



Invasive Species: Societal Impacts of Flowering Rush Locally and within the Columbia System

Montana Invasive Species Summit

Oct 25, 2022



Flowering Rush Impacts

- Creates closed water habitats of previous open water habitats

Impacts to threatened Bull Trout, West Slope Cutthroat Trout a species of special concern

Flowering rush facilitate invasive fish

Expanding flowering rush impacts to Columbia River salmon and trout

Other issues; property values, loss of recreation, water quality, irrigated agriculture, nutrient cycling, others

Flathead Lake Flowering Rush Summary

- Initiated work on flowering rush around 2003 with mapping and monitoring
- Spatial model in 2007 predicting approximately 6,000 acres of littoral zone & 8,000 acres of 10'-20' depths subject to invasion
- Drawdown, foliar, and water column injection trials in 2009-2010, WA, OR ID added to noxious weed lists, British Columbia
- Biocontrol initiative 2013
- Northern pike-flowering rush invasion 2016
- Seven years sequential treatments show 100% control
- Flathead Lake Flowering Rush Control Plan and Environmental Assessment in 2021

Flathead Lake Flowering Rush Controls

- Complications occurred in implementation
 - Complicated project involving 100 cooperators, affecting less than 20 acres, spread over 62 m shoreline
 - Very short window for field review
 - Now have landowner sign ups, environmental and cultural review of 100 sites.
 - Finalize Tribal Council consultation, Natural Resource consultation, EPA, solidify funding, advertise for commercial applicator, implement March 2023
 - There are around 200 additional small infestations to enlist in project
 - Large patches in East Bay, Dayton Bay, Elmo Bay and river infestations

Degrade
Recreational
Values

Property
Values

Habitat favors
Invasive Fish
over Native
Fish

Increased
Irrigation
Operation
Costs

Societal Costs
of Invasive
Species

Creates
Closed
Water
Habitats vs
Open Water
Habitats

Headwaters
Infestation
Impacting
Columbia
River System

Sediment,
Water
Temperature,
Nutrient
Cycling

Confederated
Salish and
Kootenai Tribes

Lake Shore
Property
Owners

Columbia
Basin
Interests

State of
Montana

Tourism

STAKEHOLDERS

Federal
Government:
EPA, BIA.
BPA, USACE

Anglers

Irrigators

Funders

Thank You