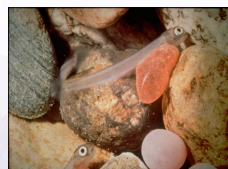


Calling Back the Salmon Spirit

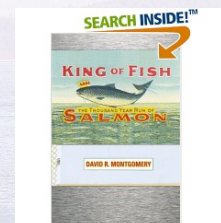


Kit Rawson
January 17, 2006



Salmon Management: Focus on the “H’s”

- Harvest management
- Hatchery programs
- Habitat protection and restoration



Harvest Management

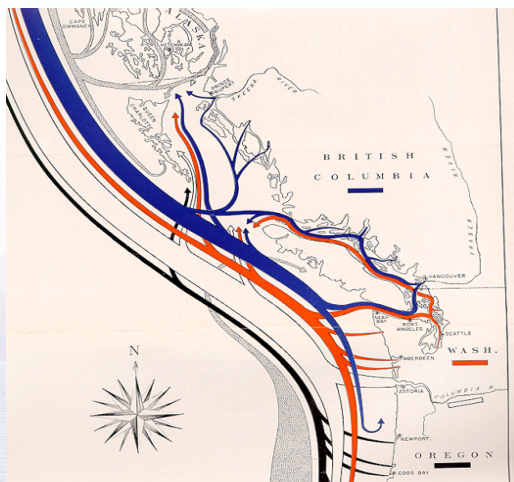


Table I. Summarized coded-wire recoveries of Chinook salmon adults & sub-adults from 1978-2001 in WDFW Area 7, which includes the San Juan Islands

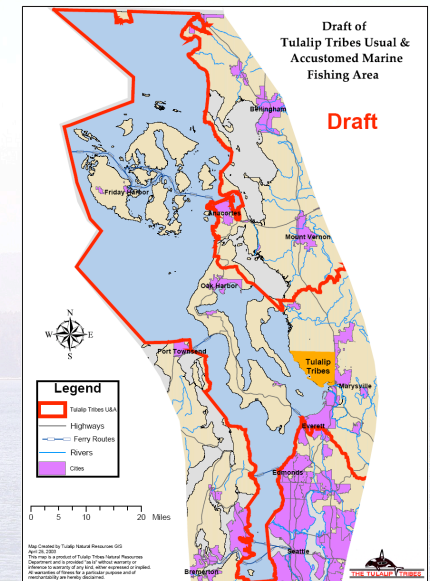
Chinook Salmon Adults & Sub-Adults Area/River of Origin	Number of Tags Recovered
Georgia Strait/ Mainland North	110
Georgia Strait/ Vancouver Island	321
Vancouver Island/ West Coast	49
Fraser/Thompson Rivers	300
North Washington Coast	
• Queets River	7
• Quillayute River	20
Strait of Juan de Fuca	50
Hood Canal	
• Skokomish/Dosewallips	139
North Puget Sound	
• Nooksack	473
• Samish	540
• San Juans	239
• Skagit	117
Mid Puget Sound	
• Duwamish/Green	157
• Lake Washington	384
• Puyallup River	11
• Stillaguamish/Snohomish	80
South Puget Sound	107
Upper Columbia River	16
Snake River	10
Central Columbia River	130
Lower Columbia River	242

(Source: Pacific States Marine Fisheries Commission, RMIS database.)



“The right of taking fish at usual and accustomed grounds and stations is further secured to said Indians in common with all citizens of the Territory”

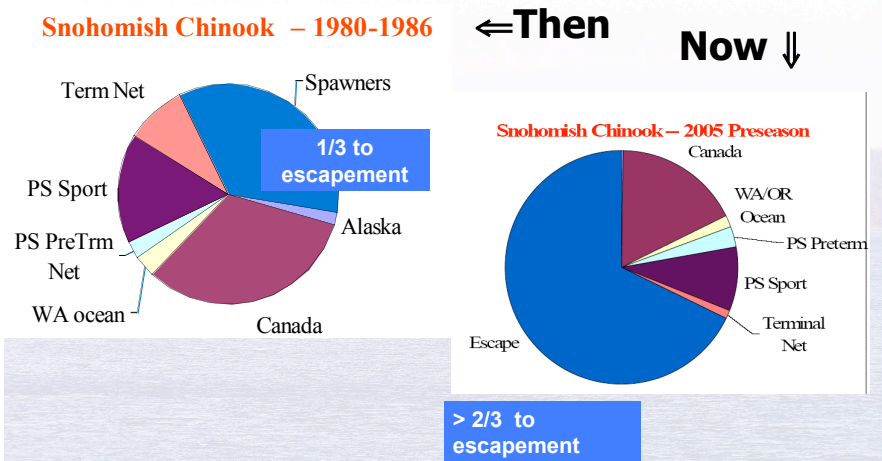
Treaty of Point Elliott
January 22, 1855
(151 years ago next week)



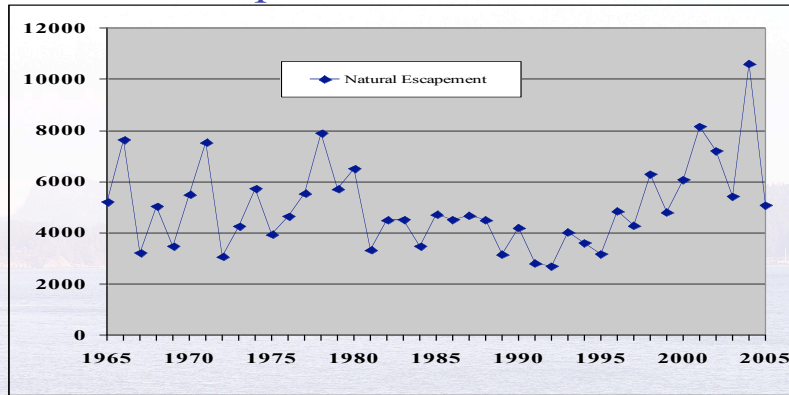
Salmon Management Forums

- Pacific Salmon Commission
 - United States, Canada
 - US: Tribes, States, Federal Gov't have specific roles
 - Pacific Salmon Treaty (1985)
- Pacific Fishery Management Council
 - Washington, Oregon, Idaho, Tribes, NOAA
 - Sustainable Fisheries Act (Renewed 1997)
- Domestic Comanagement
 - Tribes, Washington
 - Stevens Treaties (1855), *United States v. Washington* (1974), Puget Sound Salmon Management Plan (1985)

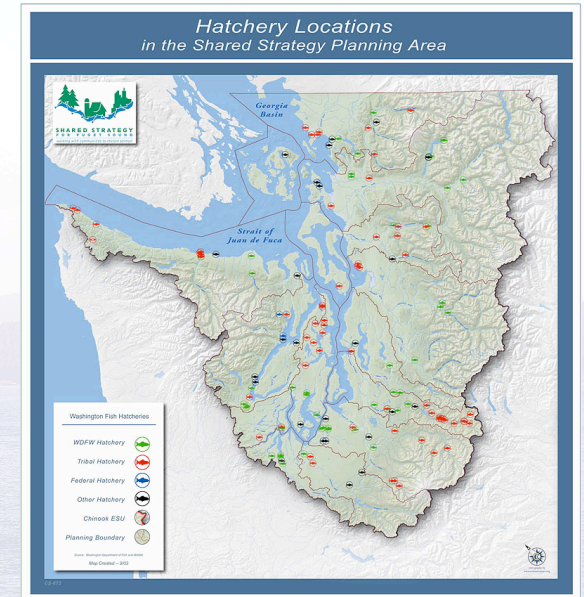
Impacts on Puget Sound salmon have been substantially reduced



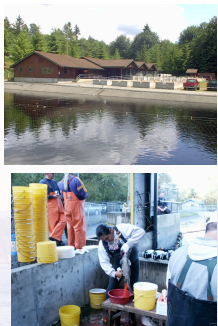
Snohomish River Chinook Escapement 1965-2005



Hatcheries



Hazards and Risks of Hatchery Production

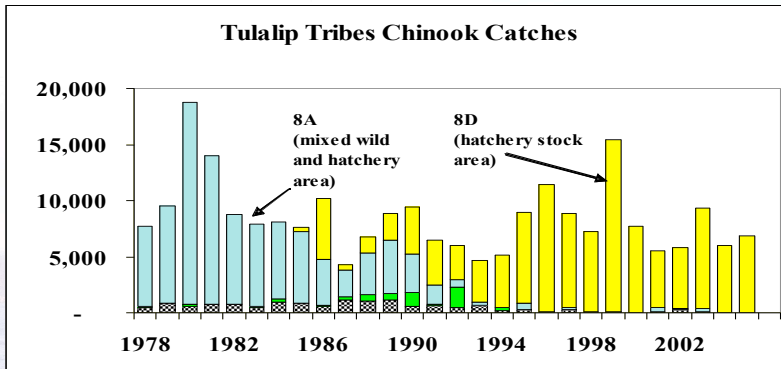


- Introduction of disease
- Change in genetics
- Competition and predation
- Overharvest of wild fish in mixed-stock areas
- Masking the true status of wild populations

Hatchery Reform



- State/tribal management plans address hazards and risks
- Hatchery Scientific review Group (HSRG)
- Review by HSRG has resulted in changed hatchery practices
- http://www.lltk.org/HRP_About.html
- New Snohomish basin hatchery management plan in 2005



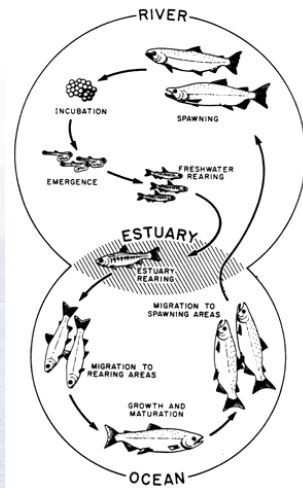
Habitat



Photo by Jeff Haymes

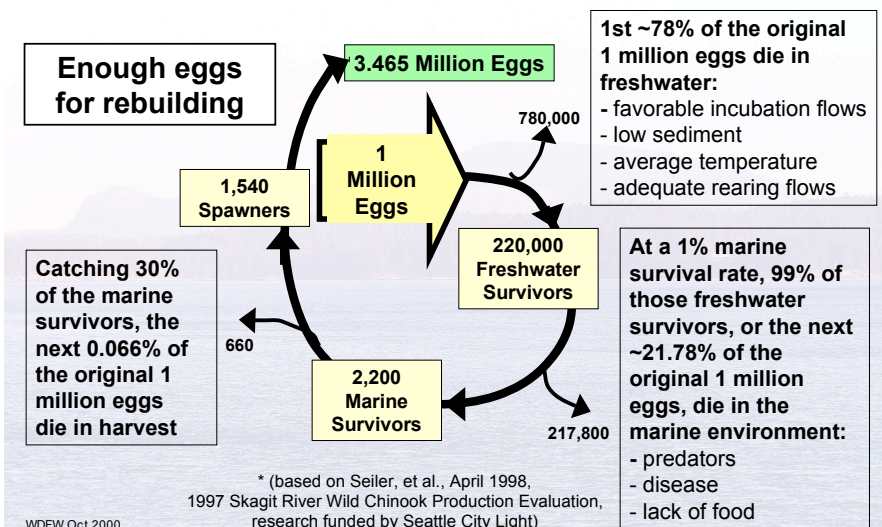
Salmon Life Cycle

- Salmon interact with habitat at every stage of the life cycle.
- Degraded or lost habitat affects survival as the fish pass through.
- The performance of the whole population is affected by the habitat at all life stages.

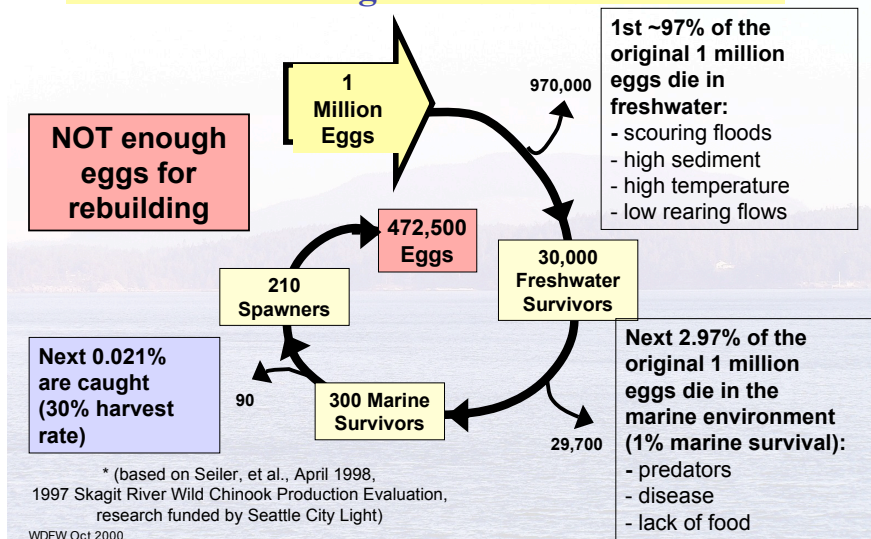


SOURCE:
<http://www.fish.washington.edu/hatchery/salmon.html>

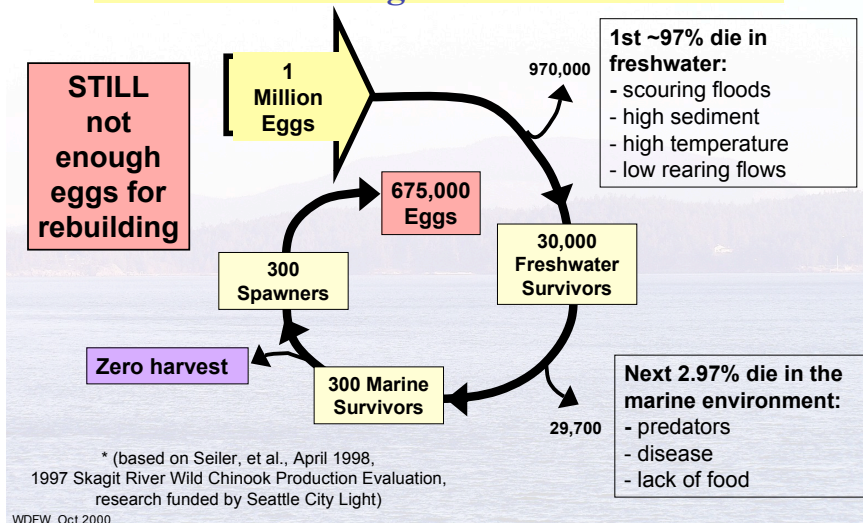
Chinook Survival by Life Stage - “Favorable” Conditions *



Chinook Survival by Life Stage - Extreme Scouring Flood Events *

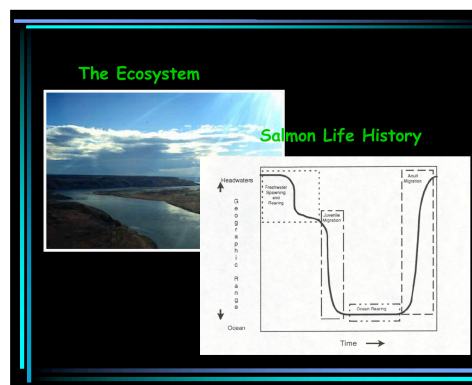


Chinook Survival by Life Stage - Extreme Scouring - No Harvest *

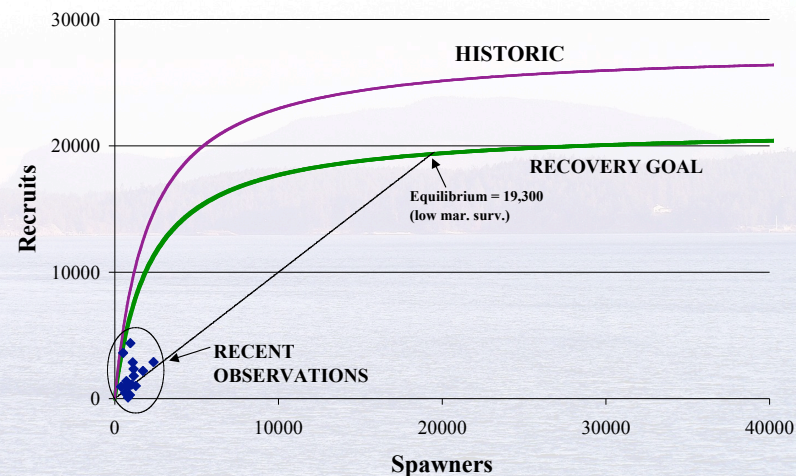


Habitat Productivity Viability Analysis (HPVA)

- Predicts population response to habitat attributes.
- Considers the response of fish to habitat throughout their life cycle.
- Provides results in terms of population abundance and productivity.
- Addresses diversity through life history trajectories.



Snoqualmie



*Calling back the
salmon spirit*

