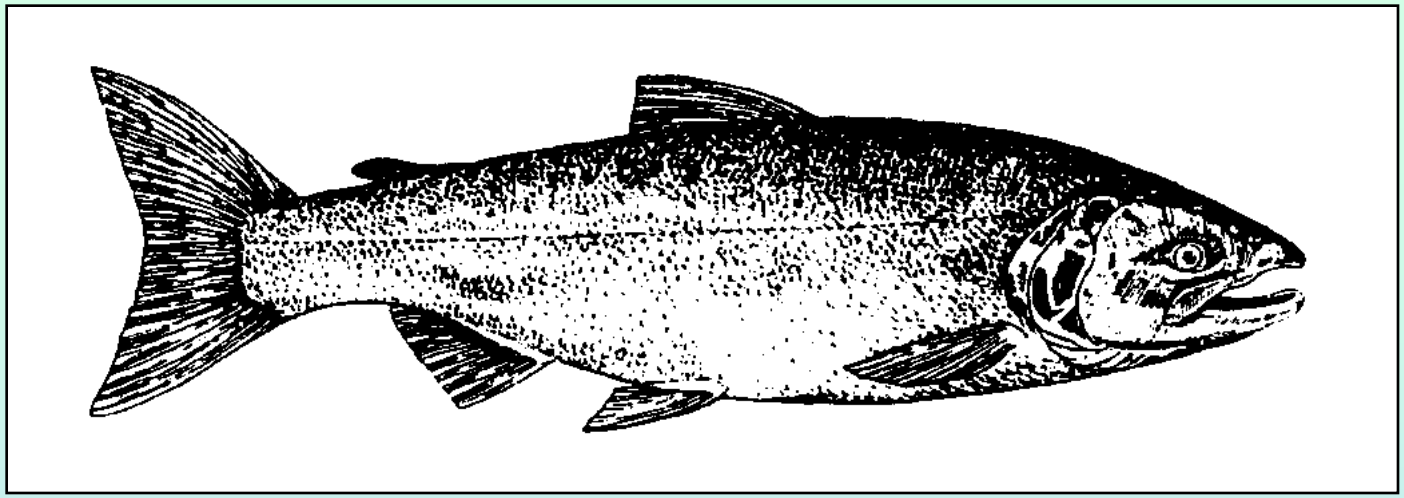
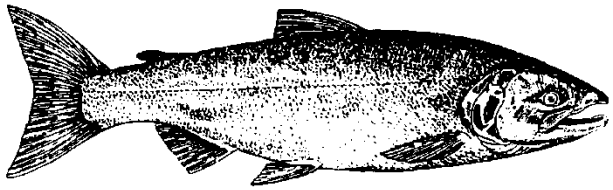
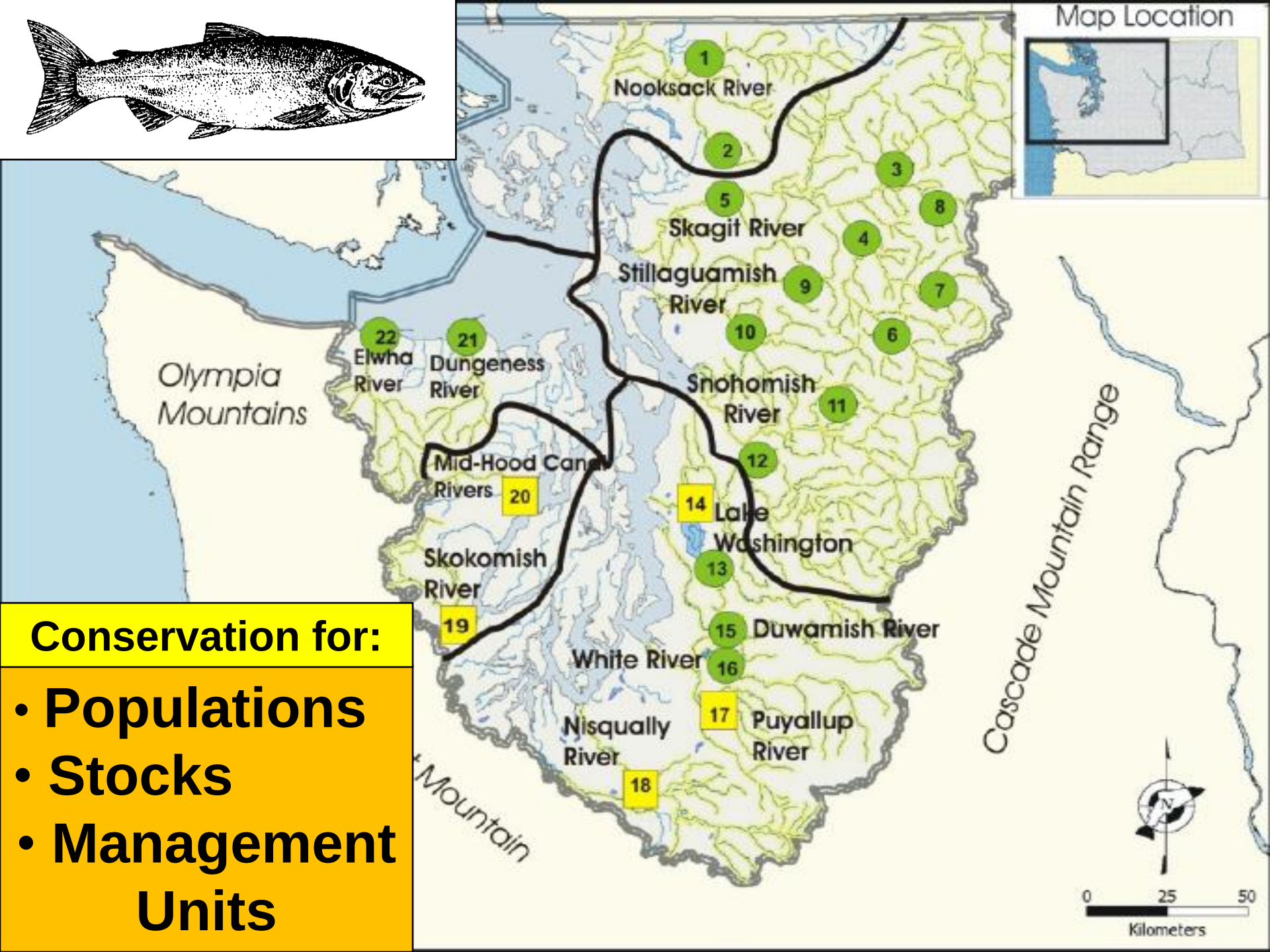


Comprehensive Management Plan for Puget Sound Chinook Harvest 2010



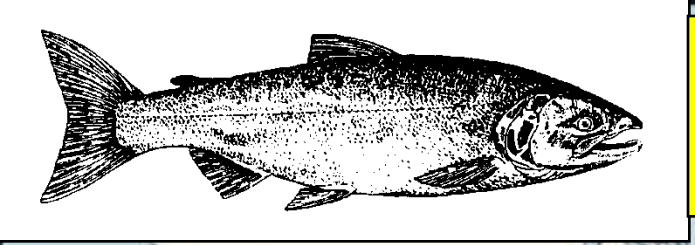
Plan Objectives

- **Conservation:**
  - Population productivity, abundance & diversity
  - Account for all fishery-related mortality
- **Legal & Policy Obligations:**
  - Indian Treaty Rights
  - Puget Sound Salmon Management Plan
  - Pacific Salmon Treaty
  - Meet ESA Jeopardy Standards
- **Provide Fishing Opportunities:**
  - Healthy Species & Stocks



Conservation for:

- **Populations**
- **Stocks**
- **Management Units**



Puget Sound Chinook Populations

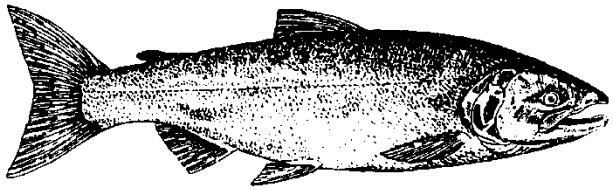
Nooksack North Fork
- **South Fork**

Skagit summer / fall
- **Upper Skagit summer**
- **Sauk summer**
- **Lower Skagit fall**

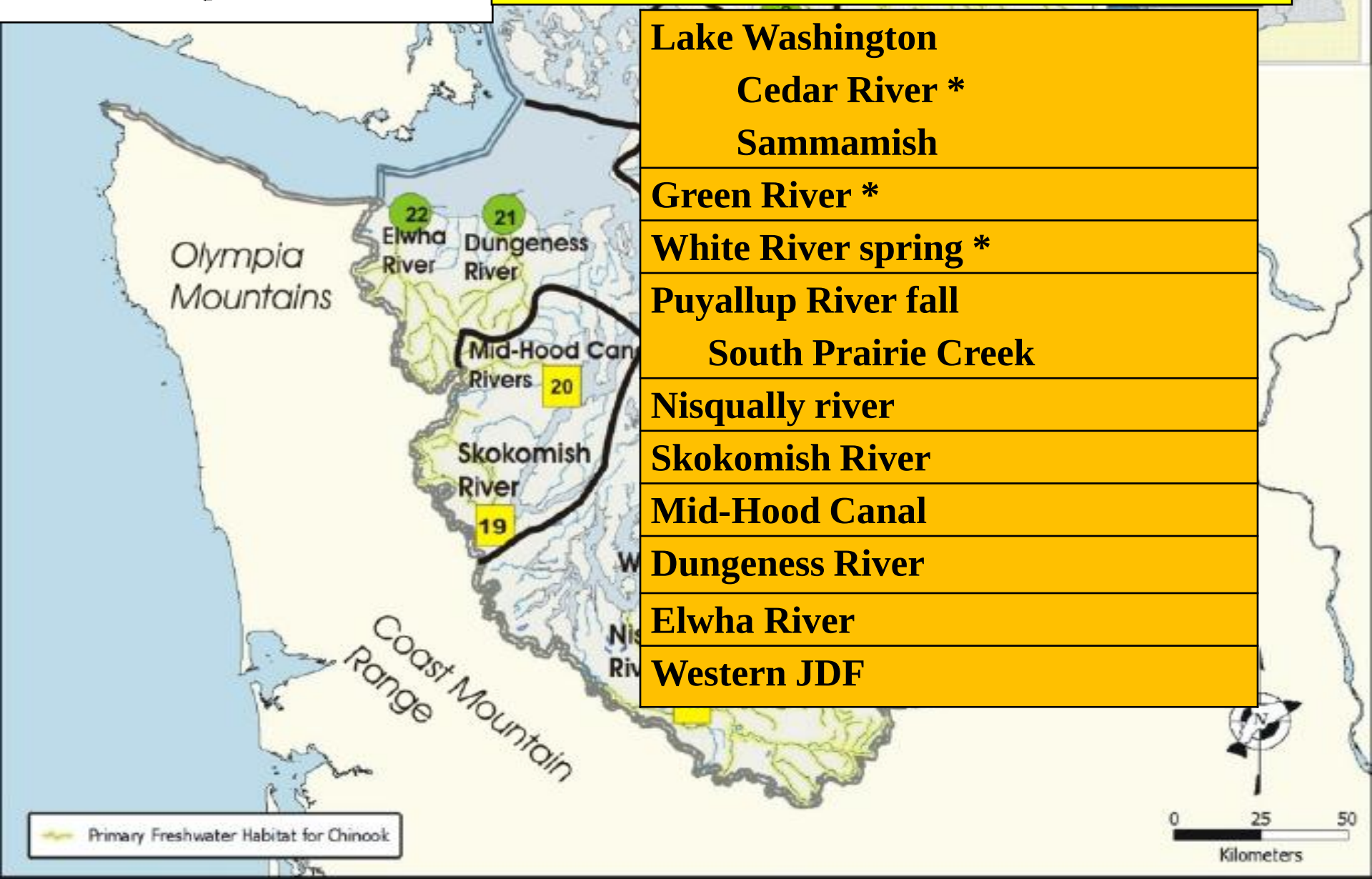
Skagit spring
- **Upper Sauk**
- **Cascade**
- **Suiattle**

Stillaguamish
- **North Fork summer**
- **South Fork & Mainstem fall**

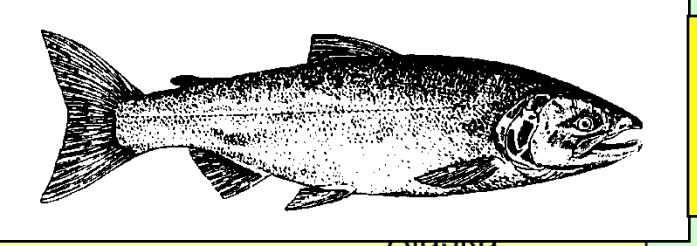
Snohomish
- **Skykomish**
- **Snoqualmie**



Puget Sound Chinook Populations

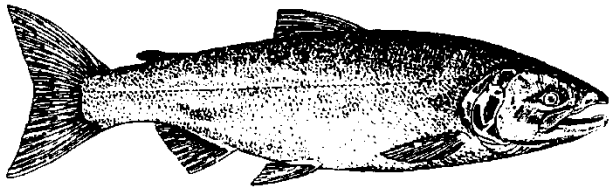


Lake Washington
Cedar River *
Sammamish
Green River *
White River spring *
Puyallup River fall
South Prairie Creek
Nisqually river
Skokomish River
Mid-Hood Canal
Dungeness River
Elwha River
Western JDF



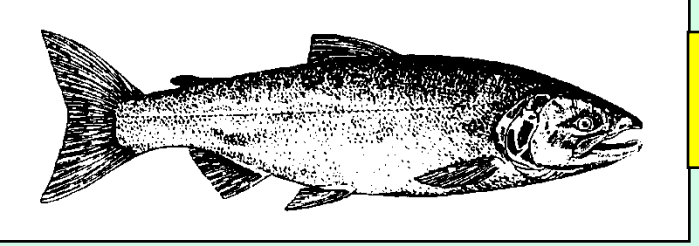
Puget Sound Chinook Life History

Puget Sound Chinook Controlling Fisheries



Controlling Fisheries

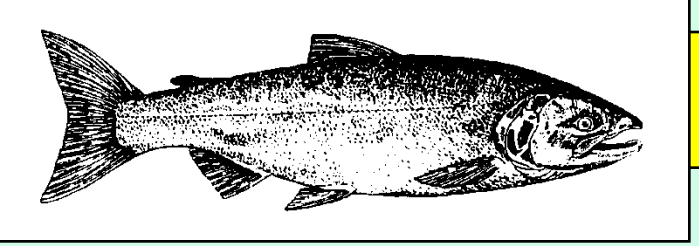
- Washington Ocean Treaty & Non-Treaty Commercial
  - Ocean Sport
- Strait of Juan de Fuca Troll, Net & Sport
- Strait Terminal Area Tribal Net & Freshwater Sport
- San Juan Islands Net & Sport
- Nooksack Samish Terminal Area Net & Sport
- Skagit Terminal Area Net & Sport
- Marine Areas 8-13 Sport
- Areas 8A & 8D Net
- Stillaguamish River Net & Sport
- Snohomish River Net & Sport
- Area 9 Net
- Area 10 Net
- Lake Washington Terminal Area Net & Sport
- Area 11 Net
- Puyallup River (&White River) Net & Sport
- Nisqually River Net & Sport
- Area 13 South Sound Net & Sport
- Hood Canal Net & Sport
- Skokomish River Net & Sport



Controlling Fisheries

- **Exploitation Rates**
  - **by Stock**
  - **Across All Fisheries**

- **Number of Spawners**
  - **Natural v. Hatchery Origin**

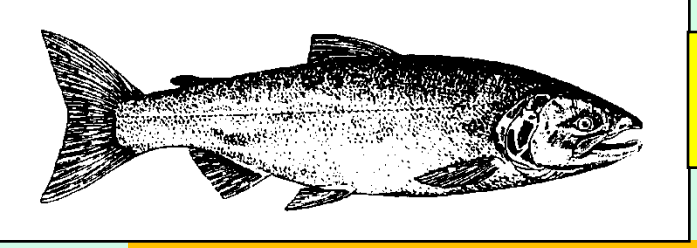


Exploitation Rates

$$ER_{s,a,f} = \frac{Mortality_{s,a,f}}{(Mortality + Spawners)_{s,a}}$$

Number caught (or killed incidentally)

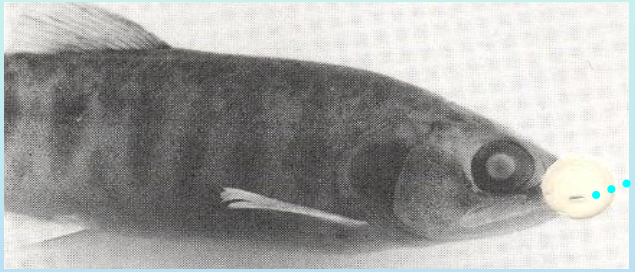
Number available to all fisheries



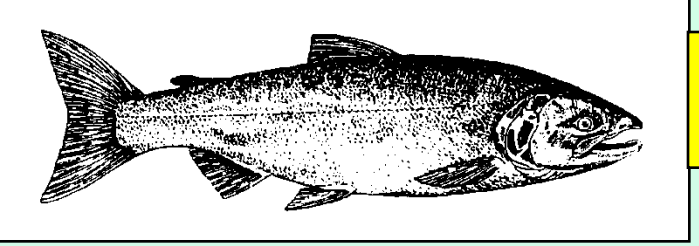
Exploitation Rates

Based on Science

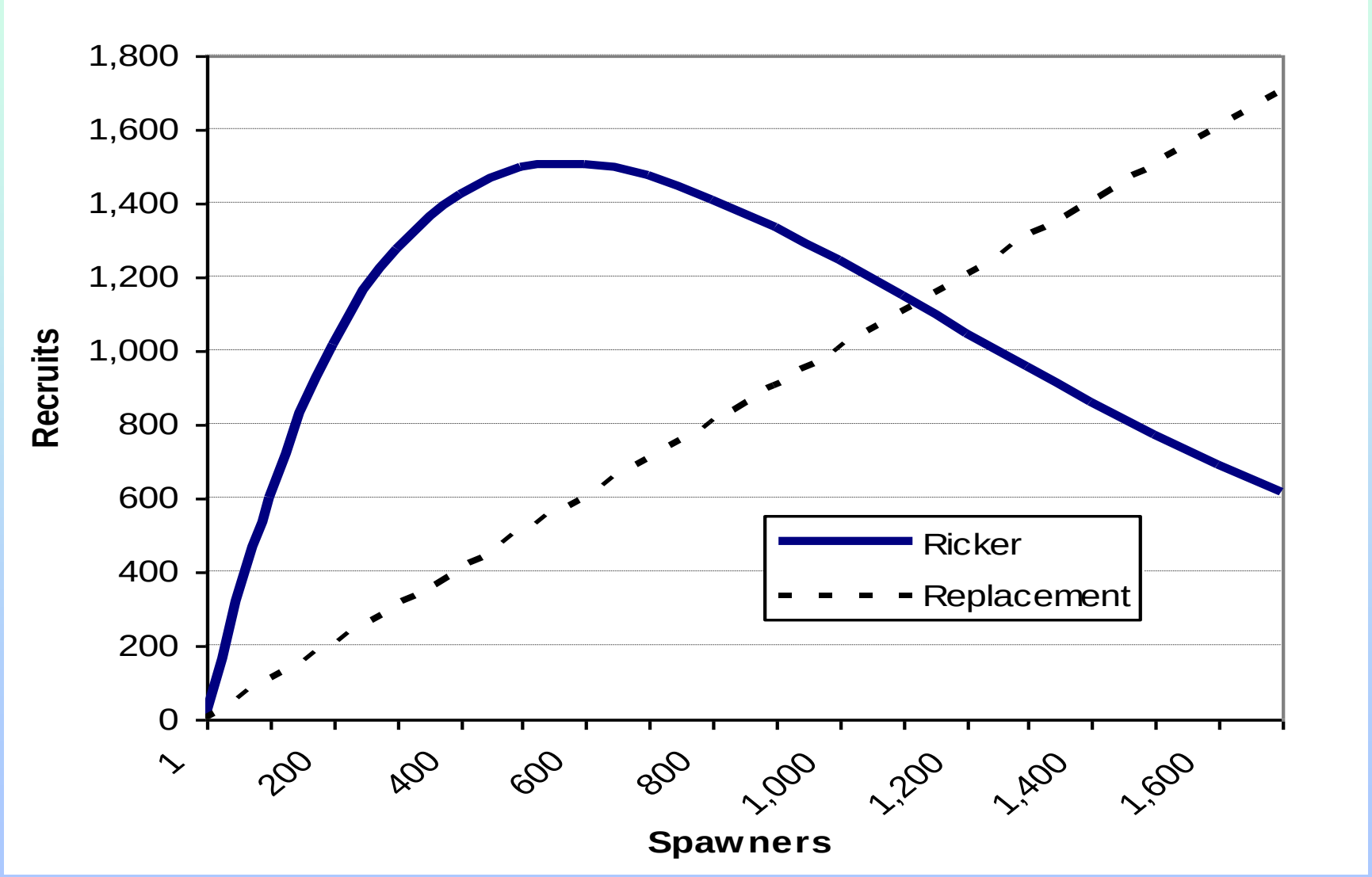
Coded-wire tags (CWTs) & other stock i.d. techniques

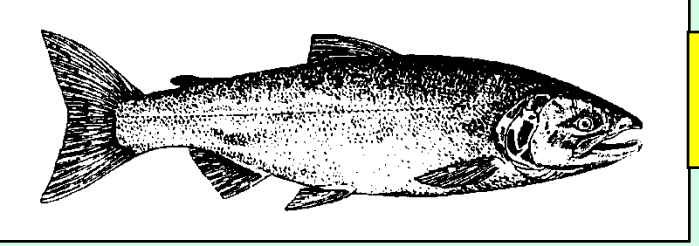


- **Population Abundance**
- **Fishery Catch / Impact**
  - **Exploitation Rate**

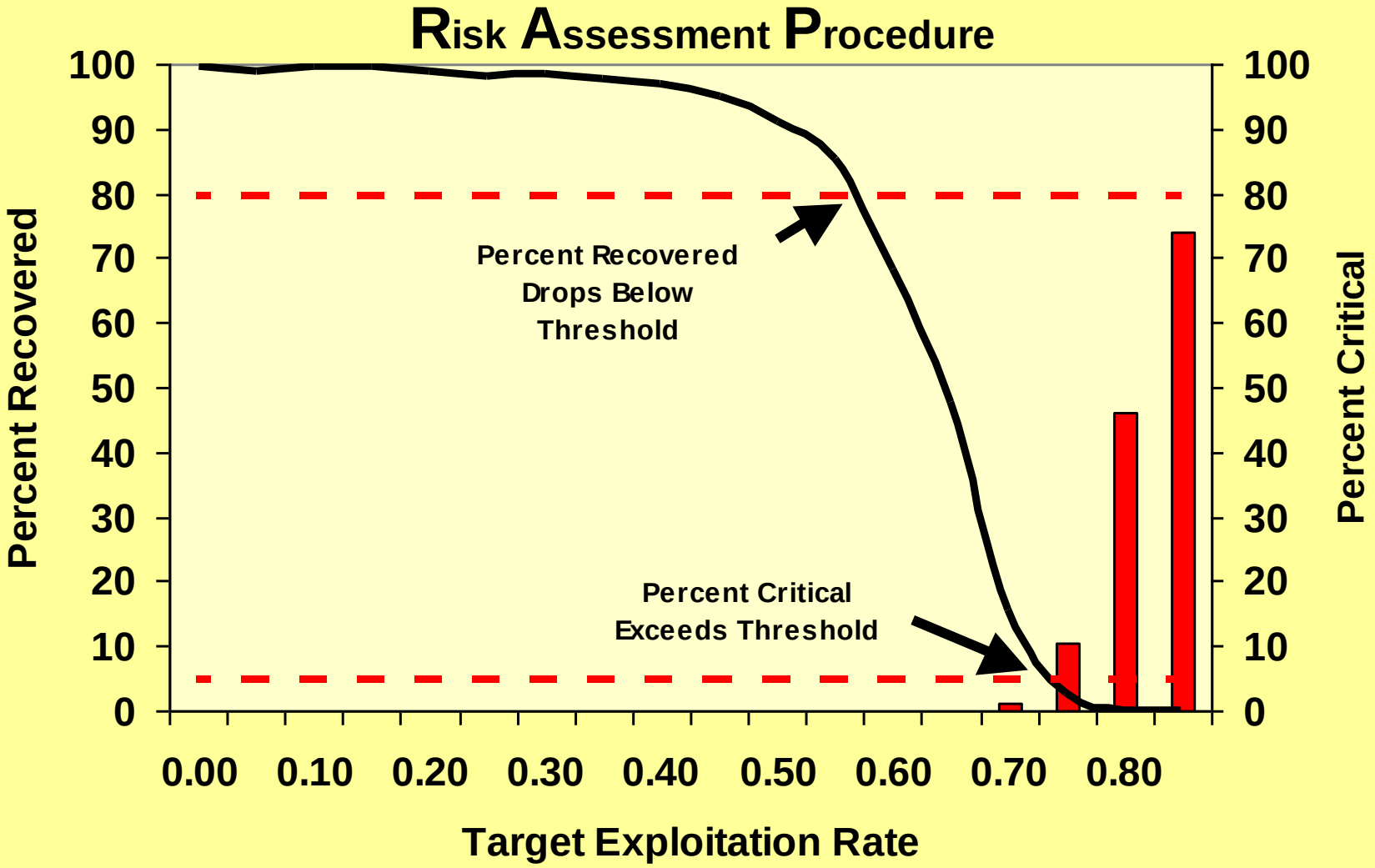


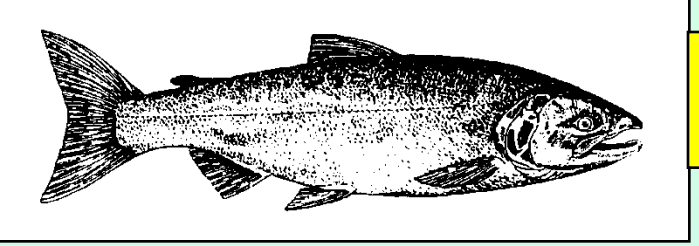
Exploitation Rates





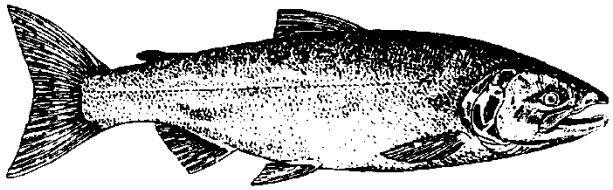
Exploitation Rates





Exploitation Rates

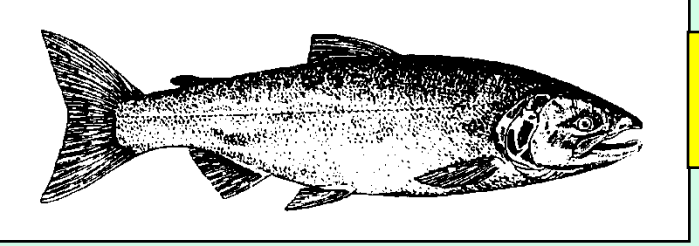
Management Unit	Total Exploitation Rate Limit
Skagit Summer/Fall	50%
Skagit Spring	38%
Stillaguamish	25%
Snohomish	21%
White River Spring	20%
Puyallup	50%



Exploitation Rates

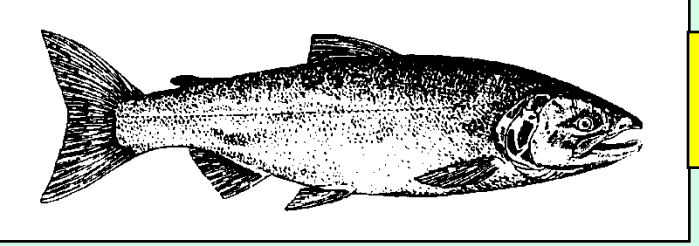
Exploitation Rates for Puget Sound Stocks

Management Unit	Total E.R.	Southern U.S. only
Nooksack Spring/Early	20%	7%
Dungeness	42%	4%
Skagit Spring	34%	21%
White River Spring	20%	19%
Skagit Summer/fall	49%	26%
Stillaguamish	23%	12%
Snohomish	26%	14%



Exploitation Rates

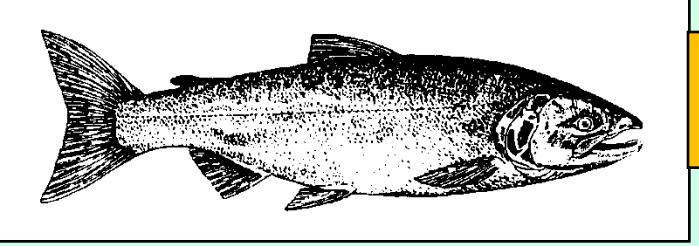
Management Unit	Exploitation Rate Limit Southern U.S. Fisheries only
Nooksack Early	7%
Dungeness	10%
Elwha	10%
Western Strait	10%



Exploitation Rates

Management Unit	Exploitation Rate Limit *Pre-Terminal* Southern U.S. Fisheries only
Lake Washington*	15%
Mid Hood Canal*	15%
Green	15%
Skokomish	15%

*** No "Directed" Terminal Area Fishing Allowed**

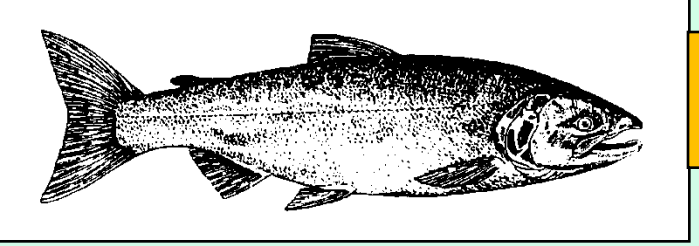


Spawning Numbers

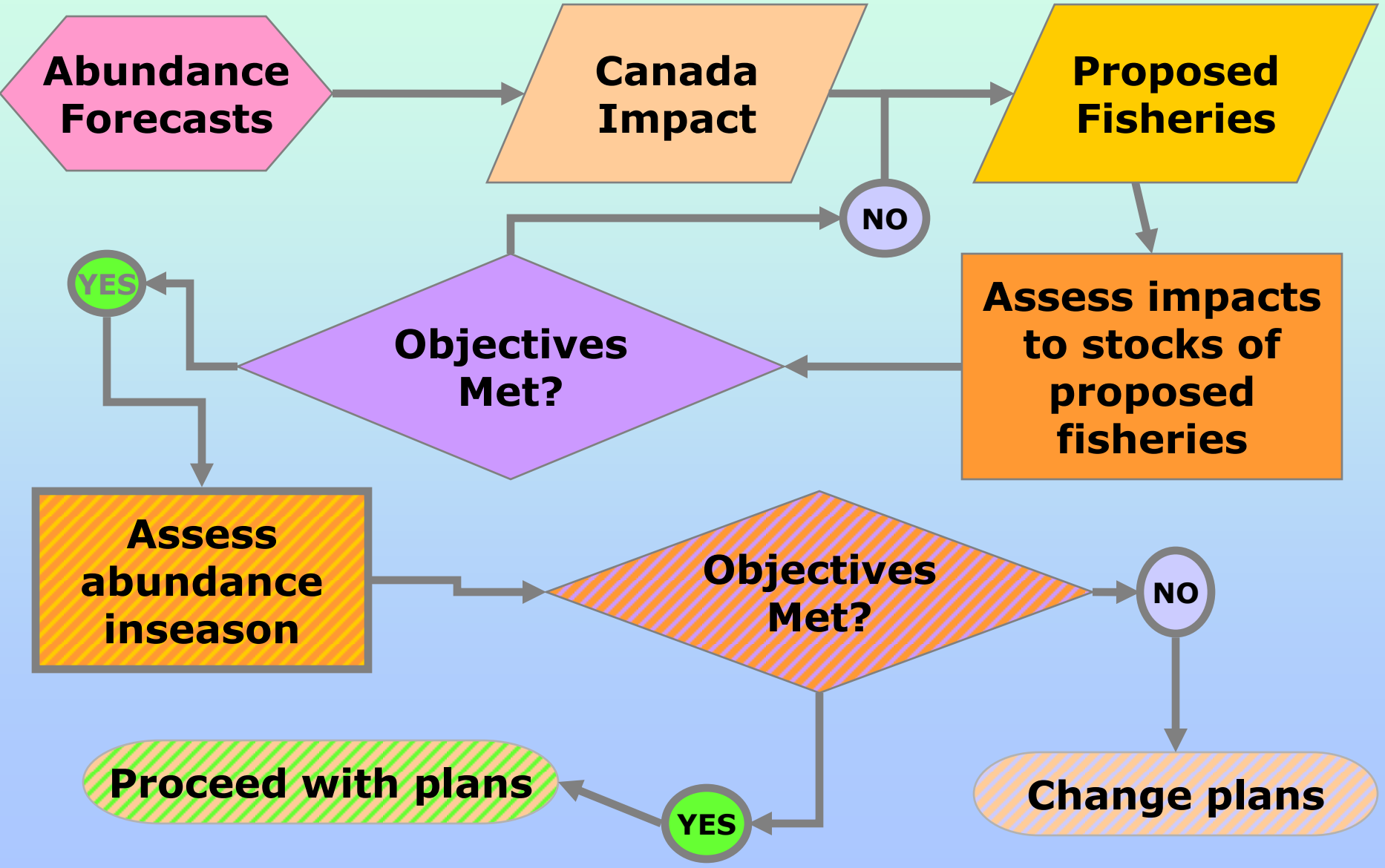
Control Fisheries to:

Avoid Low Spawner Abundance

Meet or exceed Upper Spawner Threshold



Spawning Numbers

Management Unit	Low Abundance Threshold	Upper Management Threshold
Nooksack Early		4,000
North Fork	1,000	2,000
South Fork	1,000	2,000
Skagit summer / fall	4,800	14,500
Upper Skagit summer	2,200	8,434
Sauk summer	400	1,926
Lower Skagit fall	900	4,140

Annual DECISION PROCESS