

Climate Actions in WRIA 8

Salmon Recovery



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Salmon Recovery Council Meeting

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Healthy & Restored Habitats Are More Resilient to Changing Climate

- Floodplain reconnection
- Restoring natural shorelines
- Habitat protection (headwaters, forests, wetlands, tributaries)
- Fish passage barrier removal
- Riparian restoration and planting
- Novel engineering solutions in highly modified environments
- Green stormwater infrastructure & low impact development

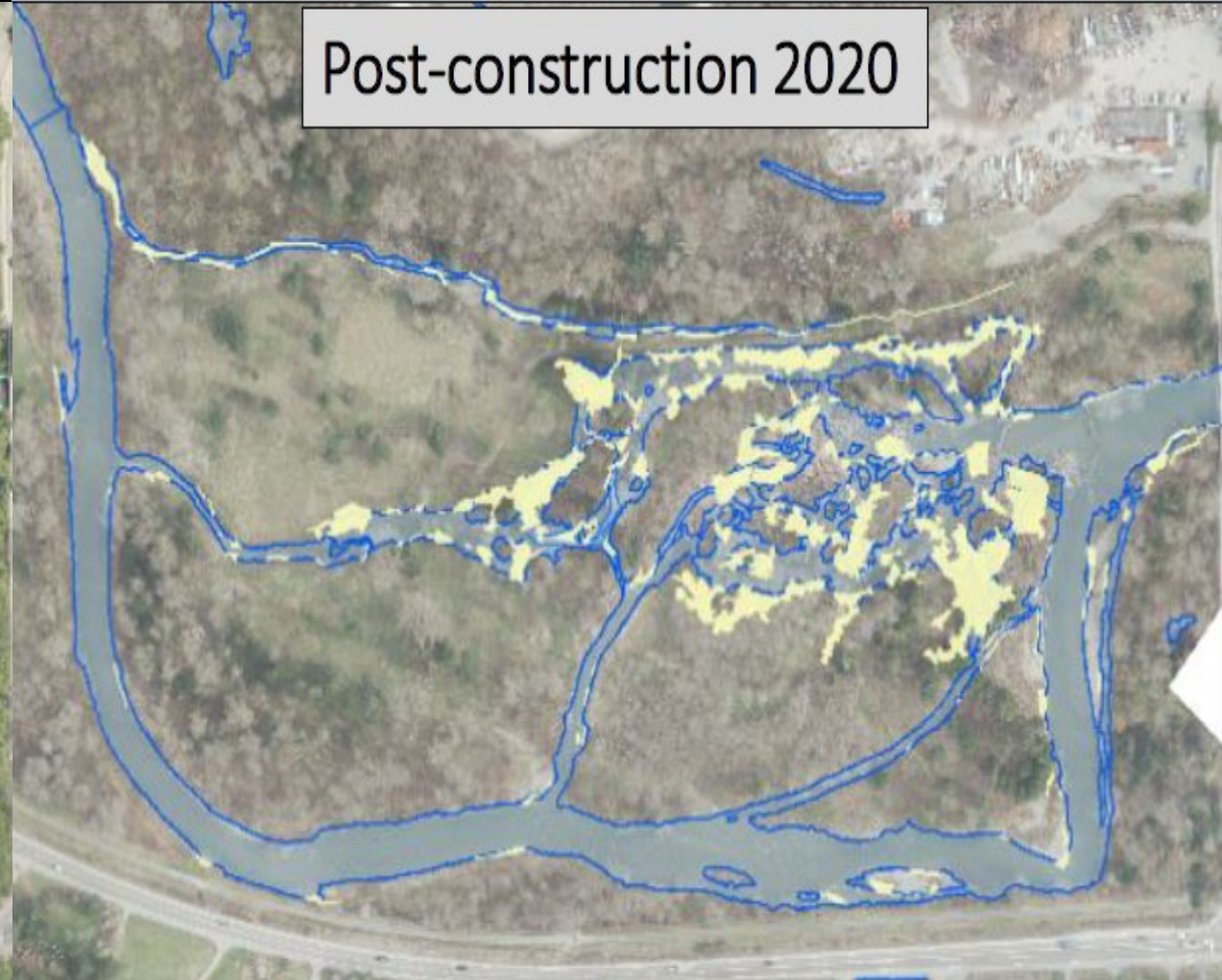
An aerial photograph showing a river bend with a large area of floodplain reconnection. The river is dark blue, and the surrounding land is covered in a mix of green evergreen trees and bare deciduous trees. A road and some buildings are visible in the upper left corner.

Floodplain Reconnection Rainbow Bend, Cedar River

Pre-construction 2013

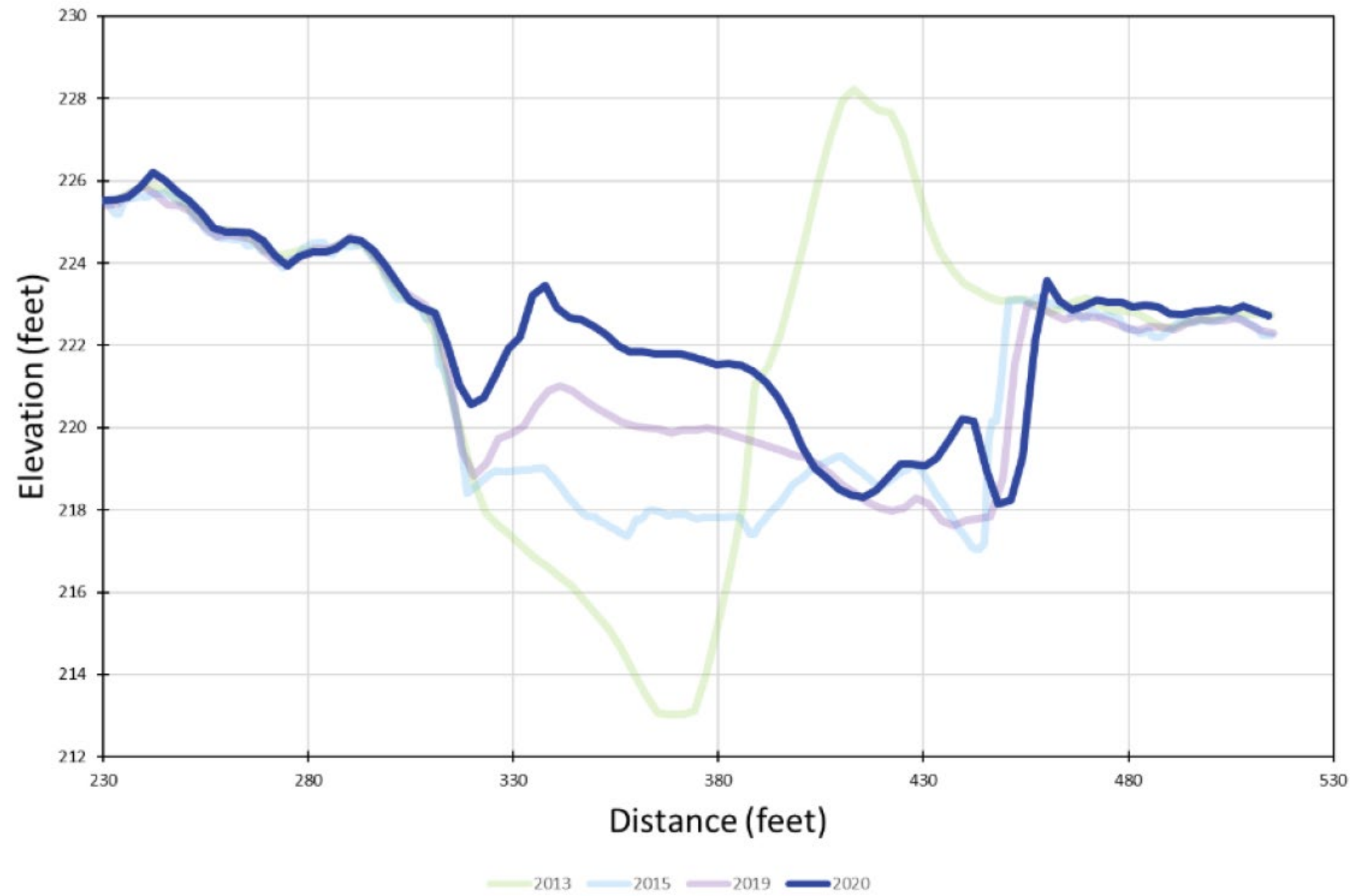


Post-construction 2020



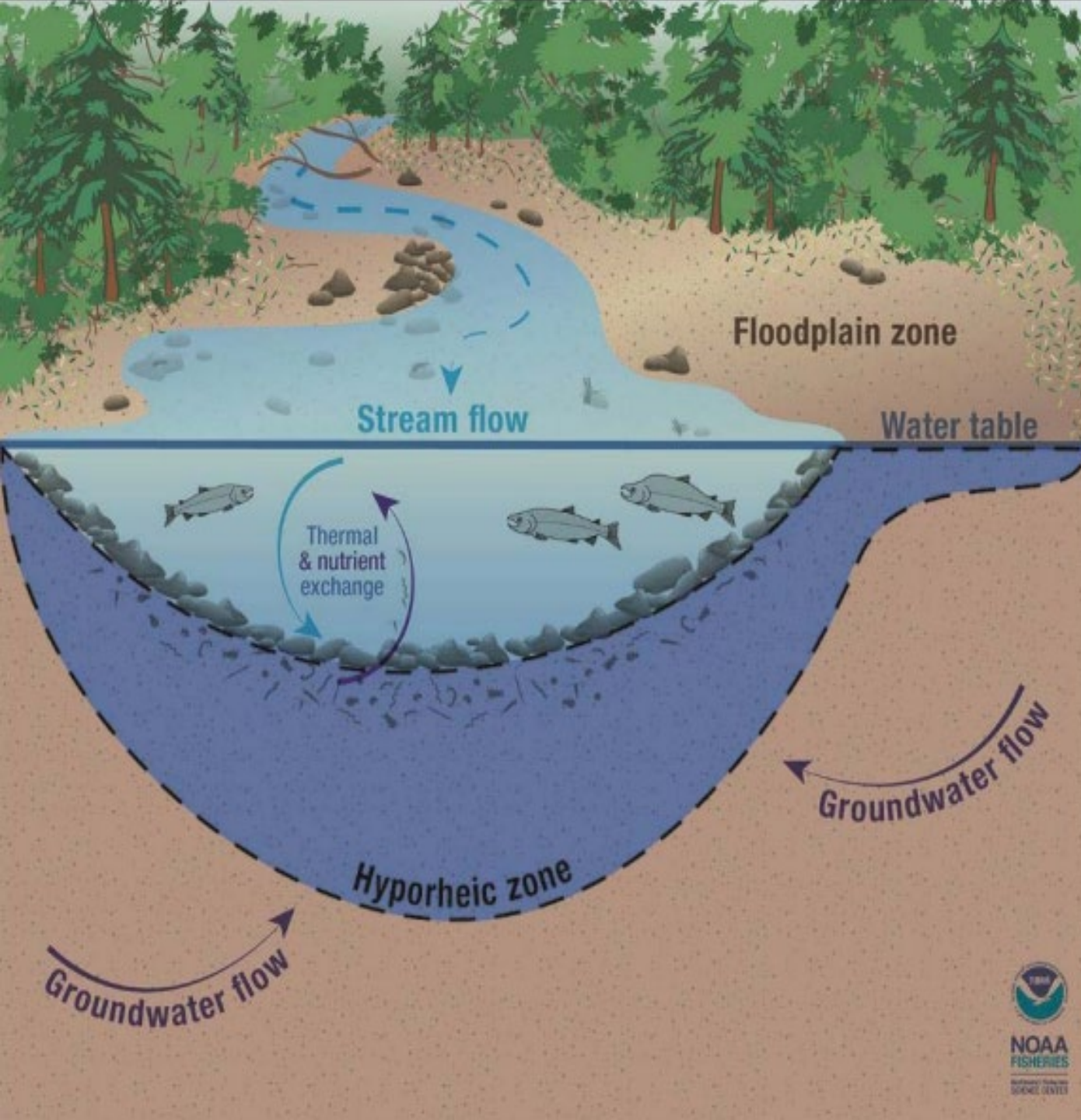
Pink & Yellow Shaded Areas = Low Velocity Edge Habitats

Rainbow Bend - Mainstem Cedar River



Stormwater Projects for Salmon Hyporheic Restoration, Thornton Creek





Ecotone

Degraded or lost

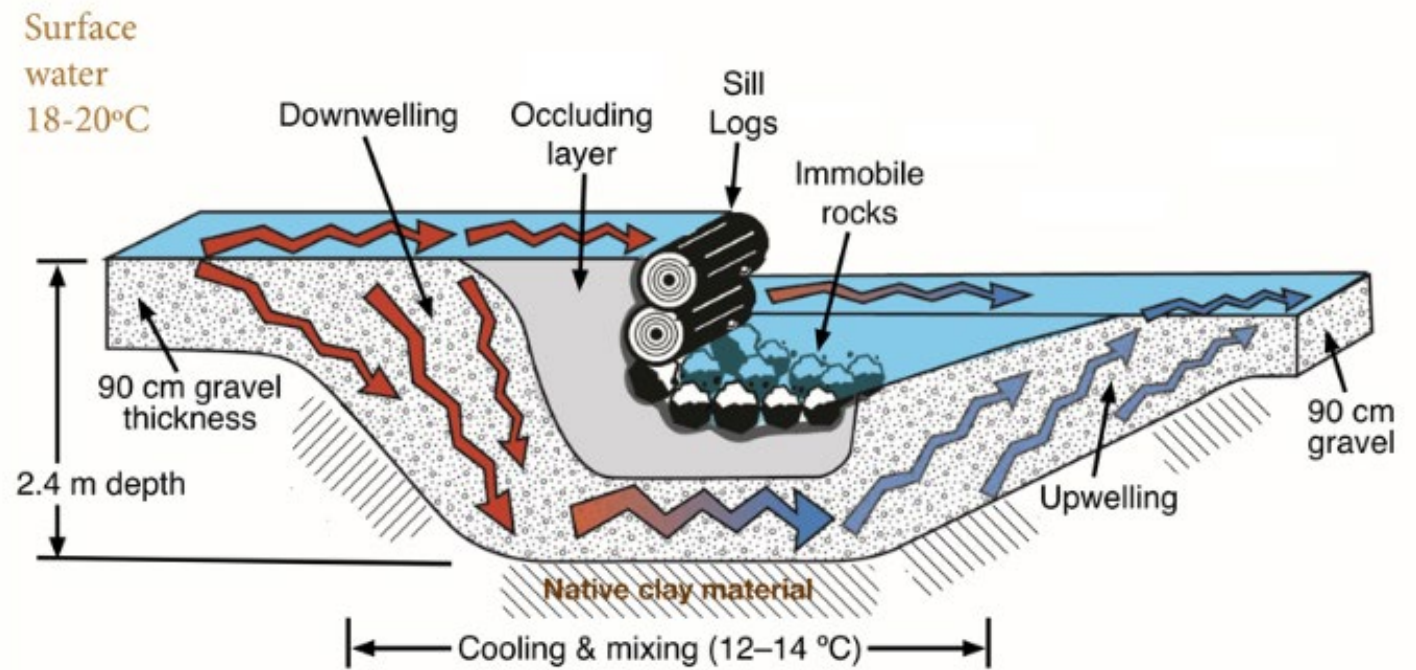
Very active

- High surface areas
- Invertebrates
- Microbes - biofilms

Stormwater treatment

- Organic compounds
- Nutrients
- Pathogens

Structures push the water down into the enhanced hyporheic zone.

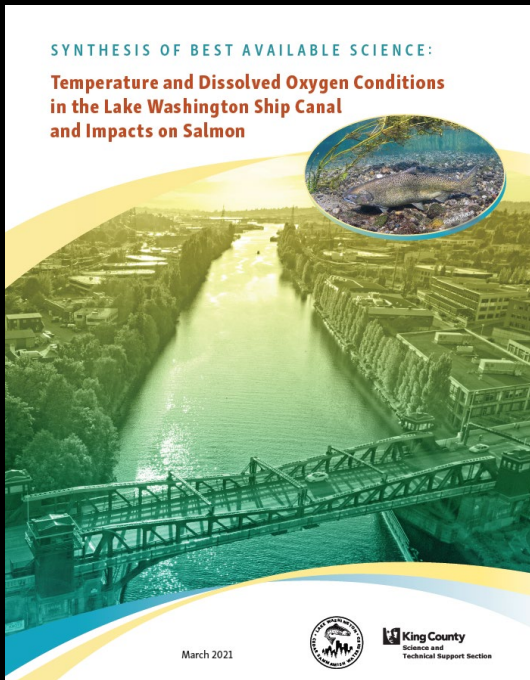


Significant reductions in 83 identified chemical pollutants linked to vehicle/roadway runoff.



Temperature Mitigation Lake Washington Ship Canal Coalition

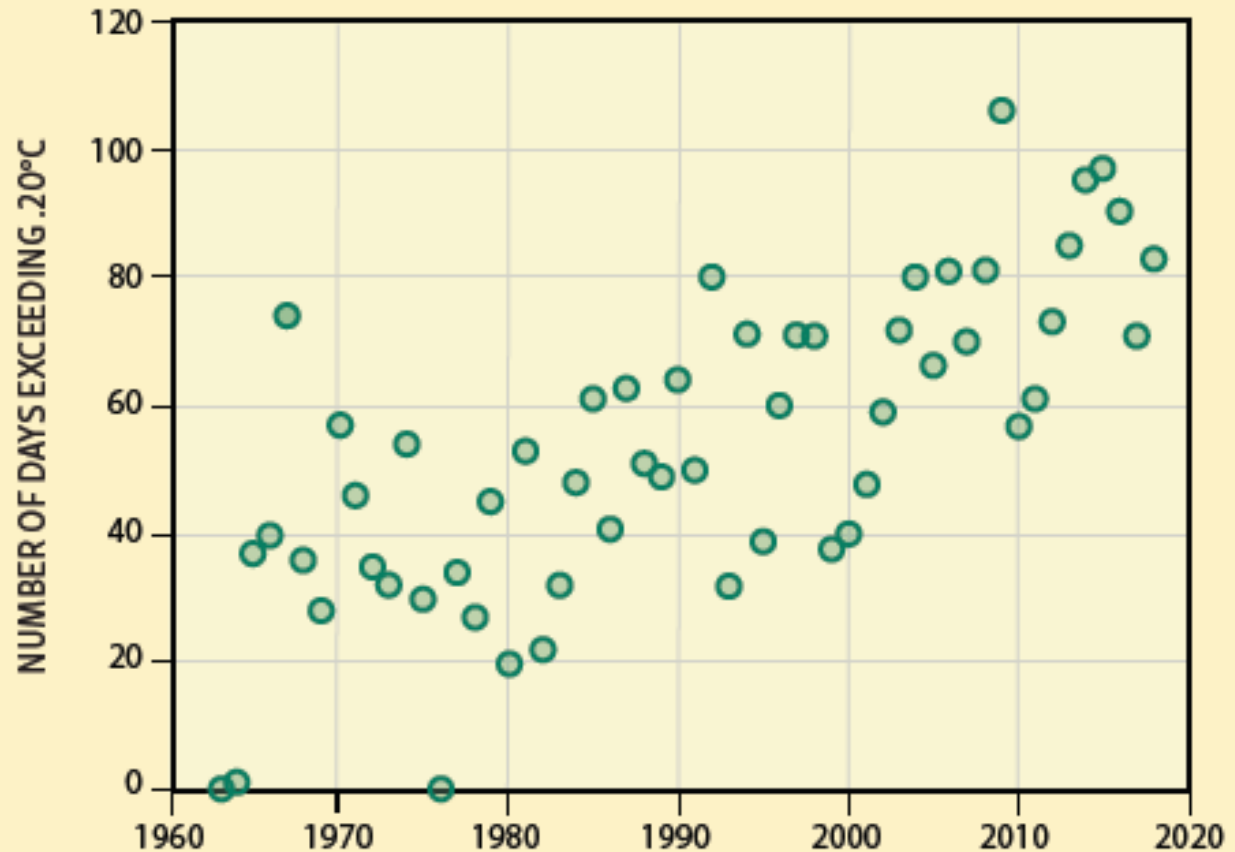




Daily Average Surface Temperatures 2009-2019

Thresholds	May – September	July – August (Chinook)
15°C - Stress	87 – 92 %	100 %
22°C – Migration Barrier/Lethal	12 – 24%	28 – 51%

Increasing Surface Water Temperatures, Lake Washington

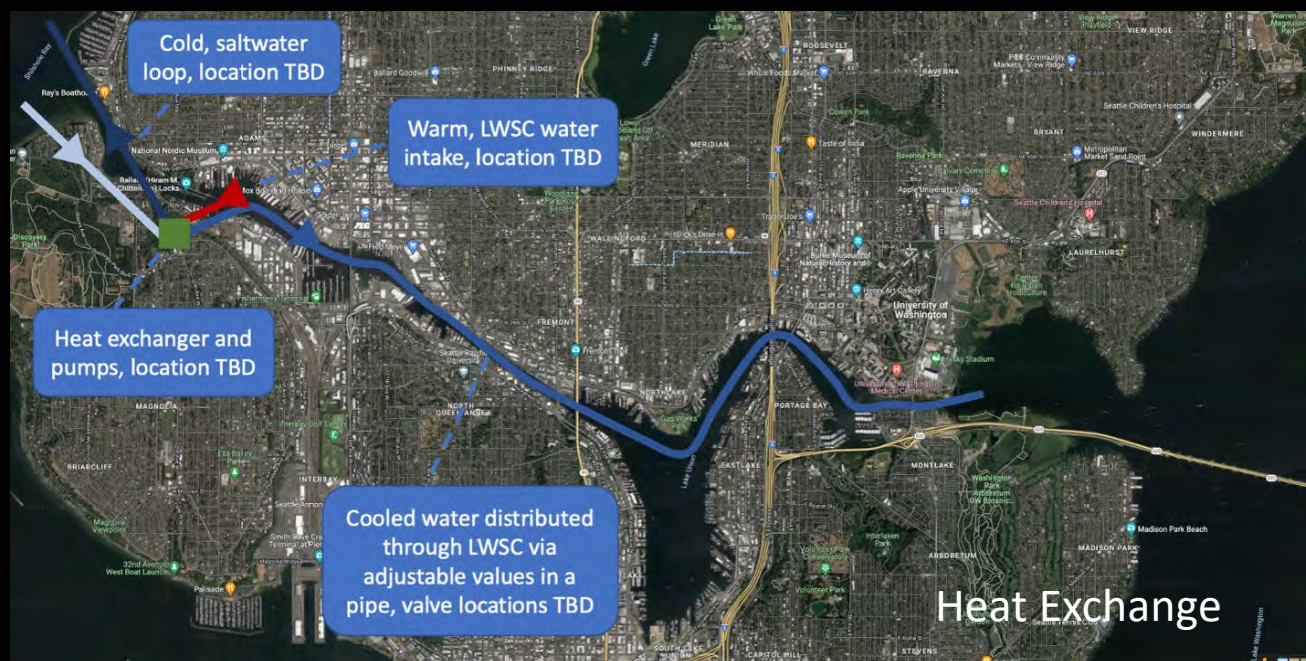
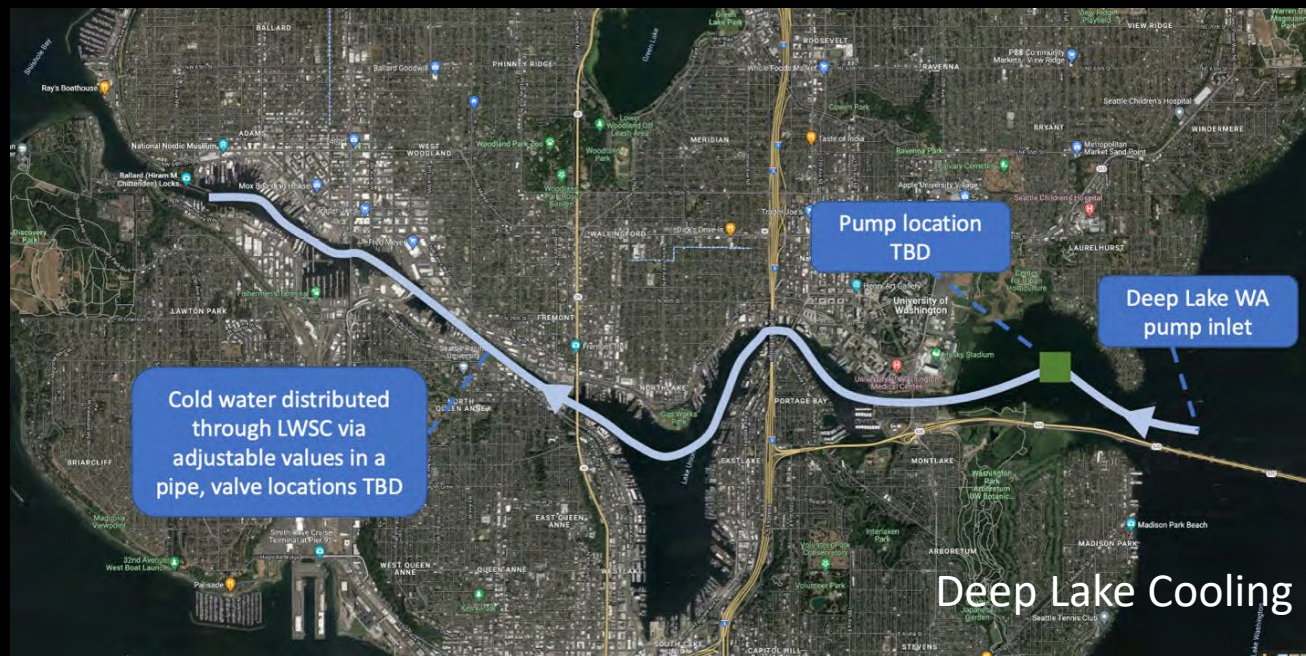


Data provided by C. DeGasperi, King County Department of Natural Resources and Parks. Adapted from Goetz and Quinn (2019).



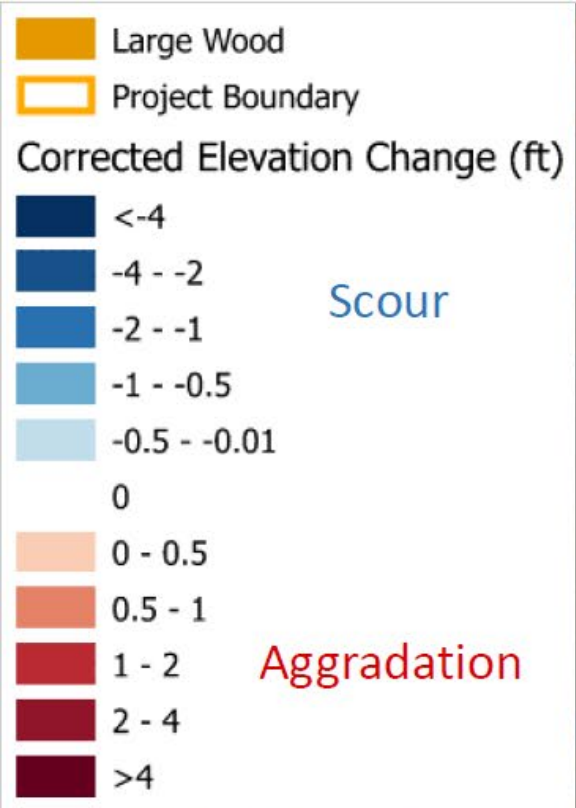
● Calibration Stations — Streams
■ Model Grid

0 1 2 3
Miles





Thank You



Elevation change from 2013 to 2020

