

APCRP: Chemical control of flowering rush

Capability

Flowering rush (*Butomus umbellatus*) is an invasive perennial plant from Eurasia that is capable of spreading rapidly, especially within the large river and reservoir systems of the Pacific and Inland Northwest (Figure 1). The species can become established in littoral zones of quiescent, as well as high-flow water conditions. Systems of importance to the U.S. Army Corps of Engineers (USACE) that are currently impacted by the flowering rush include the Columbia River and its major tributaries (to include the Clark Fork and Pend Oreille rivers). Impacts associated with flowering rush invasions include reduced diversity of native plant communities, degradation of fish and wildlife habitats, and reduction of critical habitats for listed species (i.e., bull trout) (Figure 3).



Figure 1: Submersed flowering rush stand with inflorescence above water.



Figure 2: Monoculture stands of emergent flowering rush in the Columbia River Basin.

Applications

Currently there are no reliable chemical strategies for providing long-term and selective control of flowering rush. Management approaches utilizing aquatic herbicides to selectively control flowering rush in large dense stands or in isolated pioneer colonies need to be developed and evaluated in reservoirs and flowing systems. Work is focusing on submersed applications, as well as treatments of emergent stands and de-watered sties (Figures 1-3). Development of species selective control techniques will reduce levels of established flowering rush stands, limit further spread of the plant, and protect valuable aquatic habitats. These

control strategies will also result in long-term management cost savings for USACE projects.

Status

Research is ongoing and the project is funded from FY15–17. Work is being leveraged with various groups including the USACE Seattle District, the U.S. Department of Agriculture (USDA), the Idaho State Department of Agriculture, the Bonner County Noxious Weed Control Board, and the private sector.

Get It Here

Results of work will be available via webinars, technical reports, guidance documents, and related scientific journals.



Figure 3: Herbicide trials on de-watered sites in Lake Pend Oreille, WA.

Documentation and References

- Getsinger, K. D., and J. D. Madsen. Using phenological events of flowering rush to improve chemical control strategies. USAERDC Invasive Species Webinar, September 2015.
- Webinar: <http://corpslakes.usace.army.mil/employees/learning/exchange.cfm?Option=Webinar&Type=Past&CoP=nrm&Id=265&ICS>

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