improve the lake ecosystem as a whole, and are not intended to function as a beach grooming service.

While plant and algae control is essential for maintaining the health and usability of many waterbodies, it is important to set realistic expectations. Herbicide treatments, mechanical removal, and other plant and algae control methods can be highly effective in the short term, but they often require ongoing efforts, monitoring, and funding to remain successful. Additionally, each lake and its watershed have their own unique challenges and needs. By understanding the limitations of different control methods and planning for long-term, sustainable solutions, lake residents can ensure the health and recreational quality of their waterbodies. For personalized advice, contact your lake management consultant to determine the most effective approach for your specific needs.



Mechanical harvesting.



Diver Assisted Suction Harvesting (DASH).



FINANCING YOUR LAKE PROJECT FACT SHEET

Created by Progressive Companies / Water Resources Group

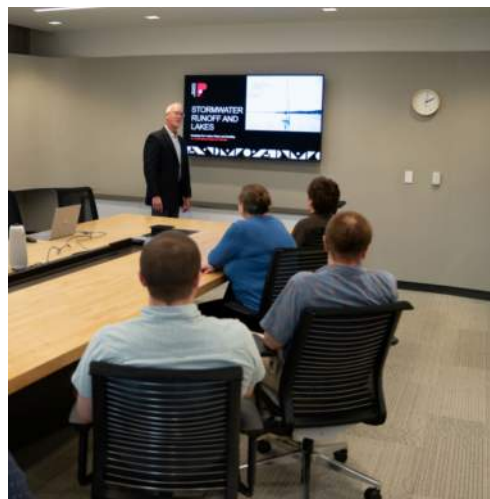
There are two common ways to organize a publicly funded lake improvement project in Michigan: through a lake board or a township board, each governed by different legislative acts—Part 309 of the Natural Resources and Environmental Protection Act (PA 451 of 1994) and the Township Special Assessment Act (PA 188 of 1954), respectively. Lake improvement projects are often necessary to combat invasive plants, improve water quality, and enhance the lake's ecological health and recreational value.

Both statutes allow for the creation of special assessment districts to finance lake improvements, with similar processes, including public hearings on the project's practicability and the special assessment roll. However, they differ in administrative structure and procedures. Part 309 establishes a lake board composed of local government representatives, while Act 188 uses the existing township board.

When establishing a special assessment district for a lake improvement project, several factors must be considered. The petition to initiate the project should clearly state that a special assessment district will be formed and that special assessments will be levied to finance the improvements, with space for property owners to sign and print their names. If the property is jointly owned, all freeholders should sign, and the local government should review the petition language. An independent study should be conducted to assess the project's feasibility, scope, and cost. The special assessment district should include only properties that directly benefit from the improvements, typically lakefront properties and those with lake access. For example, lakefront parcels are often assessed one unit of benefit, and back lots with access are assessed half a unit. Assessments should be levied fairly and consistently, using a simple, equitable apportionment scheme to avoid confusion and legal challenges.

In terms of procedure, neither statute is inherently superior to the other. However, one may be preferable in certain situations. Creating a lake board may be more suitable for projects involving multiple municipalities, as it allows for centralized administration, while utilizing the township board under Act 188 may be more efficient for lakes within a single township. However, township boards may not have sufficient time to focus solely on lake issues, unlike a lake board, which is dedicated to those concerns.

In both cases, it is crucial to follow statutory procedures carefully to avoid delays due to procedural flaws. To ensure proper steps are followed, lake residents considering the establishment of a special assessment district should seek professional assistance or legal counsel before starting the process.



PHRAGMITES FACT SHEET

Created by Progressive Companies / Water Resources Group

Phragmites (*Phragmites australis*) is an aggressive-growing, exotic emergent plant that is infesting Michigan's coastal areas, wetlands, and lake shores. Plants can exceed 15 feet in height and obstruct shoreline views and uses. *Phragmites* can greatly reduce the diversity of desirable native plants, including the native variety of *Phragmites*, and reduce wildlife habitat.

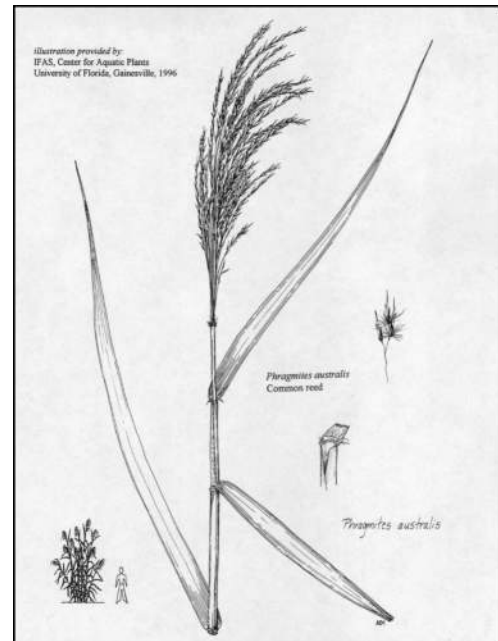
Phragmites is a perennial plant that is dormant during the winter months. Primary growth occurs during mid-summer with flowering and seed dispersal in late summer and fall. Besides seed dispersal, *Phragmites* can also spread through the expansion of underground stems called rhizomes. In fact, much of the plant's biomass is underground. Rhizomes can exceed 60 feet in length, grow several feet per year, and readily grow into new plants when fragmented. *Phragmites* rhizomes can penetrate the ground several feet and the plant can survive in relatively dry uplands as well as shallow wetlands. However, water depths greater than a few inches typically inhibit *Phragmites* seed germination.

It is recommended that herbicide treatments or prescribed burning be used to control *Phragmites*. Herbicide treatments are the primary control method and appear most effective when applied later in the growing season (September-October). To be effective, prescribed burnings should only be considered the year after the plants have been treated with herbicides. Mechanical cutting of the plant is not recommended as this can trigger further growth throughout its root structure. *Phragmites* is difficult to completely eradicate and will likely require integrated, long-term maintenance. Professional assistance may be required to differentiate between native and exotic varieties of *Phragmites*, and to implement proper control methods. Recommended herbicides include imazapyr and glyphosate products, or a combination of both.

Most of the above information was derived from a publication entitled "A Guide to the Control and Management of Invasive *Phragmites*." Co-authored by representatives of Michigan Department of Natural Resources, Michigan Department of Environment, Great Lakes, and Energy, Ducks Unlimited, the U.S. Fish and Wildlife Service, Michigan Department of Transportation, and the U.S Army Engineer Research and Development Center.

Link:

<https://www.michigan.gov/egle/-/media/Project/Websites/invasive/Docs/Documents/Response/Status/egle-ais-guide-phragmites.pdf>



Phragmites. Aquatic plant line drawing is the copyright property of the University of Florida Center for Aquatic Plants (Gainesville). Used with permission.



Stand of *Phragmites* during winter months.

