

Potential Impacts of Northern Pike/Flowering Rush on Salmon and Steelhead in the Selected Reaches of the Columbia River Downstream of Priest Rapids Dam

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Commission



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Today's Presentation

- Northern Pike/Flowering Rush
- Selected Reaches
- Potential Synergistic effects on Salmon and Steelhead
- Conclusions
- Questions



Are Northern Pike Really That Bad?!

- Live for 20 + years
- Reach 45 lbs. in weight
- Very fecund, 250k eggs
- Ability to alter entire fish communities
- Excellent ambush predators
- Can consume prey 75% of their body length



Northern Pike

- How they got started in the CRB
- How big is the threat
- Eradication/control efforts
- What can we do?



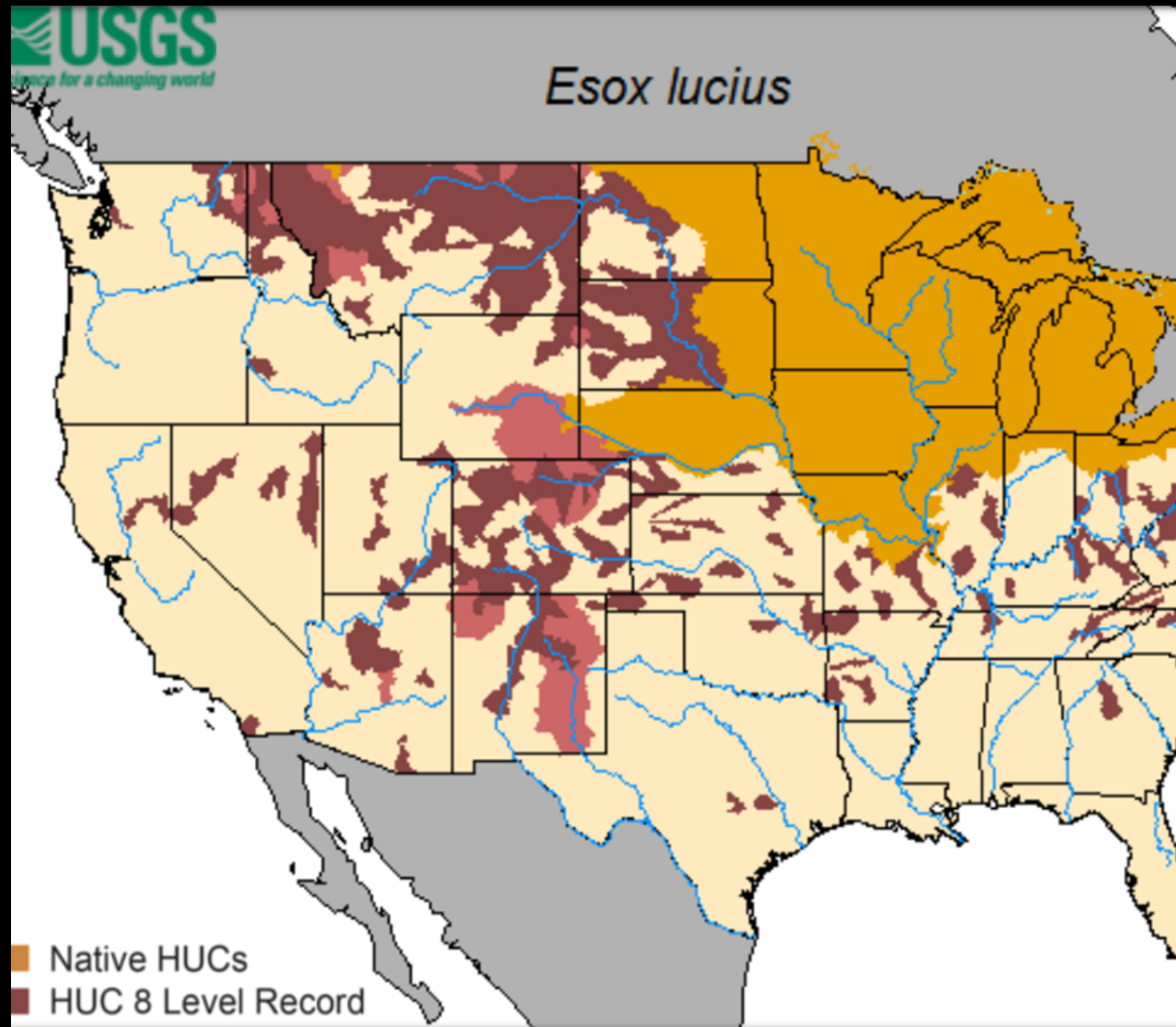


Native Range
of Northern
Pike *Esox*
lucius

- Northern Pike are found across many northern latitude regions
- Northern Pike have been introduced in a wide variety of locations, even Africa
- Fresh waters, both lakes and rivers are favored habitats, though they are found in the mildly saline estuarine areas of the Baltic Sea.

Closer to Home...

- Lots of Introductions throughout the US
- Only Hawaii and Oregon remain free of Northern Pike
- This species was initially stocked by state management agencies
- More recently, a brigade of “bucket biologists” have continued spreading NP
- Species user groups and social media continue effort to pressure management agencies to stock/protect “their” favorite species

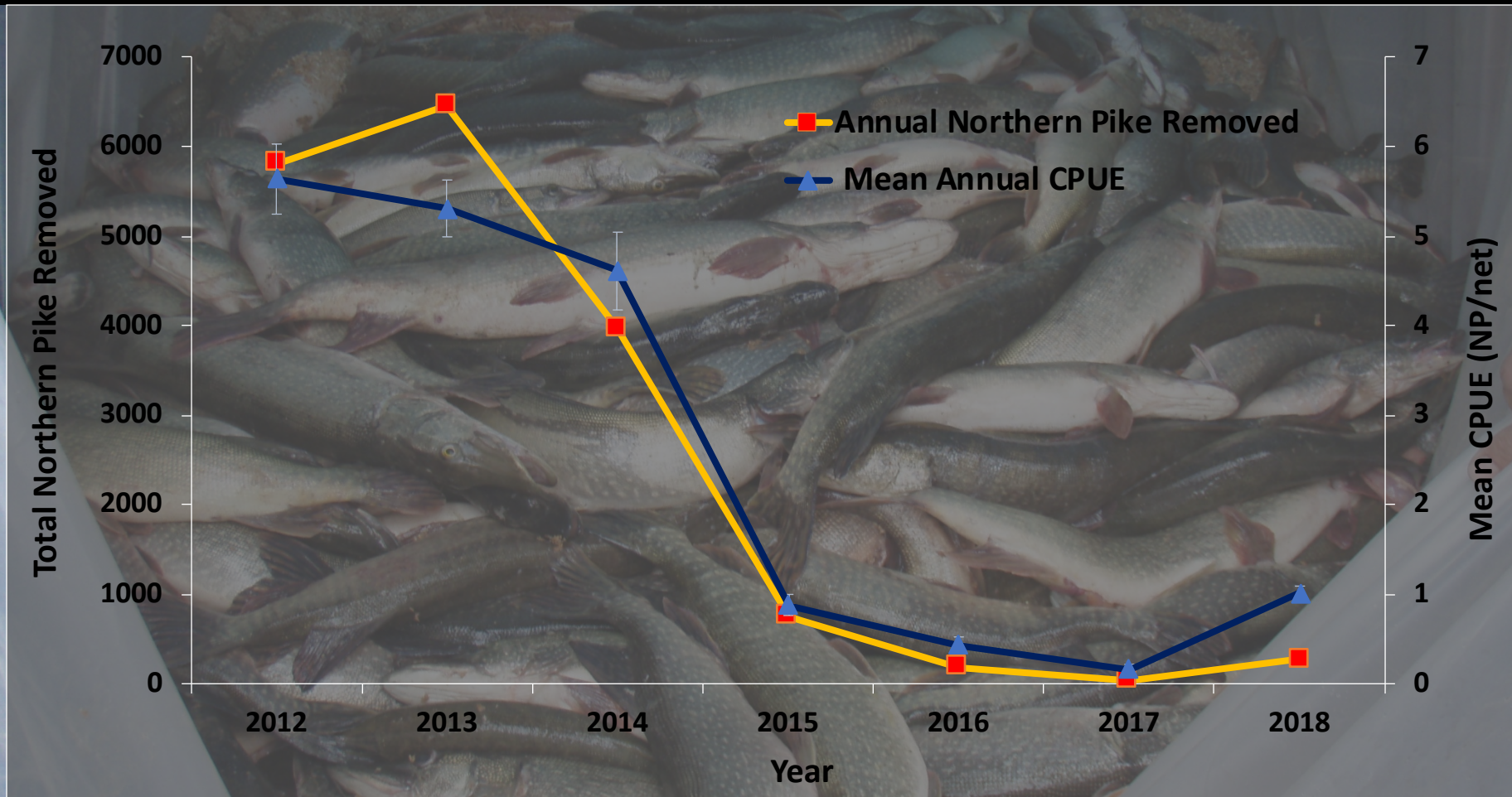


Columbia Basin Control Efforts

- To date, only the regional tribes (Kalispel Tribe, Spokane Tribe, and the Colville Tribe) and the Washington Department of Fish and Wildlife are the only co-managers who have actively managed NP, courtesy of Bonneville Power Administration funds.
- Columbia River PUD's have also participated in recent control efforts.
- Neither Montana FWP or Idaho Fish and Game have managed NP in their drainages upstream from the mainstem Columbia River as invasive species.
- Control efforts for NP in the mainstem Columbia and associated tributaries will be long-term (i.e. permanent).

Box Canyon, Pend O' Oreille River, Idaho Suppression 2012 – 2018

Courtesy of the Kalispel Tribe/Joe Maroney



- Removed nearly 17,500 Northern Pike from Box Canyon Reservoir
- 18.8 metric tons (42,000 lbs) of Northern Pike removed from Box Canyon Reservoir

Flowering Rush

- Native to Europe, introduced as an ornamental water garden plant in the US since the 1940's in Idaho
- Primarily in ID, MT and the lower Yakima River
- Starting to colonize the Columbia River downstream of Yakima River
- Control efforts organized with State and Federal agencies
- Important to look for and manage new colonizer plants
- Tremendous potential for impacting shallow water habitats in the Columbia River

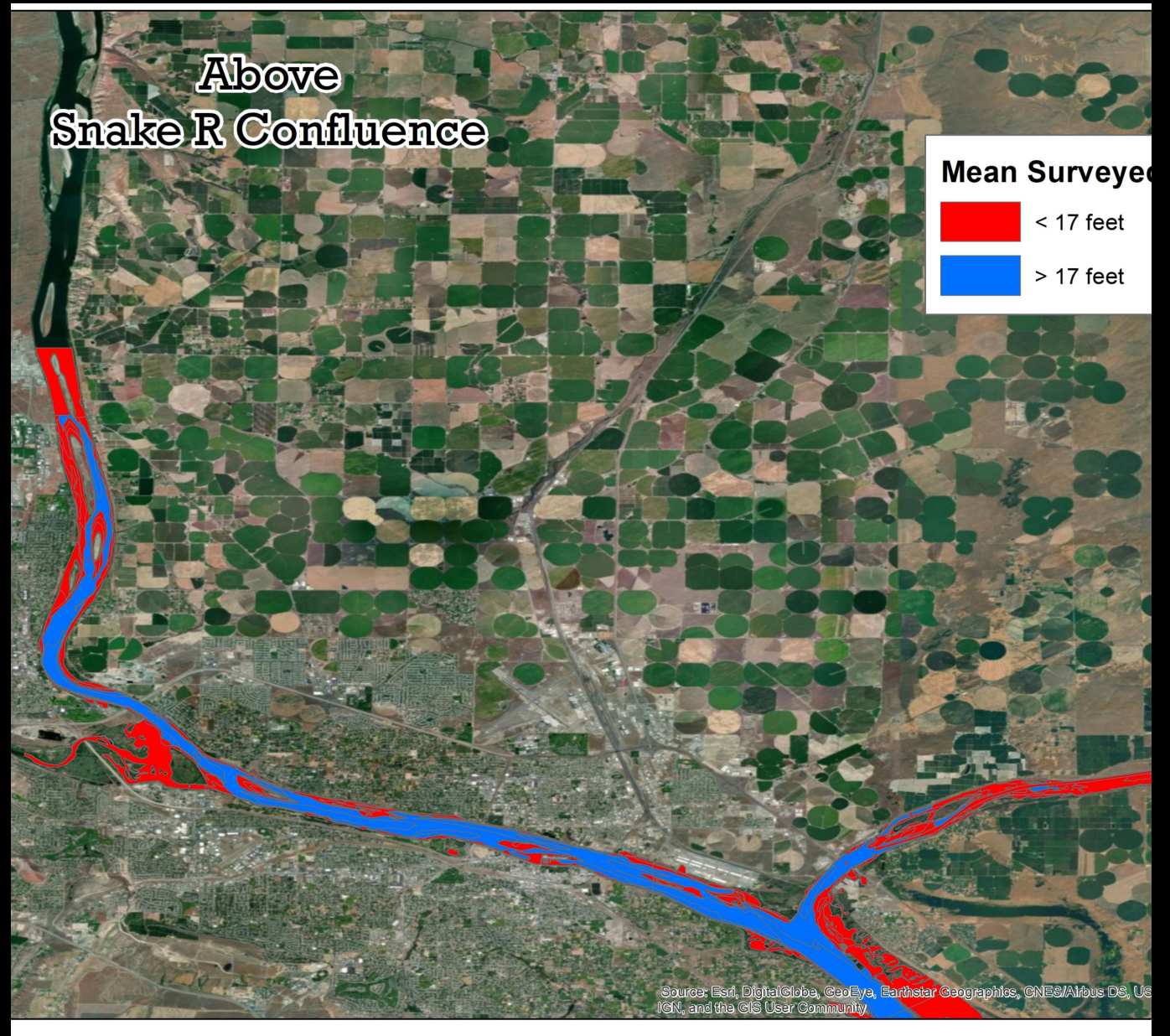


Flowering Rush Facts

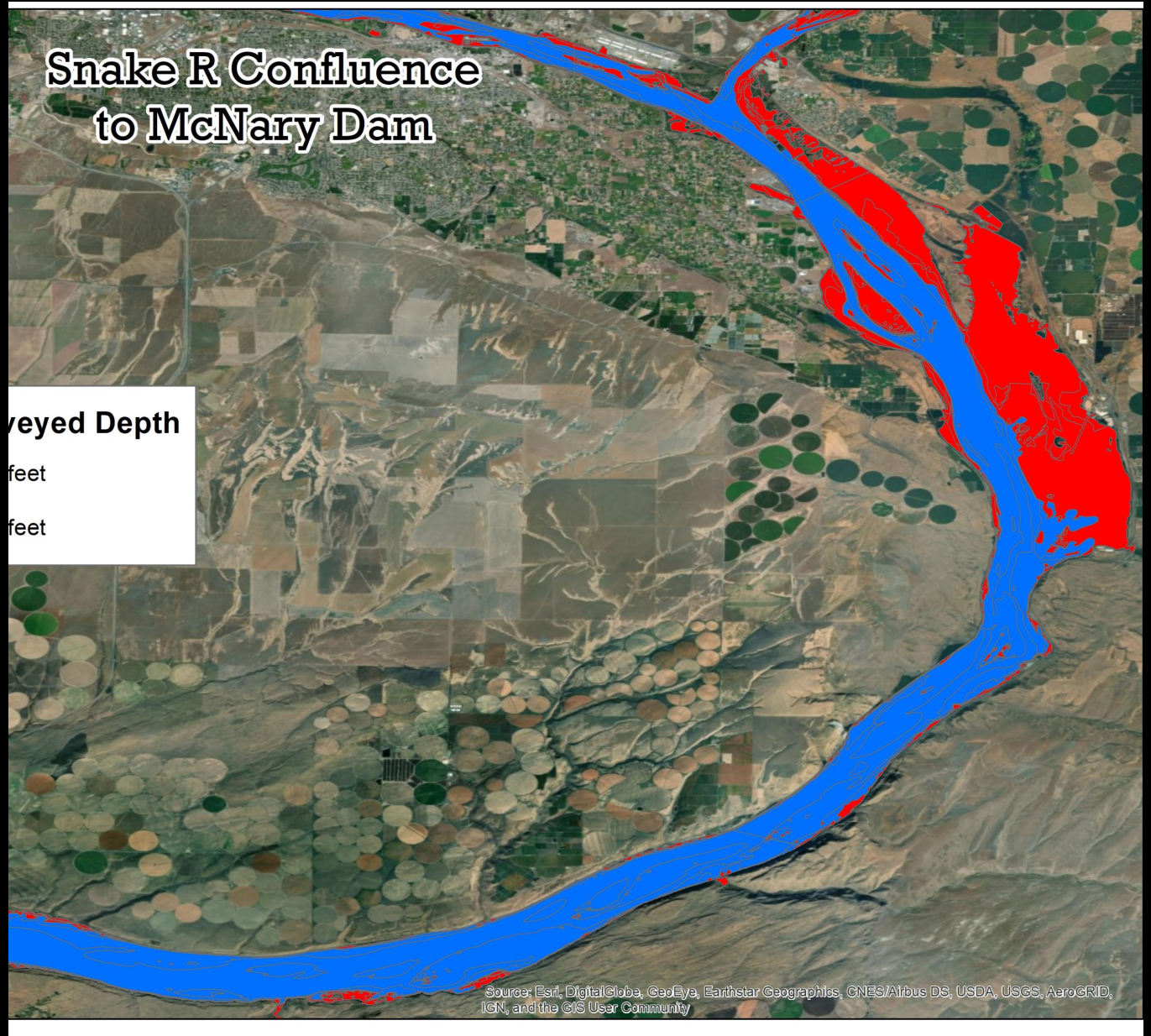
- Tremendous growth potential in clear waters of Columbia River
- Averages 3-5', but can reach nearly 20'
- Open growth habit makes excellent cover for predatory fish (i.e. NP)
- Easily moved downstream by river currents and breakage of stems and root fragments
- Can flourish in still or moving water
- Control efforts must deal with river currents, stem and root breakage and sensitive fish species



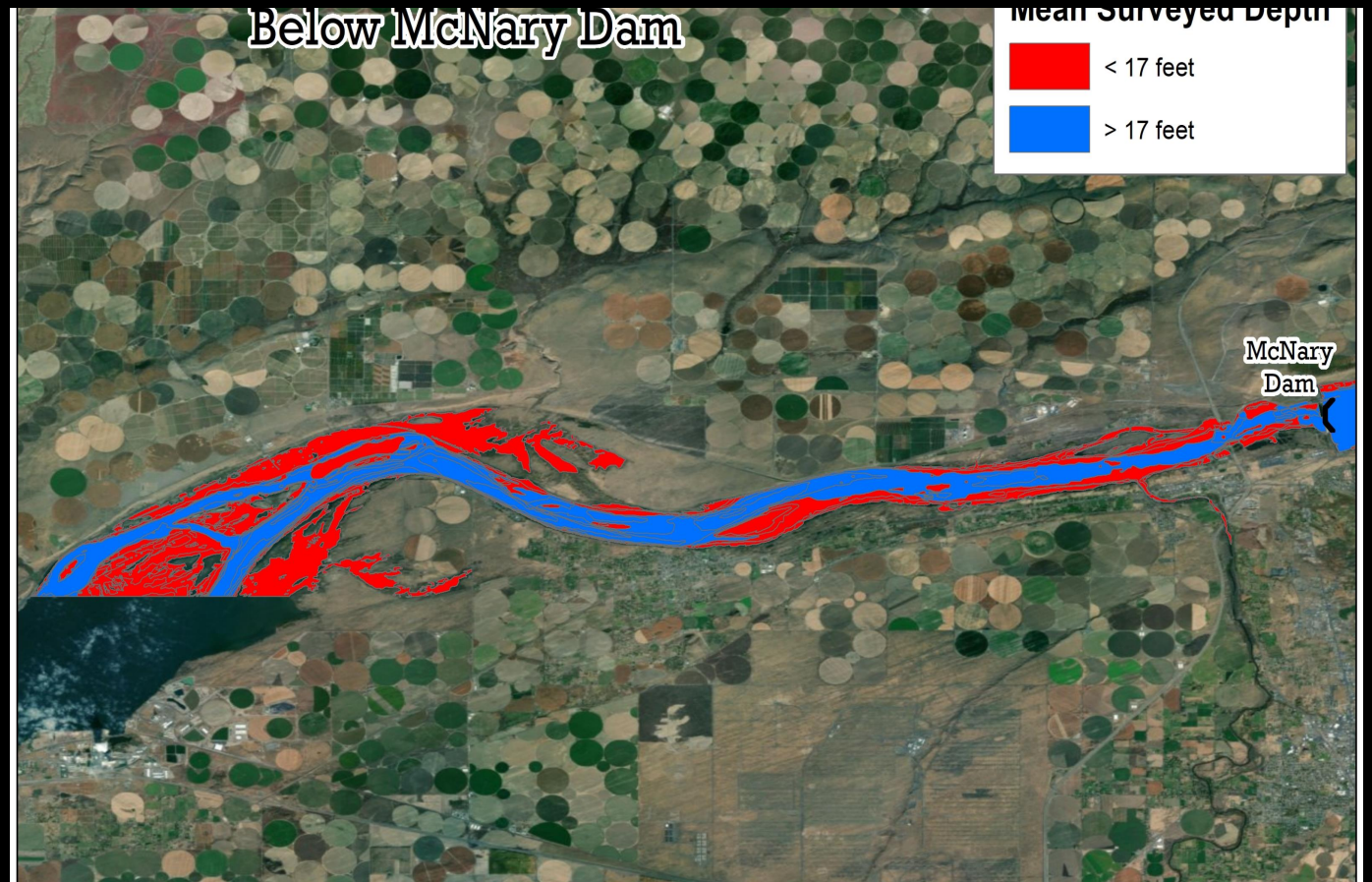
Potential
Flowering
Rush Habitat
<48% and
>52%



Potential
Flowering
Rush
Habitat
< 17' 36%
and >17'
64%



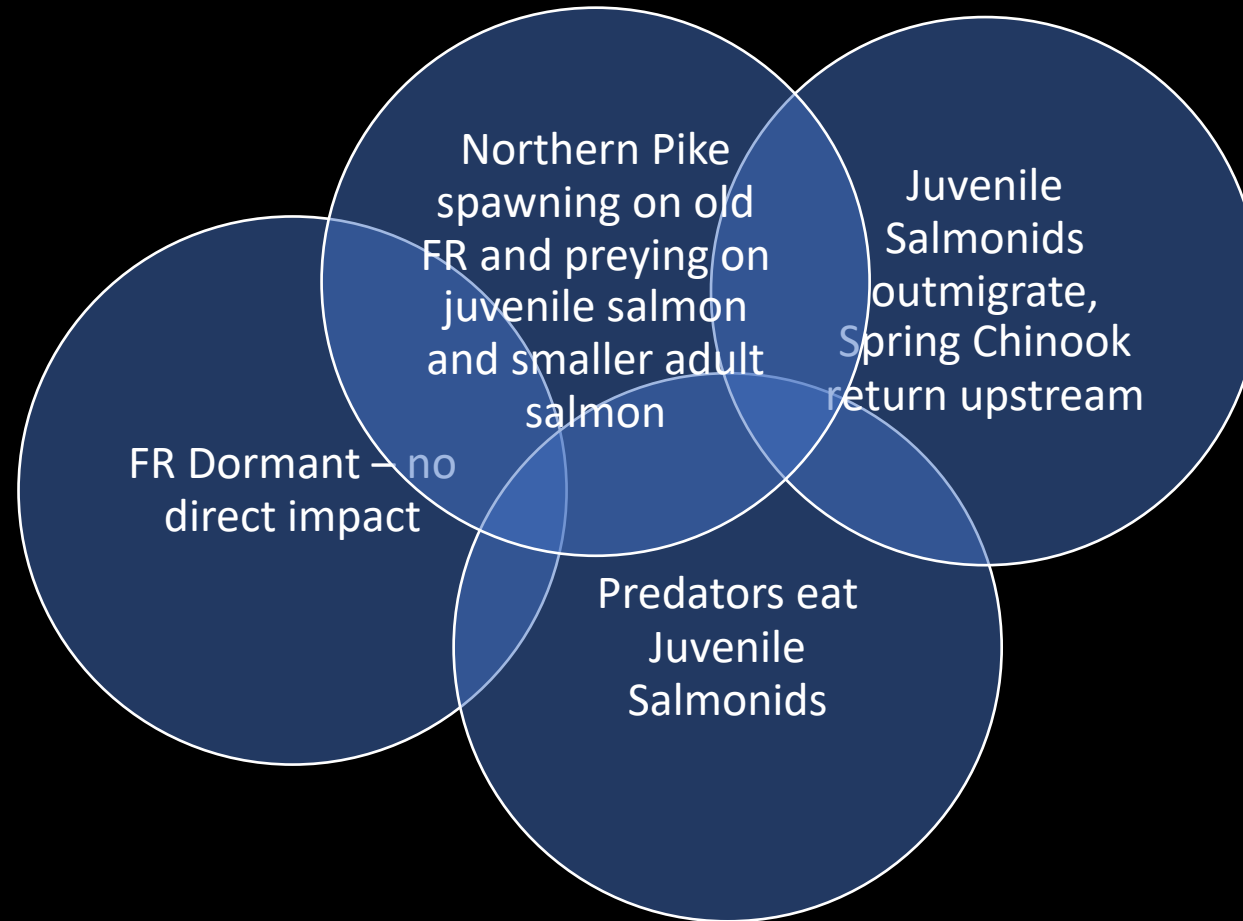
Potential
Flowering
Rush Habitat
< 17' 56%
and >17'
44%



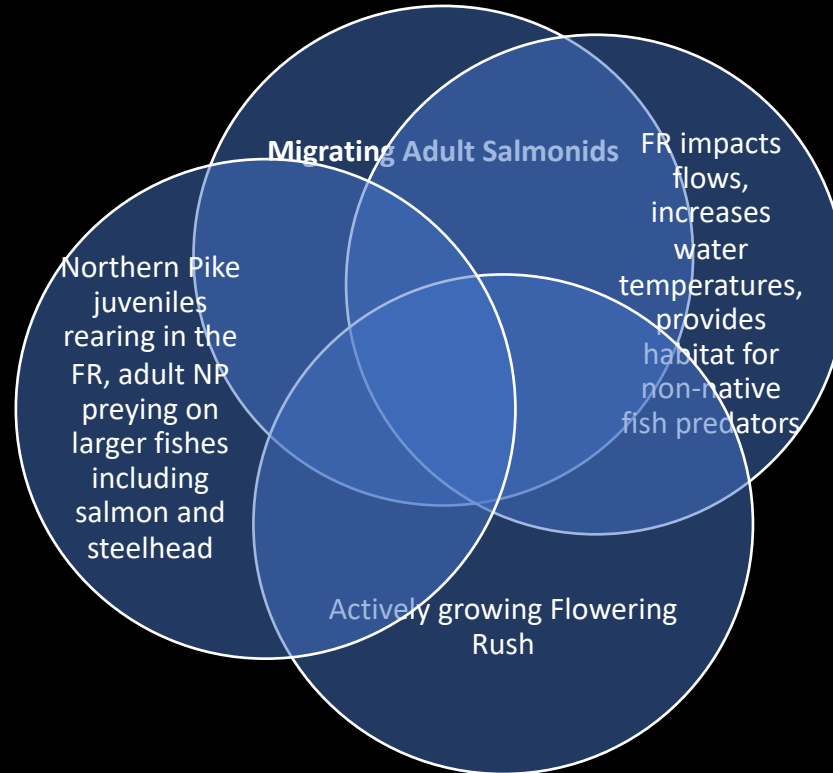
Potential Northern Pike Areas



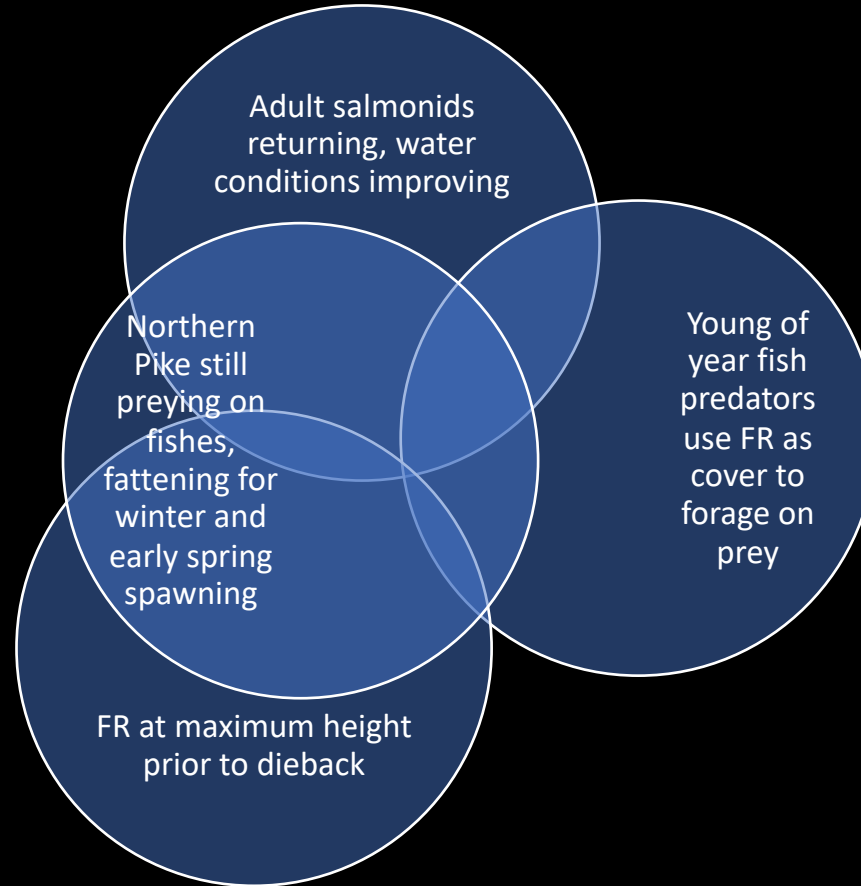
Spring Conditions



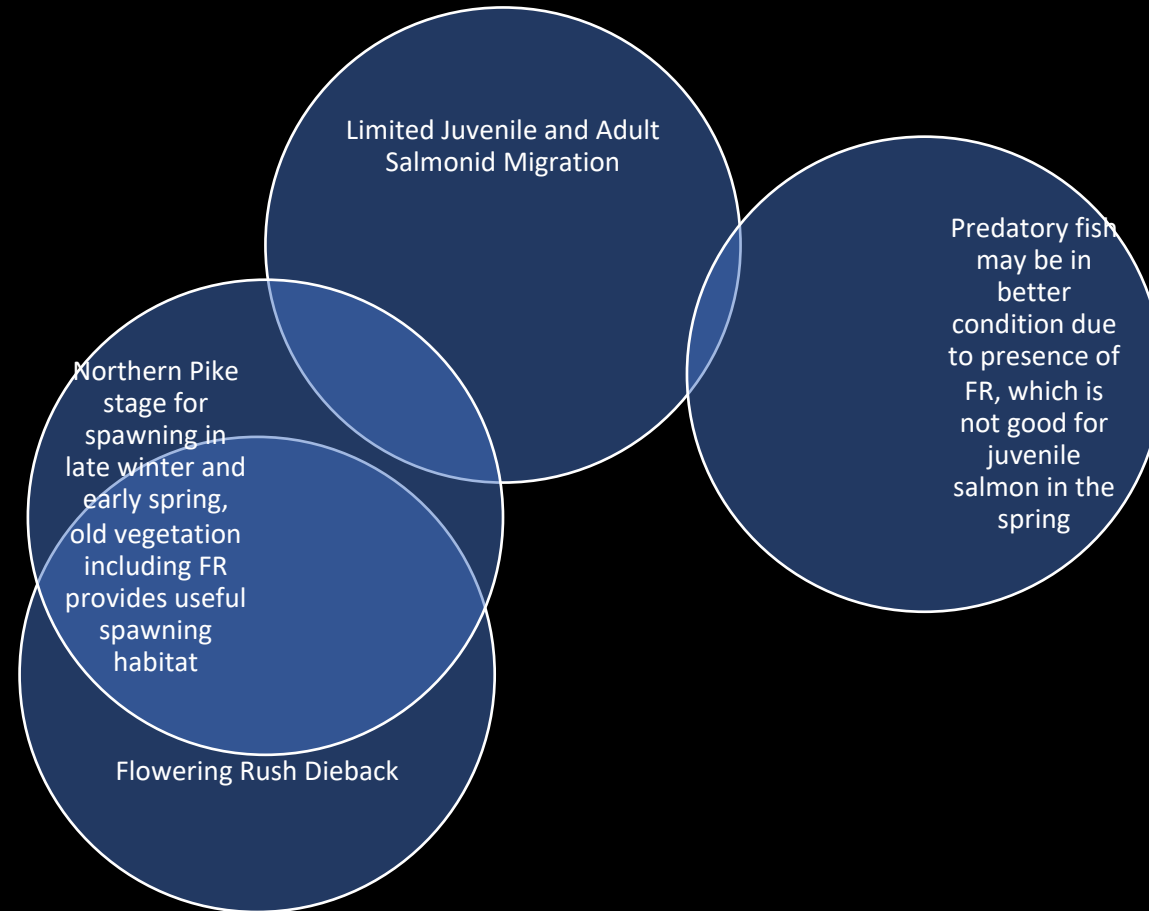
Summer Conditions



Fall Conditions



Winter Conditions



Conclusions

- Northern pike are present in Lake Roosevelt, flowering rush is present in the lower Yakima River and scattered location in McNary and John Day Reservoirs
- Neither species is controlled and are like expanding their range
- Data for both species strongly suggest significant potential to colonize substantial acreage of both McNary and John Day reservoirs
- Should we be concerned for impacts to salmon, steelhead and other native species?
- YES!

Questions

