

Aquatic Invasive Species

in the Chesapeake Bay

A M A R Y L A N D S E A G R A N T B R I E F

Phragmites (Common Reed)

What Is *Phragmites australis*?

Phragmites australis, or the common reed, is a tall, perennial grass found throughout the temperate regions of North America, primarily in fresh to brackish wetlands. It can also grow along the edges of rivers, ponds, and lakes, and in ditches. *Phragmites* commonly colonizes disturbed areas, where plant communities, hydrology, or topography have been altered through natural events or human activities.

Phragmites has been present in North America for more than 3,000 years. Prior to the 1900s, the reed was found mostly along the upper borders of marshes in mixed communities with plants such as sedges and cattails. Over the last century, however, *Phragmites* has rapidly expanded its range, becoming dominant in marshes throughout the Mid-Atlantic.

Recent genetic analyses suggest that this expansion followed the introduction of a competitively superior strain of the plant from Europe. The European strain, likely carried to the United States in ballast water in the 1800s, has displaced stands of native *Phragmites australis*. According to estimates, *Phragmites* occupies as much as one-third of the tidal wetland acreage



along the eastern U.S. coast, with only a few native populations remaining.

Why Is It Harmful to the Chesapeake Bay?

The rapid invasion and expansion of *Phragmites* into the Chesapeake watershed may pose a threat to the biodiversity and ecosystem functions of the region's wetlands. Dense monocultures of the common reed are replacing native plant species in tidal and non-tidal marshes that provide food and shelter to animals. The plant's expansion also threatens rare and endangered plant species. What is more, *Phragmites* traps sediment, altering the way water moves through marshes and causing these ecosystems to become drier.

What Is Being Done to Control *Phragmites australis*?

Efforts to control introduced *Phragmites* have been extensive across the Chesapeake Bay watershed. The state of Maryland is required by law to control *Phragmites* on state-owned wildlife management areas. Several states also provide cost sharing to help private landowners control stands on their properties that could pose a danger to wildlife habitats. Methods to control *Phragmites* include chemical

treatment (herbicide spraying), mowing, burning, and flooding.

In 2002 the Chesapeake Bay Program (CBP), in partnership with Maryland Sea Grant, sponsored a workshop aimed at developing Baywide management strategies for problematic invasive species, including *Phragmites*. The Chesapeake Bay *Phragmites Australis* Working Group, comprised of natural resource managers and researchers, was appointed in 2003 to develop a final Baywide management plan. Based on that plan, Maryland, Virginia, and Pennsylvania developed permitting processes for land development that require those states to achieve a long-term goal of no net gain in *Phragmites* acreage. The state of Maryland (through the Department of Natural Resources) currently contributes herbicides at no cost to efforts to control *Phragmites* on private and public lands.

What Is Its Status?

In 2012 the state of Maryland's cost-sharing program for controlling *Phragmites* resulted in the treatment with herbicides of more than 700 acres containing the reed, owned by 335 private landowners. The state's

efforts are currently not on target for maintaining no net growth of the plant. Following frequent high tides in recent years, due largely to extreme weather, *Phragmites* has increasingly spread inland into previously forested sites. Such sites make herbicide treatments difficult or impossible, according to the Maryland Department of Natural Resources.

For More Information

Maryland landowners interested in the cost-share program should contact Donald Webster (Waterfowl Habitat Manager at the Maryland Department of Natural Resources) at (410) 221-8838 ext.103 to determine eligibility for the program.

Applicants interested in spraying in wetlands to control *Phragmites australis* are responsible for obtaining necessary permits before spraying activities begin. Applications are available upon request.

For more information, read "A Landowner's Guide for the Control of *Phragmites*" on the Maryland Department of Natural Resources website: http://www.dnr.state.md.us/wildlife/Plants_Wildlife/phrag.asp

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