A Landowner's Guide for the Control of Phragmites

The Mighty Phragmites

Its proper name - Phragmites - makes it sound like a crawling creature, or a disease. But phragmites, also known as common reed, is a large, coarse, perennial grass often found in wetlands. Although scattered clumps of phragmites provides cover for small mammals and birds, it usually forms large, dense stands that provide little value for wildlife. Phragmites reduces the diversity of plant and wildlife species.

Phragmites is found in wetlands worldwide. It grows in wet areas including fresh or brackish marshes, creeks, edges of ponds and lakes, ditches, and the dune systems of barrier coastal islands. Dense stands of phragmites usually are associated with areas where soil has been exposed or disturbed. The plants are less competitive when water levels vary by seasons and years. The exact abundance and current rate of spread of phragmites in Maryland is unknown. However, it is increasing in abundance and distribution.

Phragmites has a thick stalk that can reach 13 feet in height. It has a large plume-like flower that persists throughout the winter. Phragmites most often spreads by creeping rhizomes (roots). All stands have vertical and horizontal rhizomes, and young stands have long surface runners that help in rapid expansion of the colony.

Controlling Phragmites

Techniques used to control phragmites may include chemical treatment (i.e., spraying herbicides) or physical treatments such as mowing and flooding. Multiple treatments are usually necessary to effectively control a heavy stand. Controlling phragmites in wetlands by any method may require advance approval by state and federal agencies before treating. Based upon experience obtained in Maryland and other states, the most practical method of controlling phragmites is treating the plants with glyphosate or imaszapyr herbicides approved for aquatic use.

Chemical Control

Glyphosate (the formulation approved by the U.S. Environmental Protection Agency for use in wetlands is sold under trade names such as Rodeo, Aquaneat, and Aquastar) is a broad spectrum aquatic herbicide that is virtually nontoxic to mammals, birds, and fish when used according to instructions. It can be purchased at any store that sells agricultural chemicals. Imazapyr is the active ingredient utilized in the formulation of Habitat which is also a broad spectrum herbicide effective in controlling Phragmites. All herbicides must include a non-ionic surfactant which allows the herbicides to adhere to the plants leaves, stalks and rhizomes for effective control. Surfactants must be acquired separately and added to tank mixtures, unless otherwise noted on label recommendations obtained with the herbicides.

When applied to the foliage of actively growing plants, both imazapyrs and glyphosates are rapidly absorbed and transported throughout the plant tissues. The herbicides kill the entire plant: leaves, stems, and rhizomes. This is especially important in the control of phragmites since it spreads through rhizomes. It may be applied in or around wetlands using aerial spray equipment, a boom or handgun from a boat, or from the shore using spray equipment. However, large stands in open areas are best treated with an aerial application by helicopter. Phragmites can be treated successfully when plants are actively growing and are at mid- to full-bloom (late July through October but before a killing frost).

Treatment before or after this stage of growth may result in reduced control. Herbicides should be applied at a rate of 4-6 pints per acre where equipment used has been calibrated to achieve accurate volume (gallons) to the acre. Equipment (backpacks/handheld) sprayers should follow the recommended percentage of concentrated herbicide per gallon of total mixture found on the products label. Be sure to follow the dilution and surfactant rates prescribed on the product label for maximum effectiveness. The use of a surfactant ensures that the herbicide is absorbed by the plant stems and leaves. Enough herbicide should be applied to wet the plant but avoid runoff. Spray coverage should be uniform and complete. Phragmites will die within 6-8 weeks and should then be burned or mowed where safely done so. Dead phragmites cane should be left on site to prevent spread by seed during removal to adjoining areas. In heavily infested areas some regrowth may occur from unconnected rhizomes. In addition, seedling growth may occur. For best results, the some area should be sprayed in two successive years, then spot-treated in succeeding years to prevent reestablishment.

Important: A toxic chemicals application permit is needed to spray phragmites with aquatic herbicide in wetlands. To obtain a permit application, please contact: Maryland Department of the Environment's Industrial Discharge Permits Division 410-537-3323 or visit website;
http://www.mde.state.md.us/assets/document/permit/MDE-WMA-PER015.pdf

Physical Control

Physical control is an alternative only if conditions allow. This will help to remove the

litter of matted canes and allows light to reach the soil. This increased light will encourage germination of seeds from desirable plants. Mowing often (6-8 times during the growing season) where feasible is the most widely used method of stressing phragmites and encouraging native plants.

Important: Prior to burning you should contact the Maryland Department of Natural Resources Forest Service office (410-260-8531) in your county to obtain a burning permit and for information regarding safe burning practices. If you plan to disturb wetlands through filling, excavating or vegetation removal, you should consult the Maryland Department of the Environment's Water Management Administration website:

http://www.mde.state.md.us/Permits/WaterManagementPermits/inde
or call (410-537-3000) – (Nontidal/Tidal) to determine if a wetlands permi

The Future

The conservation of our natural resources concerns everyone. Many peo wetlands resources for their livelihood, recreation or the enjoyment of see experiencing nature. Maryland has lost nearly 45 percent of its wetlands. aggressive invasion of phragmites into Chesapeake Bay wetlands is cont further loss and degradation of our remaining wetland habitats.

If you are interested in halting the invasion of this plant and would like to techniques applicable to your property, available assistance programs, or of licensed applicators or wetland restoration professionals that specialize control of phragmites, please contact:

Waterfowl Habitat Specialist – Donald Webster
MD DNR – Wildlife and Heritage Service
828B Airpax Road, Suite 500
Cambridge MD 21613
410-221-8838(ext.103)

Demonstration Area

Would you like to see the beneficial effects of eliminating phragmites from wetlands? Visit the Chesapeake Bay Environmental Center (C.B.E.C.) ne Grasonville, Maryland and enjoy a self-guided tour of Lake Knapp, a 12-a was once dominated by phragmites. Following a combination of aquatic h application and burning to control phragmites, the lake has been restored teeming with waterfowl and wading birds. Groups are welcome to make r for a guided tour of the demonstration project and other wildlife viewing e calling 410-827-6694.

Directions:

From Baltimore and Washington D.C., take U.S. Route 50 East to Maryla Shore. Continue on Route 50 and take Exit 43 B, and follow the C.B.E.C. Route 50 West, use Exit 45B, and follow signs.

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Plants and Wildlife

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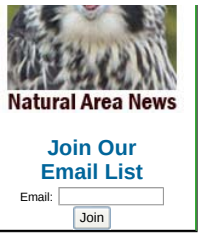

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