

PHRAGMITES CONTROL LEGISLATIVE REPORT 2002

SUMMARY:

Increased awareness by State and Federal agencies, environmental groups and private landowners recognizing the need to control the invasive plant species Phragmites (Attachment A) in Maryland created demand for control activities in 2002 that exceeded demand in recent years. The M.D. Department of Natural Resources, U.S. Fish and Wildlife Service, M.D. Department of Agriculture and numerous non-governmental groups combined to treat Phragmites on 500 acres of Public lands and 688 acres on private lands in 2002.

DNR PUBLIC LAND ACTIVITIES

In 2002, the Department applied the herbicide GLYPRO by helicopter to 500 acres of Phragmites on State owned Wildlife Management Areas on the Lower Eastern Shore and the Patuxent River (Table1). Previous aerial reconnaissance by the Department had targeted 300-acre stands of Phragmites on the Patuxent River and 100 acres each on Maryland Marine Properties and Fairmount W.M.A. in Somerset County for control in the fall of 2002. Unlike previous years, the U.S. Fish & Wildlife Service funded the control on 100 acres of the Patuxent River's approximate 300 acres of Phragmites.

Costs of herbicide, surfactant, drift control and helicopter application totaled \$33,425.75, or an average cost of \$66.84 per acre in 2002, compared to \$84.00 per acre in 2001. The cost of herbicide was substantially reduced by the advent of a new aquatic herbicide (GLYPRO®). The funding was provided by the Maryland Waterfowl Stamp Fund.

TABLE 1

AERIAL APPLICATIONS/PUBLIC LANDS	ACRES
MARYLAND MARINE PROPERTIES/ SOMERSET	100
FAIRMOUNT WMA/ SOMERSET	100
MERKLE N.R.M.A. & ASSOC. PUBLIC PROPERTIES	300
TOTALS	500

ASSOCIATED COSTS:

HELICOPTER APPLICATOR	\$19,250.00
* U.S. F&W.S. (\$3,850.00)	
GLYPRO (HERBICIDE)	\$13,500.00
DIRECT(DRIFT CONTROL)	\$168.00
SPEADER ADJUVANT	\$502.75
TOTAL COST	\$33,420.75

Approximate cost/acre===== \$66.84

MD.DNR PRIVATE LANDS PHRAGMITES CONTROL COST SHARE PROGRAM

In 2002, the Department of Natural Resources offered cost-share opportunities to individual landowners in Caroline, Talbot, Dorchester and Worcester counties. This year's program was the most successful thus far at offering both financial and technical assistance to the public. The Maryland Department of the Environment(MDE) contributed \$25,000.00 towards the Department's Phragmites Control Cost-Share Program in 2002, an increase of \$15,000.00 from 2001.

With support from Maryland Department of Agriculture, the U.S. Fish and Wildlife Service and the Chesapeake Wildlife Heritage, approximately 600 acres of phragmites were treated on private lands by air and truck in the DNR Cost-Share Program. An additional 400 acres were controlled as a result of technical services provided by the Department of Natural Resources.

In 2002, DNR expanded the program to include landowners in Caroline and Talbot counties. Initially, Somerset, Wicomico and Dorchester counties were targeted because of large stands of Phragmites in tidal wetlands that potentially threaten migratory waterfowl habitat.

A news release went to the media in early July, 2002 describing the details of the Phragmites Control Cost Share Program and the counties applicable (Attachment B). Also, there was a news spot on WBOC Channel 16 of Salisbury concerning the Program.

With the DNR's lack of vehicles equipped with sprayers, past Phragmites Control Cost-Share Programs have been limited to landowners wishing to control Phragmites stands totaling 3 acres or more. Aerial applications were the only feasible means of controlling Phragmites on private lands offered by the Department.

A Partnership formed by the Department of Natural Resource's Wildlife Division and Maryland Department of Agriculture's Weed Management Division and the Chesapeake Wildlife Heritage in 2002 was paramount to offering control efforts to all landowners, large or small. The fall herbicide applications required to control Phragmites was a timely event for MDA's Weed Management personnel, as dates for herbicide treatments on other AG related noxious weeds had expired. Weed Management personnel in all four counties in the Phragmites Control Cost-Share Program offered their time and expertise @ \$75.00/hr. and herbicide (Glypro@) provided by the DNR, as State cost-share towards the control efforts.

Over 400 landowners and individuals requesting information about Phragmite's control contacted DNR between January and November 2002. In addition, 265 individuals participated in helicopter and truck control efforts on 574 acres at a cost to the Department of \$17,290.00, or an average cost of \$31.20/acre (Tables2&3). Comparatively, landowners were rewarded with substantial savings in the Cost-Share Program, with savings of approximately \$60.00/acre for helicopter applications and approximately \$200.00/acre for truck applications.

PRIVATE LANDS PHRAGMITES COST SHARE PROGRAM
TABLE 2

AERIAL APPLICATIONS/PRIVATE	ACRES
2 LANDOWNERS/SOMERSET	10
2 LANDOWNERS/ WICOMICO	26
3 LANDOWNERS/TALBOT	20
1 LANDOWNER/CAROLINE	24
10 LANDOWNERS/DORCHESTER	272
Total	352 ACRES

ASSOCIATED COSTS:

LANDOWNERS--- \$17,600.00 LANDOWNER AVG.COST/ACRE--\$50.00

DNR COST SHARE

GLYPRO(herbicide)-- \$7,920.00

DIRECT(Drift Control) \$100.00

Surfactant \$86.13 DNR AVG. COST/ACRE--\$23.30

DNR--- \$ 8,106.13

**MARYLAND DEPARTMENT OF NATURAL RESOURCE'S
AND MARYLAND DEPARTMENT OF AGRICULTURE'S
COOPERATIVE PHRAGMITES CONTROL PROGRAM**

TABLE 3

TRUCK SPRAYING/ PRIVATE LANDS	ACRES
WORCESTER/WICOMICO---19 LANDOWNERS	22.00
CAROLINE--- 11 LANDOWNERS	5.00
DORCHESTER--- 43 LANDOWNERS	55.25
TALBOT-- 18 LANDOWNERS	23.50
TOTAL- 91 LANDOWNERS	105.75

D.N.R. AVG COST/ACRE---\$42.45 (DNR TOTAL COST-\$4,266.00)

LANDOWNER AVG. COST/ACRE--\$146.50 (MDA CHARGES)

DNR TECHNICAL ASSISTANCE:

Although the Department of Natural Resource's administered the Phragmites Control Cost-Share Program in Worcester, Somerset, Wicomico, Dorchester, Caroline and Talbot counties, there were many requests for assistance from other counties.

Approximately 75 requests for assistance in the control of Phragmites were received from Baltimore, Harford, Anne Arundel, Prince George, Kent, Cecil, Queen Anne and Calvert counties. Technical advice ranged from individuals whom wished to control their own Phragmites, to where can they hire professional applicators to achieve control. The Department served as a clearinghouse for landowners requesting assistance. Advice for permitting procedures, helicopter applicators, professional applicators and MDA's Weed Control personnel could often help landowners, regardless of State Cost-Share assistance.

GOALS :(2003)

The Department of Natural Resource's Wildlife and Heritage Service plans to include 2 additional counties in the Phragmites Control Cost-Share Program (Kent and Queen Anne) in 2003. The decrease in the cost of herbicide and continued funding at 2002 levels(25K) from the Maryland Department of Environment will adequately support the program. Landowner interest in controlling Phragmites has continued to grow and control measures are warranted in the aforementioned counties. Control of Phragmites on Public lands will continue at past funding levels (40K) on lands deemed necessary by the Department in 2003. Aerial surveys during the summer of 2003 will be required prior to prioritizing control measures.

ATTACHMENT A

Background Information

Biology of Phragmites

Phragmites, or common reed, is a large perennial rhizomatous grass. It typically grows in marshes and swamps, along streams, lakes, ponds, ditches, and wet wastelands.

Although there is some scientific evidence that *Phragmites australis* is indemic to the Northeastern United States, there is also evidence that exotic and invasive genotypes have been introduced to this area as well. It is very difficult to eradicate because it spreads through stoloniferous rhizomes that may reach 10 m or more in length. Rhizomes can reach down almost 2 meters below ground, their roots penetrating even deeper, allowing the plant to reach low lying ground water (Haslam 1970). Killing frosts may knock the plants back temporarily but can ultimately increase stand densities by stimulating bud development. In smaller stands, shoots that fall over can product roots and rhizomes that spread far from the original plant. It can colonize in almost any wet soil type, but grows best in firm mineral clays. It can tolerate moderate salinity and thrives where water level fluctuates from 15 cm below soil surface to 15 cm above. Phragmites seeds are shed from November through January.

Phragmites can survive, and in fact thrive, in stagnant waters where the sediments are poorly aerated at best. Air spaces in the above-ground stems and in the rhizomes themselves assure the underground parts of the plant have a relatively fresh supply of air. This characteristic and the species' salinity tolerance allow it to grow where few others can survive. In addition the build up of litter from the aerial shoots within stands prevents or discourages other species from germinating and becoming established. The rhizomes and roots themselves form dense mats that further discourage competitors. These characteristics are what enable Phragmites to spread, push other species out and form monotypic stands.

- Phragmites has little habitat value for wildlife. Occasionally, songbirds will roost in Phragmite's colonies and muskrats will feed on rhizomes, when more favorable plants are not available. The reduction of large colonies will increase plant diversity and encourage use by many species of wildlife. However, its tendency to form dense monotypic stands has a negative effect on healthy diversity of wetland areas and is included on The Nature Conservancy's "hit list" of exotic invasive species.

However, The Nature Conservancy also acknowledges that not all Phragmites stands are invasive or pose a threat to the diversity of native habitats and rare species. Young stands of Phragmites may or may not become problematic to the surrounding wetlands. Where Phragmites appears to be spreading and outcompeting native wetlands plants, altering and destroying habitat for native species, it should be controlled. While eradication of Phragmites is often expressed as an ultimate goal, it should be noted that it has, in one form or another, been here for thousands of years and may occupy an important niche in our native wetland habitats. The plants ability to colonize and spread in disturbed soils

makes it very difficult to eradicate. Prioritization of goals for Maryland's Phragmites control program can help target limited resources to areas in greatest danger of losing important plant diversity.

May 30,2001

ATTACHMENT B

MARYLAND DEPARTMENT OF NATURAL RESOURCES OFFERS COST SHARE ASSISTANCE FOR PHRAGMITES CONTROL

In partnership with Maryland Department of Agriculture's Weed Management Division, the Department of Natural Resources' Wildlife and Heritage Division will offer both financial and technical assistance towards the control of Phragmites on private lands this fall. Requests for financial assistance in the control of Phragmites must be made by landowners to the Department of Natural Resources' Wildlife and Heritage Division and must be received by September 15, 2002.

Also known as "common reed", Phragmites is an invasive wetland plant species that spreads rapidly by rhizomes and seed in both tidal and non-tidal wetlands. Phragmites out-competes valuable wetland plants that provide both winter food and cover for a variety of wetland dependent wildlife species. While scientific debate continues over the native origin of this plant, it is generally considered to be exotic to the Chesapeake Bay.

The 2002 Phragmites Control Cost Share Program will be offered to landowners in Dorchester, Worcester, Caroline and Talbot counties. Priority will be given to individuals who own properties containing stands of Phragmites that significantly threaten the preservation of valuable wildlife habitats.

The Department of Natural Resources will be providing the herbicide (Rodeo® or Glypro®) as its cost share portion of the program. Landowners will be responsible for the charges related to the cost of application, either hourly or by the acre, provided by the Certified Applicator. The herbicide used in the cost-share program is provided in part by the Maryland Department of the Environment.

Interested landowners should contact Donald Webster (Waterfowl Habitat Manager at (410) 827-8612 to determine eligibility for the Program. Applicants interested in spraying in wetlands to control Phragmites are responsible for obtaining necessary permits before spraying activities begin. Applications are available upon request