

Aquatic Invasive Plants: Management Options for Lakeshore Property Owners

Does your lake currently have aquatic invasive species? If so, you are not alone. While it may be stressful to learn that your lake has an aquatic invasive species (AIS), there are a variety of strategies available to manage them. It's also important to know that non-native species are not always “invasive” and can often coexist with native species without significant disturbance to your lake. A recent survey conducted by the University of Wisconsin–Madison found that 51% of lakeshore property owners surveyed reported that their lake had invasive plants and many are unfamiliar with ways to manage them once they have been found in their lake. The purpose of this information is to provide practical

guidance about the various management strategies that are available to you as a lakeshore property owner in Wisconsin.



A lakeshore property owner performs a rake toss aquatic plant survey. Monitoring for aquatic invasive species is one effective management strategy that lakeshore property owners can take.

Credit: Goldens Sands RC&D

Important questions for lakeshore property owners to consider:

- What are your options for maintaining the health of your lake?
 - What invasive plant control methods are consistent with your values and those of your community?
- Invasive plant management strategies can sometimes come with unintended consequences for non-target native plants, and no single management strategy will be a perfect solution. Therefore, it is important to consider advantages and disadvantages to whichever strategy you and/or your lake community are interested in. Mechanical harvesting, for example, can sometimes uproot beneficial native plants as the harvester moves across the lake. Chemical treatments, because they are dispersed into the water, may impact non-target plants more broadly. Although both mechanical and chemical methods are common and effective ways to manage invasive plants, an integrated pest management (IPM) approach, which considers a combination of available management actions, is oftentimes the best approach to managing invasive plants.

What can you and your neighbors do about aquatic invasive plants in your lake?

Most concerns about aquatic invasive plants in Wisconsin lakes go beyond a single property owner, and efforts to control them can often affect the entire lake. If your lake has a lake association or a lake district, you will want to connect with them to learn what is happening at the lake-scale to prevent and manage invasive species.

To find out if there is a lake organization for your lake, please visit the Extension Lakes website: <https://www.uwsp.edu/cnr-ap/UWEXLakes/Pages/organizations/lakelist/default.aspx>

Lakeshore property owners in Wisconsin have the right to reasonable use of their lake. It is also important to keep in mind that most invasive plant management options require permits, so your lake association may want to consider working closely with your county's land and water professional and regional WDNR aquatic plant management staff.



A diver manually harvests invasive aquatic plants from a lake.

Credit: Goldens Sands RC&D



An example of aquatic plant harvesting on a Wisconsin lake.

Credit:WDNR

Talk with your neighbors and lake association to evaluate how problematic AIS are in your lake.

- Do most stakeholders (other property owners, lake organization members, recreational users, etc.) agree that invasive plants are causing problems in the lake?
- Do the invasive plants greatly reduce the ability to use the lake for recreational purposes?
- What are the options to control aquatic invasive species in your lake?
- How much work will it take to manage the invasive plants, and what will it cost?
- Is there monitoring information available for the lake that documents an increase in invasive plant populations every year?

Key points about aquatic plants:

- Native aquatic plants are essential to the health of fish populations and other lake life.
- Healthy native aquatic plants can improve water clarity by absorbing nutrients in the lake that would otherwise be consumed by algae. Excessive amounts of algae can harm fish or native plants by limiting the amount of oxygen in the lake.
- While invasive plants are present in many Wisconsin lakes, they do not always cause problems for the lake in which they are found. In fact, native and invasive plants can often coexist without causing significant harm to the lake. Considering that many invasive species do not end up becoming a nuisance, monitoring the development of an invasive species over time before deciding on a potentially higher risk or more expensive strategy might be a good option for your lake.
- If you are a new lakeshore property owner, keep in mind that aquatic plant abundance can increase and decrease in a dynamic and unpredictable fashion. Changes in plant abundance may be related to seasonal weather patterns or other environmental factors. Speak to your neighbors and other property owners on the lake about concerns you may have to make sure plant growth is not a naturally occurring variation.

What can you do as an individual lakeshore property owner?

Options for individual property owners may be limited to the shoreline area.

- Without a permit, manual removal is restricted to a 30-ft corridor extending from the shoreline out into the lake. However, an exception applies to this when a property is within an Area of Special Natural Resources Interest (ASNRI) or a designated critical habitat area. In these instances, a permit is required to remove any vegetation.
- Your individual county may have restrictions in their zoning ordinance that limit certain types of actions along the shoreline. For specific questions, contact your local county zoning administrator. Find them at the Wisconsin County Code Administrators website: <https://www.wccadm.com/wcca-contacts>

Be aware that some lakes naturally have more aquatic plants and algae than others, and this may be normal for your lake. If you are a new lakeshore property owner, ask your neighbors about what the lake looks like year-round.

- When considering removing plants from an area along your shoreline, keep in mind the benefits of healthy vegetative buffers. Planting (or keeping) healthy native plants along the shoreline can help reduce erosion and control runoff. For more information, visit the Wisconsin Healthy Lakes & Rivers website: <https://healthylakeswi.com/>
- For more information on what types of aquatic plant management activities require a permit, please visit the Wisconsin Department of Natural Resources (WDNR) website: <https://dnr.wisconsin.gov/topic/lakes/plants>
 - Aquatic plant management permit forms: <https://dnr.wi.gov/lakes/plants/forms/>

Contact county and local WDNR professionals to get more specific information about the actions you can take on your shoreline.

Key points about common invasive species management approaches

Management method	What is it?	Permit required?	Key advantages	Key disadvantages	How long to see results?
Biological	Includes the releasing of natural predators, such as insects, that feed on specific species of plants in the lake	Maybe; some methods may require a permit. Contact local WDNR representative for more details.	<ul style="list-style-type: none"> Native plants will often not be harmed after a healthy invasive plant predator population is established. While biological control does not often completely eradicate invasive plants, it can greatly reduce the impact of invasives on native plants. Once a predator population is well-established, plant control can continue with limited effort. 	<ul style="list-style-type: none"> Biological control agents often take years or decades to become widely available for use. Biological control agents do not exist for all invasive plants. Results are not guaranteed and may vary over time. 	Up to two years or longer (may not need to be repeated)
Chemical	Includes use of herbicides, applied either directly onto the plant or below the water surface via boat. Common herbicides include endhothall, diquat, and 2,4-D	Yes	<ul style="list-style-type: none"> Can be effective at reducing invasive plants over a short time frame Feasible for whole-lake treatments 	<ul style="list-style-type: none"> Long-term population control is variable. Multiple treatments may be required. Repeated treatments may result in herbicide-resistant plants, which are more difficult to control long-term. Herbicide can negatively impact desirable native plants. 	Within weeks, but may depend on the specific chemical compound used (may need to be repeated)
Manual	Pull plants by hand or with non-mechanized handheld devices	No, but a permit is required if one wishes to remove plants in an area greater than the 30-ft corridor allowed for lake access.	<ul style="list-style-type: none"> Can target specific invasive plant species Can be helpful for controlling smaller populations of invasive plants 	<ul style="list-style-type: none"> Time and labor intensive for large populations of invasive plants May not be practical for larger populations of invasive plants 	Immediate (better for smaller populations of plants)
Mechanical	Harvest via mechanical methods, mowing by boat, or diver-assisted suction harvest	Yes	<ul style="list-style-type: none"> Can result in an overall reduction of plant abundance 	<ul style="list-style-type: none"> May potentially result in the spread of invasive species if cut fragments are not properly removed May need to be done continuously to control plant levels 	Immediate (must be repeated)
Monitoring	Use field sampling techniques to track and monitor the growth of aquatic plant populations over time	No	<ul style="list-style-type: none"> More information about the aquatic plant community present in the lake leads to more effective management outcomes. Can sometimes be done by trained volunteers Can be done at same time as other methods 	<ul style="list-style-type: none"> Monitoring does not directly control existing invasive plants in lake. Invasive plant populations may continue to grow during monitoring period. 	Ongoing



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