

Common Reed and Mechanical Aquatic Harvesting

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Common reeds, both native and non-native proliferate along the shorelines of North America. There are several excellent guides to determine if a given reed is invasive and thus a plant to remove (see References). Like many common reeds, the decorative value may have been the initial intention. Today there are is one common reed perhaps the most notorious – *Phragmites australis*. This reed is responsible for the negative modification of wetland ecosystems around the globe.

Like many invasive organisms, *Phragmites* becomes the dominant species, displacing and ultimately eliminating native plants. At first the damage to the given wetland area may not be apparent, but in time the changed environment impacts the survival of indigenous birds, insects and flowers.

Soon large monocultures grow with one plant type expanding at the expense of a diversity of differing plants. *Phragmites australis* is one of the worst plants of this order. Growing up to 13' in height with spreading rhizomes of 30' horizontally, this reed is simply an invasive *monster*. Moreover, *Phragmites* is tolerant in soils fed by both freshwater as well as saltwater. *Phragmites* absorbs a host of environmental wastes and chemicals. Once the reed dries in the fall it becomes a major fire hazard.

The logical treatment would be to cut and remove the reed, but too often the mainstream recommendations are for the use of herbicides. Chemical treatments will provide the desired short-term goal of killing the reed, but this treatment will do nothing for decreasing the biomass unless it's removed. Moreover, herbicide treatments will not prevent the dried plant from catching fire in the future.

Weedoo^{INC} Shoreline Greenboats have an extended boom cutter arm that cuts these thick invasive reeds (See <http://www.weedooboats.com/weedoo-e-1211-marine-boom-cutter/>). Water managers can better harvest fresh-cut green reeds or cut dried reeds for disposal. It is best to cut near the bottom of the stem to better insure future re-growth. Next, the disposed material can be used for compost or other soil filling mediums. Since the common reed (most notably *Phragmites*) is so

hardy, there is a strong likelihood that this material could be useful in some unique application in agriculture or industry.

The advantage of **Weedoo^{INC} Shoreline Greenboats** is the world's first precision aquatic harvester for macro-algae and invasive aquatic plants. These scientifically engineered machines are agile, cost-efficient and the most environmentally sensitive way to improve your estuary, lake or pond.



Phragmites australis

References

- <https://www.nps.gov/plants/ALIEN/fact/pdf/phau1-powerpoint.pdf>
- <https://mnfi.anr.msu.edu/phragmites/phragmites-native-non-native.pdf>
- <http://www.fs.fed.us/database/feis/plants/graminoid/phraus/all.html>
- <https://mnfi.anr.msu.edu/phragmites/treatment.cfm>
- <https://extension.umaine.edu/publications/2532e/>
- http://store.msuextension.org/Products/Watch-Out-for-Phragmites_4611.aspx
- <http://www.weedooboats.com/>
- <http://www.weedooboats.com/weedoo-e-1211-marine-boom-cutter/>