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October 1, 2008

## MEMORANDUM

**TO:** Council Members

**FROM:** Kerry Berg

**SUBJECT:** Invasive Flowering Rush Presentation

Below please find an abstract sent by one of the presenters, Peter Rice of the Division of Biological Sciences at the University of Montana, for the presentation on flowering rush.

### FLOWERING RUSH: AN INVASIVE AQUATIC MACROPHYTE INFESTING THE HEADWATERS OF THE COLUMBIA RIVER SYSTEM

Peter M. Rice, University of Montana, Missoula MT  
Virgil Dupuis, Salish Kootenai College, Pablo MT

Flowering rush (*Butomus umbellatus*) is an invasive Eurasian aquatic macrophyte with emerged and fully submerged forms that can dominate irrigation systems, wetlands, the littoral zone of lakes, and river edges. Ongoing GPS/GIS mapping in Flathead Lake has so far delineated ~ 1,000 acres of flowering rush. It has passed through Kerr Dam on Flathead Lake and infested the Flathead and Clarks Fork Rivers as far down river as Lake Pend Oreille in north Idaho. There is also a large infestation near the headwaters of the southern reach of the Columbia Rivers System in an irrigation canal system that spills into the American Falls Reservoir on the Snake River. The Flathead Lake/Kerr Dam hydroelectric facility is operated to reach low pool in early spring, whereas an unregulated natural lake would reach low pool in late summer. This unnatural spring drawdown appears to create seasonal conditions that are favorable for the establishment of flowering rush infestations and disadvantages to native macrophytes evolved to a hydrologic cycle with a late summer low pool. Spread is primarily by rhizome fragments which are easily dislodged from the main rhizome by any natural or anthropogenic disturbance. Flowering rush establishes in fine sediments. It can colonize the previously unvegetated portions of variable drawdown zones. It forms monotypic colonies in previously unvegetated littoral zones and is invading native shoreline and wetland communities. These large infestations at the headwaters of the Columbia River system are likely to spread downstream and infest much of the main stem of the system.