

# In Search of a Unique Juvenile Salmon in the Snoqualmie River

## Science Seminar November 2019

Water and Land Resources Division

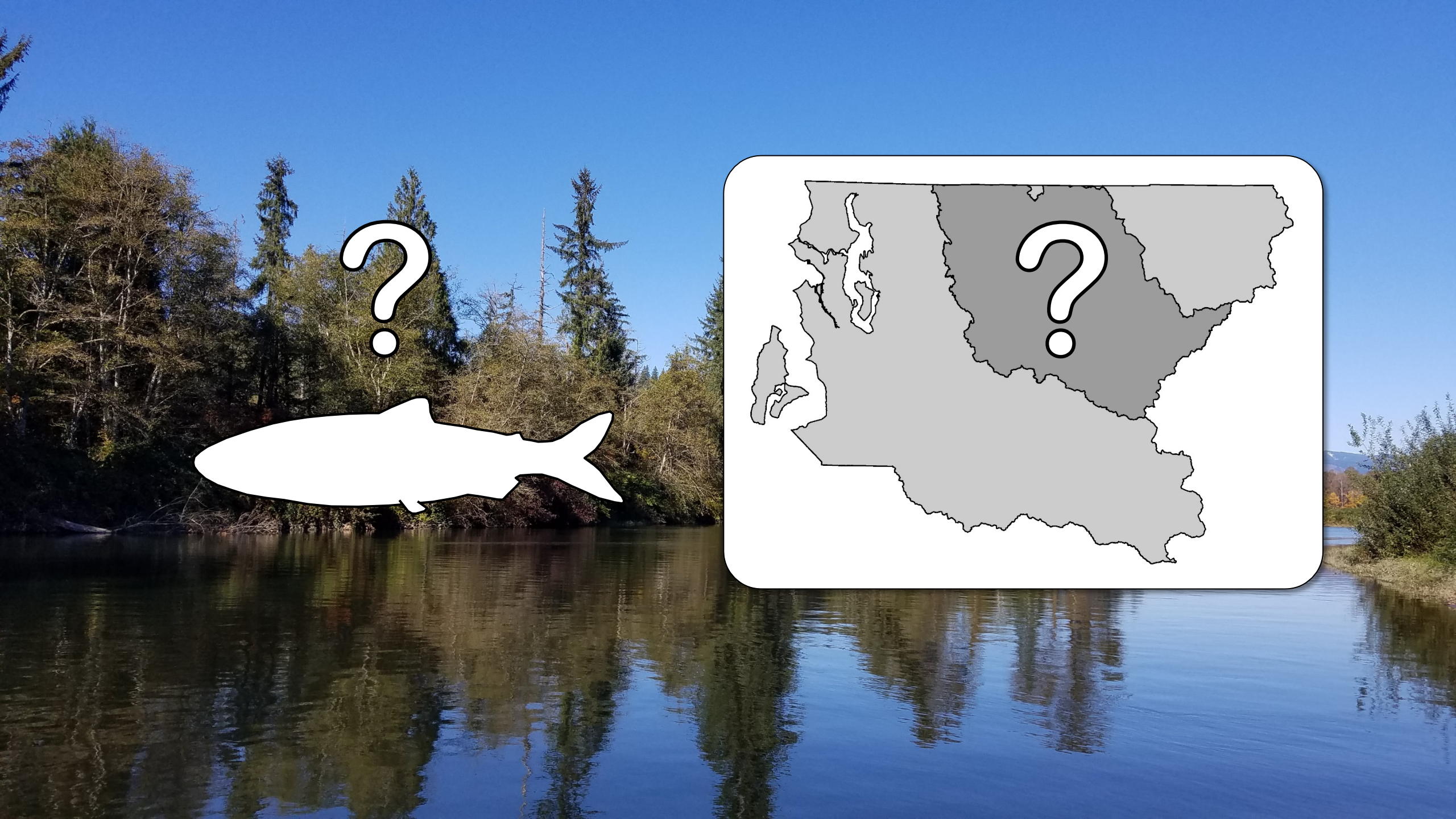


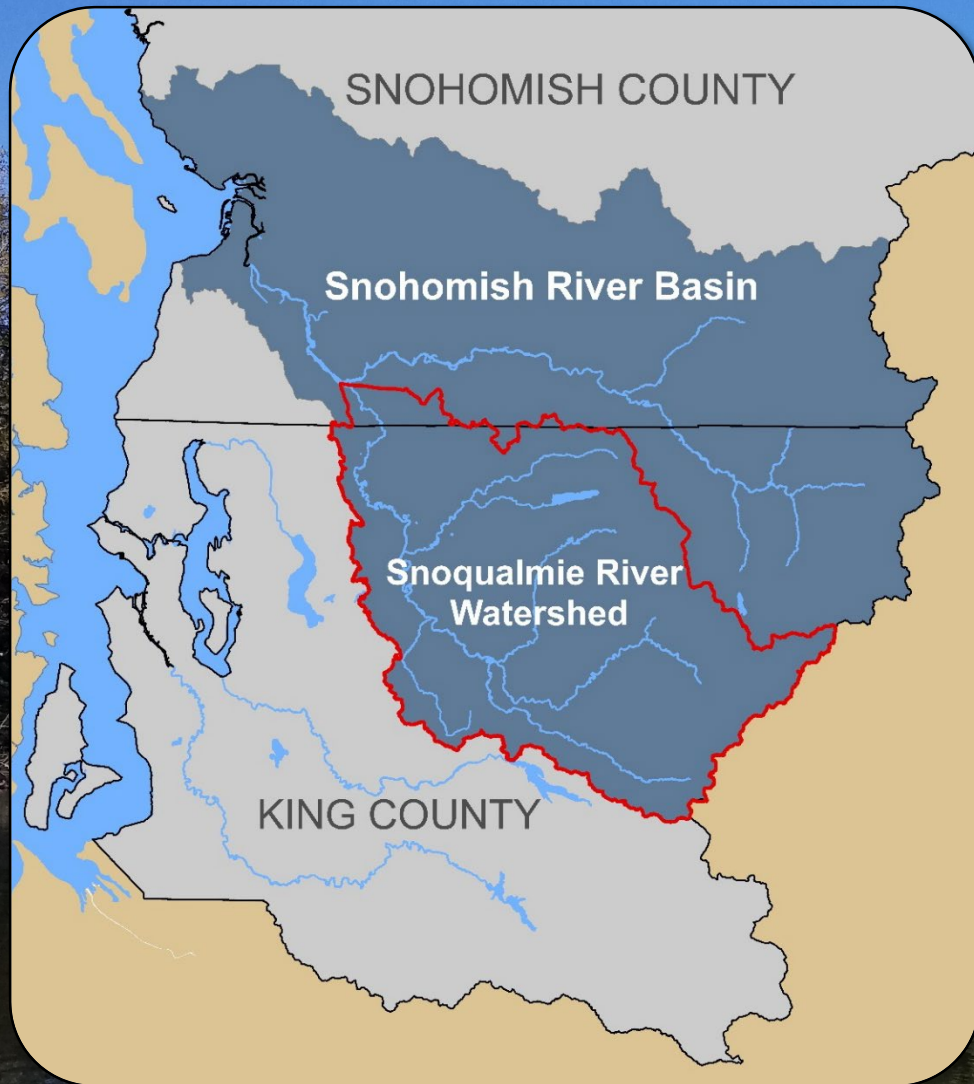
**King County**



**Josh Kubo**

**Watershed and Ecological Assessment Team**





*Chinook*



*Coho*



*Chum*



*Sockeye*



*Pink*

# Snoqualmie River Watershed

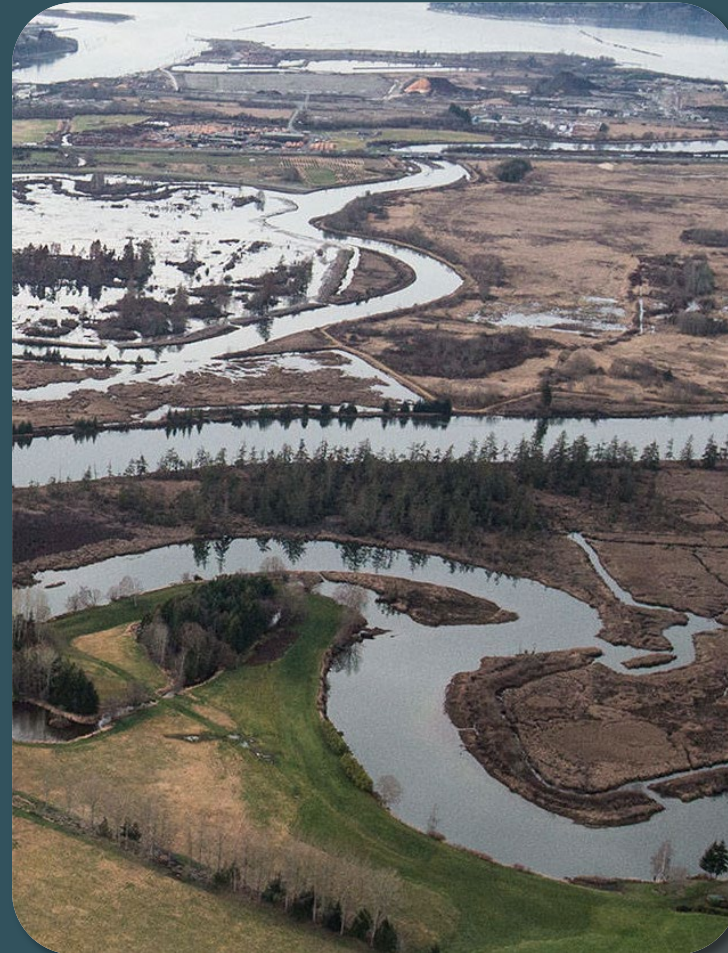
Spawning Areas



Rearing Areas

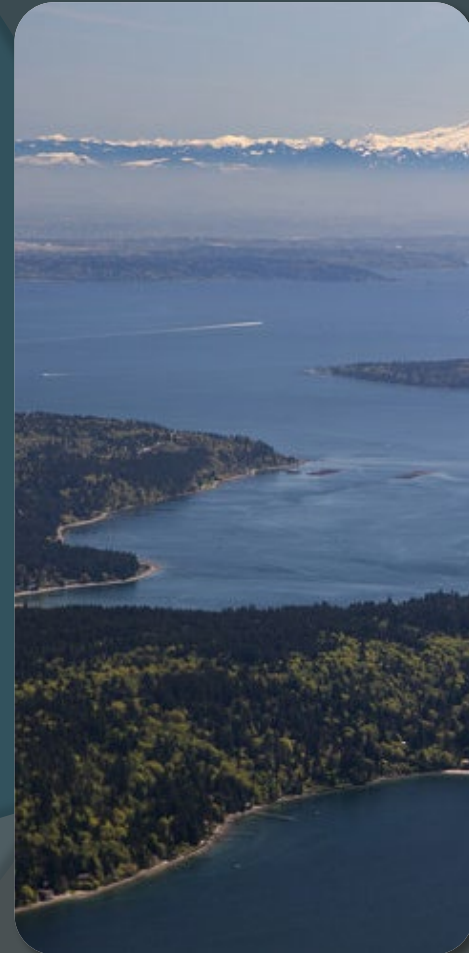


Snohomish Basin Estuary



*Photo: Wild Lands Inc.*

Puget Sound



*Photo: Washington Nature*

# Snoqualmie River Watershed

## Spawning Areas

## Rearing Areas

## Snohomish Basin Estuary

## Puget Sound

Fry

Days - Weeks

Days - Months

Parr

Weeks - Months

Days - Months

Yearling

Year+

Days???

Photo: Wild Lands Inc.

Photo: Washington Nature

Fry

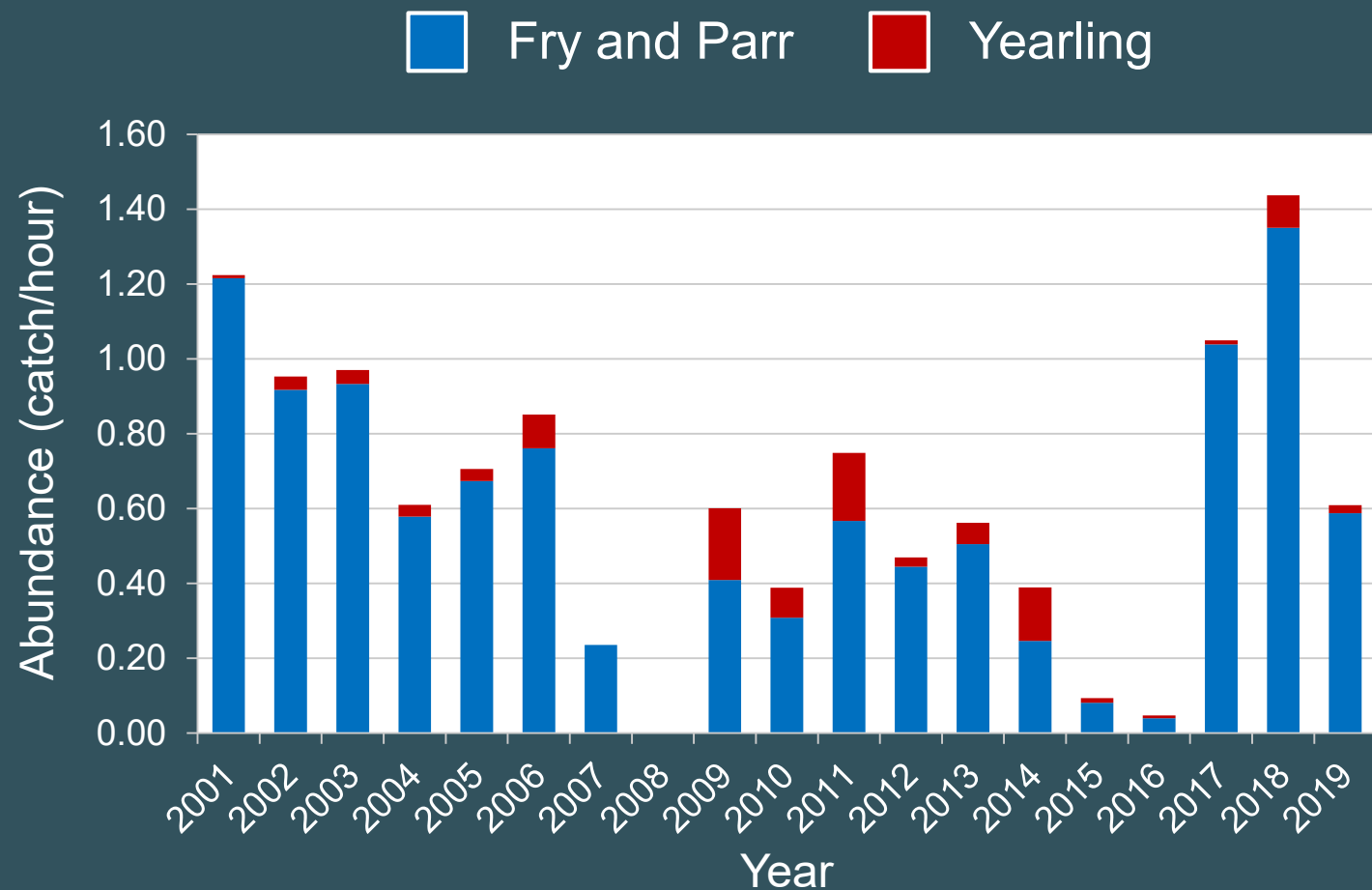


Parr



Yearling





Fry



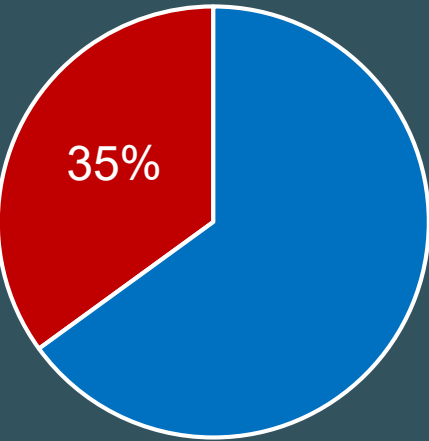
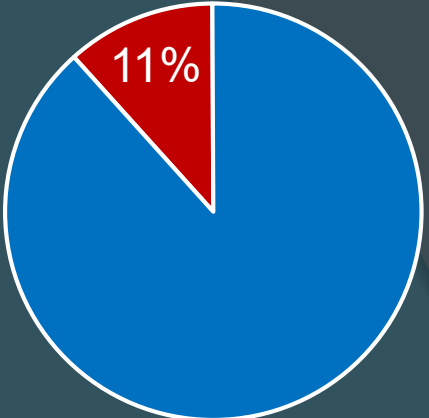
Parr



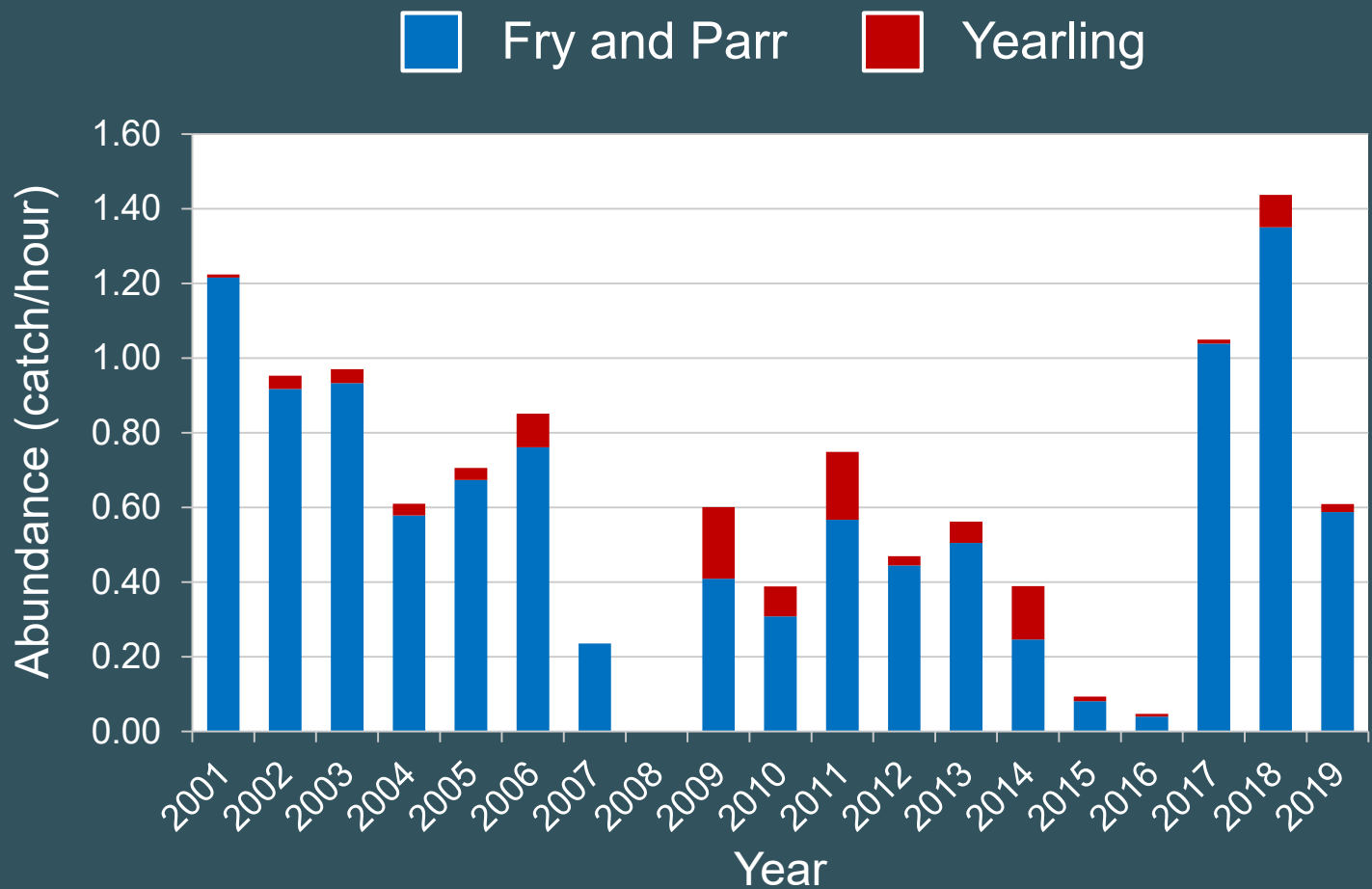
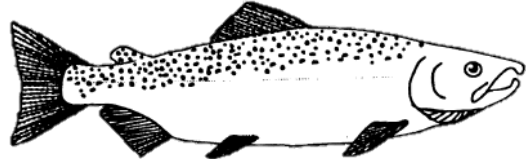
Yearling



# Juveniles



# Returning Adults



1. What is their distribution?

2. Which habitats do they use?

3. Does distribution and habitat use change across months?





Tributary Confluence



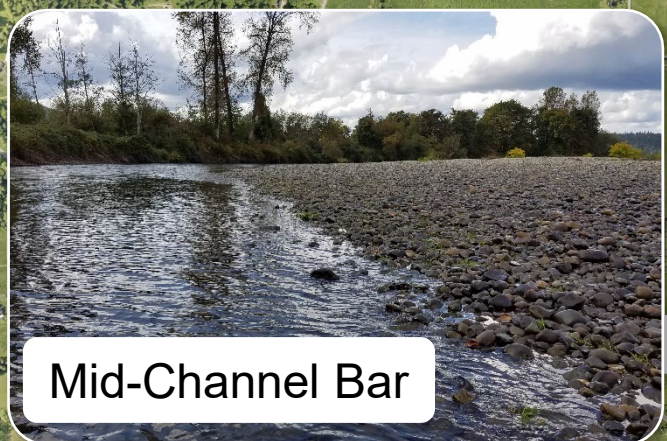
Bar



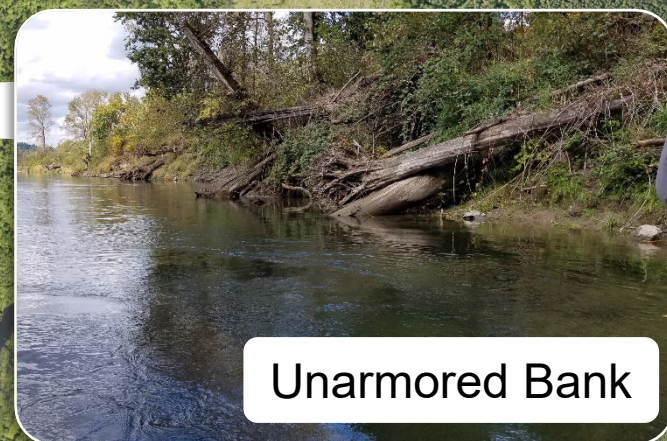
Armored Bank



Backwater

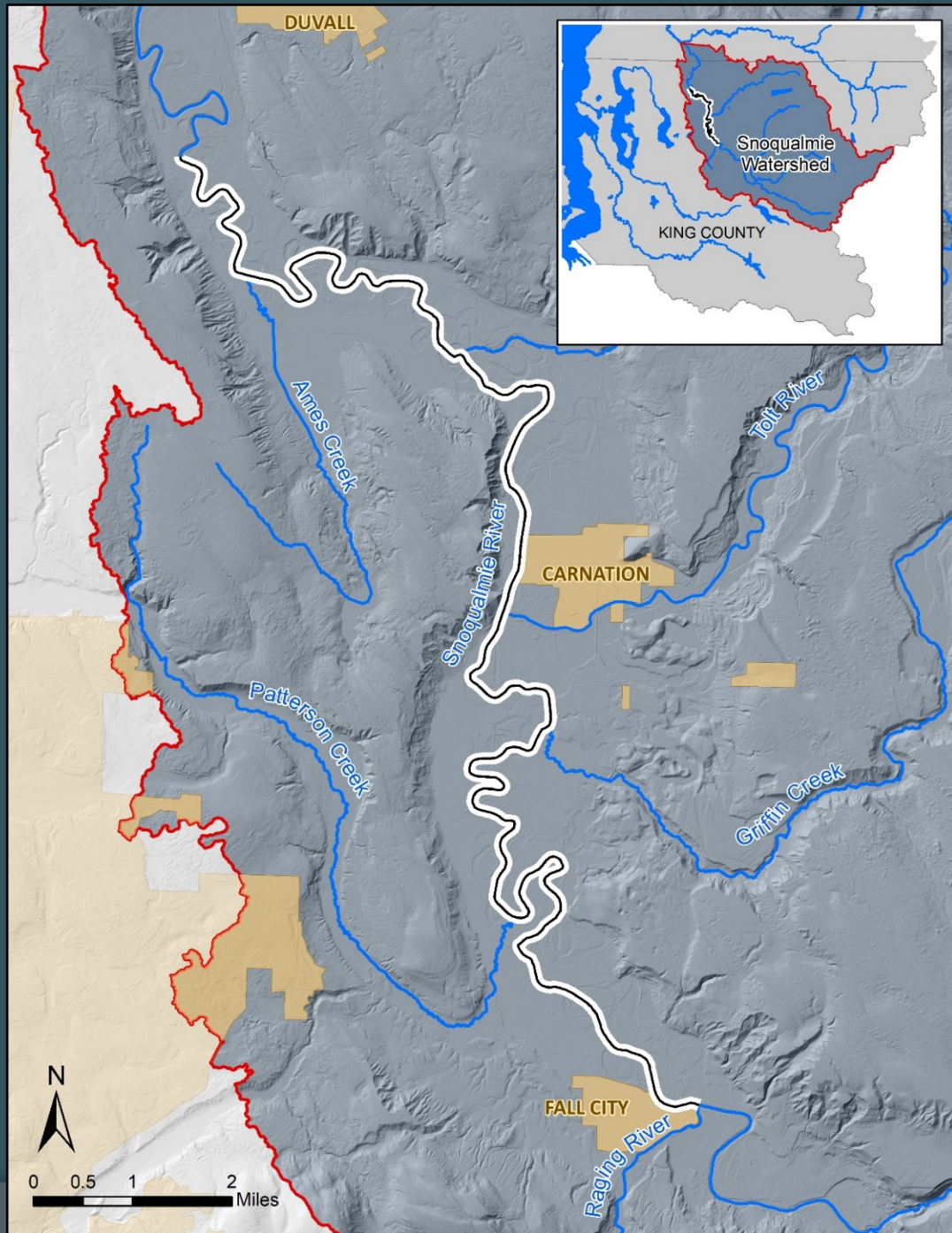


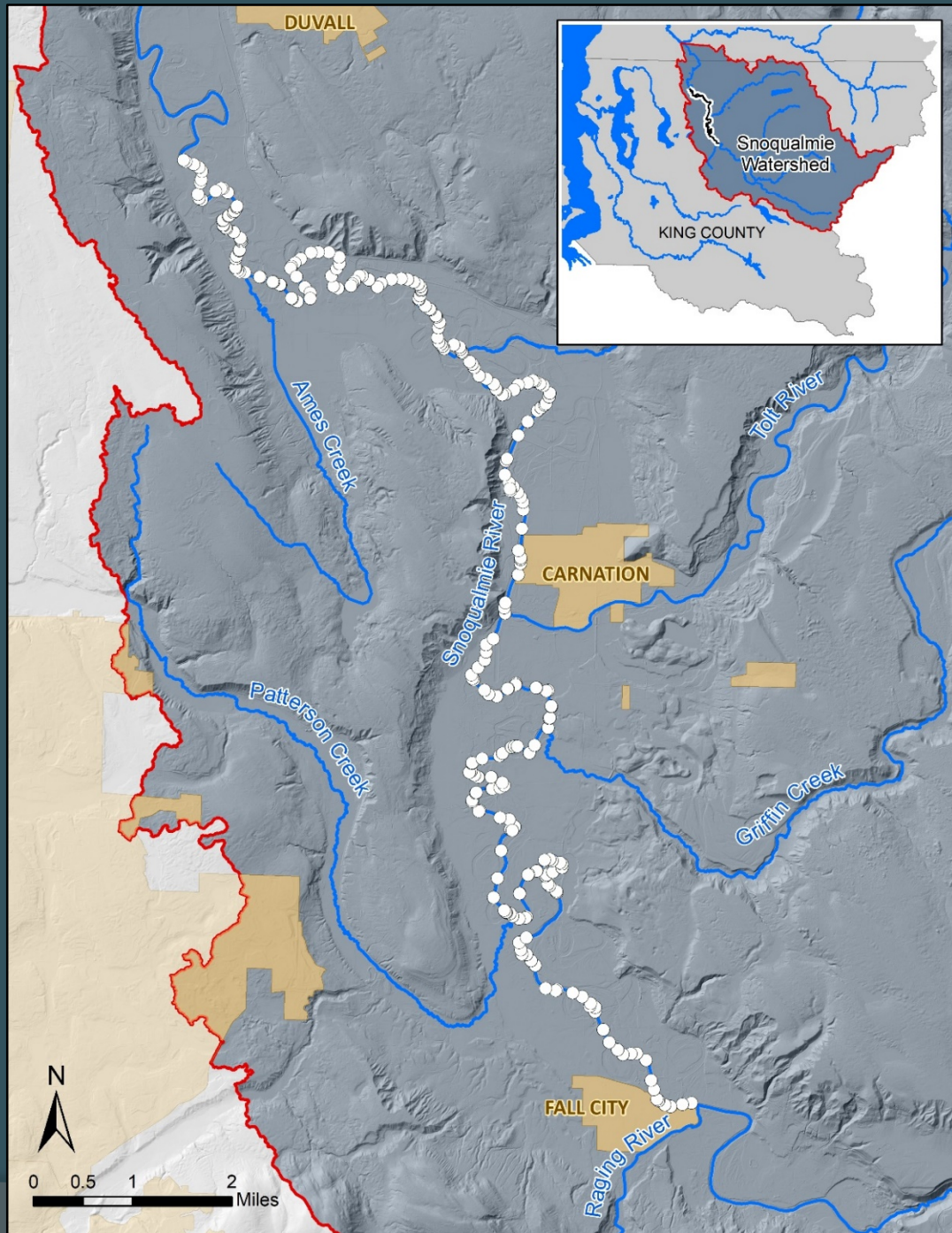
Mid-Channel Bar

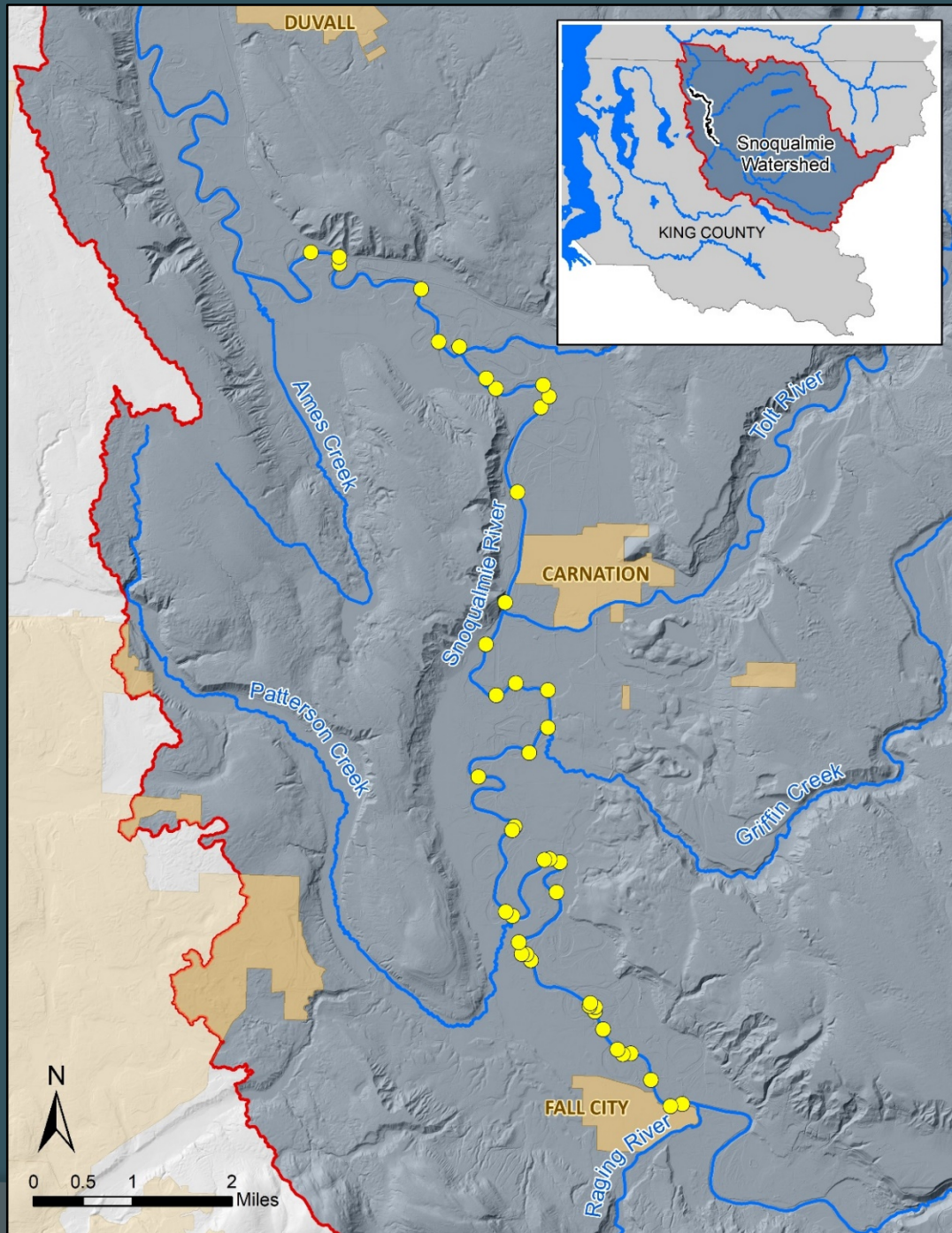


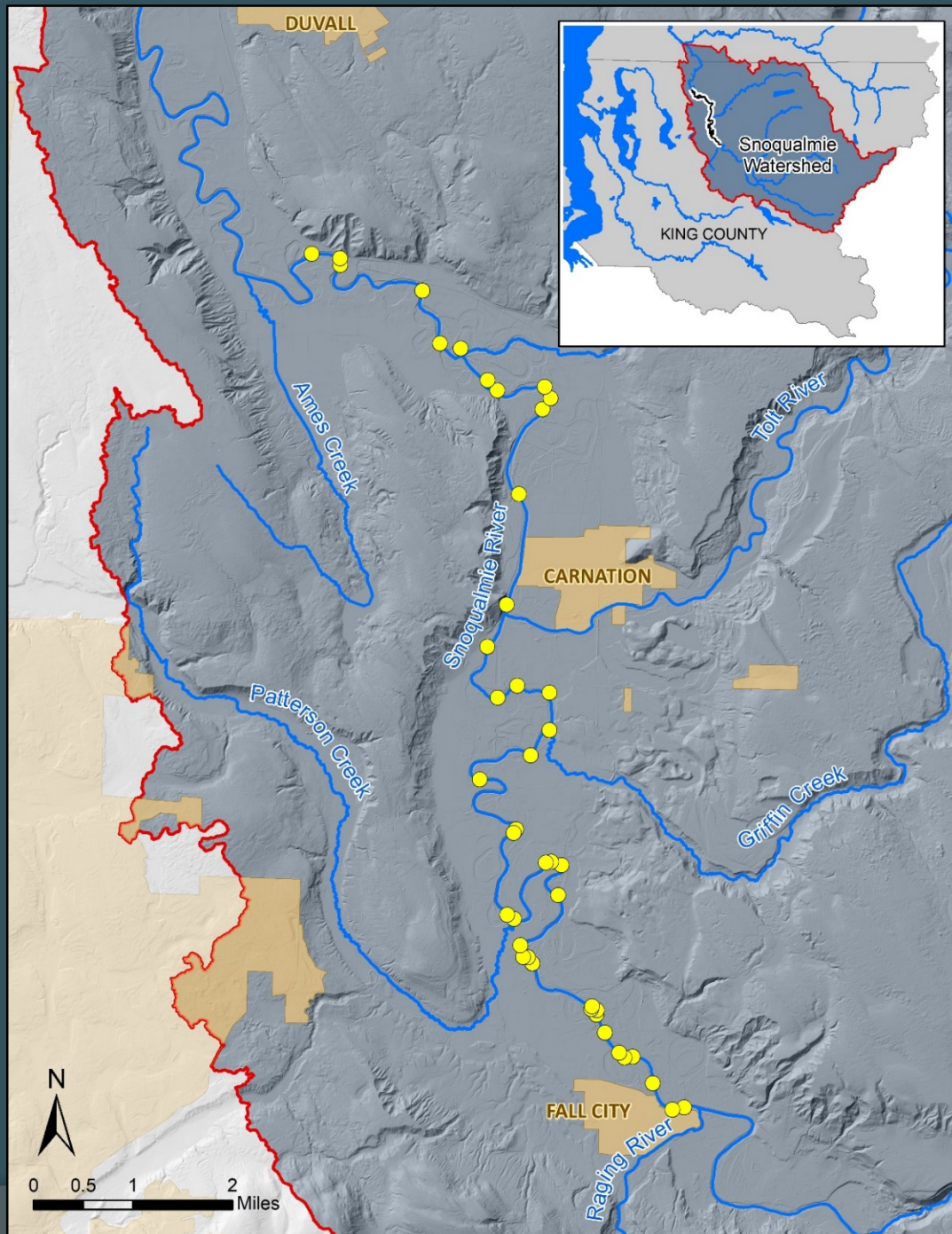
Unarmored Bank





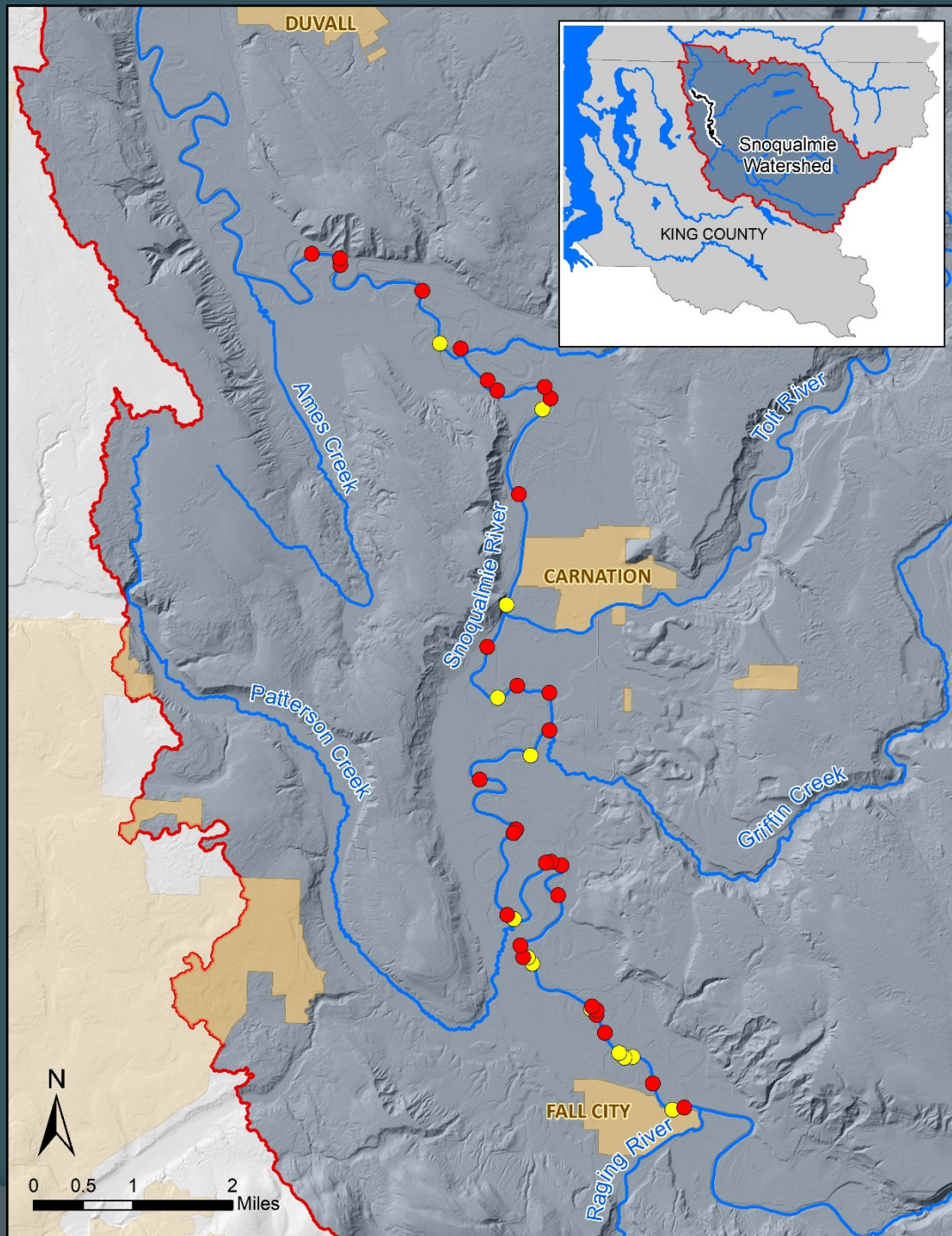


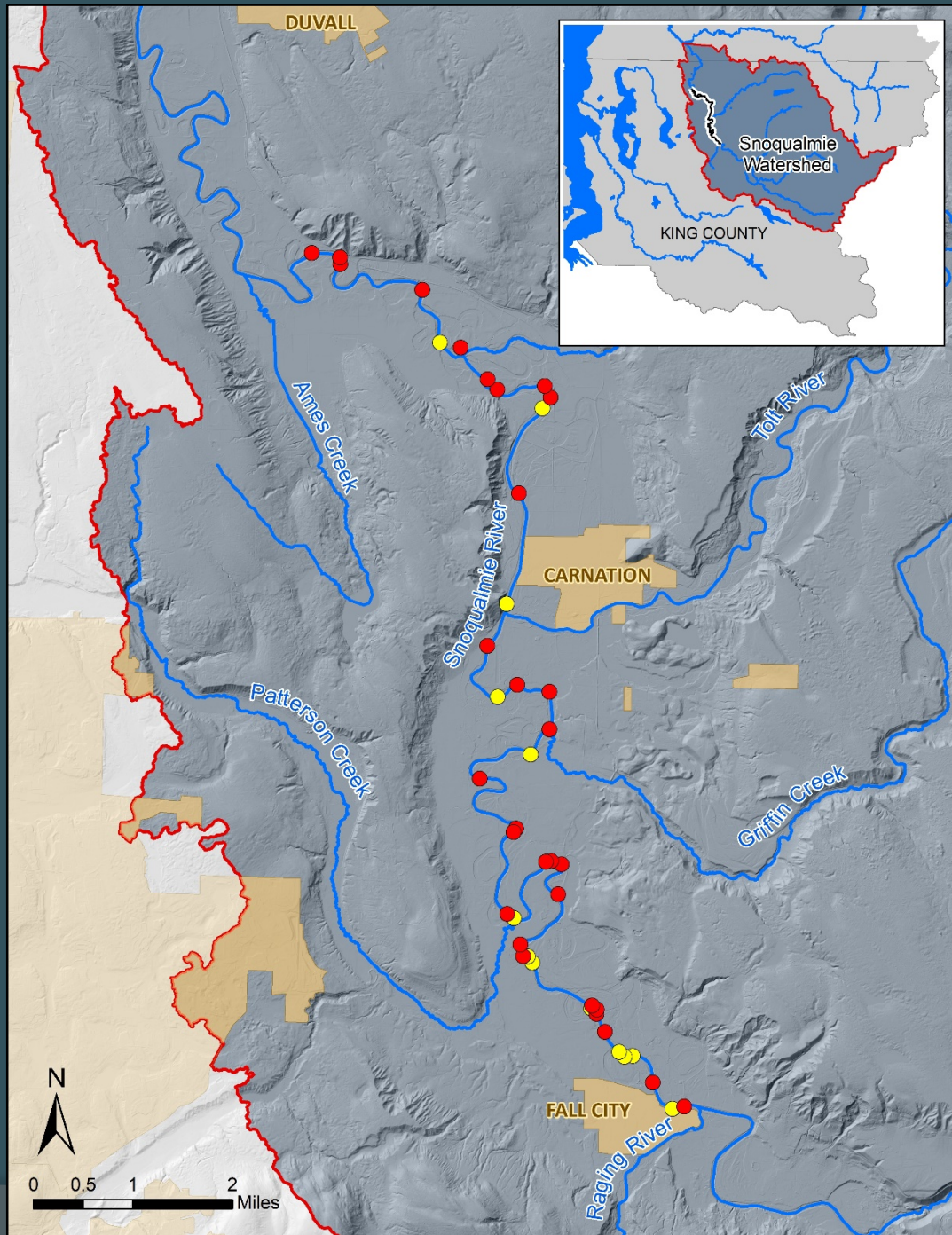


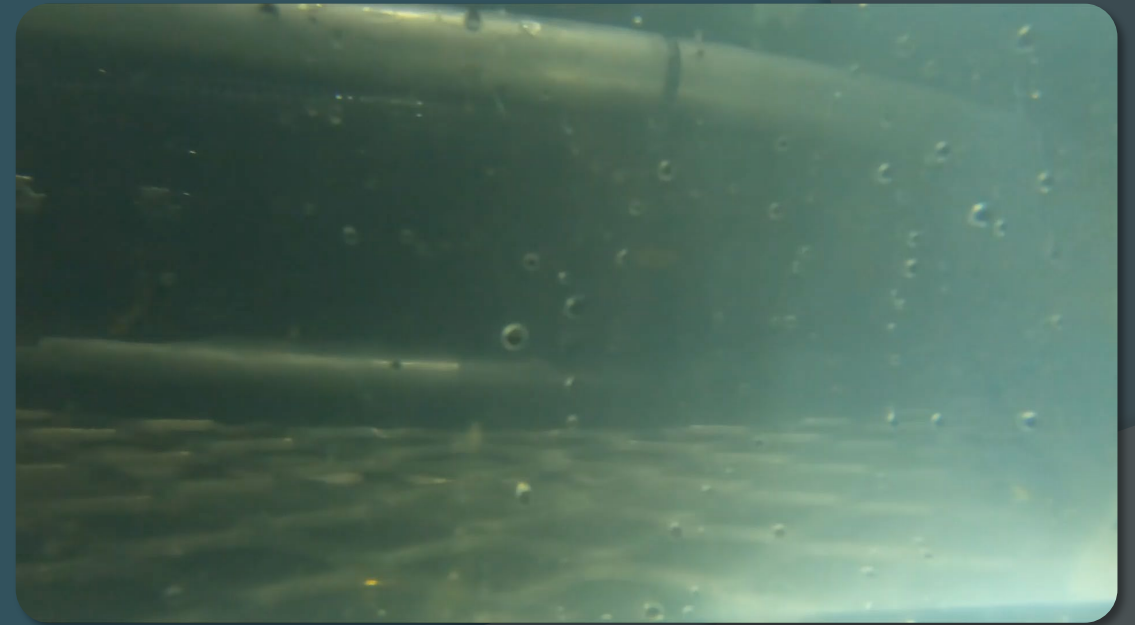
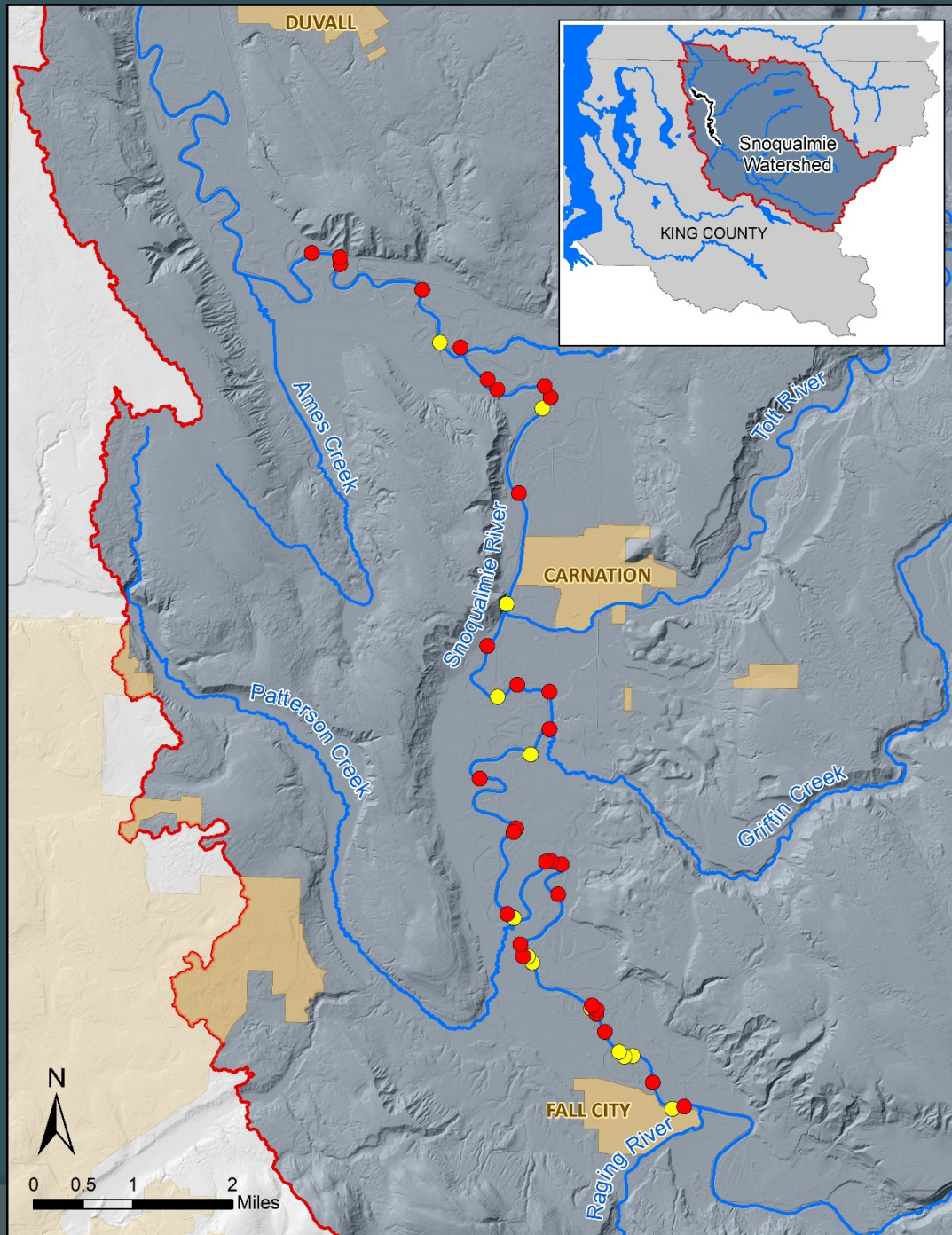


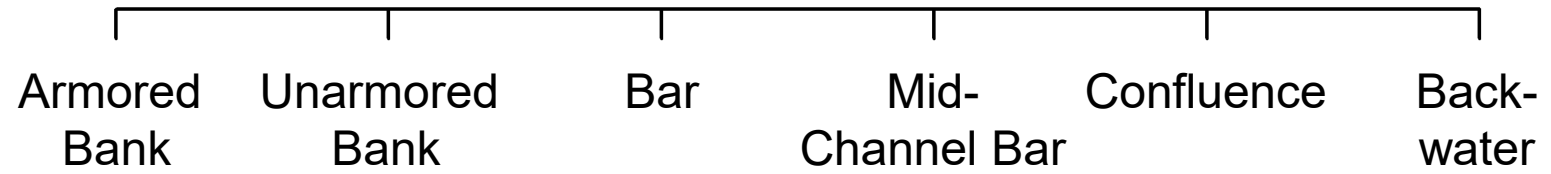
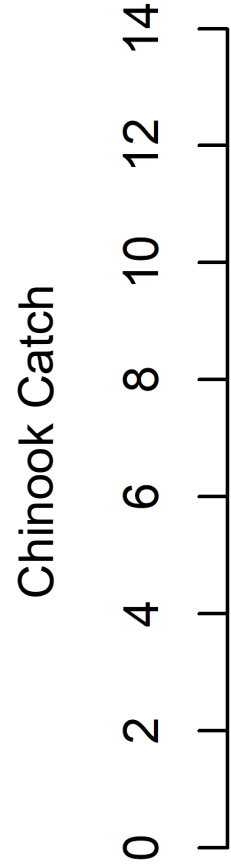
What is their distribution?





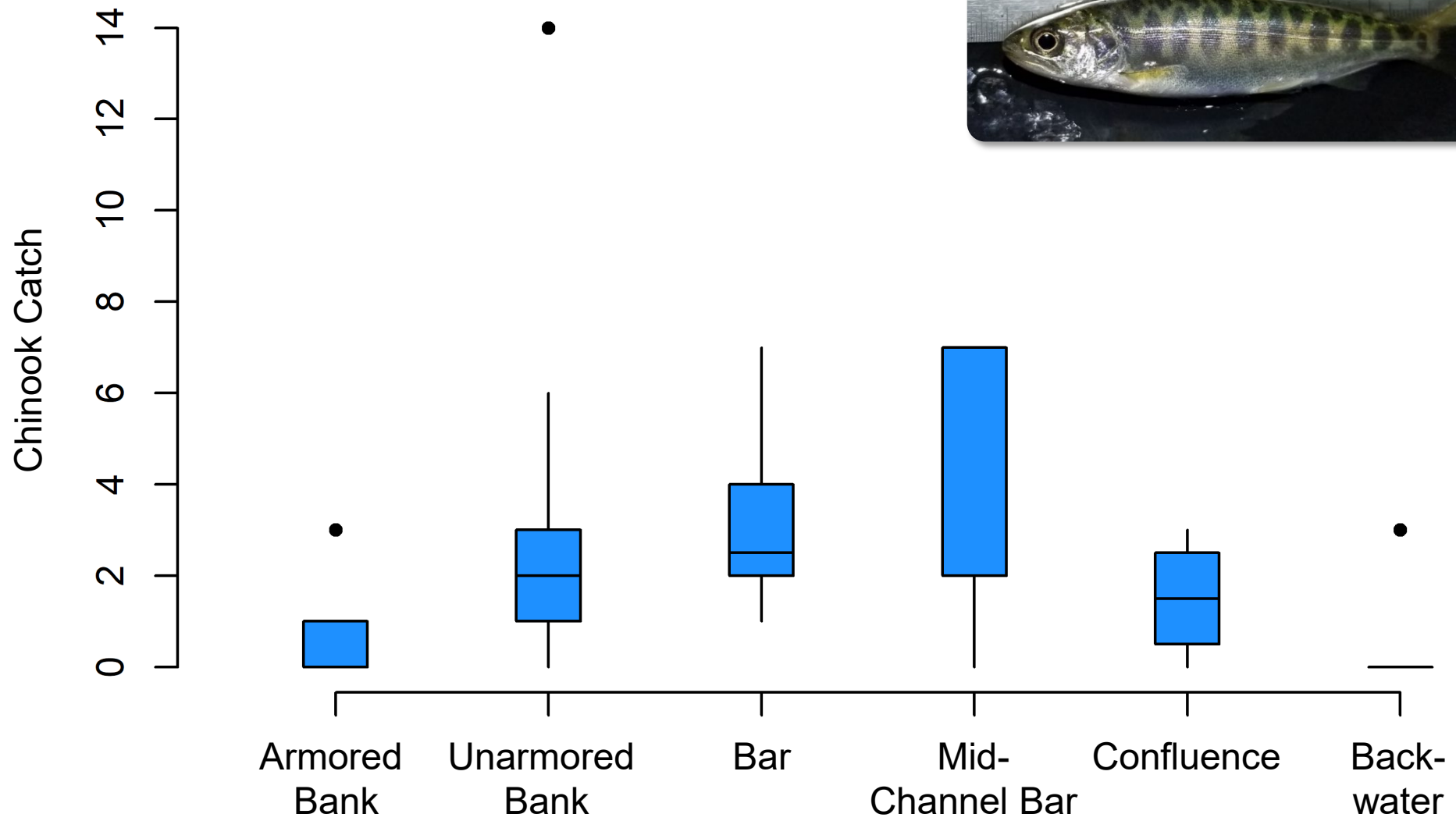






Which habitats do they use?





Chinook Catch

Armored  
Bank

Unarmored  
Bank

Bar

Mid-  
Channel Bar

Confluence

Back-  
water

% of transects  
with Chinook =

50%

78%

100%

71%

75%

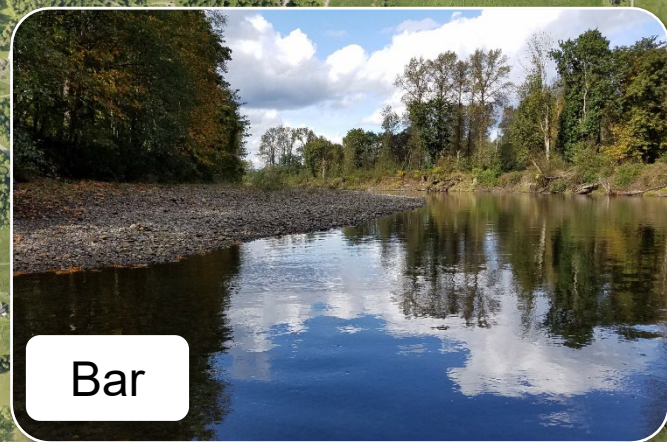
20%

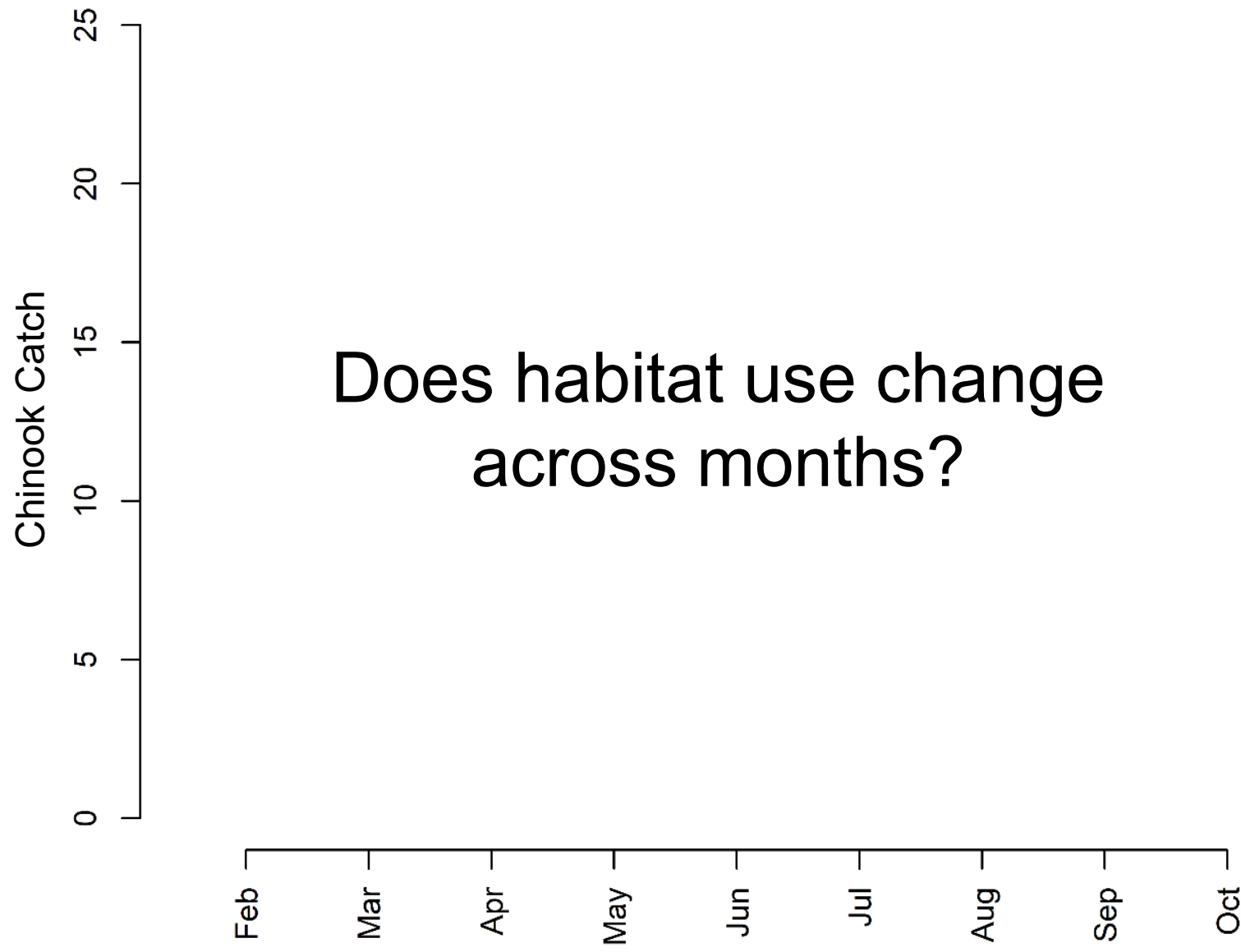


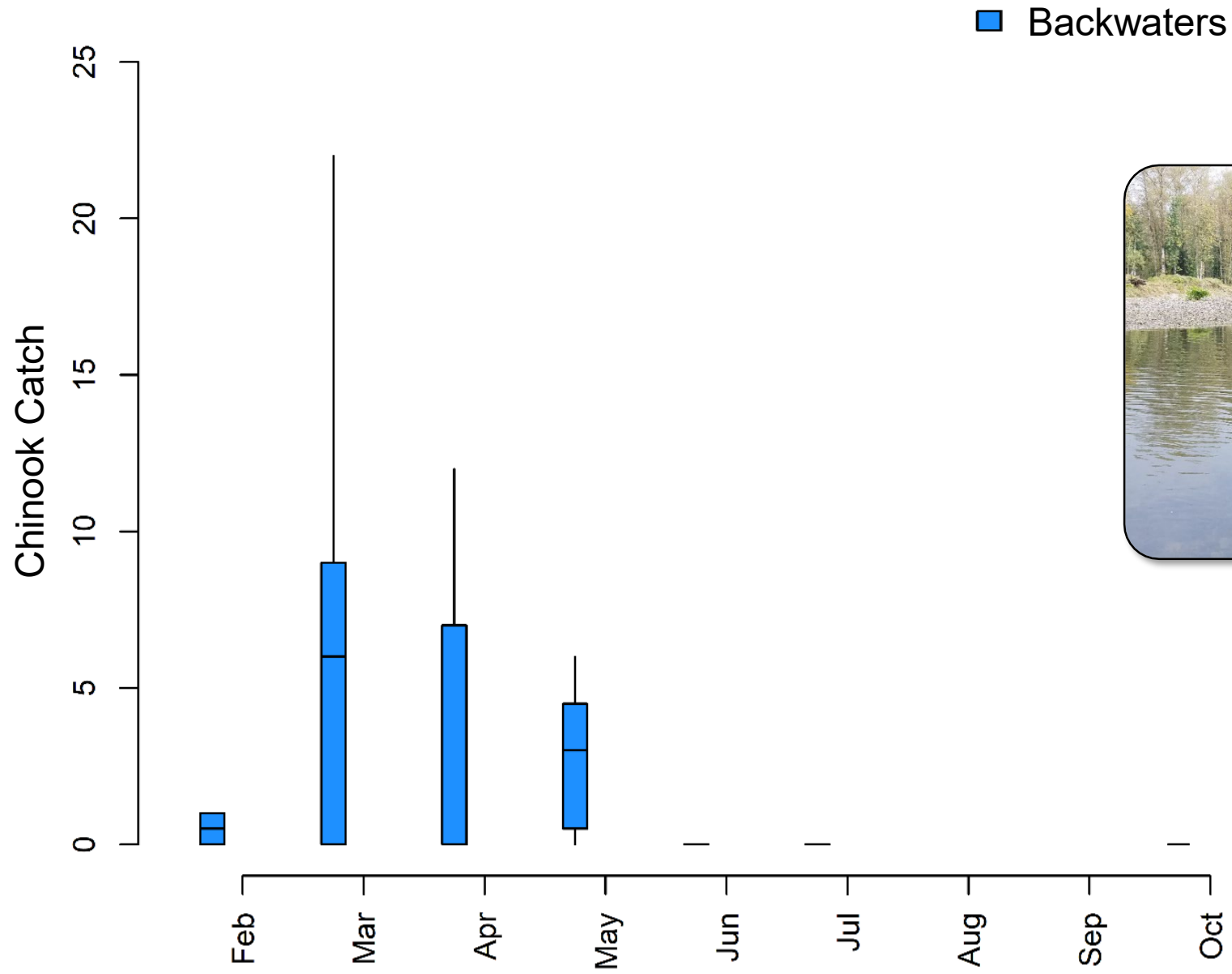
# Upper Carlson Restoration Project

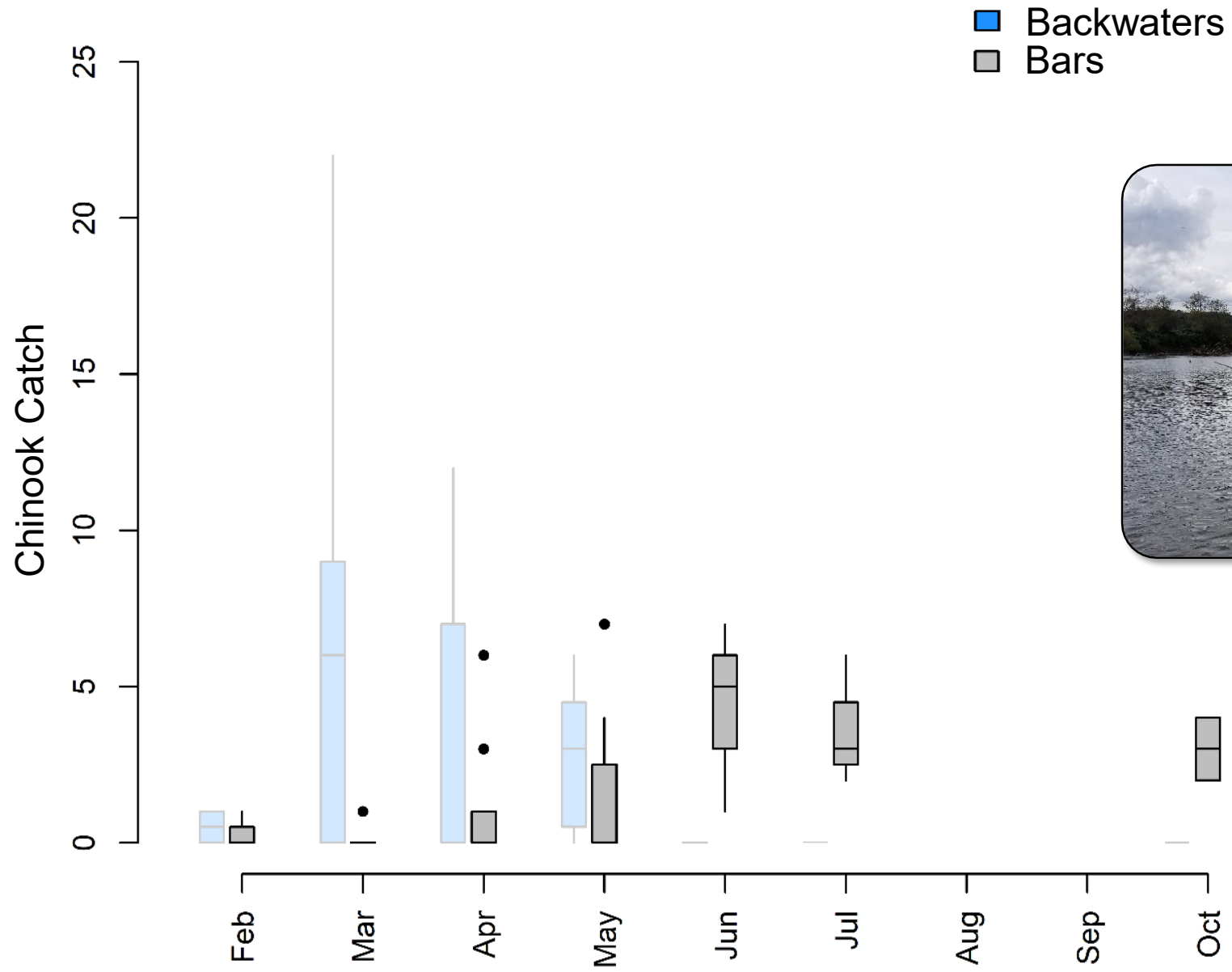


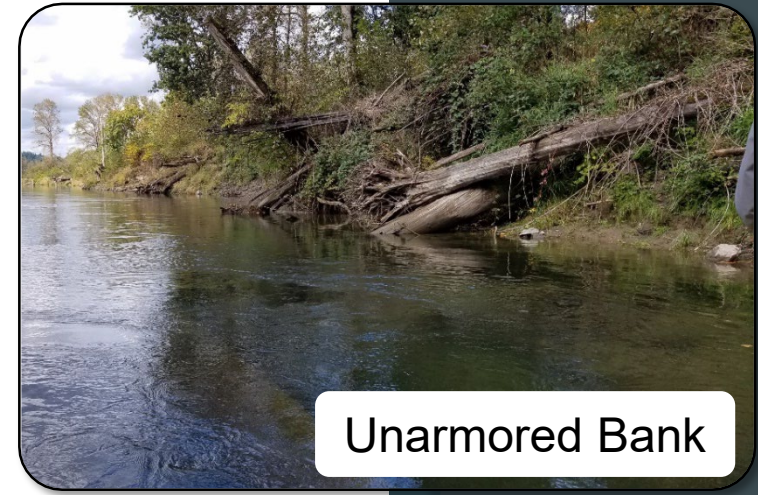
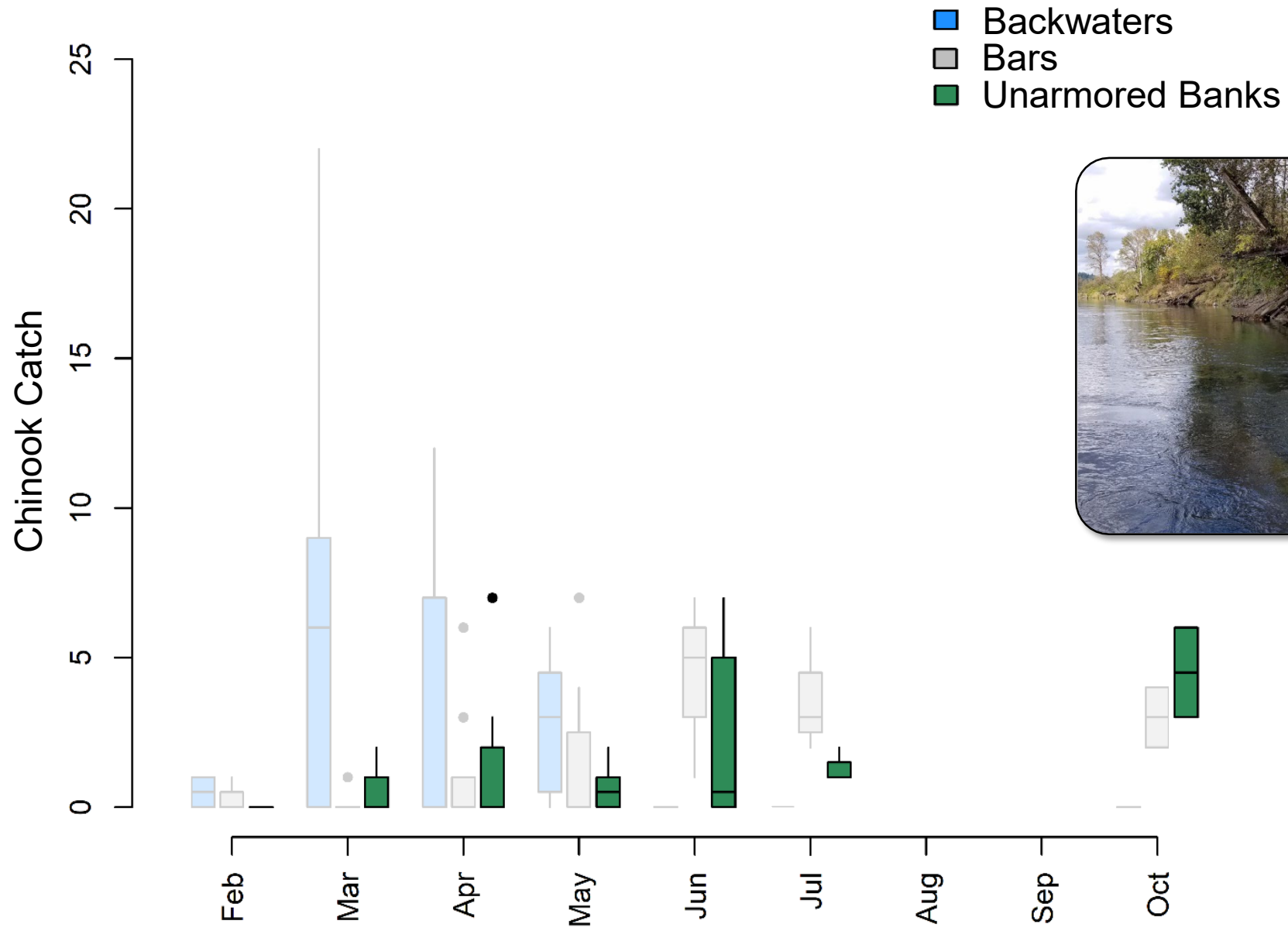
# Upper Carlson Restoration Project

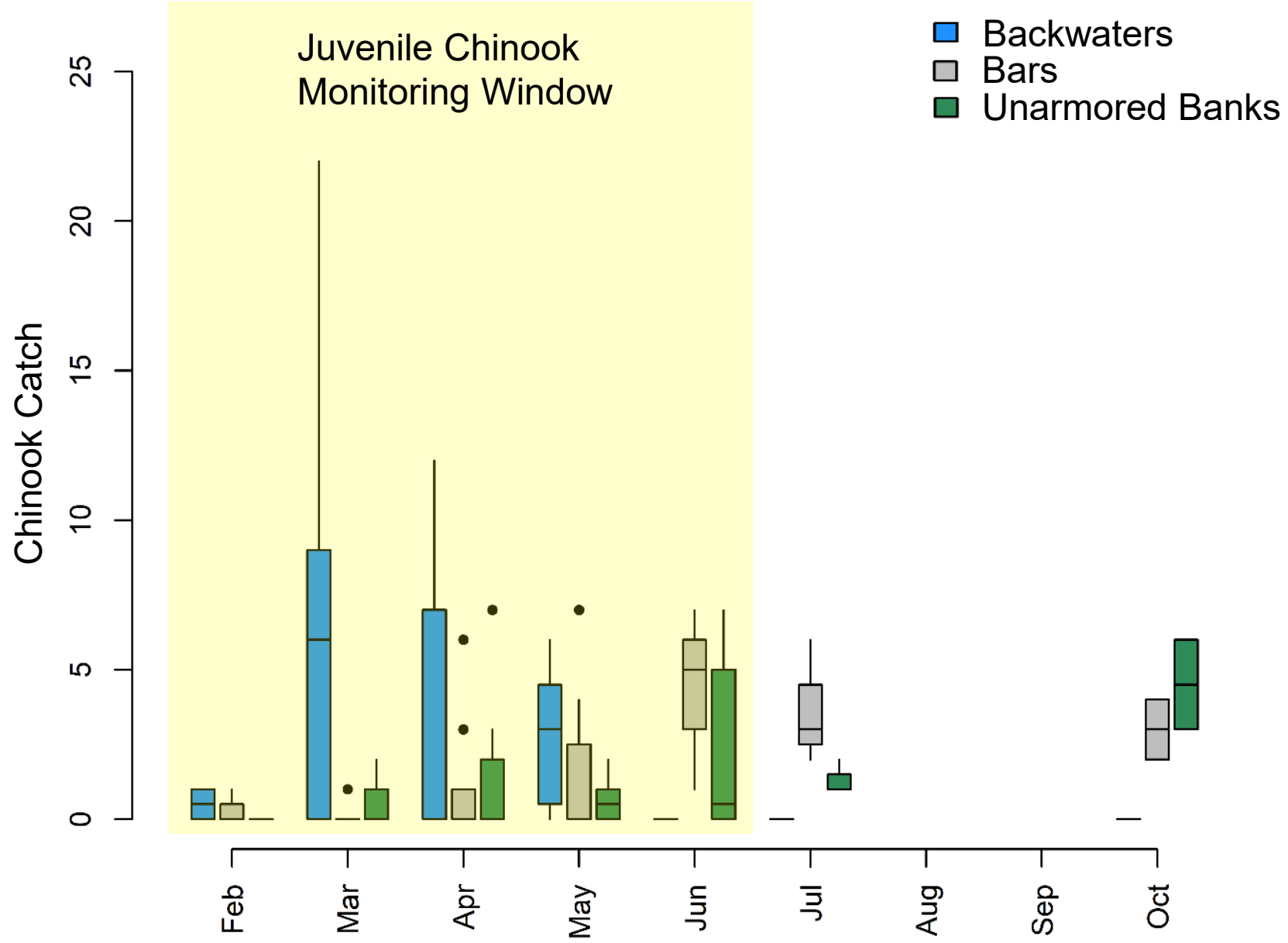












# Moving Forward

- December & January sampling
- Distribution and habitat use
- October flood event

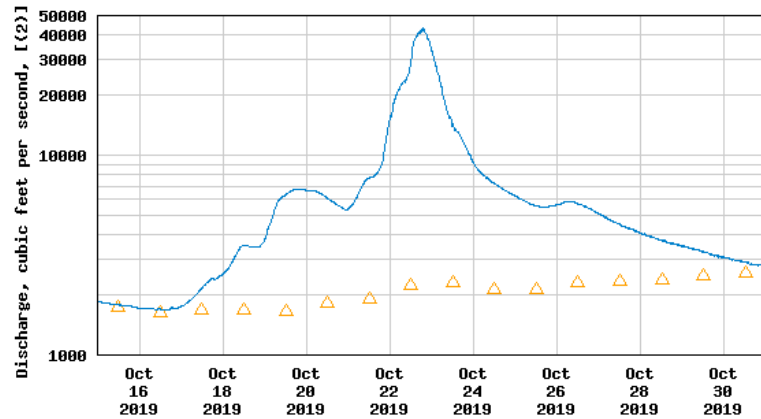


# Moving Forward

- December & January sampling
- Distribution and habitat use
- October flood event



USGS 12149000 SNOQUALMIE RIVER NEAR CARNATION, WA



△ Median daily statistic (89 years) — Discharge



Photo: Seattle Times



Photo: Seattle Times

# Potential Applications

- Project monitoring strategies
- Salmon recovery strategies
- Restoration project design elements



# Special Thanks

- Aaron David
- Chris Gregersen
- Dan Lantz
- James Bower
- Snoqualmie Watershed Forum
- King County Flood Control District  
Cooperative Watershed  
Management grant



**King County**

Department of  
Natural Resources and Parks  
**Water and Land Resources Division**



**KING COUNTY  
FLOOD CONTROL  
DISTRICT**





**King County**



Thank you.

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Water and Land Resources Division

King County Department of Natural Resources and Parks

