



River Island Restoration Project

Defining challenges and
opportunities for restoration



March 13, 2014



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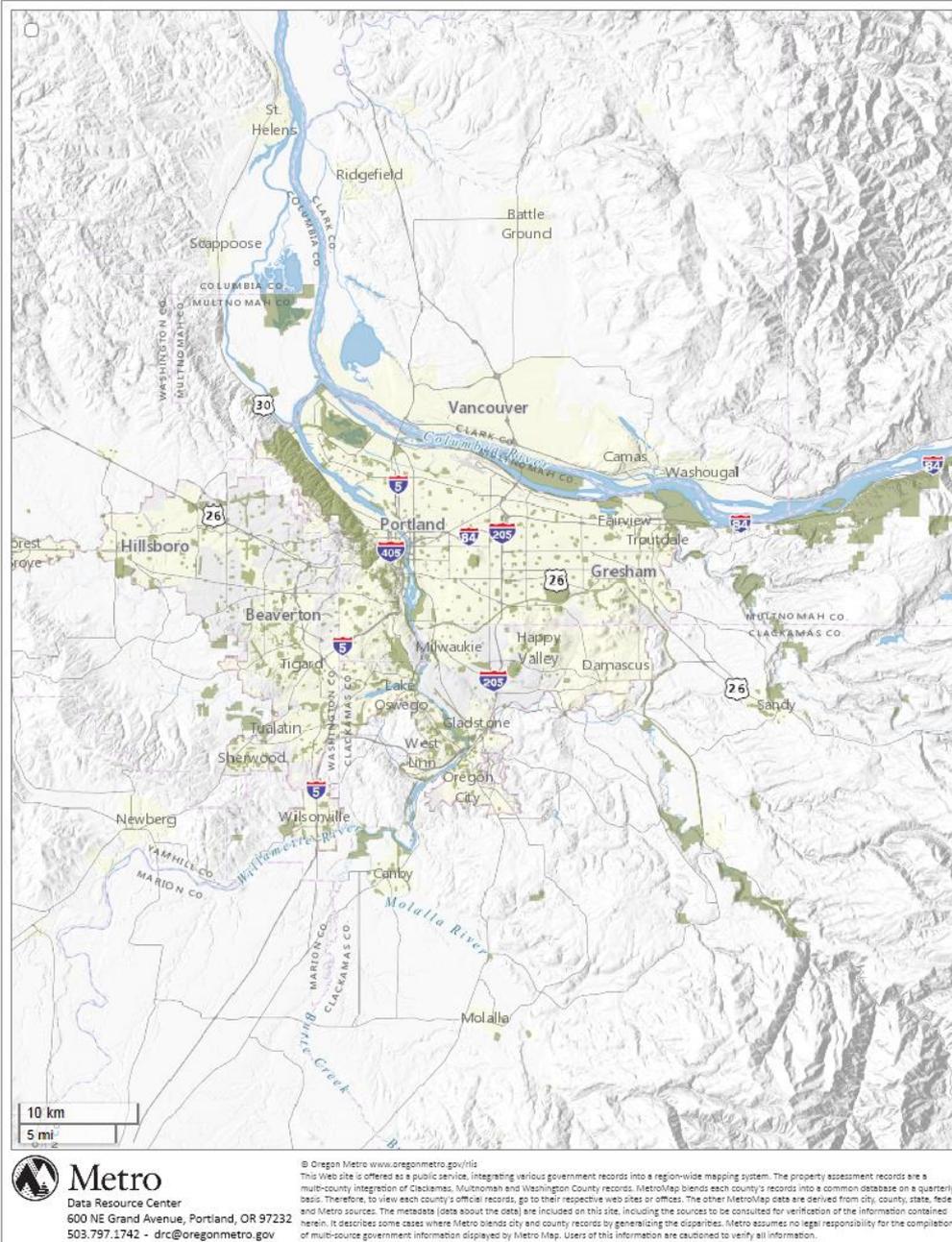
Welcome

Agenda

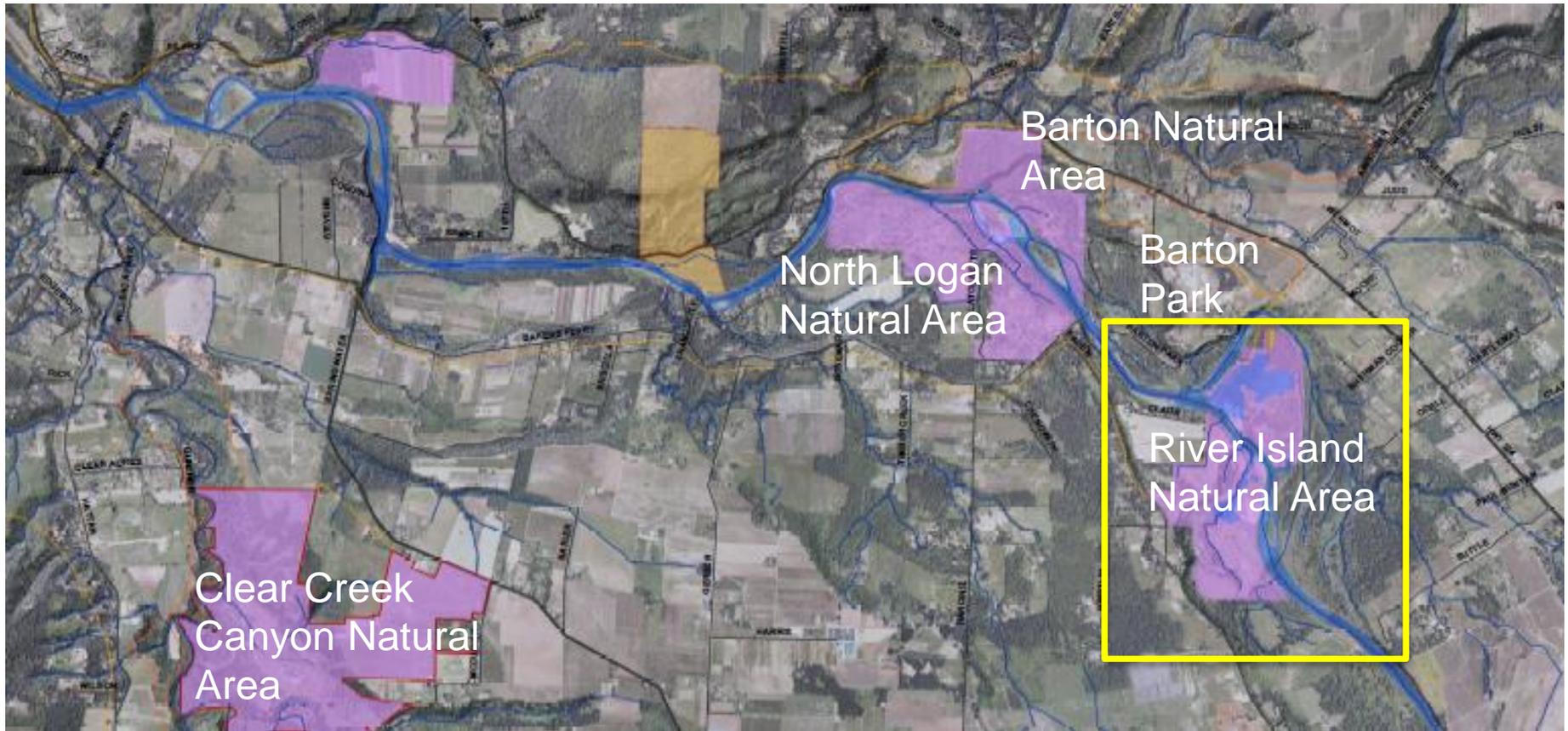
- Welcome & Introductions
- Project Background
- River Island Overview
- Questions & Answers
- Next steps and Timeline

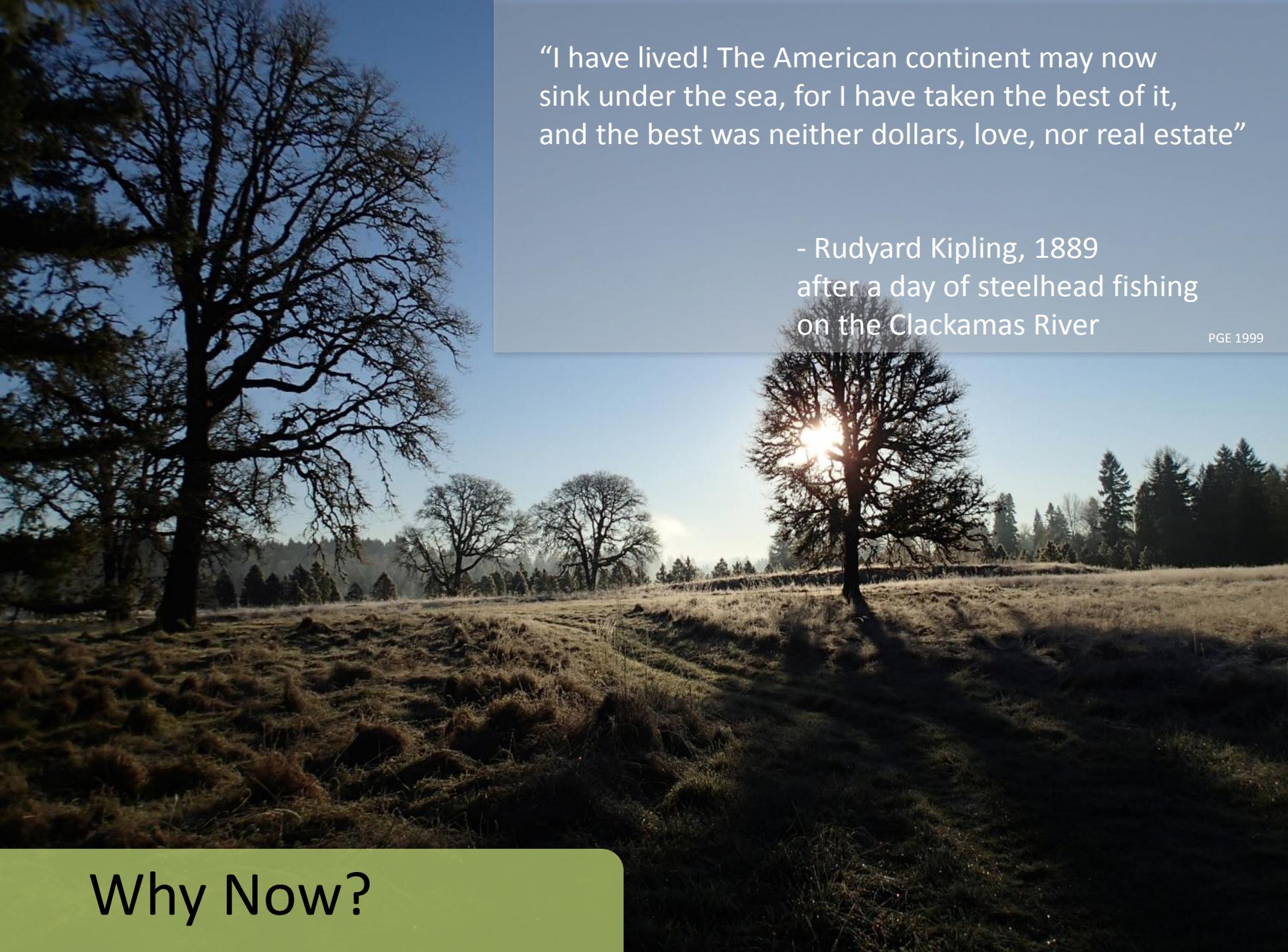
Restoration & Conservation Planning Context: Metro's Natural Areas

- Bond and levy overview
- Improve water quality and wildlife habitat



Restoration & Conservation Planning Context: Lower Clackamas



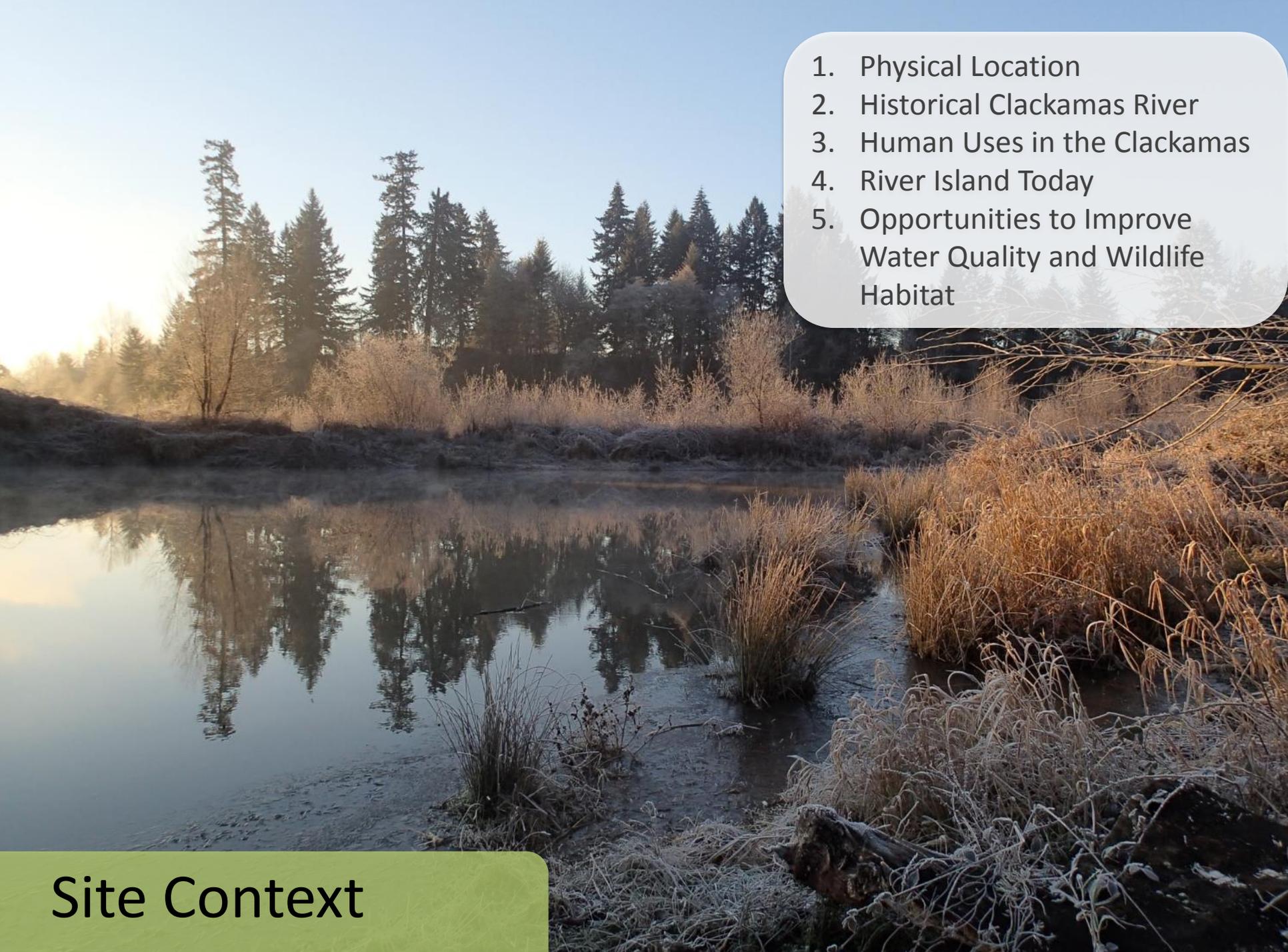


“I have lived! The American continent may now sink under the sea, for I have taken the best of it, and the best was neither dollars, love, nor real estate”

- Rudyard Kipling, 1889
after a day of steelhead fishing
on the Clackamas River

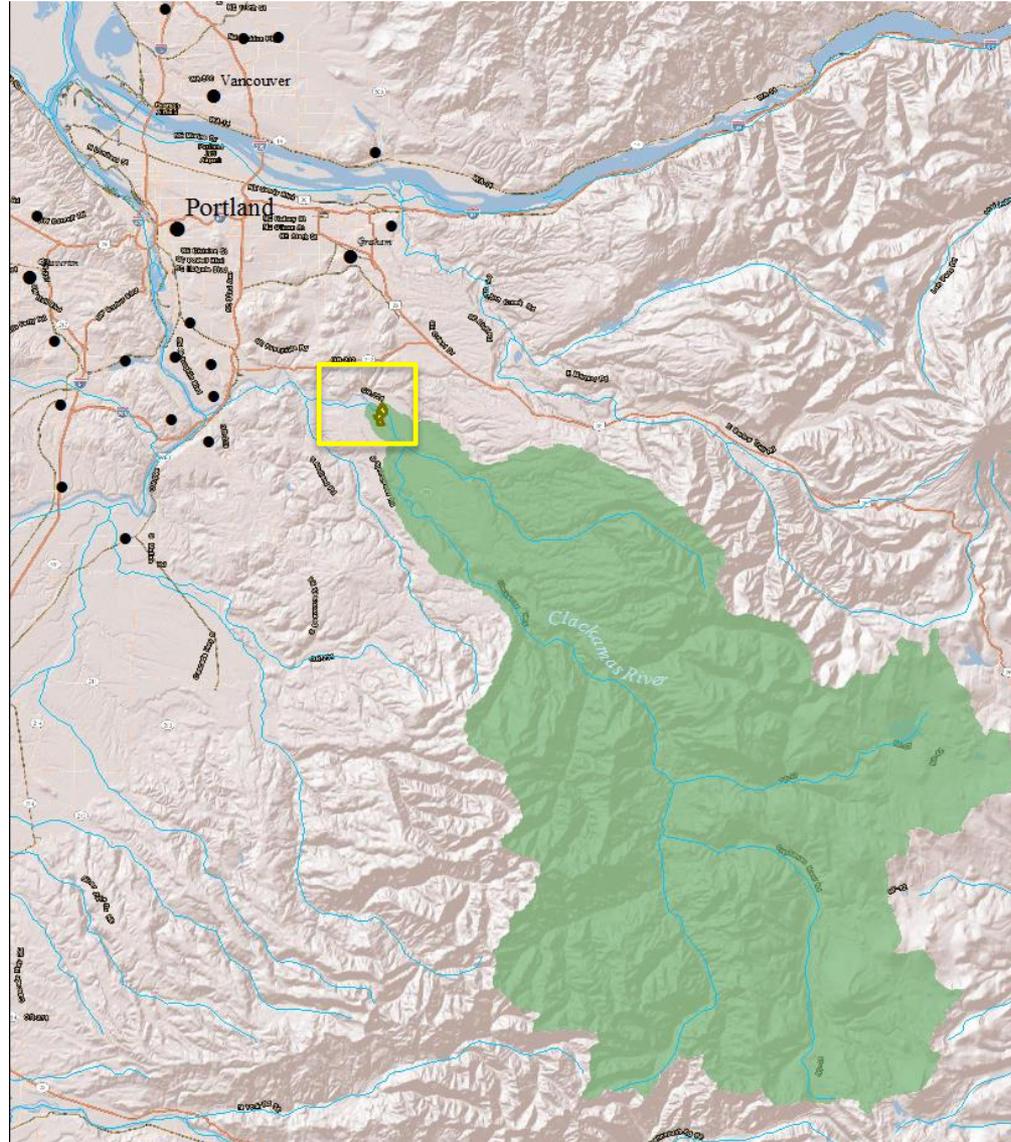
PGE 1999

Why Now?

- 
1. Physical Location
 2. Historical Clackamas River
 3. Human Uses in the Clackamas
 4. River Island Today
 5. Opportunities to Improve Water Quality and Wildlife Habitat

Site Context

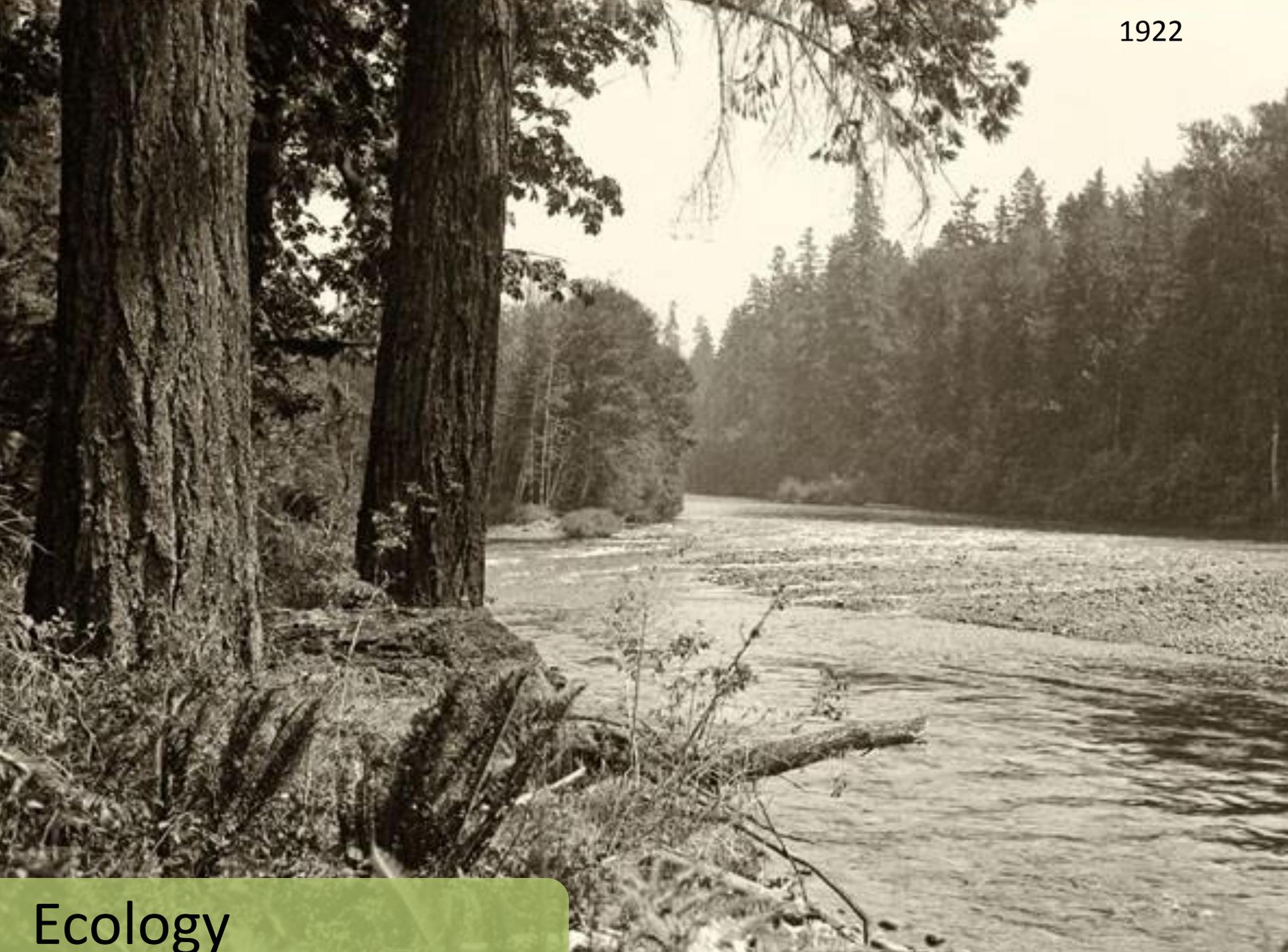
1. Physical Location



2. Historical Clackamas River

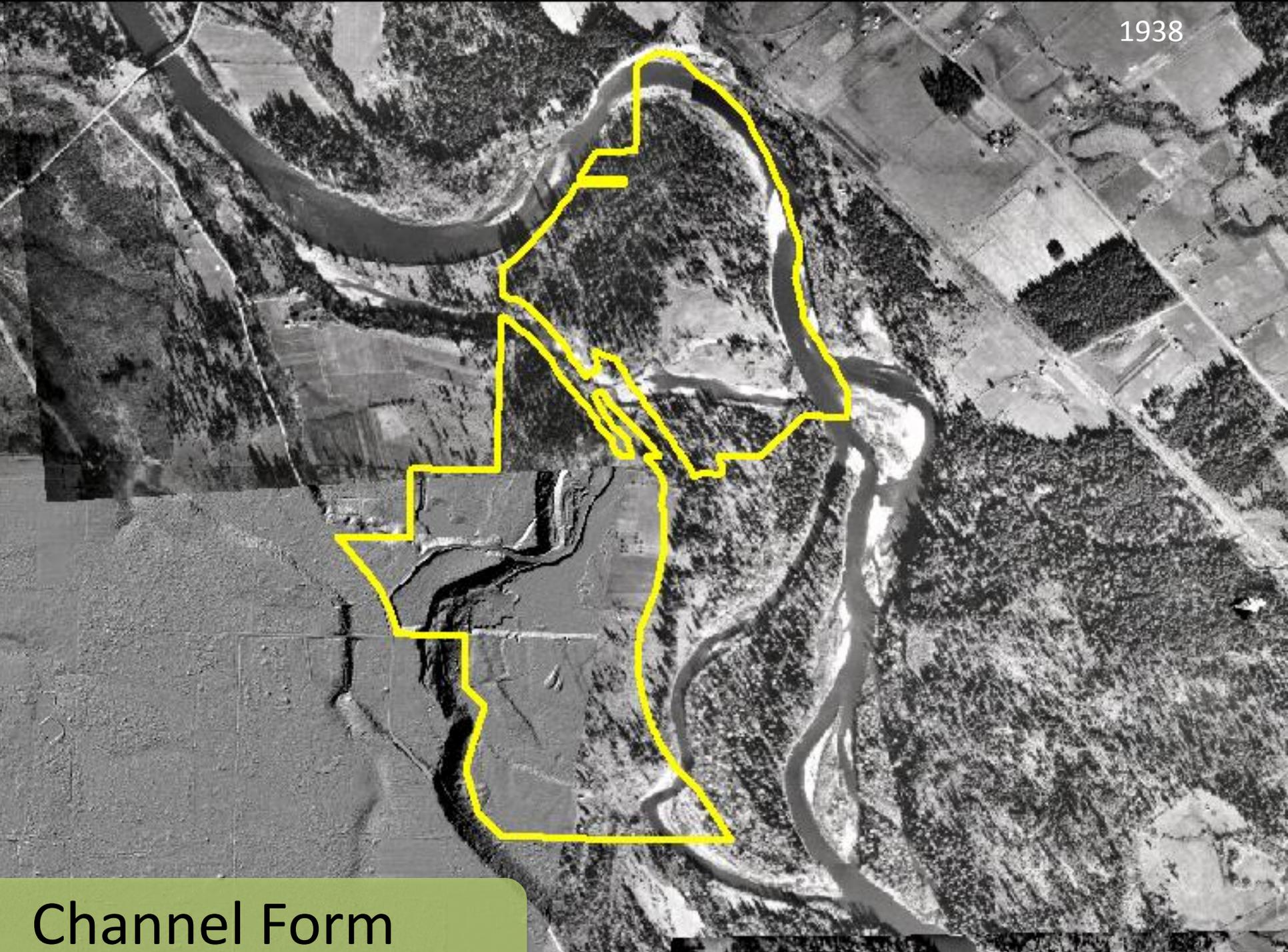


1922

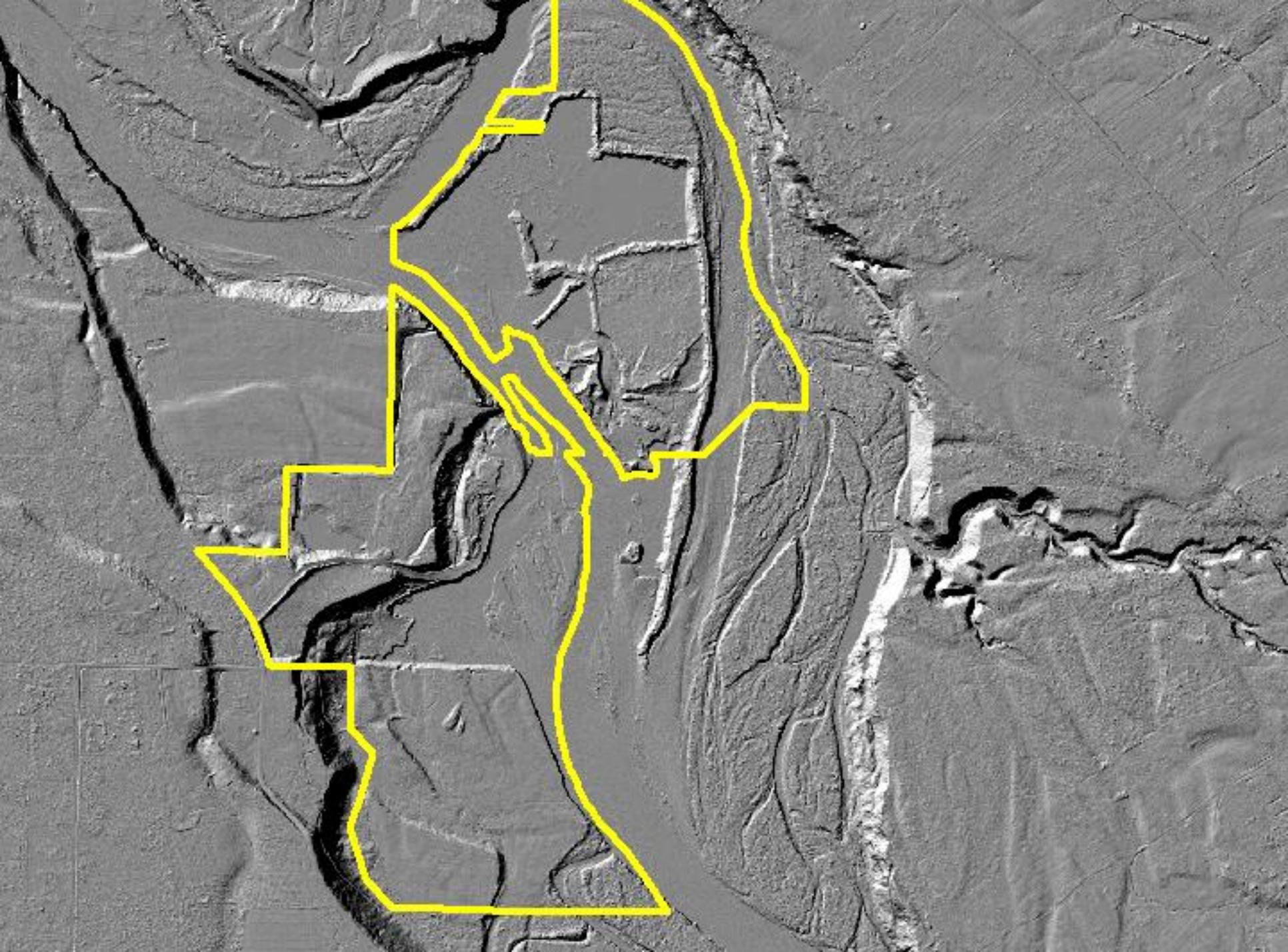


Ecology

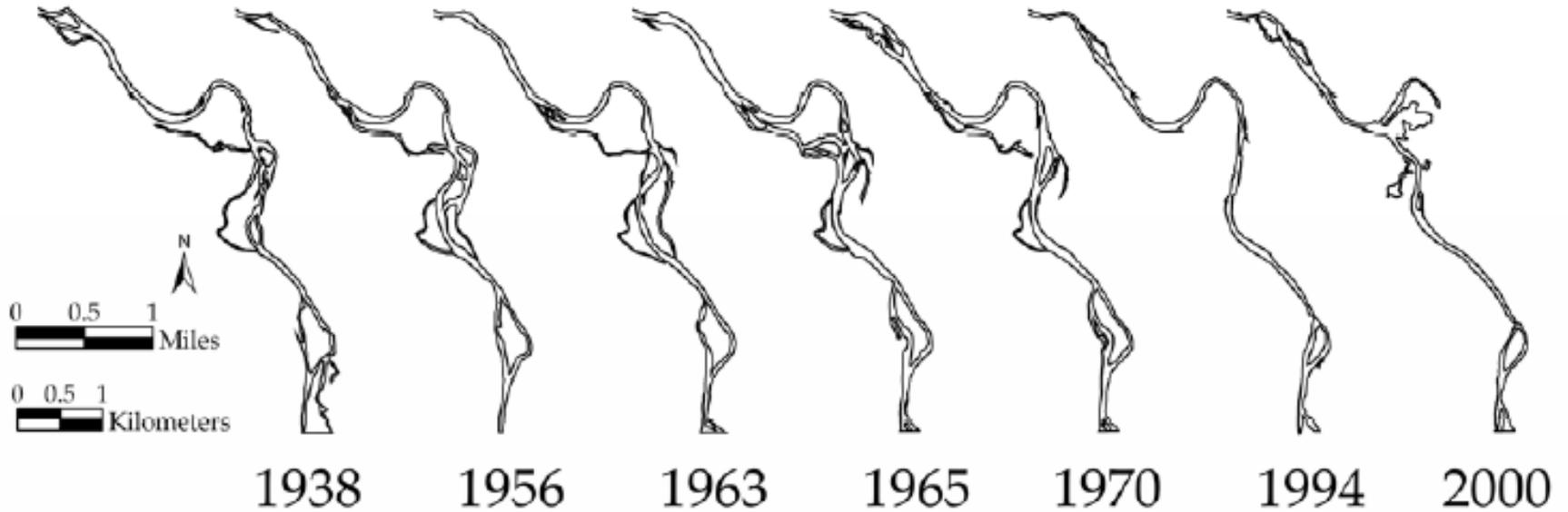
1938



Channel Form



Changes in Channel Form



(from Wampler 2006)

"I have been on all the rivers and tributaries of the Columbia from the Cascades to Priest's Rapids, to which the Chinook salmon go . . . and I do not hesitate to say that the Clackamas River, with its clear, cold water, its rapids, and its long, shallow gravel beds, is the most natural and favorite region for salmon spawning."

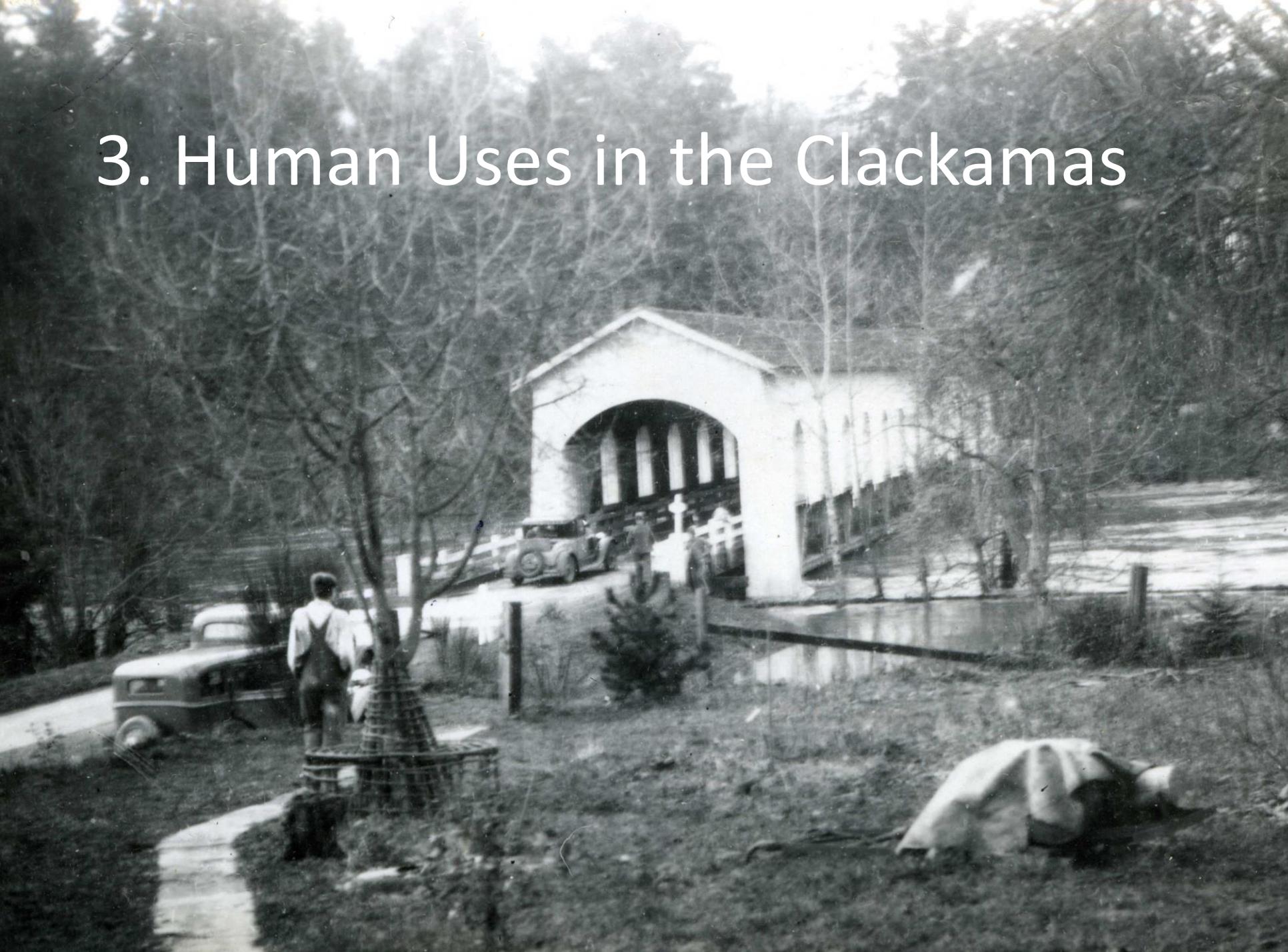
-Barin, 1885



Salmon Populations

Mouth of Clackamas River, 1937

3. Human Uses in the Clackamas





Watershed-scale Uses

Oregon City, 1923





North Cascades, 1920s



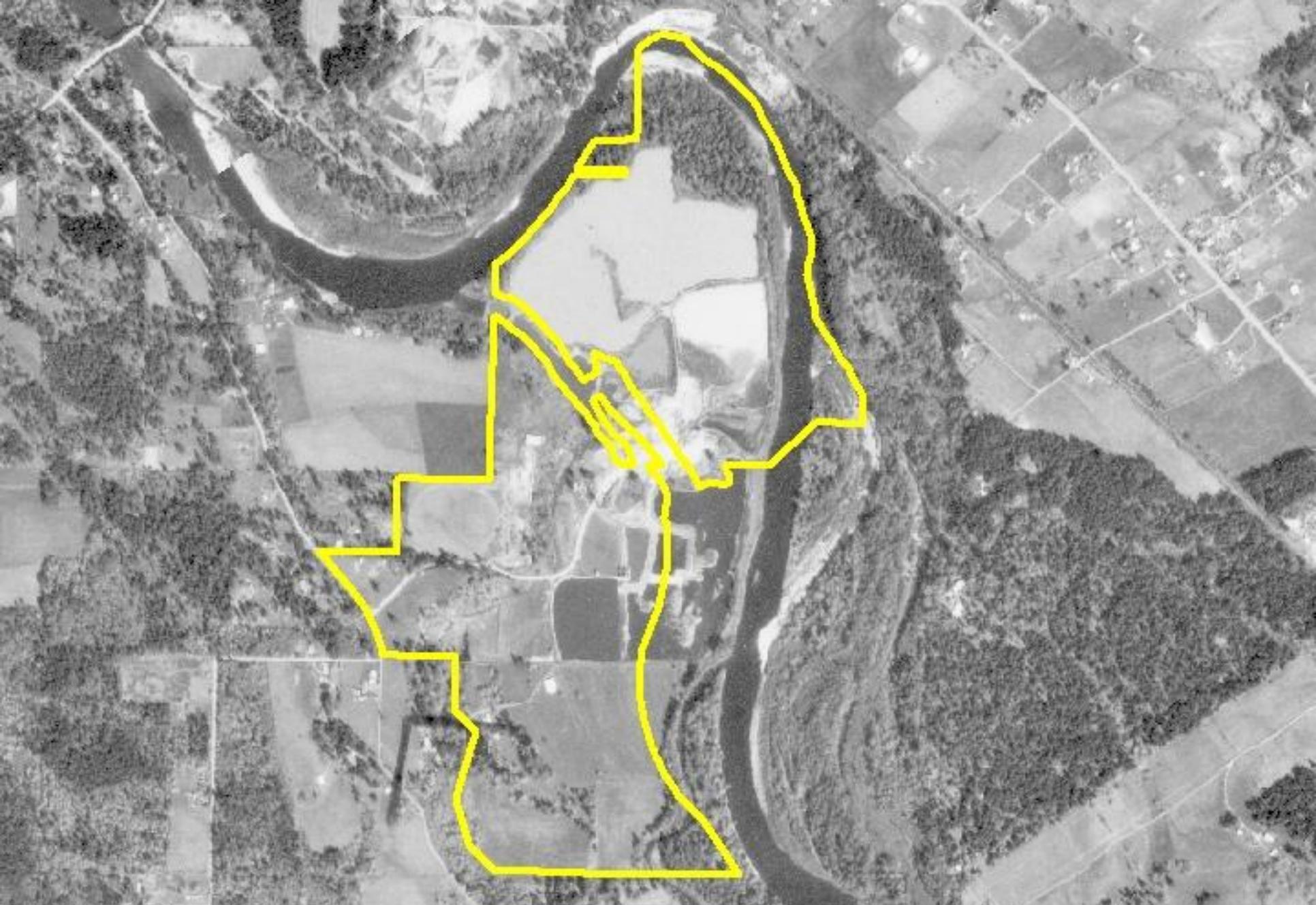


THE NEW DAM.

RIVERMILL ORE. 4



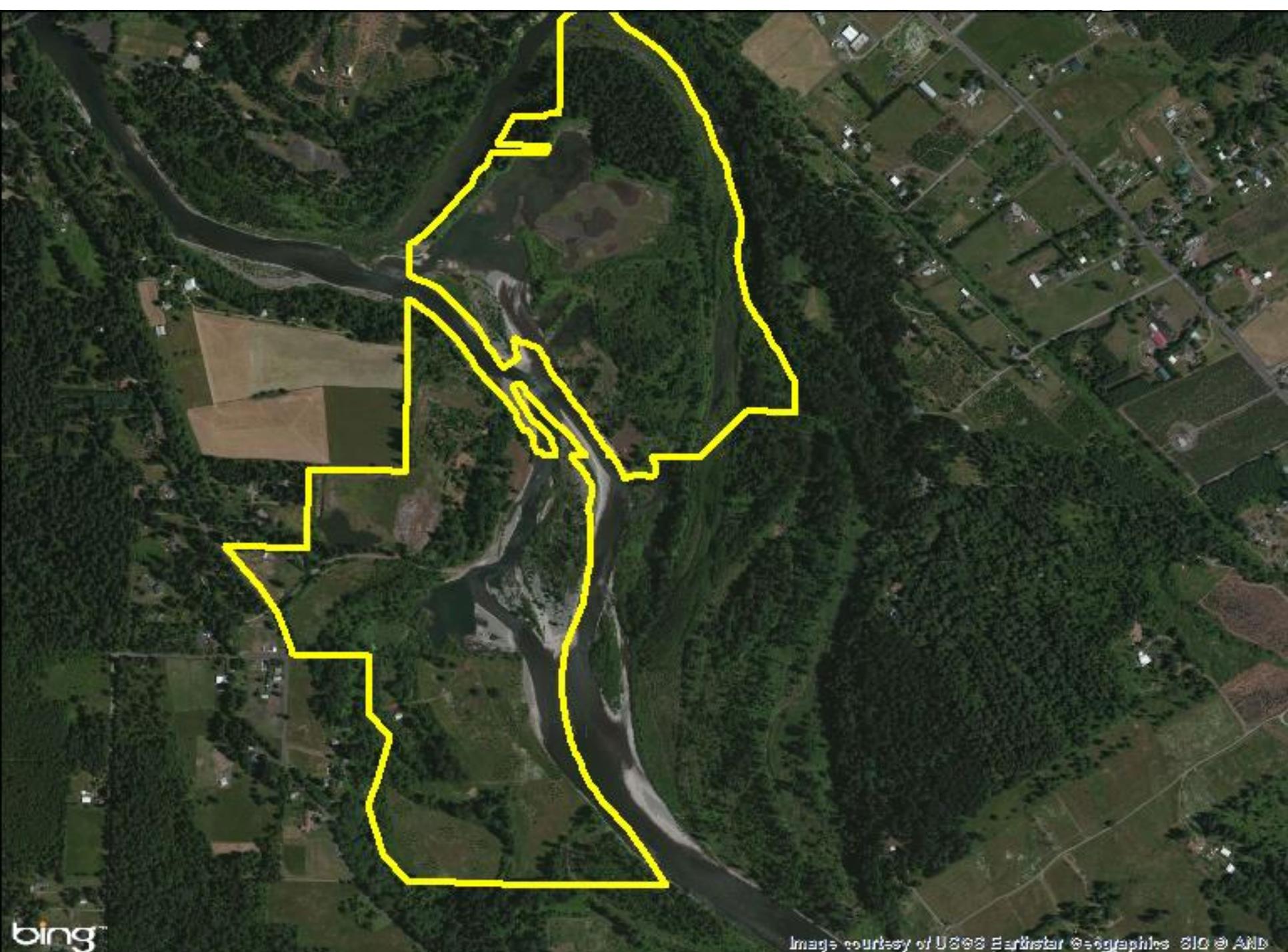
Site-Specific Uses



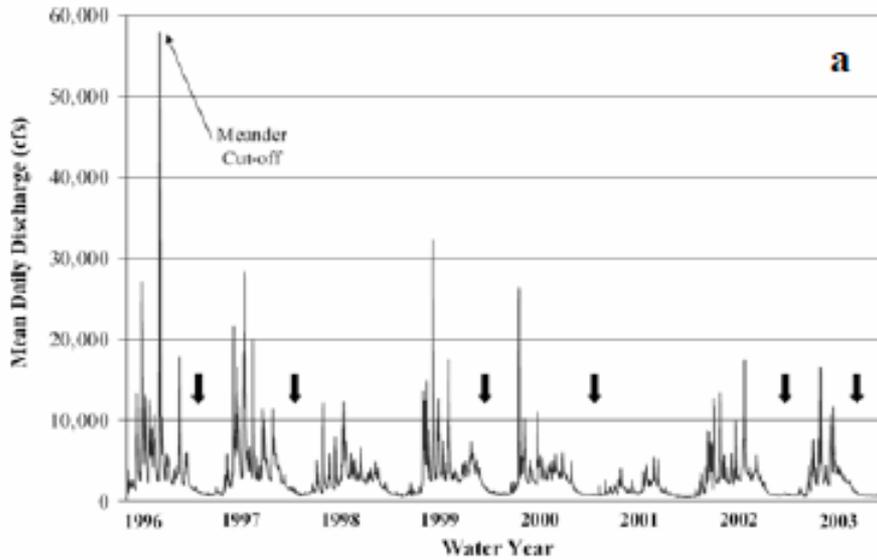
River Island gravel mining

4. River Island Today

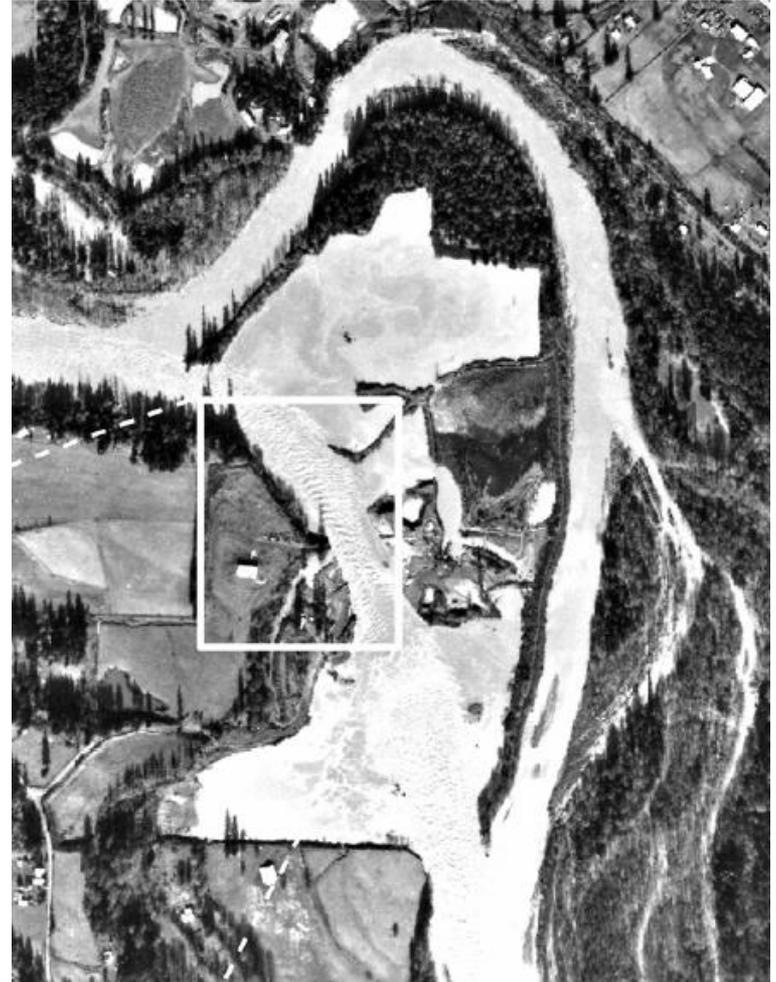


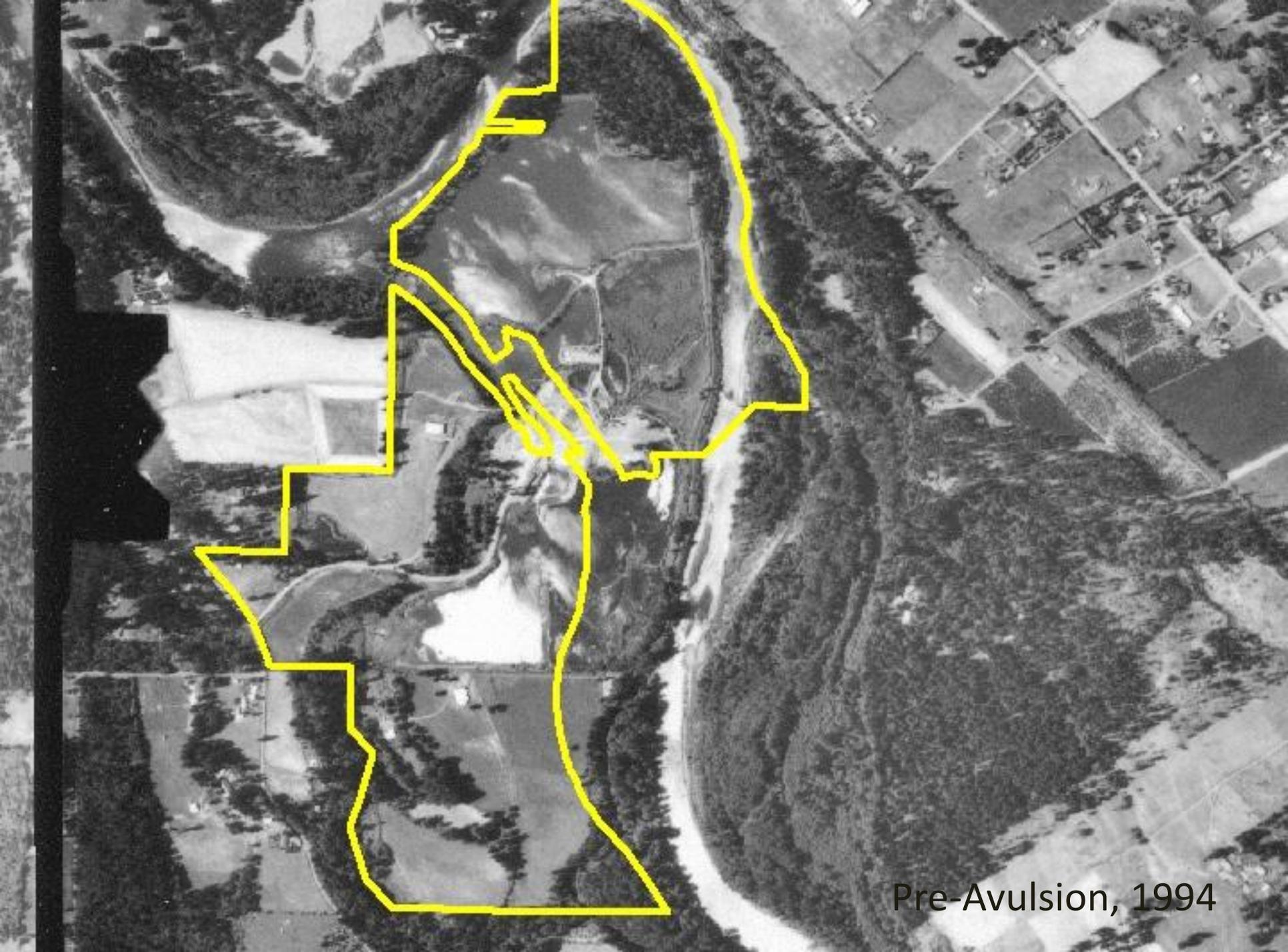


1996 Flood Event

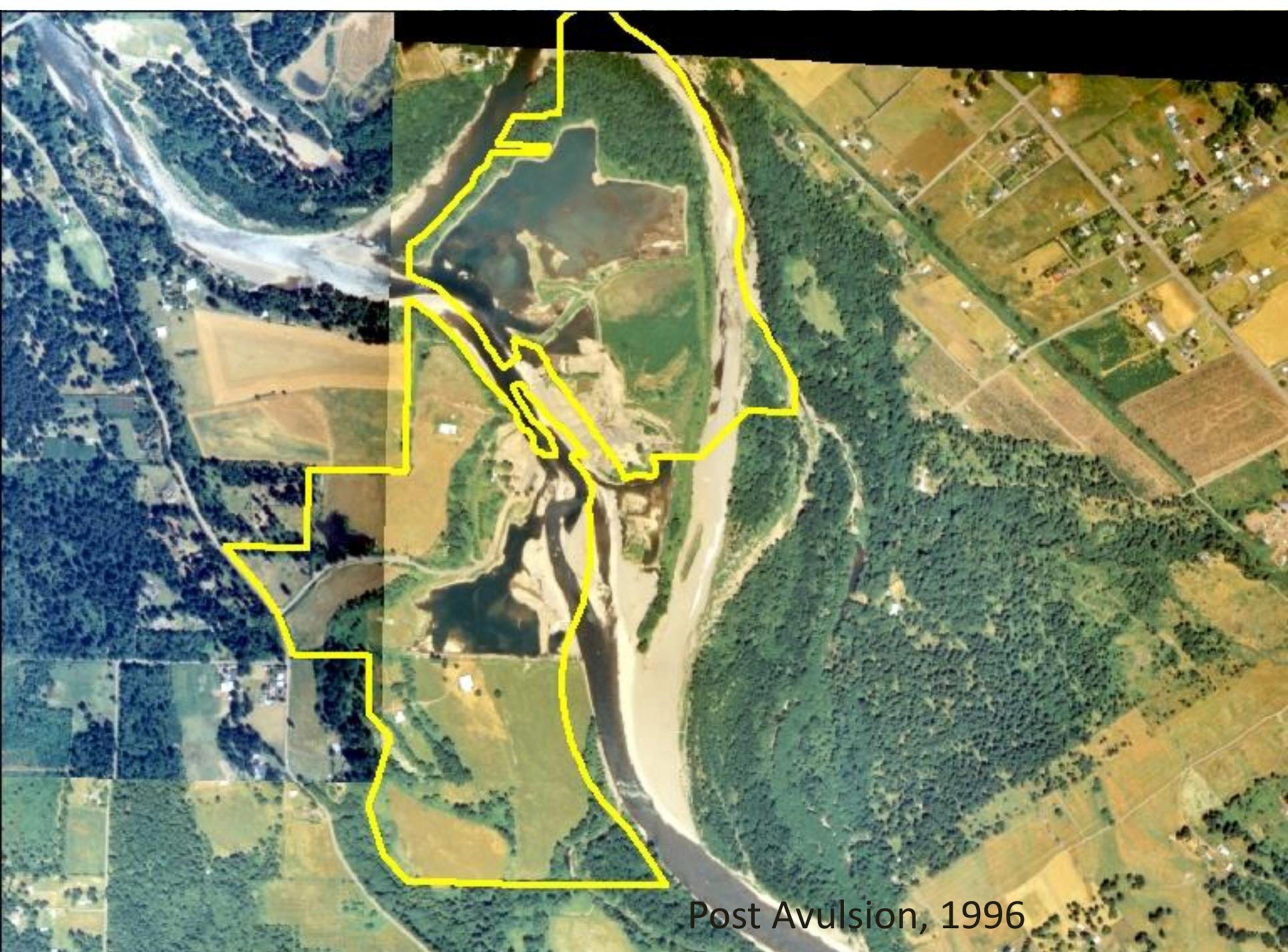


Wampler, 2006





Pre-Avulsion, 1994



Post Avulsion, 1996





5. Opportunities to improve Water Quality and Wildlife Habitat





Remnants of an Unnatural Landscape



Rapidly Eroding Banks



Invasive Species

Lost Habitat for Fish & Wildlife

A person wearing a dark jacket is seen from the back, looking out over a river. The sun is setting behind a line of evergreen trees, creating a bright glow and lens flare. The trees and the sun are reflected in the calm water of the river. A wooden post with some markings is visible in the water in the foreground.

Restoration Considerations

- Diverse Habitat Types
- Dynamic river system
- Existing sideboards
 - Land Ownership
 - Recreational Use
 - Human alterations (past and present)
 - Funding & Feasibility
- Others?

Project Elements

- **Site Conservation Plan** - Developing goals, objectives, conservation targets and identifying strategic restoration actions.
- **Restoration Design** – Design will be developed to restore ecological and river processes to benefit a variety of wildlife and habitat types
- **Revegetation and Invasive Species Treatments** – Invasive species treatments initiated July 2013 and planting planned for March of 2016
- **Habitat Assessments**– Turtles, Fish, Others?
- **Monitoring** – Photo point, low-elevation aerial, temperature?



Finding a balance



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Questions & Answers

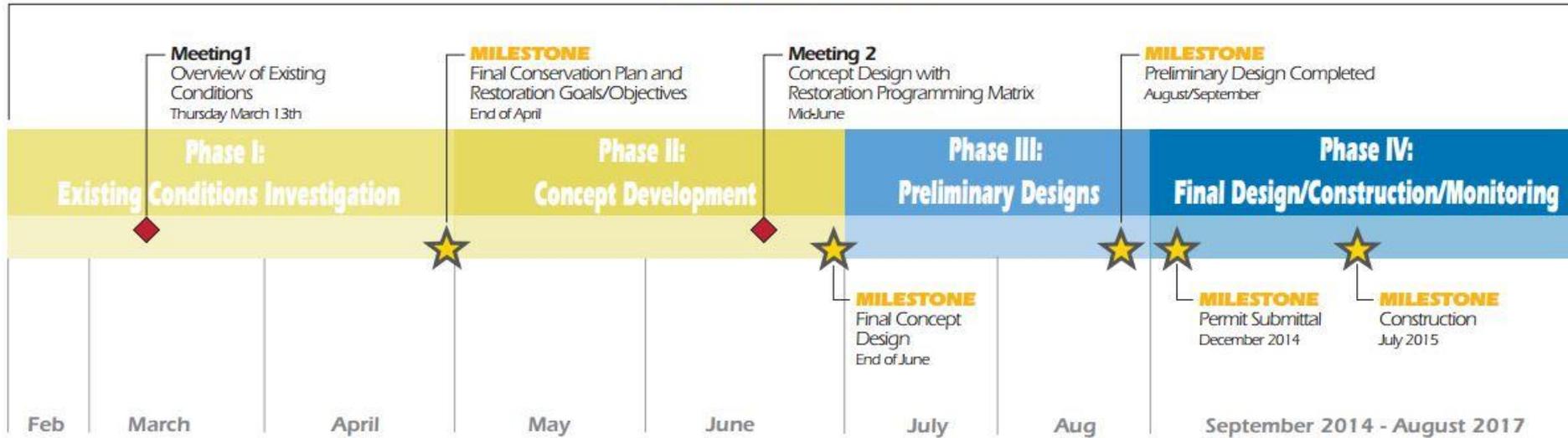


Next Steps & Timeline

Timeline

RIVER ISLAND RESTORATION PROJECT

PROJECT PHASES



PROJECT SCHEDULE

River Island Clackamas River





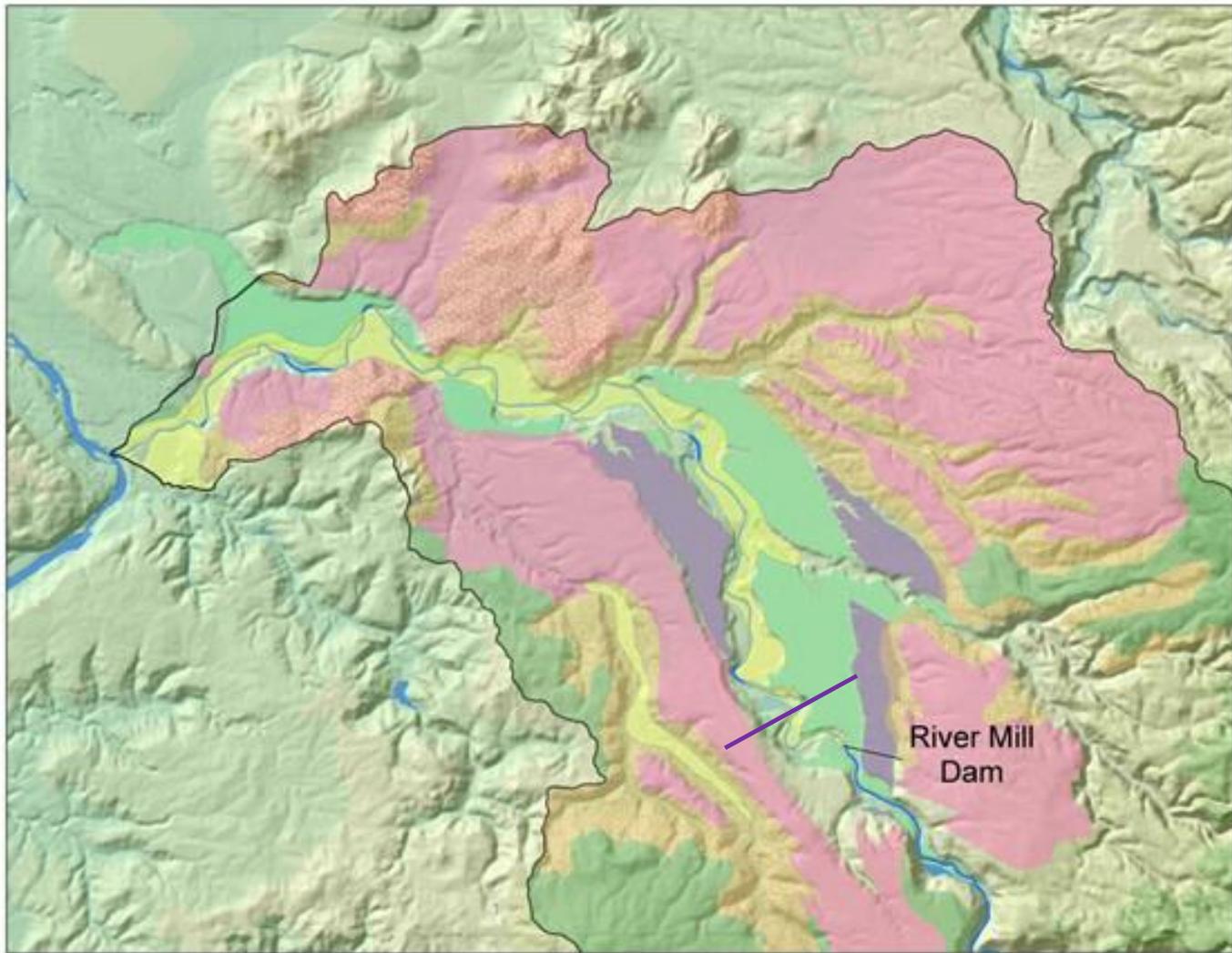
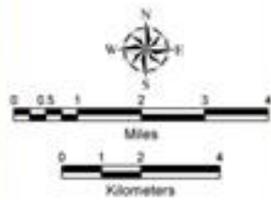
Thank you!

Geology of the Lower Clackamas Basin

Legend

Geologic Units

- Recent Alluvium
- Estacada Surface
- Gresham Surface
- Michel Surface
- Boring Lava
- High Cascades
- Sandy River Mudstone
- Springwater Formation



Prepared By P. Wampler 3/6/03

Profile Across Lower Clackamas River Valley

