Phragmites Management

Phragmites australis (frag-MY-teez) or common reed, is a perennial, wetland grass. While Phragmites is native to Michigan, an invasive, non-native, variety of phragmites is becoming widespread and is threatening the ecological health of wetlands and the Great Lakes coastal shoreline. Invasive Phragmites can grow over 15 feet tall blocking shoreline views and creates dense stands which damage wetlands and coastal areas by crowding out native plants and animals, reducing access for swimming, fishing, and hunting. These stands can also create fire hazards from dry plant material. http://mnfi.anr.msu.edu/phragmites/phragmites-native-non-native.pdf

Control Methods

Invasive Phragmites is difficult to control and requires an integrated approach that utilizes more than one control method. The primary control method is herbicide treatments (initial and spot treatments) for the most effective control. After the initial herbicide treatment, one or more follow-up methods is recommended, such as burning or mowing. All treatments in or near water of any kind must be done using herbicides which are approved by the DEQ for Aquatic Nuisance Control. Early detection is key to preventing large dense stands and is also more cost effective.

Chemical treatment*:* Two broad spectrum herbicides, glyphosate and imazapyr are known to be effective in controlling Phragmites when used properly. They can be used independently or mixed together depending on the time of year that spraying is done. They can also be mixed with a surfactant to help the herbicides to penetrate the phragmites better. Glyphosate products work best when used in late August through September. At that time of year the herbicide product will be taken into the roots and will kill the entire plant. Imazapyr is used in the spring or late summer to kill the tops of the plant. Mixtures of both the two products are used to treat in the fall.

Use only products on the Michigan DEQ approved list of aquatic pesticides and related products at the website http://www.michigan.gov/documents/deq/wrd-anc-approvedherbicides_445623_7.pdf, for phragmites control. Follow the manufacturer's recommendations on all labels for the treatment of Phragmites, and make sure to use an aquatic based formulation in all aquatic settings. All herbicides must be used in accordance with their product labels, including the use of personal protective equipment. Labels carry the force of federal law and provide valuable information to ensure safe and successful use of the herbicide.

Mechanical treatments: (i.e., mowing) of invasive Phragmites is recommended after chemical treatment (do not cut or mow for at least 2 weeks after chemical treatment for maximum effectiveness), to remove dead stems and promote native plant growth. Mowing is the most commonly used method for mechanical treatment, particularly on privately owned, or smaller properties. If mowing should only be done in those areas where invasive Phragmites is present, avoiding adjacent wetland areas where native species are dominant. In wet areas, mowing invasive Phragmites is most often done in the winter when the ground is frozen, which provides better and safer access to these areas, as well as minimizes impacts to small animals and native plants.

Tilling, Disking or Pulling of plant roots and soil **IS NOT AN EFFECTIVE MECHANICAL TREATMENT METHOD** for invasive Phragmites. These activities actually promote the spread of invasive Phragmites, as the broken rhizomes and seeds are dispersed and will sprout new growth.

Burning can be an effective part of a Phragmites control program as it can reduce the amount of dead plant material and allow for more effective chemical treatment. Once the large bio-mass is reduced, it also allows space for native species to regrow. Field practice shows that it is dangerous to burn large standing (uncut) areas of Phragmites. As such a tall plant, wind easily catches the burning seed head and can carry this for long distances, spreading fire quickly in many directions. It is strongly recommended that Phragmites is cut first and collected in piles prior to burning. This facilitates a better burn and more control – **it is important to remember that whoever lights the fire is personally responsible for any damage from the burn or smoke, or ash**. Practice safe burning! Have a team, available water for dousing, and make sure it's out before you walk away. It is important to note that burning alone will not control Phragmites; however it will encourage the return of native plants.

Phragmites Permits and Regulation

All of the above herbicide treatments are regulated under the Aquatic Nuisance Control, Part 33, Act 451 of 1994. Permit applications are accepted October 1 through August 15. The MDEQ allows for individual landowners and/or large defined areas along the Great Lakes and Lake St. Clair coastal areas to apply for a single permit for only a $75 fee however each landowner is required to provide a written consent in order to participate. Landowners should follow up with their Township, County or the Saginaw Bay CISMA for more information on this approach. The permit review time takes approximately a month and a half, so get your permit application in early. If you are going to spray starting in the beginning of August you should submit your application no later than mid-June. Following the treatment you are required to submit a Treatment Report to the MDEQ by November 30th.

Chemical Treatment: All treatments in or near waters of any kind must be done using herbicides which are approved by the MDEQ for Aquatic Nuisance Control. For inland areas (including lakes, ponds, rivers, streams, ditches, wetlands, etc.), a permit is required to treat invasive Phragmites if the plants are in standing water at the time of treatment. For shoreline areas along the Great Lakes and Lake St. Clair, a permit is required to chemically treat any plant located below the ordinary high water mark, regardless of whether there is standing water or not. The MDEQ's Water Resource Division has created a general permit category for this type of activity, which allows property owners to request authorization to control invasive species through a simplified permit process. Access this permit application at: http://www.michigan.gov/deq/0,4561,7-135-3313_3681_3710-10160--,00.html .

There are no restrictions and no permit needed to treat Phragmites above the ordinary high water mark (OHWM). In addition, no permit is needed for treating Phragmites in or around a private pond of 10 acres or less which has no outlet, where all owners of the pond give their permission and there is no record of threatened or endangered species at the site. Even in cases where a permit is not required, you will need to use only herbicides which are approved by the MDEQ for Aquatic Nuisance Control.

The use of a licensed applicator who is certified in aquatic pest management is recommended for herbicide application, especially in large, dense stands and in sensitive areas such as wetlands.

Mechanical Treatment: Mowing invasive Phragmites as mechanical treatment does not require a permit from the State of Michigan except in the St. Clair Flats. However, special care should be taken to avoid significant rutting or displacement of soil, which does require a permit. For more information on mechanical treatment of invasive Phragmites, please contact the DEQ Water Resources Division at 517-284-5593.

Burning: Prescribed burning does not require a permit from the State of Michigan, but requires notification if you are going to do burning at or near the shoreline areas. Some municipalities require additional approvals for certain activities, such as controlled burns. Please contact your township office or local Fire Department for more information.

Federal Permits - A permit from the U.S. Army Corps of Engineers is required for most activities that physically alter the Great Lakes coastal areas (none needed for Phragmites treatment or mowing). Contact the U.S. Army Corps of Engineers Detroit District at 1-888-694-8313.

Additional Web Resources for Phragmites Management

- Great Lakes Phragmites Collaborative: http://greatlakesphragmites.net/
- Michigan DEQ Water Resources Division: www.michigan.gov/aquaticinvasives
- A Guide to the Control and Management of Invasive Phragmites http://www.michigan.gov/documents/deq/deq-ogl-ais-guide-PhragBookEmail_212418_7.pdf
- Phragmites Treatment/Management Prioritization Tool http://www.michigan.gov/documents/deq/wrd-aisphragtool_423447_7.pdf?20130624075702
- Michigan DNR: www.michigan.gov/invasivespecies
- Michigan State University: http://mnfi.anr.msu.edu/phragmites/treatment.cfm#herbicides
- Midwest Invasive Species Information Network: http://www.misin.msu.edu/
- Community Phragmites Control Site: http://Phragmites.org