



Integrating Conservation Hatchery Principles With Tribal Treaty Reserved Harvest



"Our fate and the fate of the fish are linked."

Dan Landeen and Allen Pinkham, *Salmon and His People*



Can you run a hatchery program for recovery AND harvest?



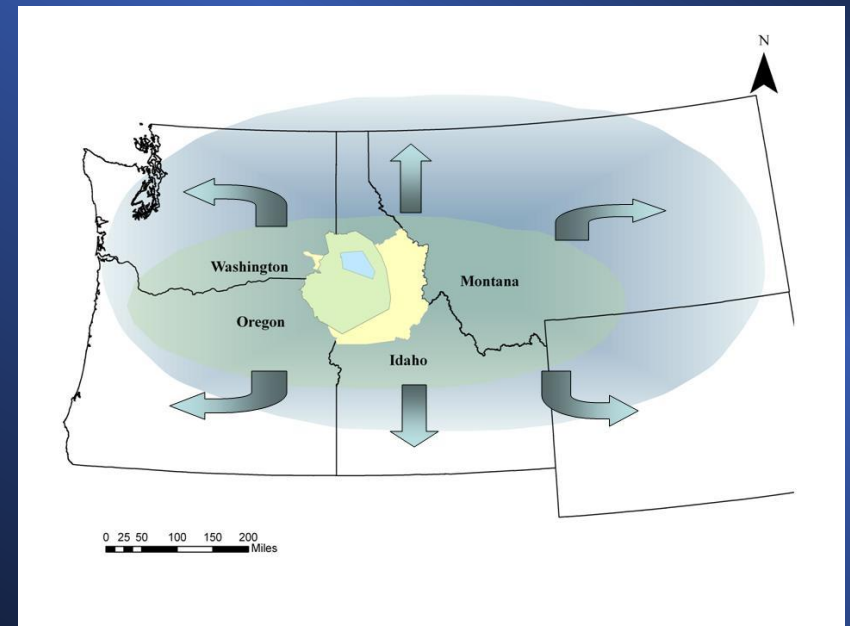
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Right to harvest up to 50% of fish runs that return to the Tribe's "usual and accustomed" fishing places (*Belloni/Boldt Decisions*)

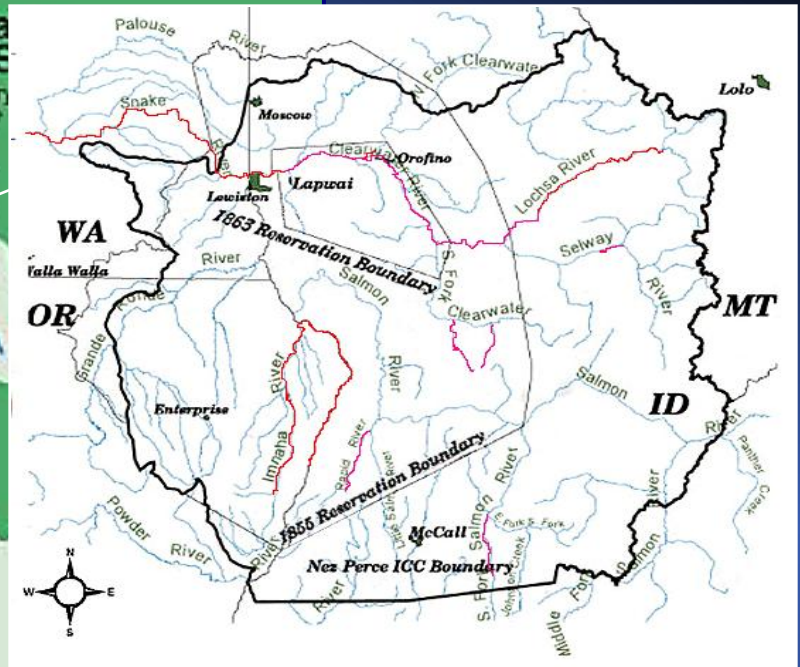
Nez Perce Treaty of 1855

The exclusive right of taking fish in all the streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizens of the Territory...(12 Stats. 957, Article 3). Treaty of 1855.



Columbia River Basin

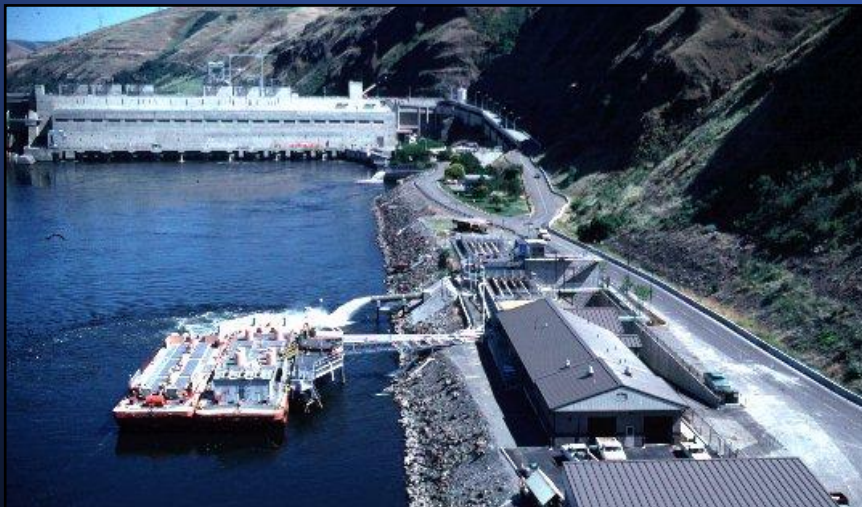
- Corps of Engineers Dams
- Dams owned by Others
- Bureau of Reclamation Dams



Warner W. Gardner, Assistant Secretary of the Interior – 1947 on building the Lower Snake River dams

“the salmon run must, if necessary, be sacrificed,” adding: “The government’s efforts should be directed toward ameliorating the impact of this development upon the injured interests and not toward a vain attempt to hold still the hands of the clock.”

The majority of hatchery programs in the Columbia Basin are producing fish to mitigate for the development and operation of the hydrosystem. As long as the dams are in place there is a legal obligation to provide fish.

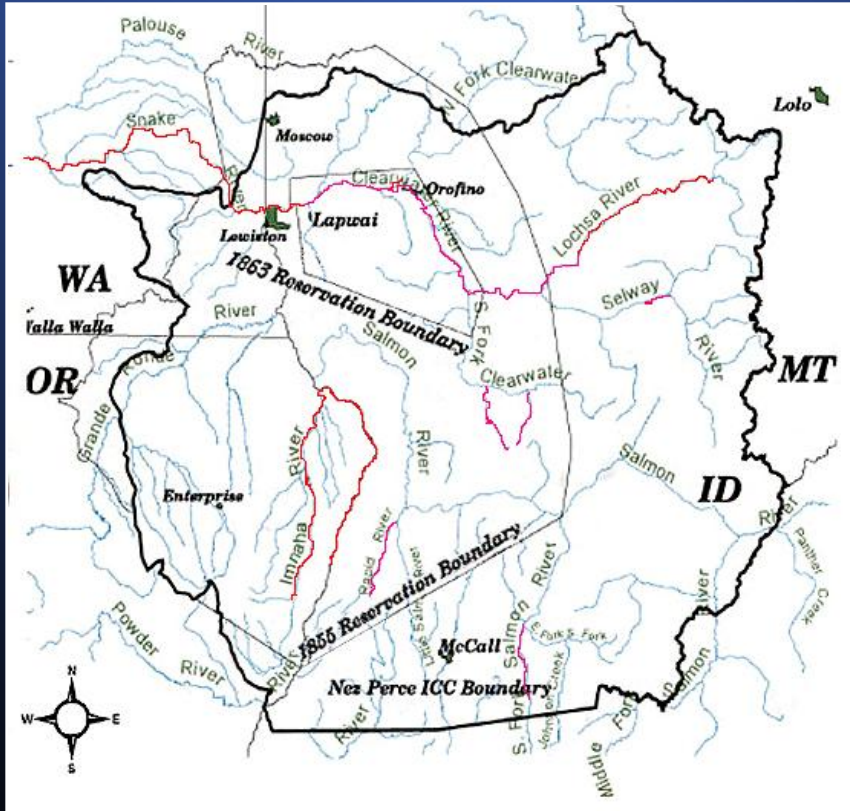


Example: Lower Snake River Compensation Plan – estimated 48% survival reduction....spring/summer Chinook – mitigation responsibility to produce 293,500 adults:

234,800 - harvest

58,700 - escape to Snake River

Nez Perce Tribe Treaty Area



- 32 spring/summer Chinook populations (Clearwater extirpated/reintroduced)
- 1 fall Chinook population
- 24 steelhead populations
- 1 sockeye population
- Coho - extirpated/reintroduced
- Lamprey - life support
- Majority of hatchery origin fish are ESA-listed

All Snake Salmon and Steelhead populations
ESA Listed ... or extirpated

Hatchery - Harvest Perspective

- Tribe reserved the right to harvest in usual and accustomed areas
- Without hatcheries in Columbia Basin there are no meaningful harvest opportunities.
- Hatcheries represent a promise - they are payment on the unfulfilled debt to mitigate for limiting factors (e.g., hydrosystem, habitat destruction).
- Hatcheries are a management tool - can be used in concert with other management tools to rebuild populations and provide for harvest opportunities.

Hatchery Sp/Su Chinook Salmon Production in Snake River Basin

SE Washington

Tucannon

225K

Tucannon

Lookingglass

Grande
Ronde R.

Upper
Grande
Ronde

NE Oregon

Lookingglass

250K

Lostine

250K

Catherine Cr.

150K

Up. Grande Ronde

250K

Imnaha

360K

Total

1,260K

Clearwater R.

NPTH

Dworshak

Clearwater

Kooskia

Lolo Ck.

Powell

Newsome Ck.

Crooked R.

Red R.

Lostine

Imnaha R.

Catherine
Cr.

Imnaha

Rapid R.

Oxbow

S. Fork
Salmon

Salmon R.

Johnson Cr.

Pahsimeroi

Sawtooth

Clearwater Subbasin

Dworshak 1,050K

Kooskia 600K

NPTH 425K

Clearwater

Powell 400K

Red R. 1,100K

Crooked R. 400K

Clear Cr. 235K

Selway 700K

Total 4,910K

Salmon Subbasin

Rapid R. 2,500K

Little Salmon 200K

Hells Canyon 300K

McCall

S. Fork 1,100K

Johnson Cr. 100K

Pahsimeroi 1,000K

Sawtooth 1,500K

Yankee Fork 200K

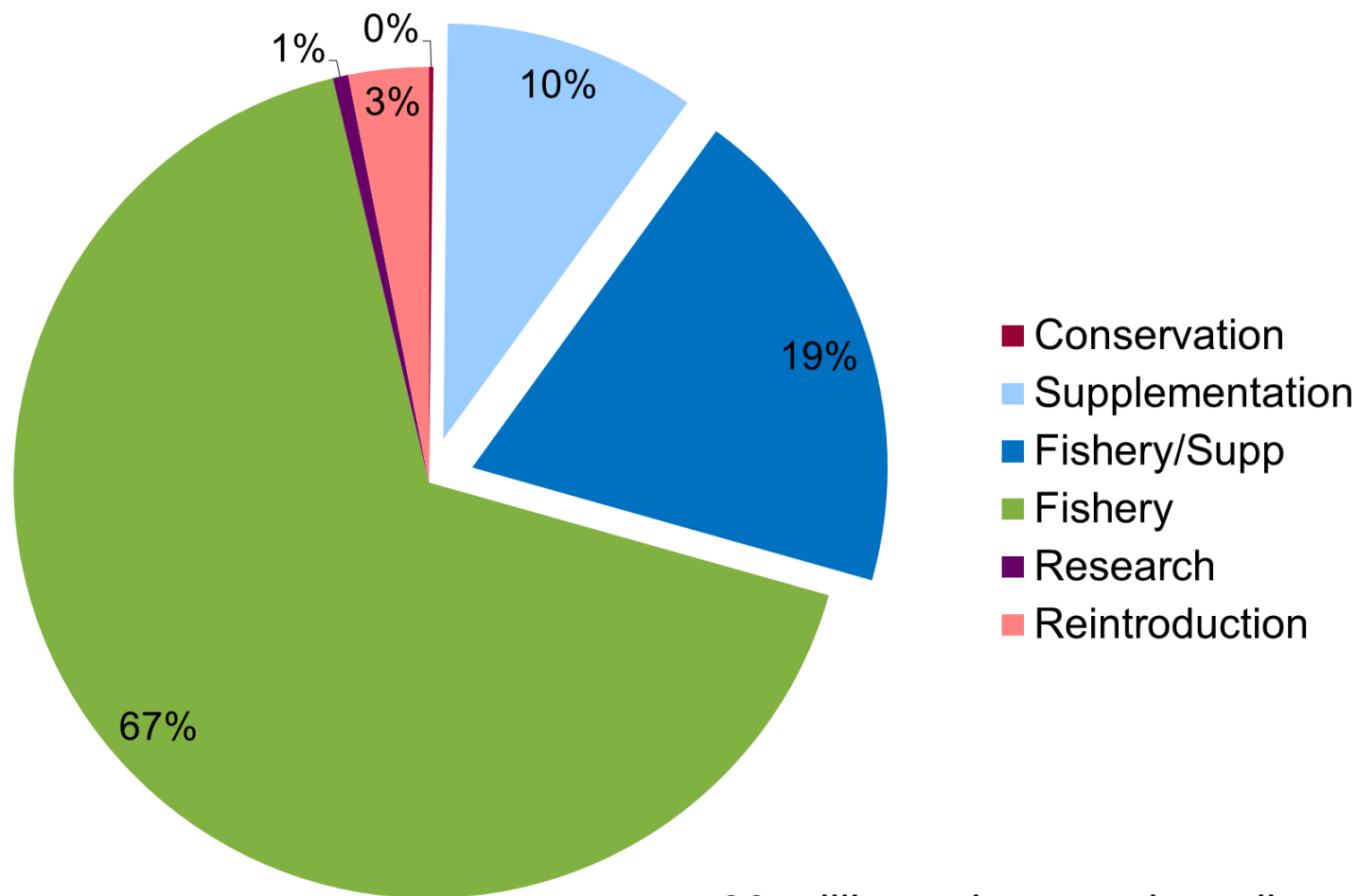
Total 6,900K

Integrated Supplementation

- ✓ In conjunction with other management actions
- ✓ Natural-origin fish in broodstock
- ✓ Hatchery-origin fish spawn naturally
- ✓ Harvest - manage number of natural and hatchery fish "taken"



Columbia Basin salmon and steelhead production above Bonneville Dam – by primary purpose



90 million salmon and steelhead

Careful Planning - Lots of Co-manager Coordination

- Annual Operation Plan Meetings -
 - Preseason projection - natural and hatchery fish
 - Broodstock management sliding scale
 - Harvest management sliding scale
 - Agreed to disposition of fish not harvested - not used for brood (recycle, distribution, outplant)
- Inseason Coordination - weekly updates
 - Return updates - PIT tags over dams
 - Fishery monitoring
 - Broodstock collection
- Post season wrap up
 - What worked and what didn't
 - What to change for next year

Manage genetic "risk"

Broodstock Management Sliding Scale

Escapement to River

50

500

1000

Strict limits

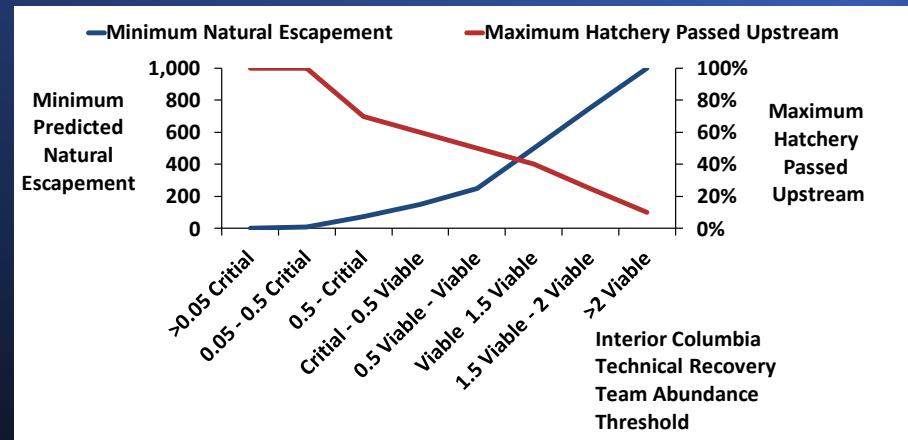
- Less than 10% hatchery above weir
- 100% natural origin in broodstock
- Less than 25% natural taken for broodstock

Demographics Important

- No constraints on % hatchery in nature or % natural in broodstock.
- Keep up to 50% natural fish for broodstock.

Genetic Conservation Important

- Limit % hatchery above weir to 50%
- Ensure minimum of 30% natural origin in broodstock
- Minimize of 30% natural taken for broodstock



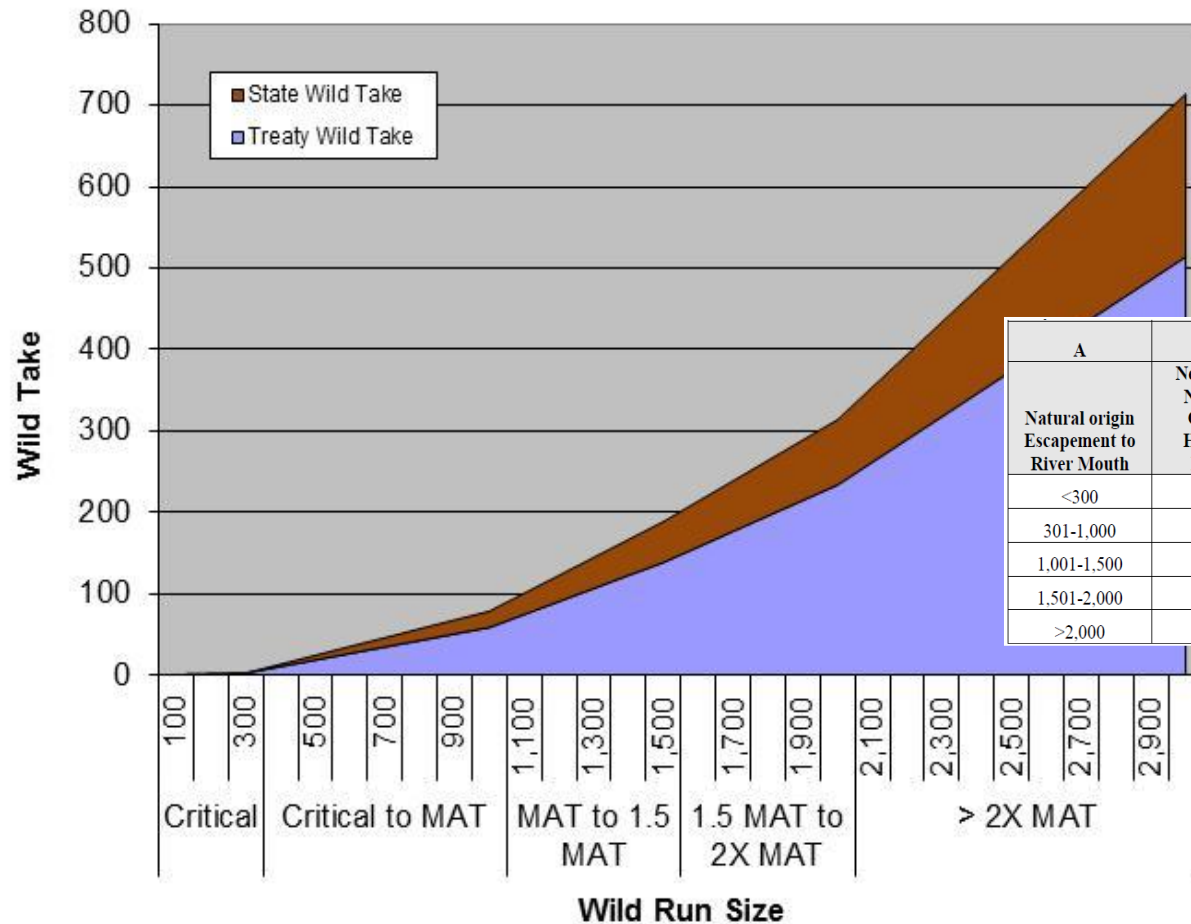
Lostine River -- At the projected run level of 421 natural adults, 30% of the broodstock should be from natural adults and 50% of the natural escapement should be from hatchery-origin adults (released above the weir).

The basic collection guidelines are as follows:

Date	Natural	Hatchery
May 31	1	1
June 7	1	1
June 14	3	4
June 21	4	8
June 28	7	16
July 5	8	19
July 12	5	15
July 19	3	10
July 26	1	2
August 2	0	1
August 9	0	1
August 16	1	2
August 23	4	7
August 30	3	8
Sept 6	2	2
Totals	43	97

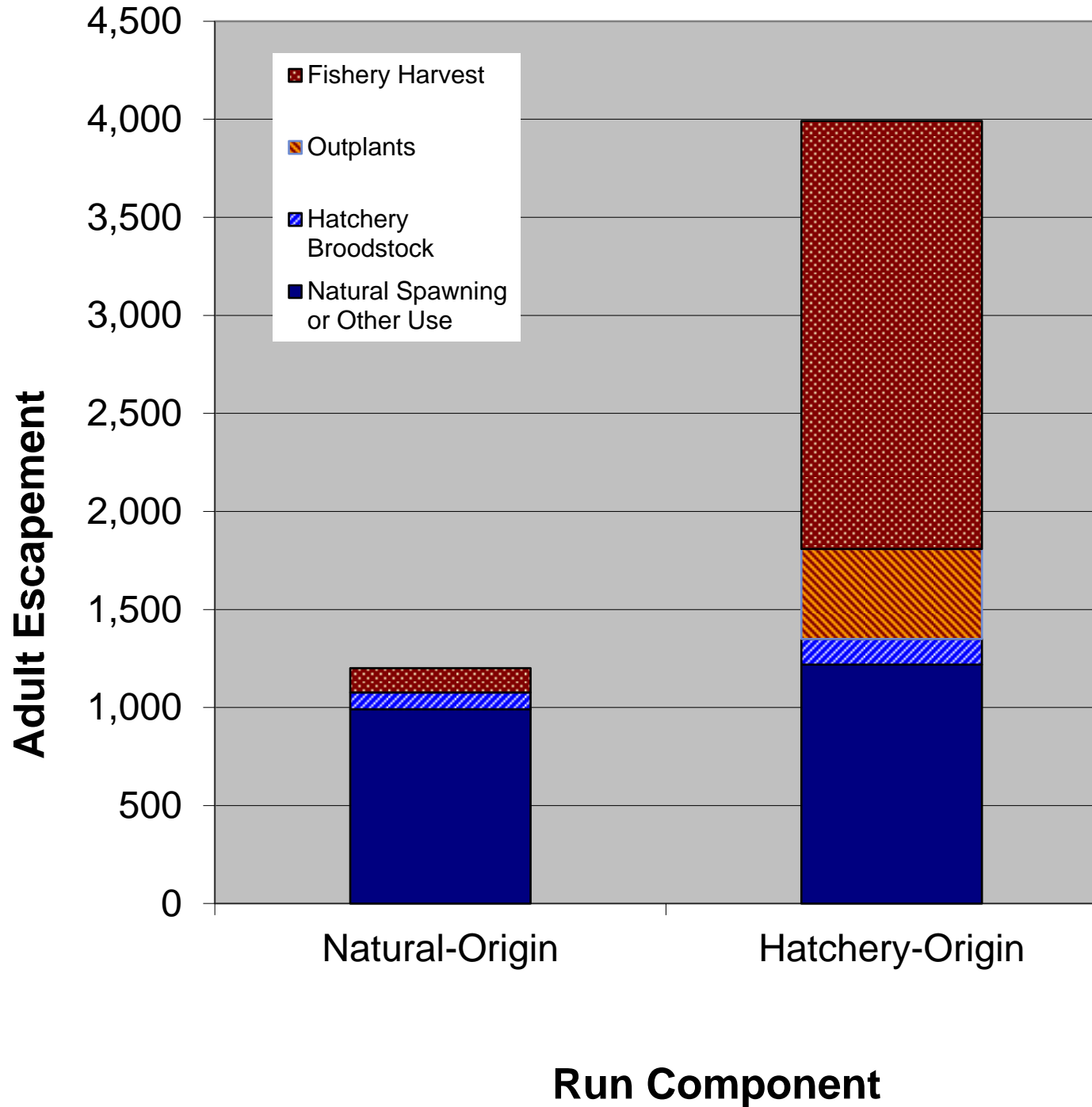
Treaty-Non Treaty harvest share 50:50

Wild take share determined by scale

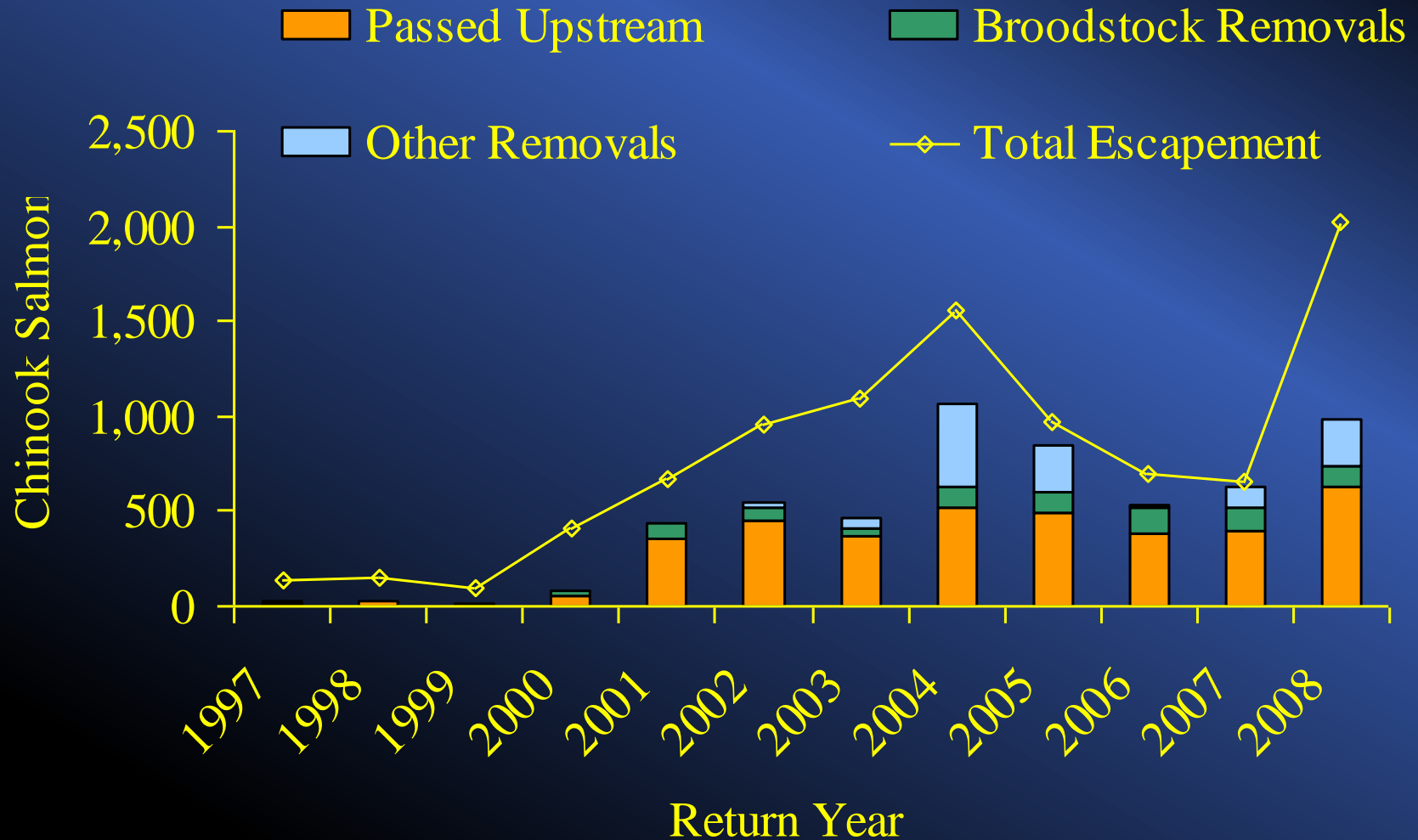


A	B	C	D	E
Natural origin Escapement to River Mouth	Nez Perce Natural Origin Harvest Rate*	State Natural Origin Harvest Rate	Expected Average % Natural Origin Harvest Allocated to Nez Perce Treaty Fisheries	Total Harvest Rate on Natural Origin Spring Chinook
<300	1%	0%	100%	1%
301-1,000	8%	3%	76%	11% "on Margin"
1,001-1,500	16%	6%	75%	22% "on Margin"
1,501-2,000	19%	6%	75%	25% "on Margin"
>2,000	28%	12%	73%	40% "on Margin"

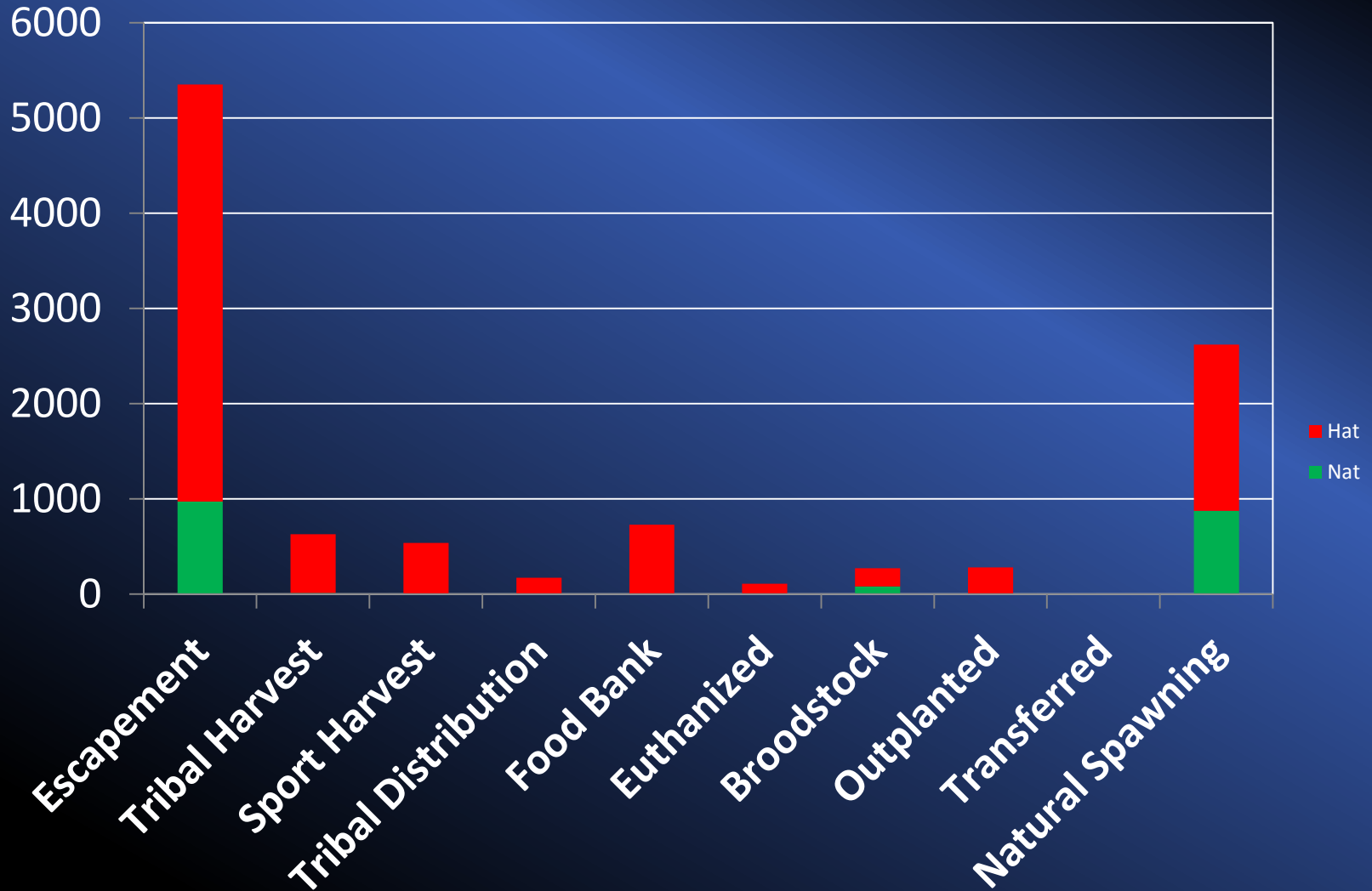
2010 Adult Return and Management

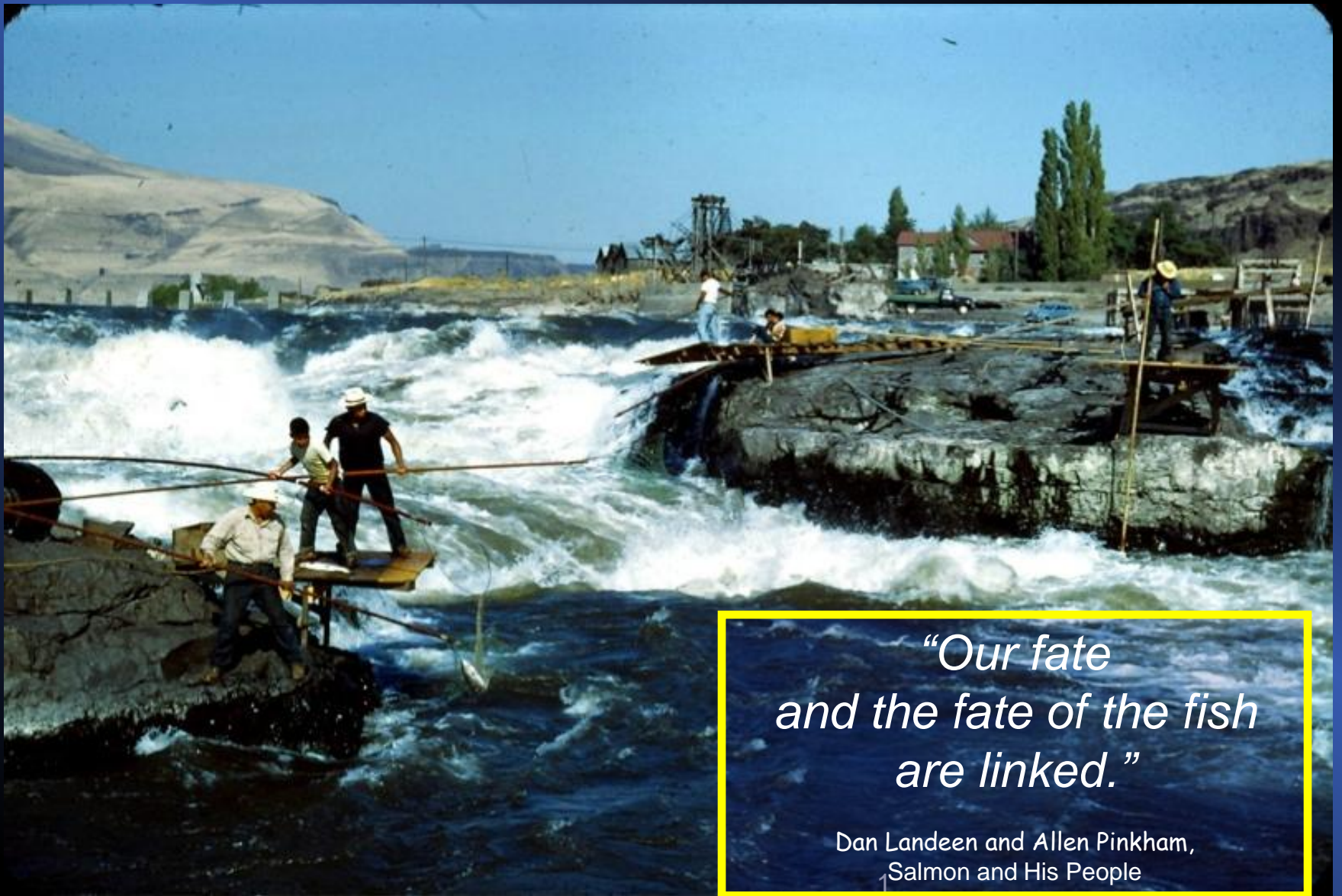


Fish Handled at Lostine Weir



Imnaha River Chinook Salmon 2010 Disposition Summary





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