



Flowering rush (*Butomus umbellatus*) is an herbaceous aquatic perennial also known by the names “grassy rush” and “water gladiolus.” The plant can grow in either an emergent or submerged form. In shallow water (up to 10 feet deep), flowering rush grows as an emergent plant with foliage standing upright, up to 5 feet. In its submerged form (10 to 20 feet deep), leaves are flexible, suspended in the water column. Emergent leaves are triangular in form, resembling a sedge, and flowering stems are round, resembling a rush, but this species is neither a true sedge nor rush. It is in its own botanical family, Butomaceae.

Reproduction of flowering rush can be by seed, but most is vegetative through rhizomes and vegetative bulbils. Emergent plants have two flowering forms: one that flowers regularly and produces viable seed, and one that flowers only occasionally and is sterile. When flowers do occur, they are light pink to rose-colored

and arranged in umbels of 20-50 flowers each. Individual flowers are 3/4 to 1 inch across, with six petals. The three outer petals are actually sepals, and they are smaller and may be slightly green in color. Bulbils form on both the flowers and rhizomes and can break off and form new plants. Rhizomes form structurally weak constrictions between buds, which allow minor disturbances to break them. Rhizome pieces are buoyant, giving them the ability to disperse long distances.

Flowering rush is native to Eurasia and was likely introduced in the late 1800s through the ornamental trade. The plant grows along lake shores, irrigation ditches, and in slow-moving waters including wetlands. It is most often found in shallow waters but can grow at greater depths by modifying its growth to a submergent form. Infestations can impact irrigation, recreation, and native species. Infested irrigation ditches suffer reduced water flow and availability. Recreational impacts include interference with boat propellers, swimming and fishing, and stands of the plant create ideal habitat for the snail that hosts parasites that cause swimmer’s itch.

The key to effective control of flowering rush is to prevent establishment through proper land management. Maintain healthy riparian corridors, wetlands and rights-of-way, and continually monitor your property for new infestations.

Flowering rush is a designated “List A” species in the Colorado Noxious Weed Act. It is required to be eradicated wherever found in the state. The following page provides management recommendations. For more information please visit: www.colorado.gov/ag/weeds or call the State Weed Coordinator at the Colorado Department of Agriculture, at 303-869-9034.



Key ID Points

1. Showy pink and white flowers arranged in an umbel form, when present.
2. Leaves triangular in cross-section.
3. Flowering stems are round.
4. Reproductive units known as “bulbils” form on both the flowers and rhizomes.

Flowering rush

Butomus umbellatus



Integrated Weed Management Recommendations

Prevention is the best control for flowering rush. It is not yet known to exist in Colorado, and locations where it is present have struggled to control the infestations. Once established, it is difficult to eliminate because herbicides don't effectively kill the plant.



CULTURAL

Prevent the introduction and establishment of new infestations by conducting regular inspections of recreational and commercial boats and waterways. Remove all plant parts from boats and prevent transportation of propagules into uninfested waters. Maintaining healthy, biodiverse, abundant native communities in slow-moving streams, ponds, reservoirs, and wetlands to help prevent establishment.

BIOLOGICAL

Biocontrol agents are not included in the prescribed management plans by the State since eradication is the management objective for all List A species. No biocontrol agents for flowering rush is available. For more information on the use of biocontrol agents to control weeds in Colorado, please contact the Palisade Insectary of the Colorado Department of Agriculture at 970-464-7916.

MECHANICAL

Small infestations can possibly be dug out by hand, especially if water levels are low, but follow-up treatment for the next several years will likely be required. Raking is NOT recommended since it will break up rhizomes which can create a bigger problem. All plant parts must be collected so that the infestation doesn't reestablish from remaining fragments and roots. Makes sure you can access all plant parts before attempting mechanical treatment, as ineffective removal can make the infestation worse.

CHEMICAL

While studies are ongoing, there is no clearly effective chemical control option for flowering rush. The following are recommendations for herbicides that can be applied in aquatic environments to treat flowering rush, although results may vary. Rates are approximate and based on smaller infestation, spot-spraying techniques. Please reference the label for exact rates. Always read, understand, and follow the label directions. The herbicide label is the LAW!

HERBICIDE	RATE	APPLICATION TIMING
Imazapyr (Habitat: pre-emergence on mud flats, or post-emergence with 2+ feet above water)	2-3 pints/acre. Plus non-ionic, aquatic surfactant at 0.06-0.5% v/v (0.5-4 pints per 100 gals)	Make a pre-emergence application on mud flats in late winter or early spring. If at least 2 feet of leaves exist above water, a post-emergence application can be made (summer to fall).
Diquat	0.5 to 2 gal per surface acre (per 4-foot water depth).	For under-water treatment of submerged vegetation. Repeat applications at 14- to 21-day intervals are necessary.



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