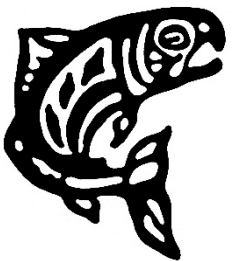


Conservation Priorities for Chinook Salmon Recovery

Washington State Conservation Commission
March 16, 2023



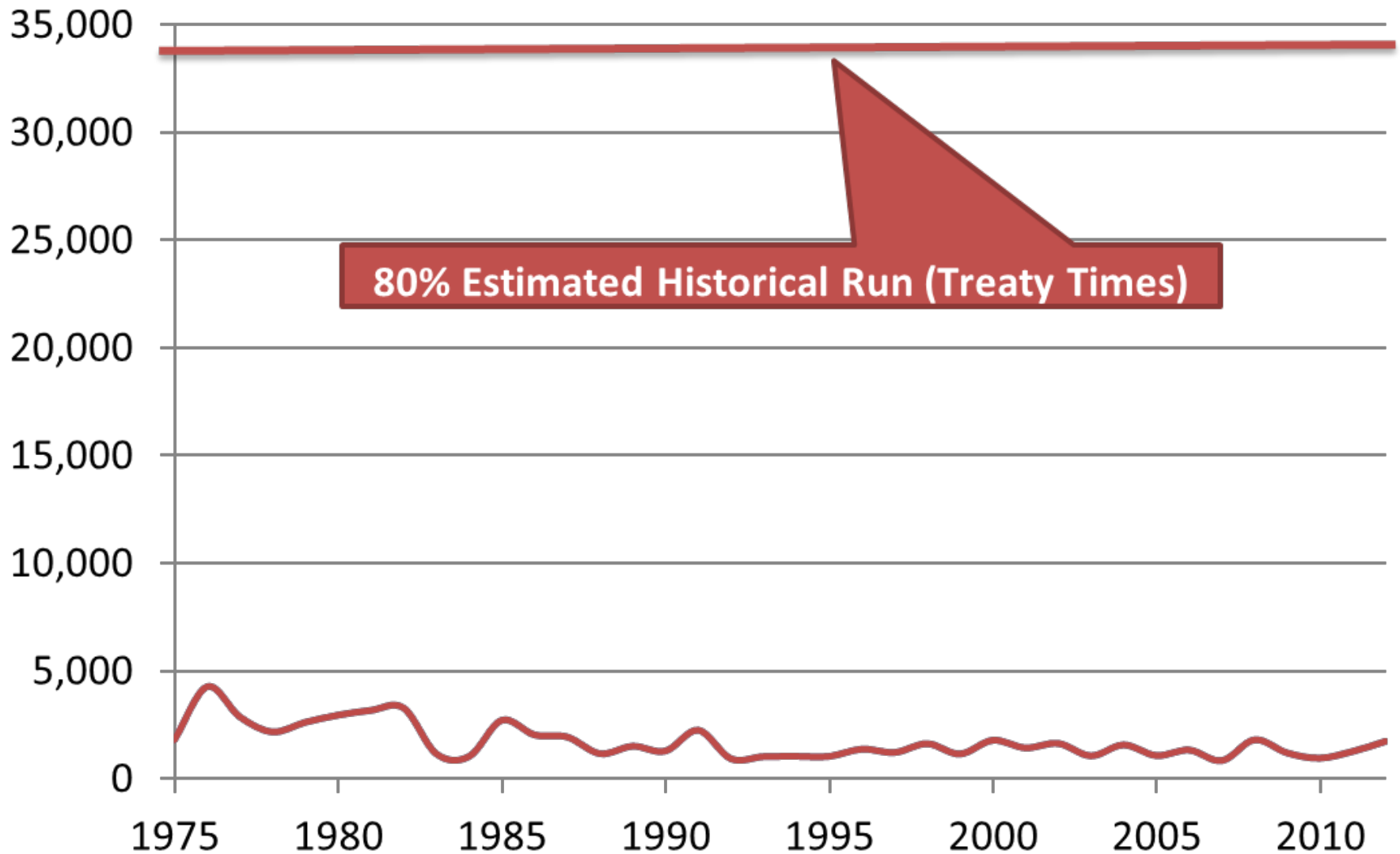
Charlotte Scofield
Stillaguamish Tribe of Indians

Outline

Conservation Priorities

- Harvest
- Hatcheries
- Habitat
 - Focus on Habitat Priorities and Chinook Salmon Recovery Plan Implementation

Stillaguamish Chinook Total Run Size



Harvest



Hatcheries

- Two integrated recovery hatcheries
 - Maintain Stillaguamish Chinook populations while co-managers and other entities work to improve productivity in the watershed.



Habitat

- What is salmon habitat?
- Habitat alteration past and present
- Stillaguamish Tribe Approach

What is Salmon Habitat?

Habitat Forming Processes

- Wood
- Beaver
- Water
 - Rivers, Tides, Waves, & Sediment

WOOD

Log jams on the
Quinault River, WA.

Most rivers had large
jams, in similar
spacing, along much
of their lengths in the
late 1800's.



BEAVER.....

> 20 dams/mile on tributaries & within the floodplain



CutterLight

WATER.....

**Dynamic rivers spreading floods
& sediment across a wide area**



Photo by Tim Abbe

WATER..... Tides flooding large areas twice a day



ALTERATION OF HABITAT FORMING PROCESSES

REMOVING WOOD.....

1880-1901: 35,000+ snags removed from Skagit, Stillaguamish, and Snohomish



REMOVING FUTURE WOOD.....

1880's-1930's: Floodplain forest cleared
from nearly the entire anadromous zone



REMOVING BEAVER.....

Mid 1800's- Present: Beaver trapped, ponds drained (~90% of wetland lost)





DRAINING WATER.....

Tides pushed back, tidal wetlands drained

85% of Stillaguamish tidal marshes diked & drained



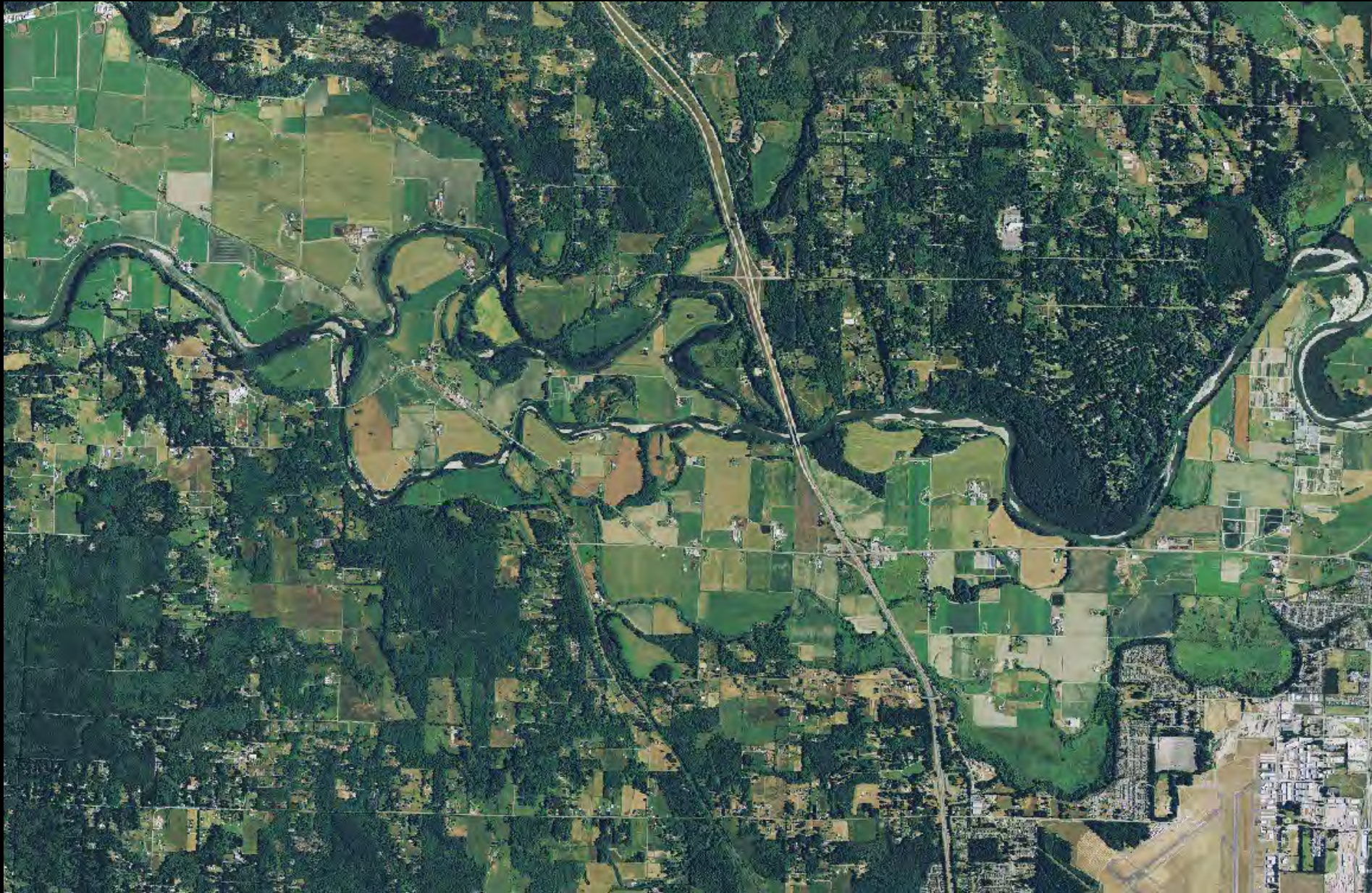


DIRECTING WATER.....

Rivers & streams locked in place

1930-1991: 33 miles armoring
added in Stillaguamish, channel
area reduced by 30%

Habitat Forming Processes Operating on Small Footprint



Stillaguamish Tribe Approach Habitat Conservation Priorities

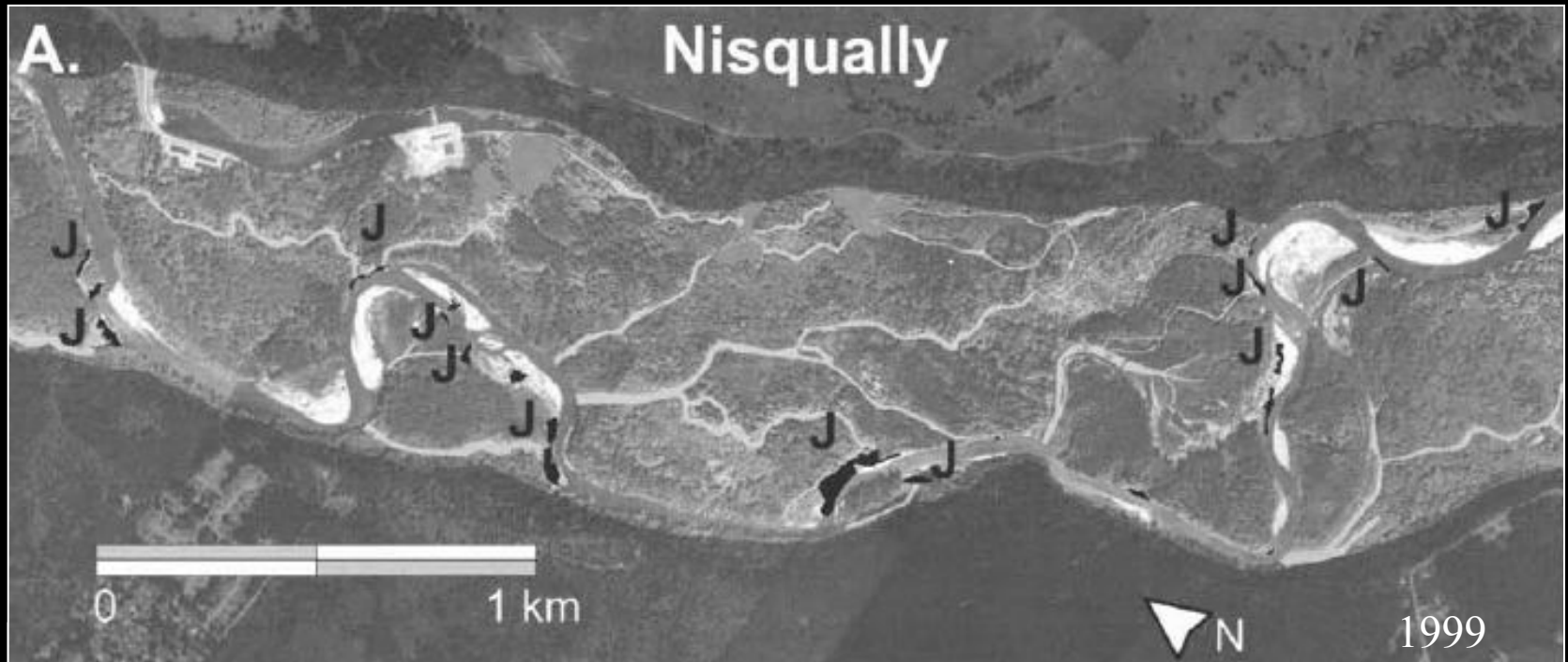
Salmon Recovery Plan Implementation

- Secure habitat corridor (Space & continuity)
- Protect (Certainty)
- Restore (Habitat Processes)
- Keep at it (Time)

(Protect and restore flows & water quality by protecting existing habitat)

**Space + Certainty+ Processes +Time =
Resilient Habitat**

Will it Work?

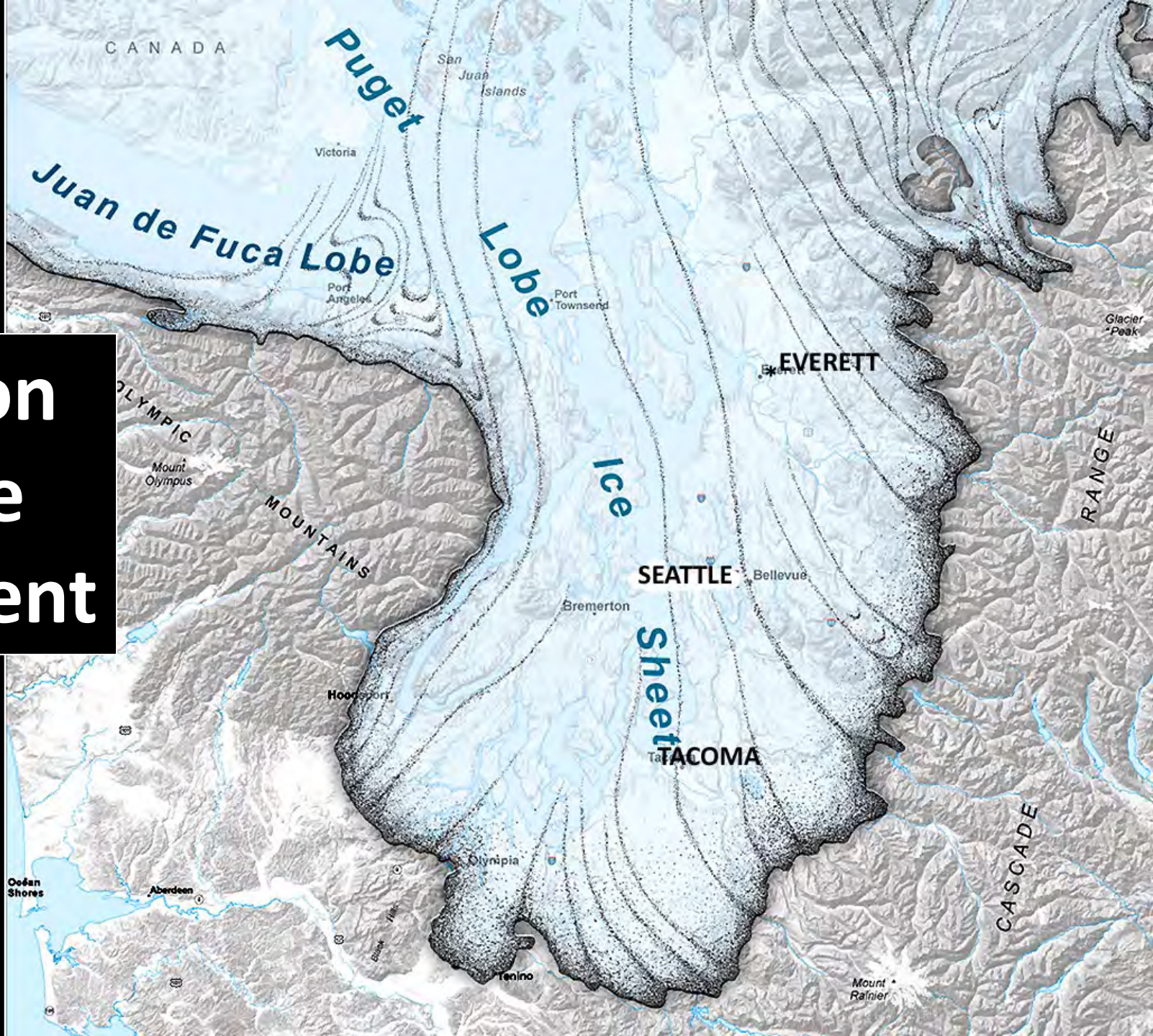


Zis a ba Phase 1 - 2011





Salmon can be Resilient

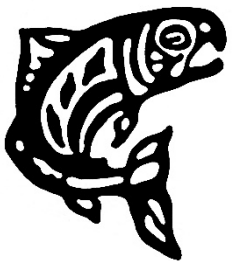


“It takes 500 years to plant a tree. We have to do that. It might take us a century to get our salmon back. We have to do that. We have to keep the quality of life here in the Northwest that we enjoy.”

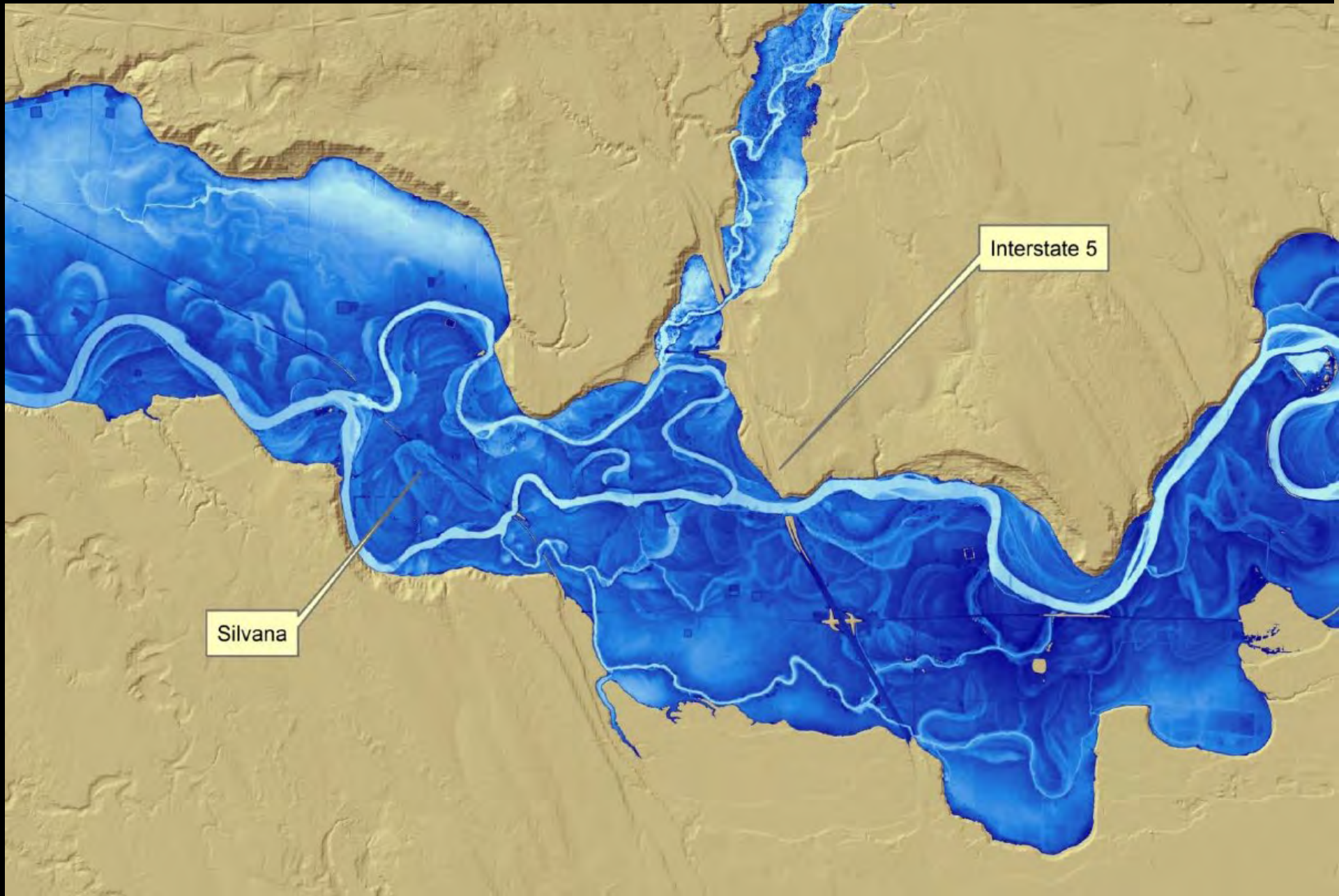
**-Billy Frank Jr.
1992 Statement to Bill Clinton on Komo-TV**

Thank you!

email: cscofield@stillaguamish.com



Fingerprints of Habitat Forming Processes Still Visible.....



Limiting Factor	Units	Recovery Plan Goal	Progress to Date	% Of Goal	
Riparian	Acres Planted	8000	516.39	6.5%	missing 20
Estuary	Acres Restored to Tidal Influence	2739	488	17.8%	missing 20
Large Wood	Engineered Log Jams	609	22	3.6%	missing 20
Floodplain	Acres Restored	150	22.3	14.9%	missing 20
	Change in Bank Armoring (miles)	-22.1	-2.9625	13.4%	missing 20
Sediment	Landslide Treatments	2	1	50.0%	missing 20
	Forest Road Treatments (miles)	106	41.6	39.2%	missing da
Habitat Protection	Acres Conserved	7225	1548	21.4%	complete

WATER..... Wave energy moving sediment/wood in the nearshore

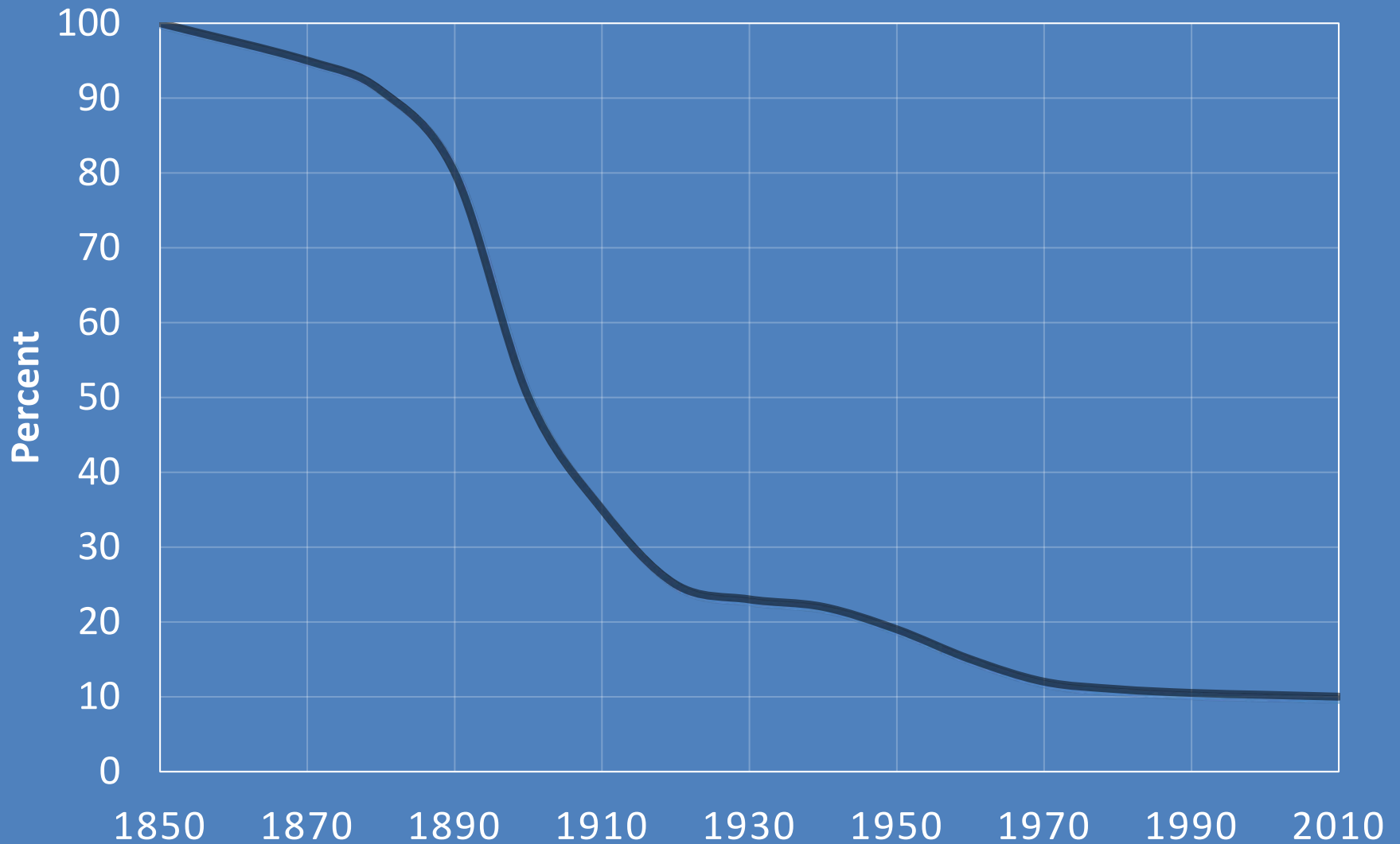


CONTROLLING WATER..... Waves/Tides held back



27% of Puget Sound marine shorelines armored.....

HISTORIC STILLAGUAMISH SALMON HABITAT OVER TIME



“All of the major activities - forestry, agriculture, hydro-development, urban growth – that affect the quality and quantity of water in the salmon’s stream must be made more compatible with the biological requirements of the fish.”

**-Billy Frank Jr.
1994 Testimony to Congress**