INVASIVE PLANT FACTSHEET
Waterprimrose (*Ludwigia* spp.)

Problems: Forms dense surface mats of vegetation and an interwoven web of submersed growth that inhibit growth of native plant species and reduce the water quality of habitat utilized by native aquatic fauna. Mats can also inhibit recreational uses in waterbodies and worsen flood events.

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

Description: Waterprimrose is a perennial plant that is classified as both floating and emergent depending on the species and subspecies. Stems and vascular systems have a red tint while alternately arranged leaves which grow on petioles are a vibrant green. Waterprimrose produces bright yellow flowers with five to six petals. The leaves range in shape from lanceolate to elliptic and increase in size in subsequent growths, up to 5 inches in length. The plant produces fruits containing seeds, but seedlings are rarely encountered; the main mode of reproduction is vegetative through elongating stems, stem fragments, and rhizome material.

Dispersal: Waterprimrose is native to Australia, New Zealand, South America, and certain portions of North America. Some water primrose species are native to Mississippi while others are invasive, however, the native species are often encountered as nuisance populations. The most common mode of water primrose dispersal is plant fragmentation and extensive branching; plant fragments can be dispersed via boating equipment and water currents.

Control Strategies: Physical - drawdown is unlikely to provide adequate control once plant is established. Mechanical - harvesters may reduce nuisance growth but likely cause further spread through dispersal of viable plant fragments. Biological - no biological control mechanisms have proven effective for primrose control. Chemical - the herbicides 2,4-D, imazapyr, and triclopyr are effective against *Ludwigia* spp. (Table 1).

Acknowledgements: This project was funded by the Mississippi Aquatic Invasive Species Council through the Mississippi Department of Environmental Quality from a grant provided by the U.S. Fish and Wildlife Service.

References

Sartain BT, RM Wersal, JD Madsen, and JC Cheshier. 2015. Evaluation of six herbicides for the control of water primrose (*Ludwigia peploides* (Kunth) P.H. Raven spp. *glabrescens*). Journal of Aquatic Plant Management 53:134-137.

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.

Tables and Figures

Table 1. Chemical control strategies for water primrose; 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*,†	SPOT RATE	FOLIAR RATE	SURFACTANT	NOTES
2,4-D	0.5%	0.5 gal/ac	1 gal/ac	Re-application may be needed to 10-12 wks. after initial application
		1 pt.	1 qt	
Imazapyr	0.375%	3 pt./ac	1 gal/ac	
		12 oz.	1 qt	
Triclopyr	1%	1 gal/ac	1 gal/ac	
		1 qt	1 qt	

*****2,4-D rates are based on a 3.8 lb./gal formulation, imazapyr rates are based on 2 lb./gal formulation, and triclopyr rates are based on a 3 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 water primrose infestation (left) and flowers and leaves (right). Image credits: G Turnage.

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