

Cedar River Juvenile Chinook Salmon Restoration Monitoring

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King County

Senior Capstone

- Nationally **recognized** Project Center
- Induction of **environmental** science
- **Real** world opportunities
- Over **1,000** hours spent on average
- Culmination of **interdisciplinary** study



Seattle University
FOUNDED 1891

Presentation Roadmap

- Background
- Problem Statement
- Habitat indicators
- Results
- Recommendations

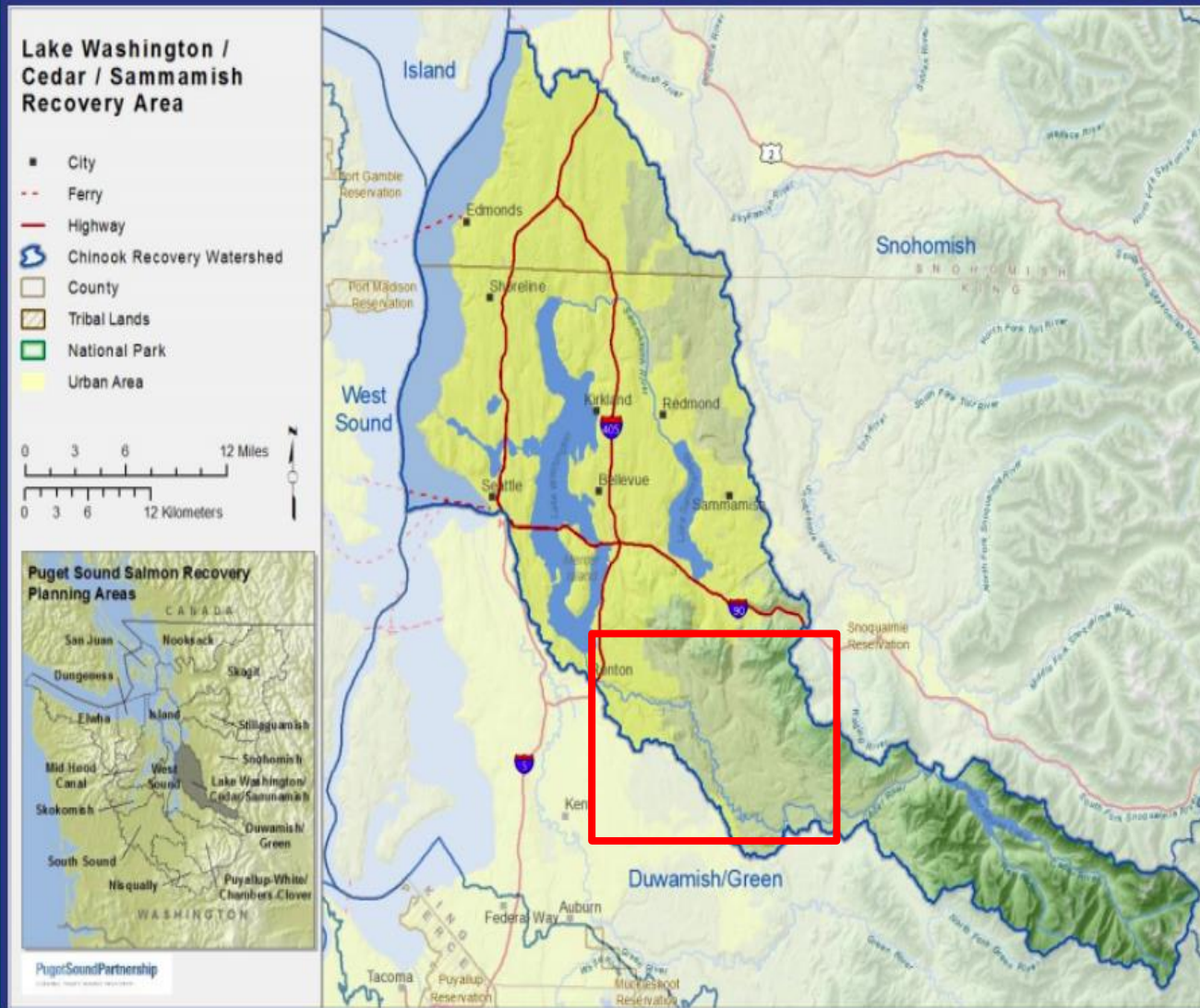


Background



- Urbanization → juvenile habitat
- Chinook listing as “threatened” in 1999
- Restoration and monitoring

Location - WRIA 8 Lower Cedar River



Problem Statement

- Chinook conservation plan for WRIA 8
- Habitat status indicators
- Available literature
- Existing data
- Gaps
- Recommendations

Habitat Indicators

Acres of forest

Total length of natural riparian bank

Acres of 100y floodplain connected to channel

Acres of natural riparian vegetation

Substrate composition

Large wood pieces per stream mile

% of historic accessible stream miles available to adult Chinook

Peak flow characteristics

Forest fragmentation

Summer stream temperature

Amount of unarmoured channel

Results



Literatur

e

72 articles

- 28 PNW focused
- 22 Chinook focused

One major gap

- Forest fragmentation

Metrics

Four major gaps

- Peak flow characteristics
- Length natural riparian bank
- Unarmored channel
- Forest fragmentation



Data

23 data sources
5 major gaps

Indicator Name	Number of Sources (secondary sources)	Analysis Status	Online Access	Max Quality	Average Score
Substrate Composition	1(1)	Raw Data	No	Medium	5
Percentage of Historic Accessible Stream Miles to Adult Chinook	2(2)	Secondary Data	Yes	Medium	4.5
Total Length of Natural Riparian Bank	0	-	-	-	-
Acres of Natural Riparian Vegetation	0	-	-	-	-
Amount of Unarmored Channel	2(2)	Raw Data	Yes	Low	4

Recommendations



Fill major data gaps

**Remote vs. Direct
Monitoring**

Monitoring Database

Thank You!



Questions?



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Photo Credit

Rainbow Bend Photos: Nathan Lind

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