



Lancaster County Weed Authority

444 Cherrycreek Road, Building B
Lincoln, NE. 68528
Office: 402.441.7817
Email: weeds@lancaster.ne.gov

A GUIDE TO THE CONTROL AND LONG-TERM MANAGEMENT OF PHRAGMITES

INTRODUCTION

An aggressive, nonnative variety of Phragmites (*Phragmites australis*), also known as common reed, is threatening the ecological health of Nebraska's wetlands and riparian areas.

- This invasive is rapidly invading, with over 800 documented locations in Lancaster County.
- Phragmites is a long living perennial, warm season grass that can grow in dense clonal stands
- Plants can reach 20 feet in height, yet more than 80% of the yearly biomass is contained below ground in a dense mass of roots and rhizomes



THE PROBLEM

Once Phragmites invades, it causes adverse ecological, economic, and social impacts including:

- Threats to waterways, wetlands and riparian areas, which are our most biologically diverse and productive ecosystems
- Domination of native vegetation, displacing desirable native plant species and reducing our plant diversity
- Reduction of wildlife habitat diversity resulting in loss of food and shelter
- Alteration of water conveyance, restricting waterways, causing erosion of banks and field edges due to its ability to clog waterways
- Causing "drying" of wetlands through increased evaporation and trapping of sediments
- Reduction of property values due to use impairment
- Restriction of access for recreation, boating, swimming, fishing, and hunting
- Creation of potentially serious fire hazard to structures due to dry biomass during the dormant season

UNDERSTANDING PHRAGMITES

Phragmites is invading waterways, marshes, bogs, swamps, lake and pond margins, roadside ditches, and other low wet areas

- Typically, it prefers the wetland-upland interface, though it can be found in dry uplands
- Phragmites continues to expand, in part because it reproduces through wind dispersal of seeds and vigorous vegetative reproduction through rhizomes. Rhizomes broken by natural actions, such as water movement, or man-made actions, such as dredging or disking, readily reroot in new locations
- Phragmites has the competitive edge over all other riparian plant species

RECOMMENDED MANAGEMENT

Because of the physiology of phragmites, well-established stands are difficult to control with only one herbicide treatment.

- An initial herbicide treatment stresses the plants, making them particularly vulnerable to subsequent treatments
- Herbicide treatments in conjunction with prescribed fire, mechanical treatment, or flooding have proven to be effective in controlling phragmites and allowing native plants to reestablish
- Monitoring and follow-up treatments will be necessary to successfully manage phragmites

HERBICIDE CONTROL METHODS

Few techniques are fully effective when used alone, and reinvasion by phragmites is likely when the management strategy is not maintained.

- The optimal methods for a site will depend upon existing conditions and management goals
- Effective control of phragmites, especially larger well-established stands, is likely to require multiple treatments using a combination of methods
- The use of herbicide treatments in mid to late summer is recommended as the primary control method and the first step toward effective control
- The best time to get control is when the patch is new and there are just a few scattered plants. Once it gets established it will form a dense patch and control will become much more difficult and expensive
- Research and field data results show that herbicide control with the active ingredient **imazapyr (Polaris, Arsenal, Ecomazapyr, Habitat)** has proven to be the most effective. *Glyphosate (Rodeo or Roundup)* will have some effect but does not have the residual of imazapyr. Always use a good surfactant to help achieve successful results.
- **Both imazapyr and aquatic glyphosate can be used in and around water.**
- Ask your local chemical supplier about imazapyr

Imazapyr – Most effective with up to 2 years control. Apply to actively growing green foliage after full leaf elongation and up to first killing frost (i.e., August up to first killing frost).

- 4.0 – 6.0 pints of imazapyr per acre + surfactant (*follow label directions for proper application rates and methods*)

Glyphosate – Medium results with annual treatments recommended. Apply after plants are in full bloom in late summer up to the first killing frost (i.e., late August up to first killing frost)

- 6.0 – 8.0 pints of glyphosate per acre + surfactant (*follow label directions for proper application rates and methods*)

LONG-TERM MANAGEMENT AND MONITORING

Because of the pervasiveness of this species and its ability to aggressively recolonize through seed or rhizomes, long-term management and monitoring are necessary.

- The control method using imazapyr described in this guide is likely to be successful in controlling phragmites for 1-2 years without additional action. However, phragmites typically begins to recover 3 years after treatment and will become reestablished if follow-up management is not implemented
- Annual maintenance is essential to the success of any long-term management plan

Chart shows the number of parcels known to be infested with Phragmites in Lancaster County.

