

CUTTING

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Although cutting may not necessarily cause *Phragmites* mortality, it may slow growth, reduce stand density and reduce seed head development. If this method is selected as a control option, an annual cutting regime must remain in place, since the plants can grow quite rapidly and dense cells can re-establish once cutting discontinues. Cutting *Phragmites* along a shoreline does not require any special permit, but it does require an understanding of how best to impact *Phragmites* while not causing harm to non target species. Timing control events so they do not coincide with bird nesting and brood rearing may be a consideration in some sites. Use of appropriate cutting tools can reduce harm to rare or high value plants that are intermixed with *Phragmites*.

Cutting frequency will depend on the site, management objects and availability of workers. Frequent cutting will increase plant stress and curtail belowground biomass production. Impacting the rhizomes and roots is key for inhibiting stand density and expansion. Under flooded conditions, cutting may also promote drowning if a sufficient depth is maintained, since the removal of stalks below the water surface can significantly reduce oxygen diffusion to the belowground structures. Cutting dead stalks during the dormant period may also promote drowning by removing the “standing straws” before rhizomes become active in the spring.

Where *Phragmites* is just beginning to colonize, and is relatively sparse, handheld pruners could be used to cut the stems. Large, dense cells can be cut using gas powered trimmers. One of the best tools for this is the Stihl Kombi System KM 130R equipped with a reciprocating power scythe FH-KM 135° attachment. Using this trimmer *Phragmites* growing in water can also be cut up to a depth of ~ 0.40 m although care must be taken to ensure that the lower gear unit is well greased with Fluid Film or other water friendly products.

Cutting stalks as close to the sediment as possible will have the best results, however the short, brittle stubble can be potentially hazardous, since they can puncture skin and footwear. This may be an important consideration in areas used for recreation. If the plants cannot be cut at the sediment, then cutting the stalks anywhere below the lowest leaf would be the next best option. Removing stolons is also of value for reducing spread, and can be accomplished by pulling or cutting. At sites where frequent cutting is not feasible or practical, cutting once between mid July to mid August would prevent seed head development.

Invasive Phragmites is being cut along the edge of a Lake Huron coastal wetland.



In areas where Phragmites is growing in sand, or other soft substrate, the stalk could be cut below the sediment surface at the point where it is attached to the rhizome. This is best done using a spade with minimal disturbance to the sediment and surrounding plants. The method can be labour intensive and requires repeated efforts for a few years but, with persistence, it will eventually control even a well established Phragmites stand. A program is currently underway at Wymbolwood Beach near Midland (southern Georgian Bay) using this method and results to date have been extremely positive (pers. comm. L. Short, 2013).

Regardless of the cutting method selected, proper disposal of plant material is an important consideration for preventing unintended spread. If feasible and practical, plant material can be placed into paper yard waste bags and moved to a location to dry out. The bags of dried Phragmites could then be safely incinerated in burn barrels or fire pits. Larger amounts of biomass could be piled onto tarps and moved to an appropriate location for disposal. If plants have seed heads it would be best to cut these off first and immediately place into yard waste bags to be burned when dry.

If cut material is to be taken to a local landfill, ideally the disposal site would have a location dedicated for quarantining invasive plant material. The Phragmites biomass could be piled and covered with thick plastic to kill viable plant parts. Once dried, the piles could be incinerated if appropriate and permitted by local by-laws. Alternative options include burying or leaving as debris piles. If not covered, these piles may have to be sprayed with the appropriate herbicide to control establishing plants. Due to the recalcitrant nature of the stalks, composting would likely only be achieved with the addition of a large amount of animal manure.