# INVASIVE PLANT FACTSHEET
# Common reed (*Phragmites australis* (Cav.) Trin. ex Steud)

Problems: Forms dense stands of emergent vegetation along shorelines that inhibits growth of native plant species and reduces habitat utilized by aquatic fauna. Common reed can disrupt nutrient cycling between terrestrial and aquatic environments thereby negatively affecting ecological processes in both environments. Plants commonly found growing in water as deep as 4 ft.; plants can be a navigation hazard to small boats in braided river systems. Standing vegetation burns easily and can be a source of wildfire ignition.

Regulations: No federal or MS regulations prohibiting movement of this plant.

Description: Common reed establishes as a riparian species but extends underground rhizomes into water as deep as 4 ft.; stems can grow as tall as 6 m and form impenetrable monocultures. Common reed has long, lanceolate leaves (30 cm) on stems that can grow as tall as 6 meters in height (Figure 1).

Dispersal: Common reed is native to every continent. In the U.S., there are multiple native haplotypes and 2 non-native haplotypes (Haplotypes M and I). In MS, common reed is most prevalent in the southern part of the state; most populations are suspected of being Haplotype I (Figure 2; Turnage and Shoemaker 2018, Turnage et al. 2019, 2020). Common reed reproduces via vegetative dispersal; the gulf biotype (Haplotype I) isn't known to produce viable seed.

Control Strategies: Physical-drawdown is not effective as rhizomes can survive drought and freezing temperatures. Mechanical-harvesters may reduce nuisance growth but likely cause further spread through dispersal of plant fragments. Biological-two insects have been approved for release in the U.S.; however, their use is controversial due to the potential damage to native common reed haplotypes. Chemical-the herbicides glyphosate, imazapyr, imazamox, and triclopyr have all been shown to be effective against common reed; however, repeated applications may be necessary to attain long term control (Table 1).

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References

Turnage, G. and C. M. Shoemaker. 2018. 2017 survey of aquatic plant species in Mississippi waterbodies. Geosystems Research Institute, Mississippi State University, Mississippi State, MS. February 2018. GRI Report # 5077. Pp. 69.

Turnage, G. 2019. A Brief Introduction to Factors Affecting Water Quality, Aquatic Weed Control, Herbicide Labels, & Mixing Calculations. Mississippi State University, Geosystems Research Institute Report #5084. Pp. 22.

Turnage, G., A Lazaro-Lobo, S. L. Sanders, and M. Thomas. 2019. 2019 survey of aquatic plant species in Mississippi waterbodies. Geosystems Research Institute, Mississippi State University, Mississippi State, MS. December 2019. GRI Report # 5085. Pp. 35.

Turnage, G., A. Sample, and C. McLeod. 2020. 2020 survey of aquatic plant species in Mississippi waterbodies. Geosystems Research Institute, Mississippi State University, Mississippi State, MS. October 2020. GRI Report #5086. Pp. 71.

Tables and Figures

Table 1. Chemical control strategies for common reed; the first row for each herbicide is the amount of formulated product needed for commercial applications (100-gal solution), the second row is the amount of product needed for private landowners (25-gal of solution; typical ATV sprayer size); all rates are in imperial units (see Turnage 2019 for instructions on calculating ac-ft; and to gain a greater understanding of how aquatic plant management and aquatic ecosystem processes affect each other); herbicide will move to a constant concentration in the waterbody after application.

| HERBICIDE*,† | EARLY SEASON RATE | LATE SEASON RATE | NOTES |
|---|---|---|---|
| Glyphosate | 80 oz/ac | 160 oz/ac | Add 0.25% v:v non-ionic surfactant to solution to increase foliar uptake |
| | 20 oz | 40 oz | |
| Imazapyr | 45 oz/ac | 90 oz/ac | Add 0.25% v:v non-ionic surfactant to solution to increase foliar uptake |
| | 11.25 oz | 22.5 oz | |
| Imazamox | 69 oz/ac | 125 oz/ac | Add 0.25% v:v non-ionic surfactant to solution to increase foliar uptake |
| | 17.25 oz | 31.25 oz | |
| Triclopyr | 1 gal/ac | 2 gal/ac | Add 0.25% v:v non-ionic surfactant to solution to increase foliar uptake |
| | 1 qt | 2 qt | |

*****Glyphosate rates are based on a 3.0 lb./gal formulation, imazapyr rates are based on a 2.0 lb./gal formulation, imazamox rates are based on a 1.0 lb./gal formulation, and triclopyr rates are based on a 3.0 lb./gal formulation; see Turnage (2019) regarding herbicide labels and formulation determination.

†This table is meant to be an aid in mixing herbicide solutions; it is not meant to be used as a replacement for herbicide label recommendations.

Figure 1. Image of common reed infestation (left; note the height compared to a human) and rhizomes sprouting new growth (right). Image credits: G. Turnage.

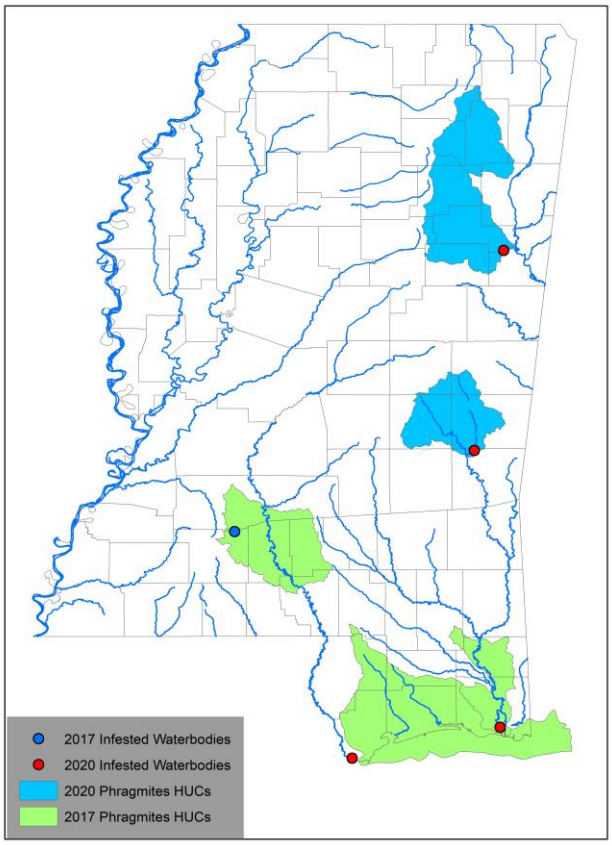


Figure 2. Mississippi Hydrologic Units and waterbodies infested by common reed according to surveys by Turnage and Shoemaker (2018) and Turnage et al. (2019, 2020). Hydrologic units are based on HUC 8 codes.

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