

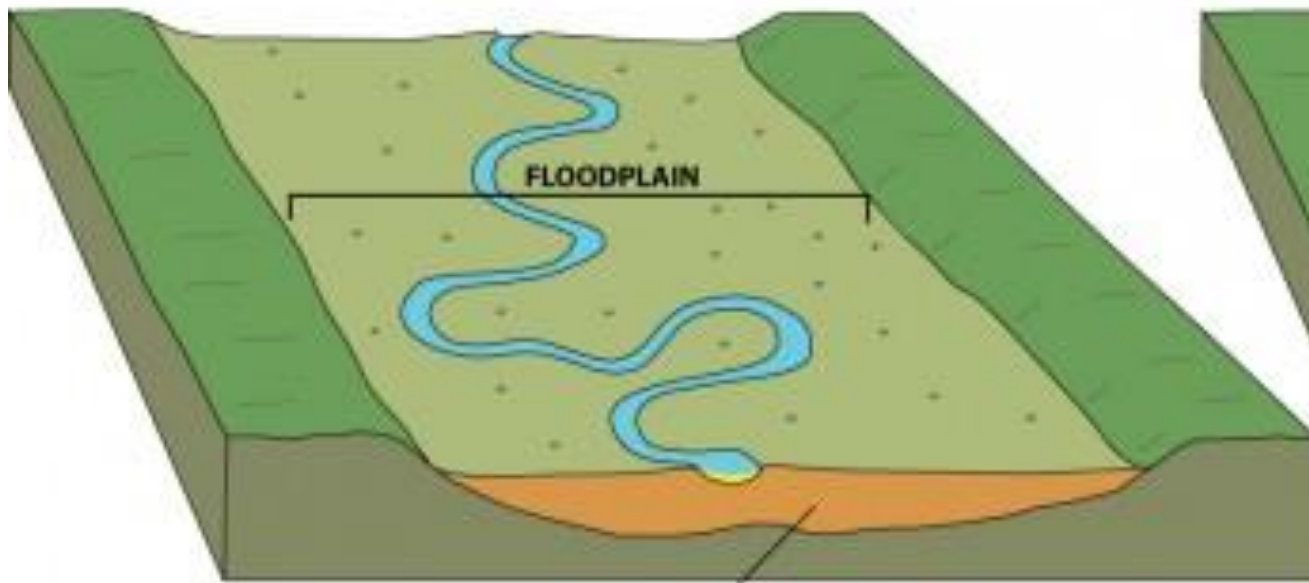
An underwater photograph of salmon swimming in clear blue water. A person's legs and feet are visible in the background, suggesting a diver or fisherman. The image is partially obscured by a dark, semi-transparent overlay on the right side, which contains the title and author information. The overall color palette is dominated by blues, greens, and greys.

Urban Floodplains: Reconnecting Habitats

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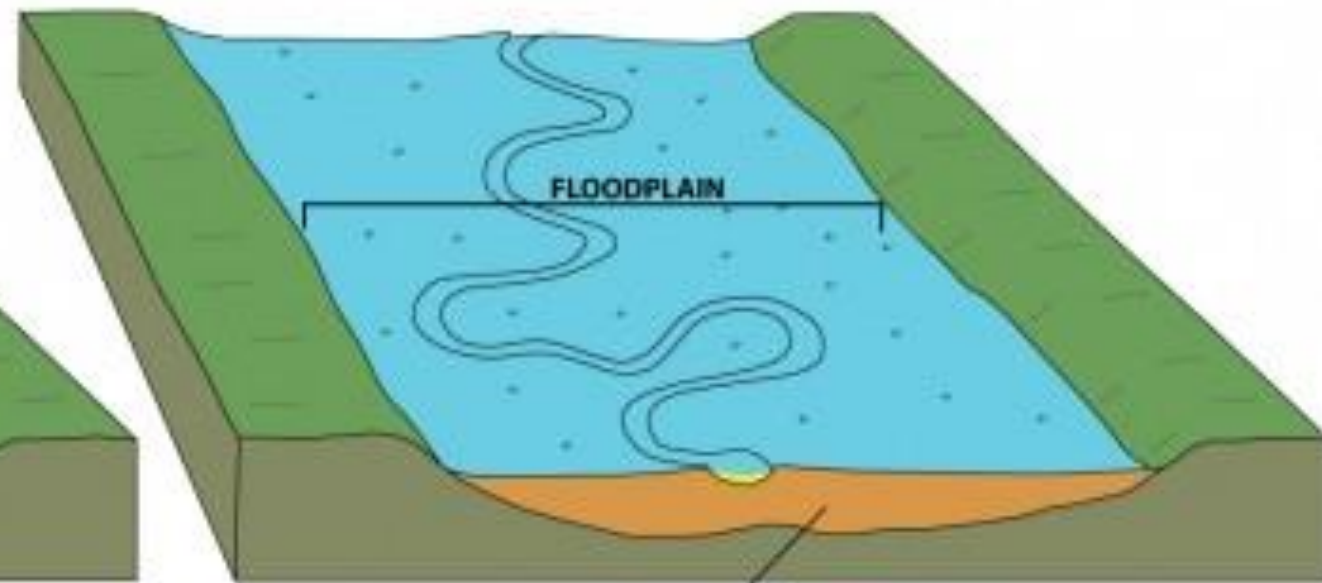
What is a floodplain?

NORMAL CONDITIONS



older river channel and floodplain sediments

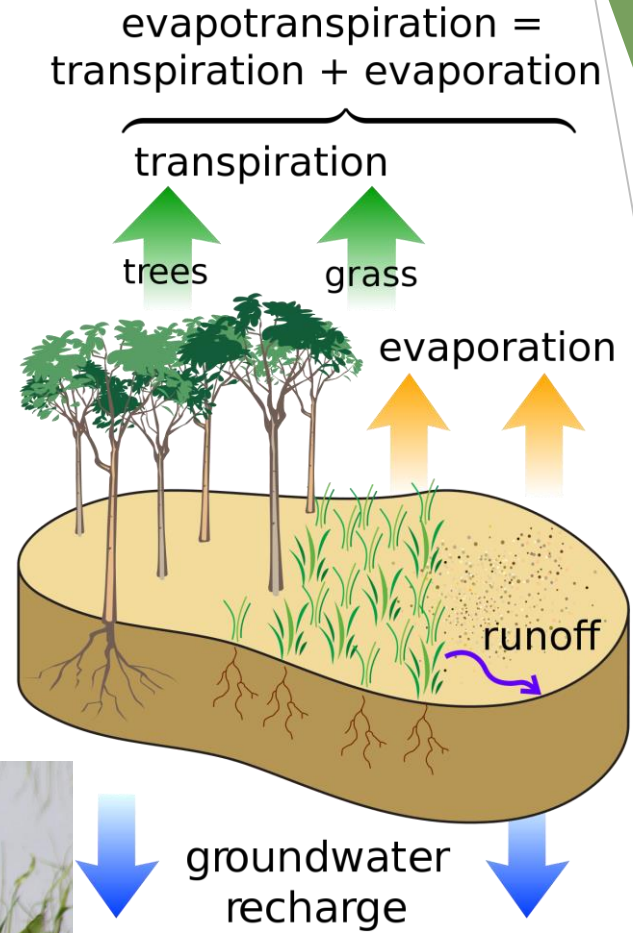
FLOOD CONDITIONS



older river channel and floodplain sediments

Why care about floodplains?

- ▶ Clean Water
- ▶ Habitat →
- ▶ Flood Storage
- ▶ Groundwater Recharge →
- ▶ Food
- ▶ Transportation
- ▶ Culture →



Floodplain Wildlife

- ▶ Over 200 native plant species
- ▶ 100's of invertebrates (snails, dragonflies, beetles, etc.)
- ▶ Over 100 bird species, including more than 30 species of ducks, geese and swans
 - ▶ Recent counts have shown use by more than 300,000 wintering waterfowl in upper Willamette Valley, including seven subspecies of Canada geese in winter
- ▶ At least 25 butterfly species
- ▶ 35 species of fish and shellfish



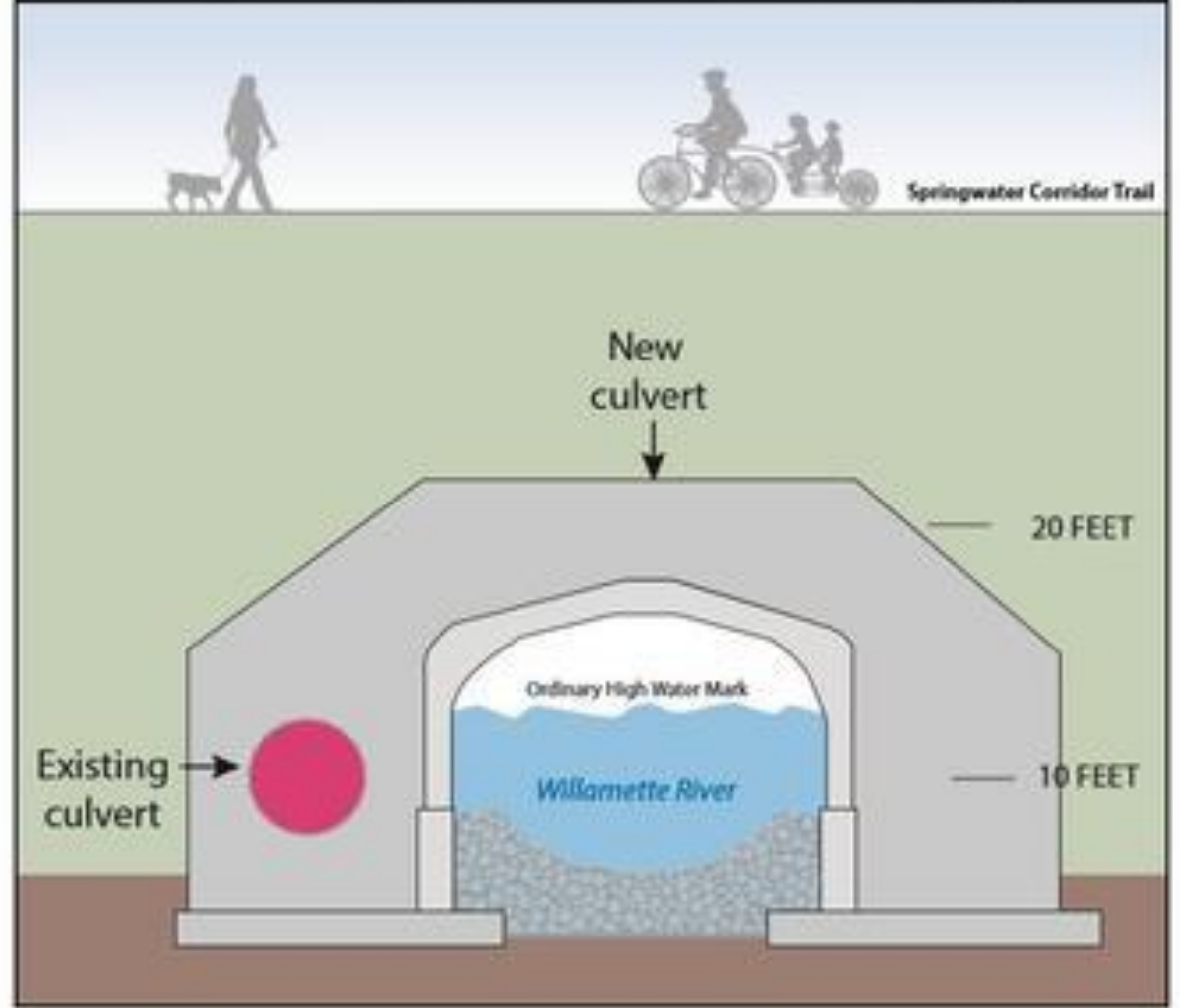
- ▶ Dozens of rare plant communities and sensitive, threatened and endangered species ranging from coho salmon and spotted frogs to the western pond turtle, upland sandpiper and sandhill crane

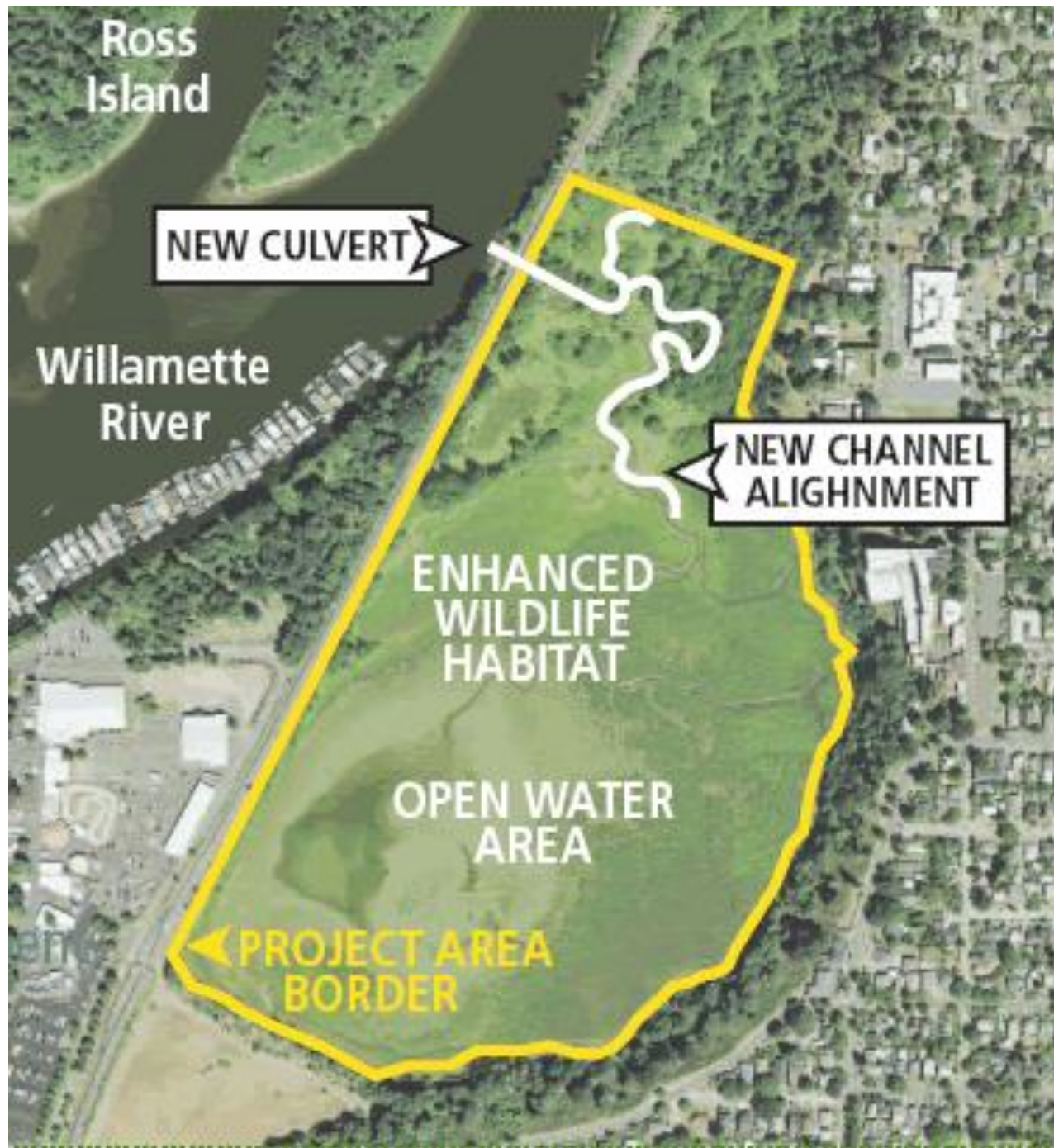


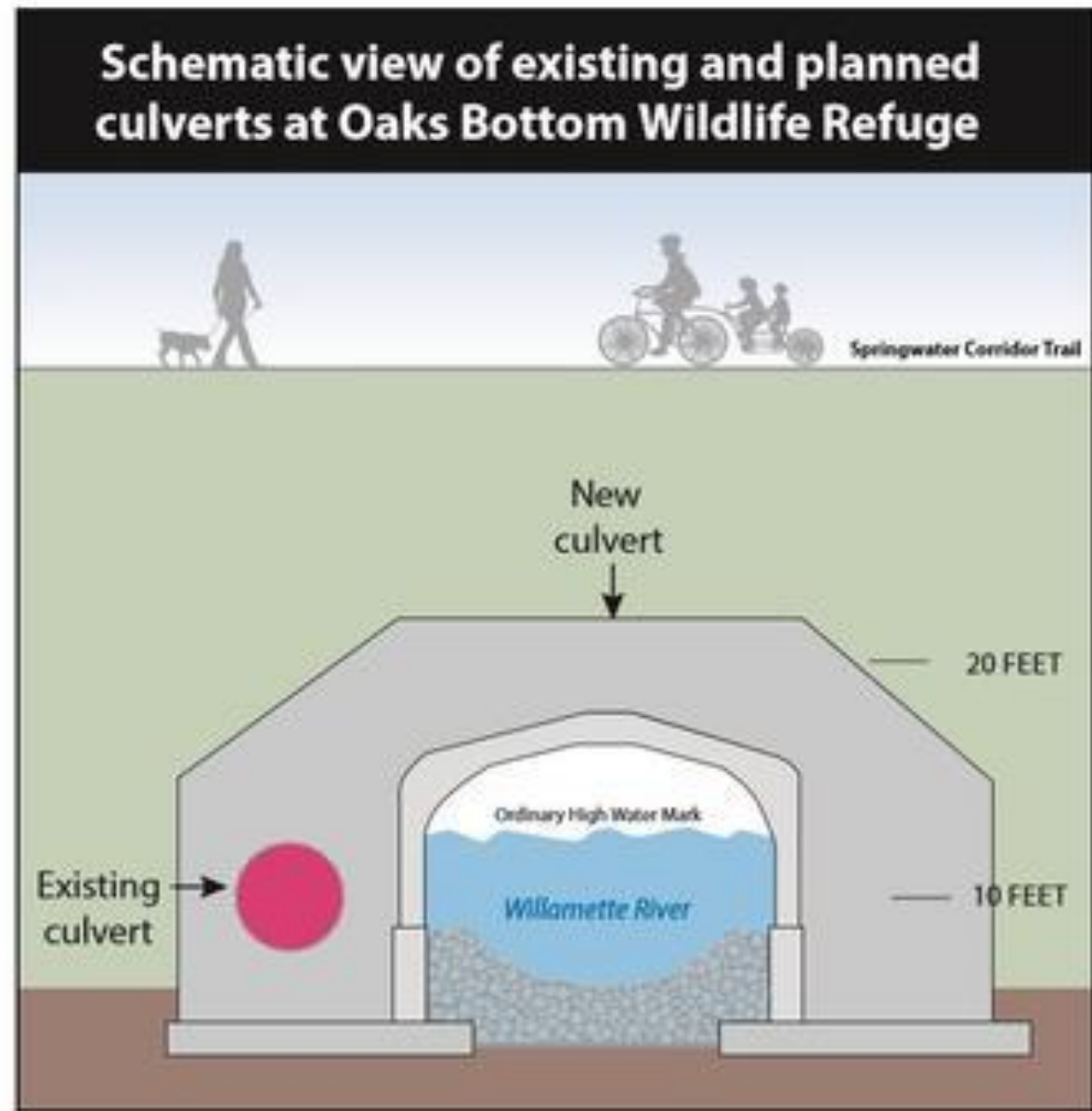




Schematic view of existing and planned culverts at Oaks Bottom Wildlife Refuge









- ▶ <https://youtu.be/Ys7Qf2OwPX0>
- ▶ <https://www.youtube.com/watch?v=pKL>



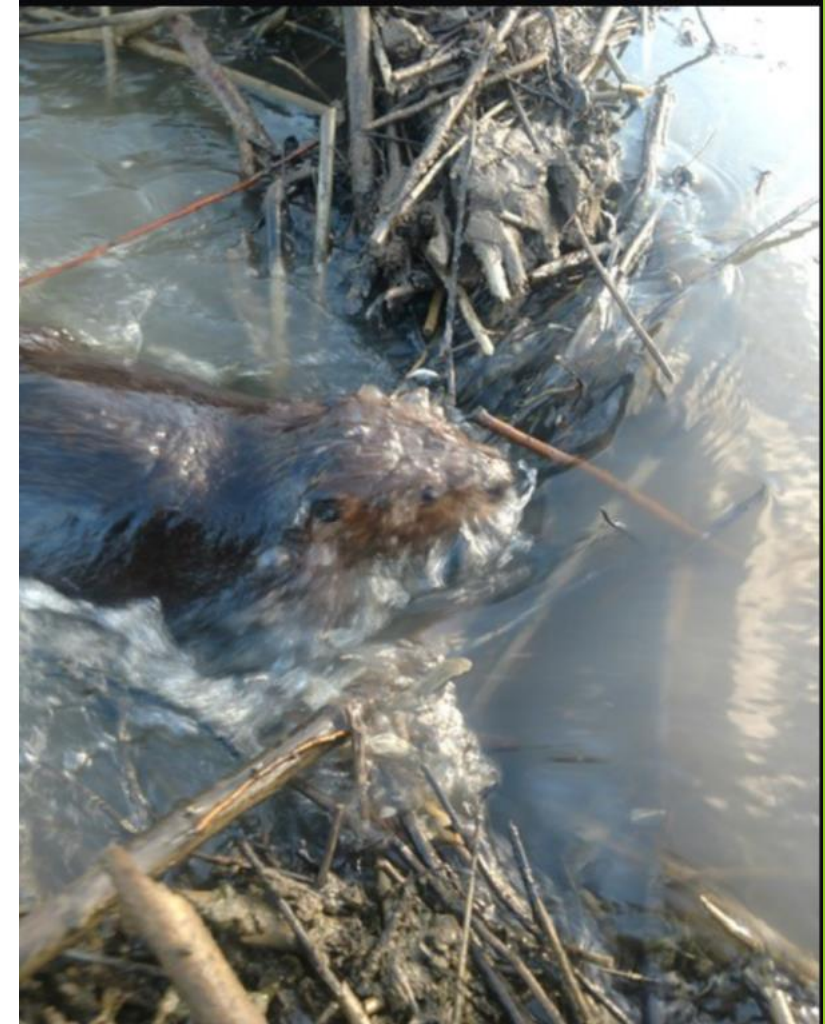
Desired Impacts and Potential Issues

▶ Project Goals:

- ▶ Enhance 75 acres of wetland habitat
- ▶ Make it possible for fish to pass between the Willamette River and the wetland refuge
- ▶ Improve the tidal flow of the Willamette River in and out of the refuge
- ▶ Excavating tidal slough channels and improving wetland habitats so young fish, including species listed as threatened or endangered, can use the calmer waters of the wetland to rest and find food
- ▶ Removing invasive vegetation, such as purple loosestrife, and revegetating with native species

▶ Potential Issues

- ▶ Short term wildlife impacts: beaver, river otter, freshwater mussels
- ▶ Long term impacts: water levels, Audubon concerns, invasive vegetation
- ▶ <https://www.flickr.com/photos/besportland/28568587837/in/album-72157668567937697/>





Your Role

- ▶ Waterfowl Survey - before and after
- ▶ **Research Question** - How will a more natural hydrologic/flooding regime affect how waterfowl at Oaks Bottom use the reservoir?
 - ▶ Changes to diversity and/or abundance?

