

Pest Management – Invasive Plant Control

Common Reed – *Phragmites australis*

Conservation Practice Job Sheet

NH-595

Common Reed (*Phragmites australis*)



Common Reed, leaves

Common Reed

Phragmites is most commonly found in freshwater wetlands but it readily invades salt marshes that have been degraded by some type of flow restriction. It can also be found along river edges, shores of lakes and ponds, roadsides and disturbed areas.

Phragmites alters the structure and function of diverse marsh ecosystems by changing species composition, nutrient cycles and hydrological regimes. Dense phragmites stands decrease biodiversity and quality of wetland habitat, particularly for migrating waders and waterfowl species.

Similar Natives

There exists an uncommon native variety of Phragmites in New Hampshire.

Description

Phragmites is a perennial grass that can grow to approximately 14 feet in height. The leaves (see picture above) are lanceolate, often 20-40 cm long and 1-4 cm wide. Flowering and seed set occur between July and September, resulting in a large feathery

inflorescence, purple-hued turning to tan. Phragmites reproduces through wind dispersal and vigorous vegetative reproduction through rhizomes. It often forms dense, virtually monospecific stands.

Control

Before control methods are implemented, it is important to be aware of animal species utilizing the habitat. Many waterfowl will utilize Phragmites habitats so long as they have not become too dense to nest in.

An initial herbicide treatment stresses the plants, making them particularly vulnerable to subsequent treatments. Because of the physiology of Phragmites, well-established stands are difficult to control with only one herbicide treatment. Creating multiple stresses on the plants is the most effective way to control phragmites. Herbicide treatment in conjunction with prescribed fire, mechanical treatment or flooding have proven to be effective in controlling phragmites and allowing native plants to reestablish.

Biological Control

Currently there are no commercially available biological methods for the control of phragmites.

Mechanical Control

Cutting or Pulling: Cutting or pulling has been used successfully to control small stands of phragmites. Treatments usually need to be repeated annually. The best time to cut phragmites is at the end of July. Cutting at other times may increase stand density. Phragmites stems should be cut below the lowest leaf, leaving a 6" or shorter stump. Some patches may be too large to cut by hand, but repeated cutting of the perimeter of a stand can prevent vegetative expansion.

Black Plastic: Black plastic is feasible on small areas, and heavy tarps or other type mats should be used, as Phragmites can pierce through typical black plastic used for vegetable operations. After cutting a stand of phragmites, anchor a sheet of black plastic over the cut area using sand bags or rocks and leave in place for a full growing season. High temperatures under the plastic will eventually kill off the plants.

Prescribed Burning

Prescribed burning, as a treatment by itself, can actually increase shoot densities and below ground biomass of phragmites. Burns can be effective, however, if followed by flooding in the marsh. Flooding a marsh after a burn requires the capacity to manipulate water levels. Burning has also been used successfully following herbicide applications. This technique can be dangerous, and is only appropriate for professional land managers.

Chemical Control

Foliar applications are the most common method of treatment for phragmites, though cut-stem application can be used in isolated or scattered stands where impacts to native species must be avoided. Herbicides are best applied in late summer/early fall after the plant has flowered for either cut stem treatments or foliar application. In most cases herbicides should be used in conjunction with burning or mechanical methods, and follow-up spot treatments should be expected for best results^{1,2}.

Refer to the pesticide label for complete instructions on the use and application of a given herbicide. Some applications, by rule, may only be done by a certified pesticide applicator, and/or might require the applicator hold a special permit. Private landowners can apply anything purchased at your local garden

store with out having a permit so long as it is not near a water body or known public aquifer. You should contact the New Hampshire Division of Pesticide Control if there are any concerns before applying any pesticides.

¹- "Control of Phragmites or Common Reed." Water Fowl Management Handbook.

²- "A Guide to the Control and Management of Invasive Phragmites." US Fish and Wildlife.

Disposal

There are a few general rules of thumb that will ensure proper disposal. Be sure the plant is dead before placing in a mulch or compost pile. Either dry it out in the sun, or bag it in a heavy duty black plastic bag. If you have flowers and/or seeds on the plant, put the flowers and seed heads into the bag head first so that there is minimal risk in dispersing seed.

Information and Recommendations compiled from:

- Alien Plant Invaders of Natural Areas (NPS)
- "A Guide to the Control and Management of Invasive Phragmites." US Fish and Wildlife.
- "Control of Phragmites or Common Reed." Water Fowl Management Handbook.
- Ecology and Management of Invasive Plants Program, Cornell University.
<http://www.invasiveplants.net/phragmites/Default.asp>
- "Invasive Plant Management Guide." Stewardship Subcommittee of the Connecticut Invasive Plant Working Group.
http://www.hort.uconn.edu/cipwg/art_pubs/GUIDE/guideframe.htm
- Chambers M., Randolph et al. 2002. "Hydrological and chemical control of *Phragmites* growth in tidal marshes of SW Connecticut, USA." Mar Ecol Prog Ser.

CAUTION: The NH Division of Pesticide Control is the agency that regulates the sale and use of pesticides in New Hampshire. Many labels and registrations change from year to year, so applicators will want to be sure they are using a currently, registered product. Contact the Division of Pesticide Control (603-271-3550) for information on pesticide registration, how to acquire a special permit, lists of currently-licensed pesticide applicators, and other information pertaining to the rules and regulations governing pesticide application in this state.