

Snake River Fall Chinook Program:

An example of operating a large-scale mitigation and supplementation program using integration

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Snake River Fall Chinook Salmon Hatchery Program

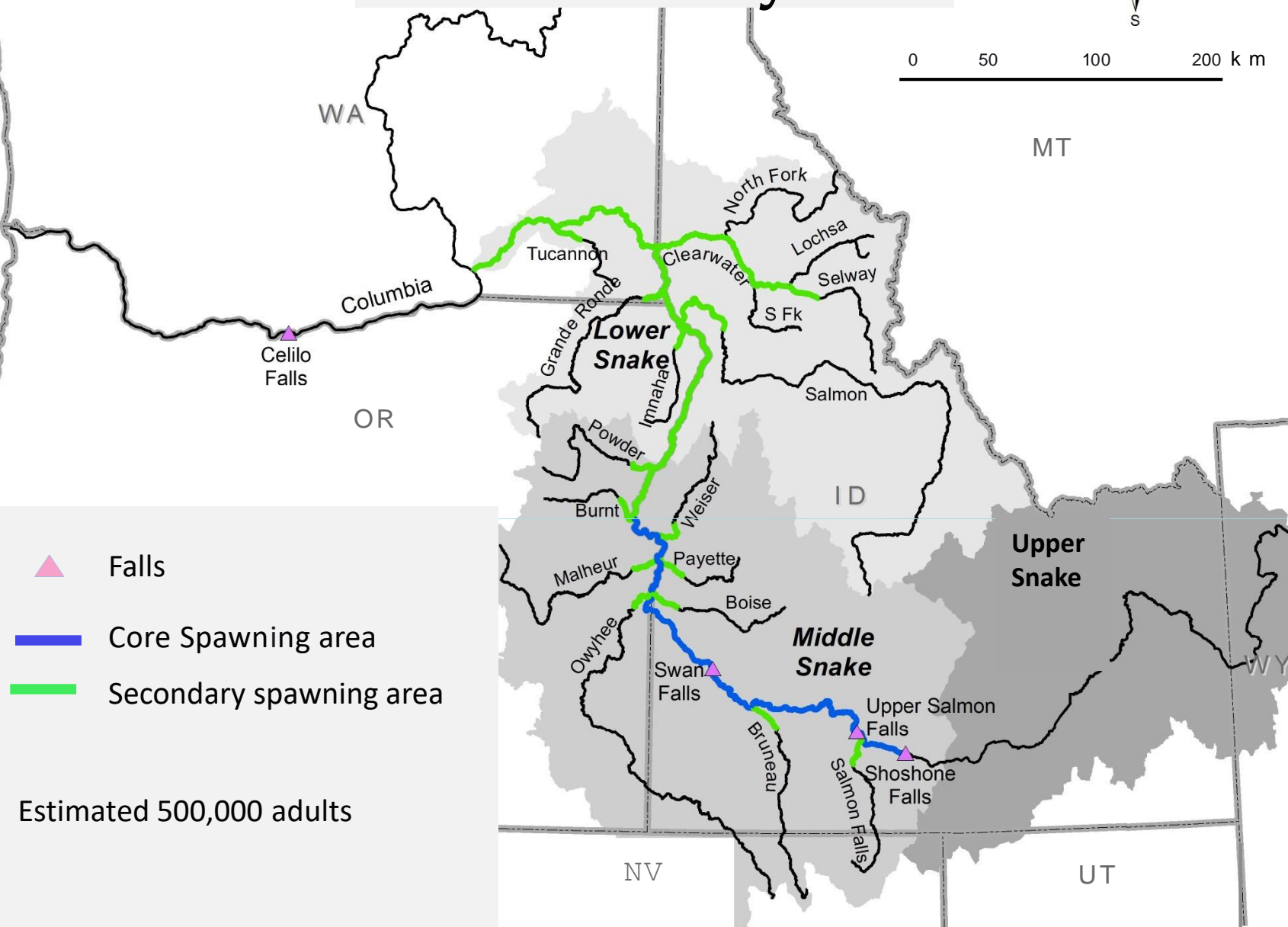


**Extensive Collaboration between multiple Federal, State
Tribal and Private agencies**

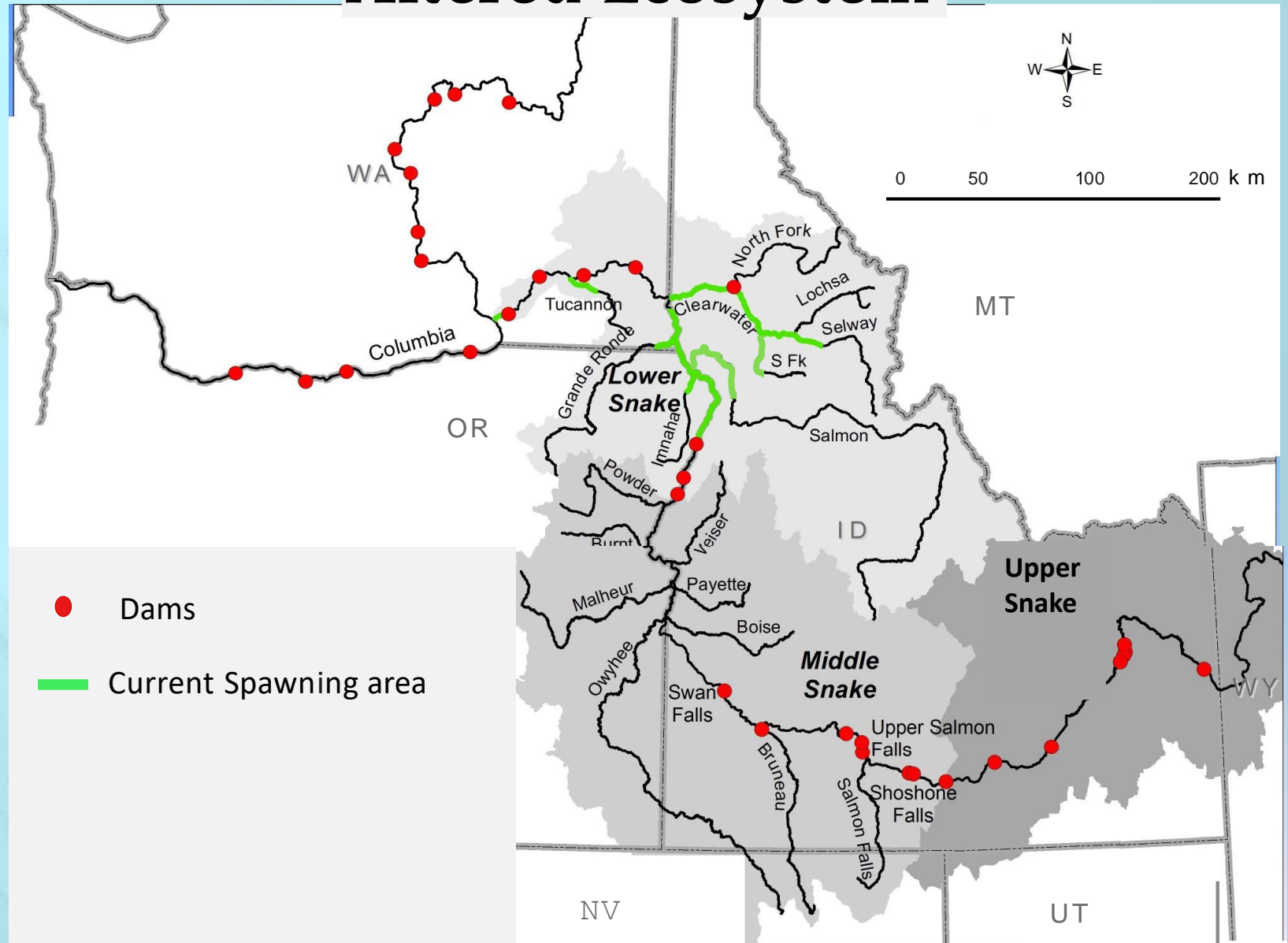
Historic Ecosystem



0 50 100 200 k m



Altered Ecosystem



15% of historical habitat remaining

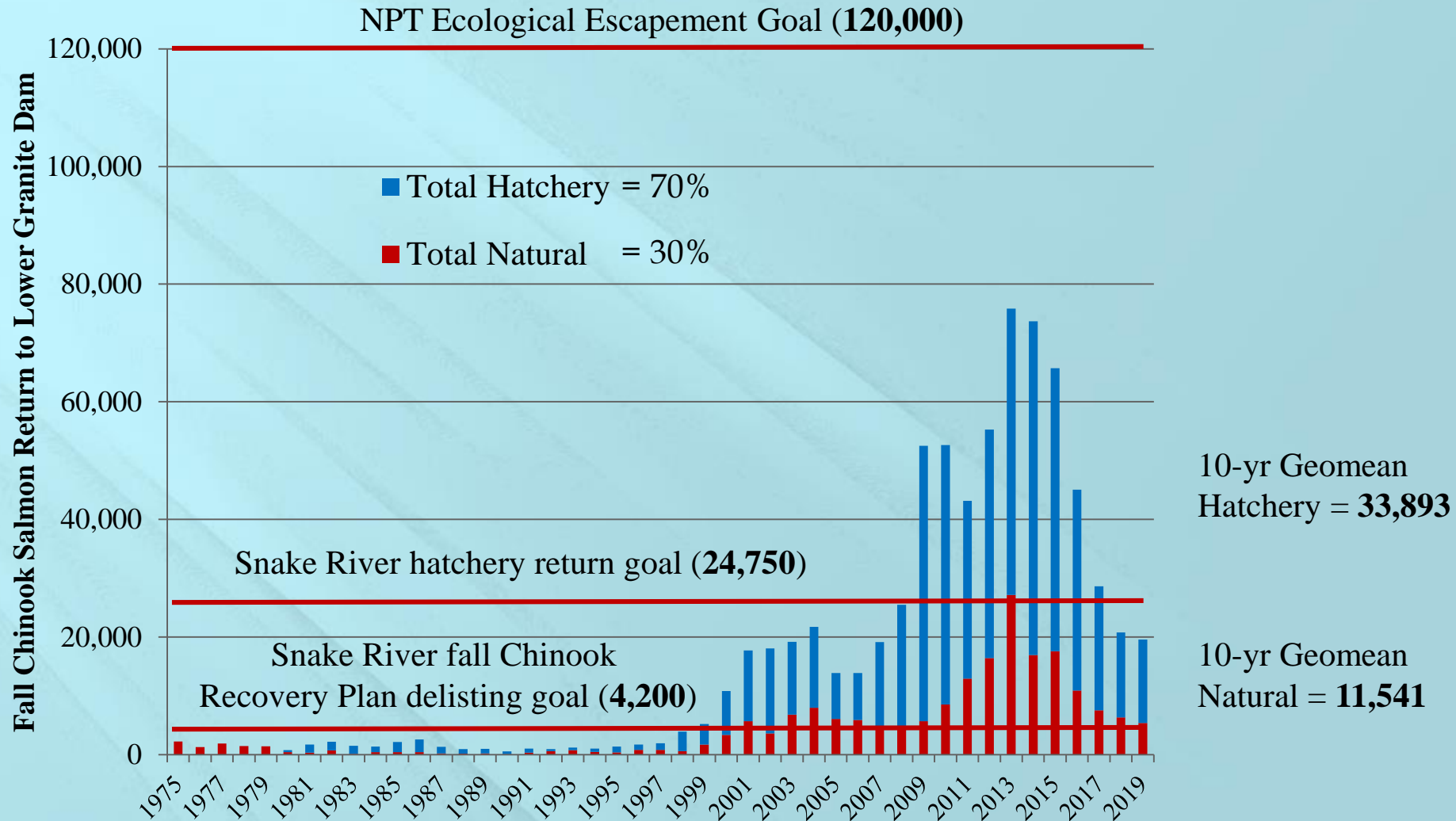
Snake River fall Chinook salmon life history

- Ocean-type Chinook salmon
 - Emigrant to ocean as subyearling in June/July
- Spawn late October – early December
- Generally spawn in larger main-stem rivers



Goal of
30%
natural
in brood

Fall Chinook Adult Abundance to Lower Granite Dam

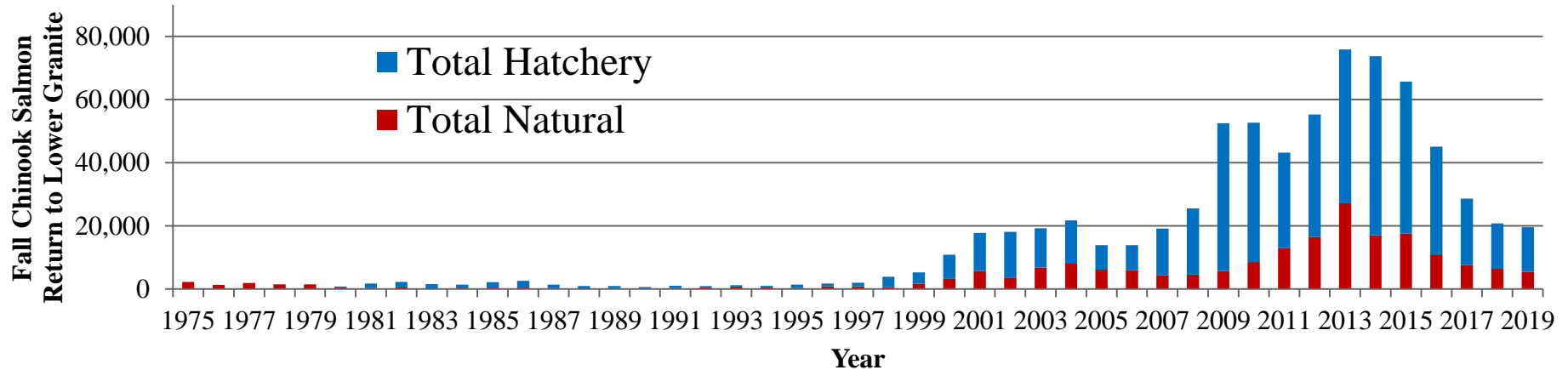


Snake River Fall Chinook Hatchery Programs

Three hatchery mitigation programs were developed

All released below
Lower Granite Dam

Released above/below
Lower Granite Dam



Egg
Bank

Lyons Ferry
Hatchery

Fall Chinook
Acclimation
Project (FCAP)

NPTH

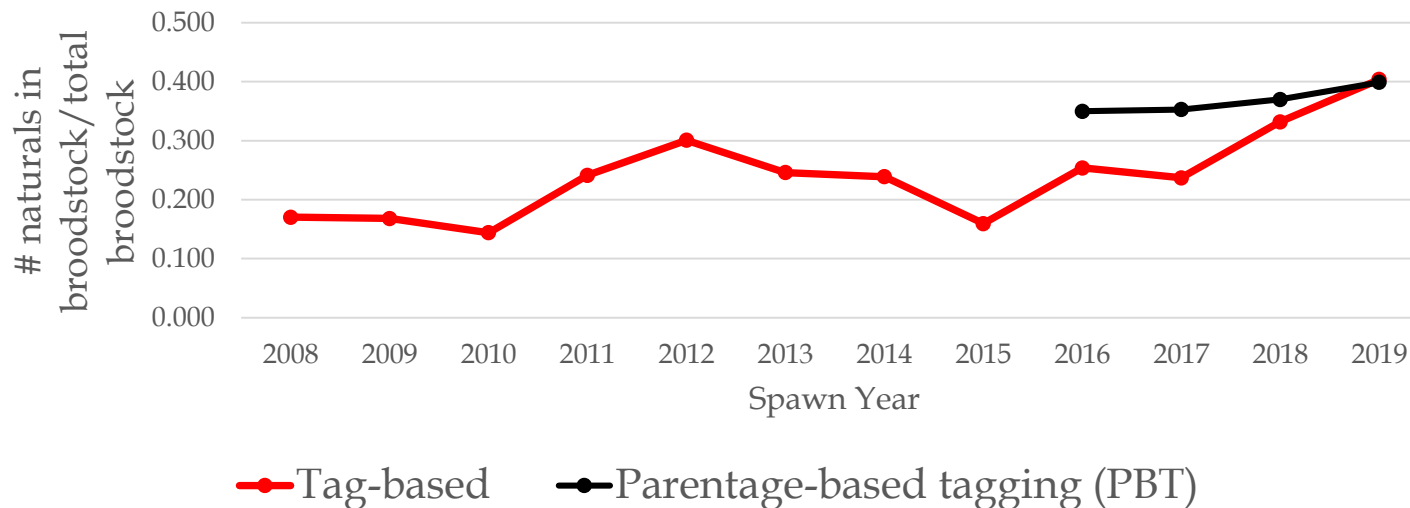
Idaho Power
Corp

Lower Snake River Compensation Plan

Juvenile Snake River Hatchery Fall Chinook Brood Stock Collections and Percent Natural-origin

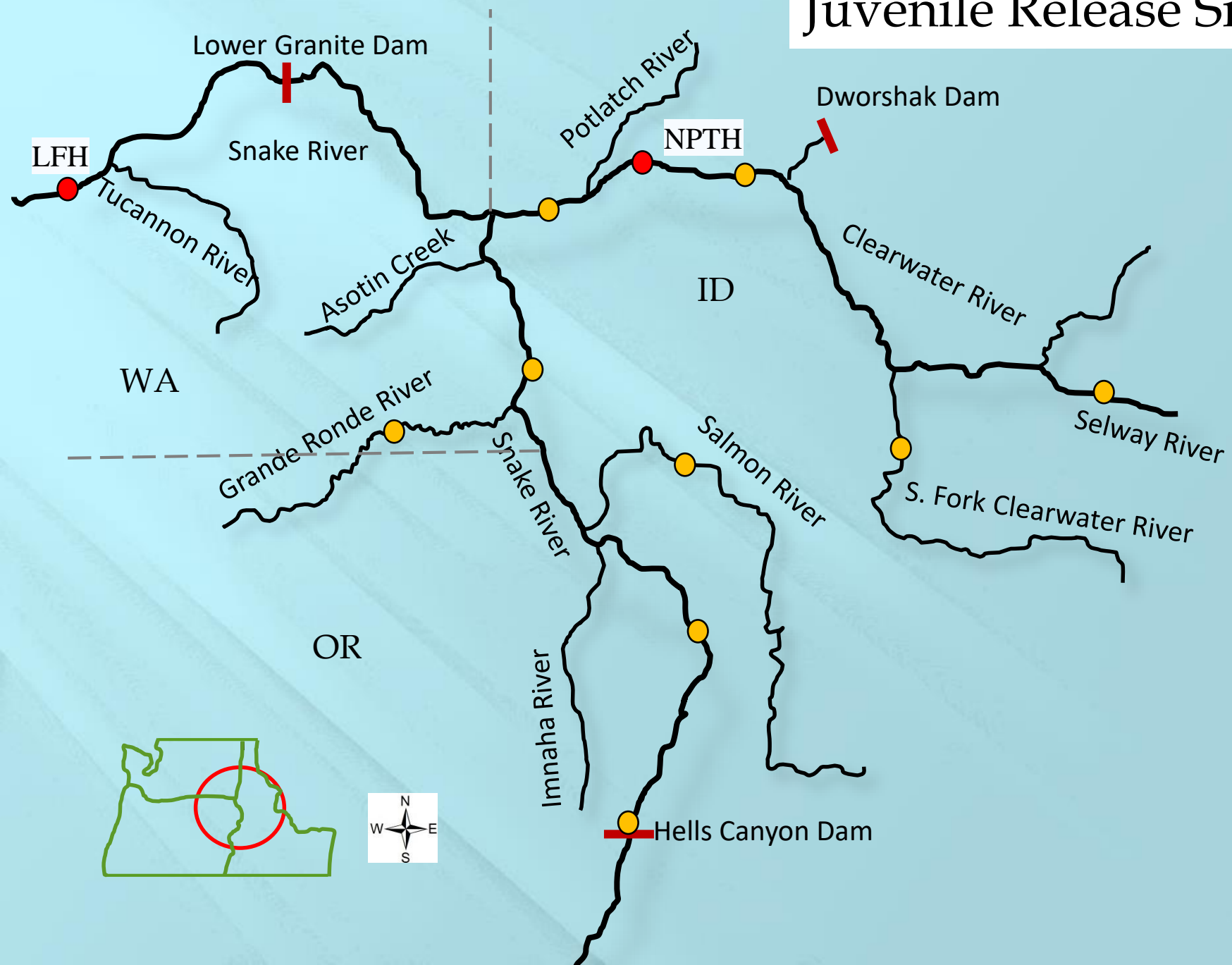
Broodyear 2019	LYONS FERRY HATCHERY/ IDAHO POWER	NEZ PERCE TRIBAL HATCHERY	TOTAL
Total females spawned	1,158	418	1,576
Total live egg take	4,666,867	1,638,895	6,305,762
Estimated juvenile production	4,250,000	1,577,000	5,827,000

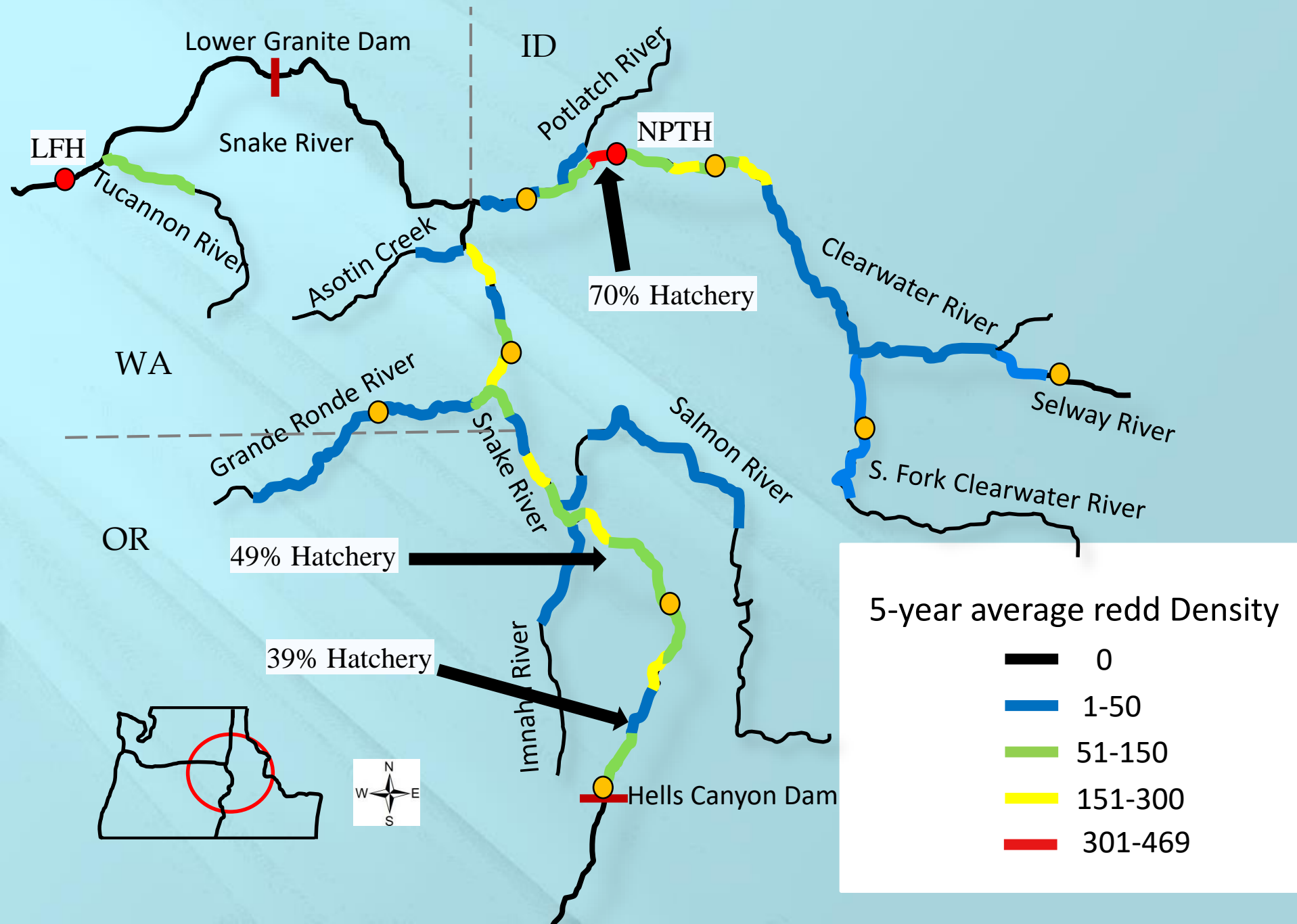
50% AD
clipped



Goal of
30%
natural in
brood

Juvenile Release Sites

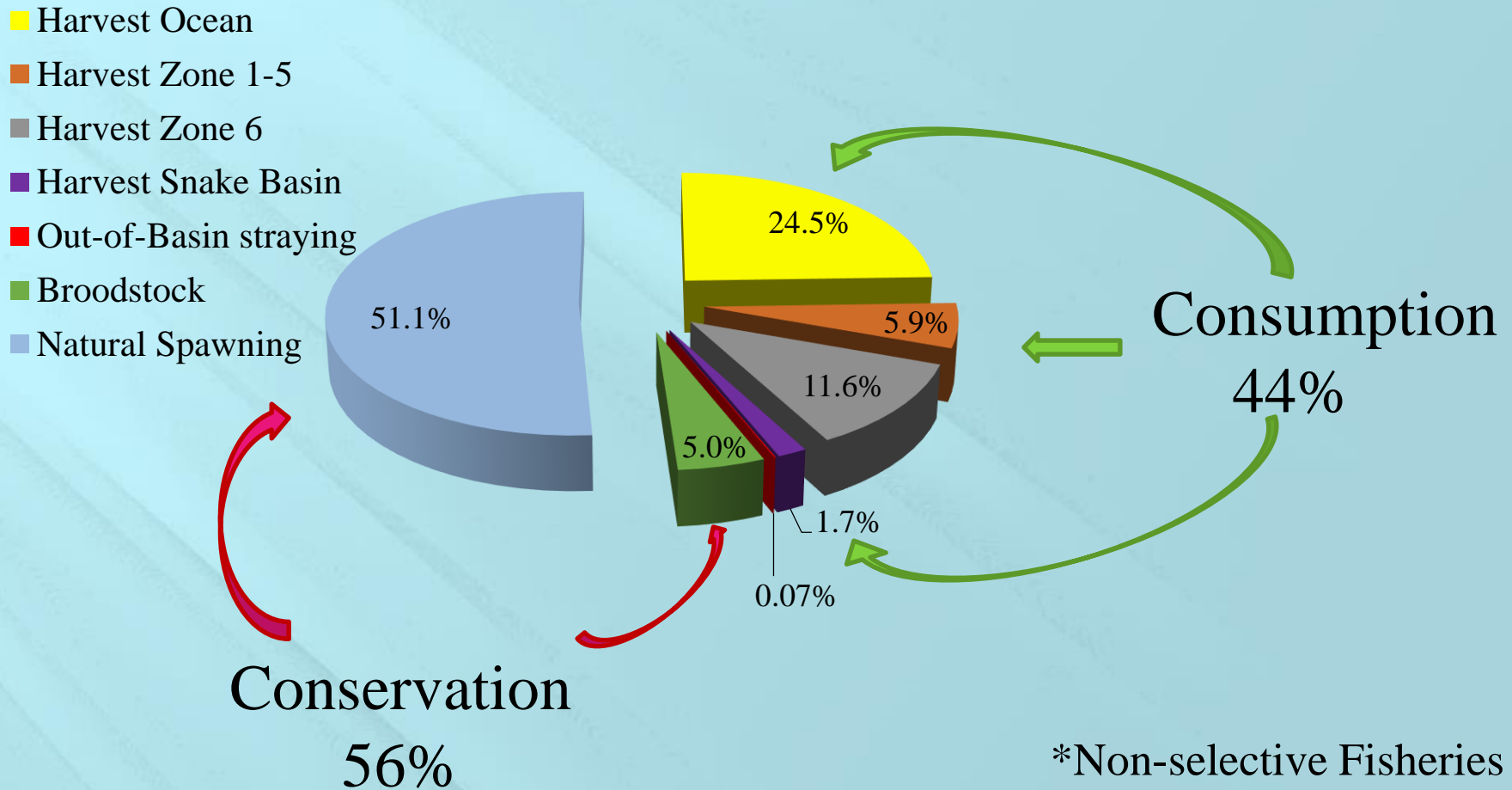




Snake River Fall Chinook Salmon

Harvest

Hatchery disposition estimates – reporting years 2014-2018



How has the supplementation program impacted adult abundance?

- Avoided extinction
- Maintained native (endemic) stock structure
- Adult abundance has increased significantly
 - Close to meeting in and out of basin hatchery mitigation goals
 - Natural-origin adult abundance above delisting criteria.
- Maintained non-selective harvest regimes
- Increased natural spawning distribution
 - Re-established marine derived nutrient food-web connection

Total Returns

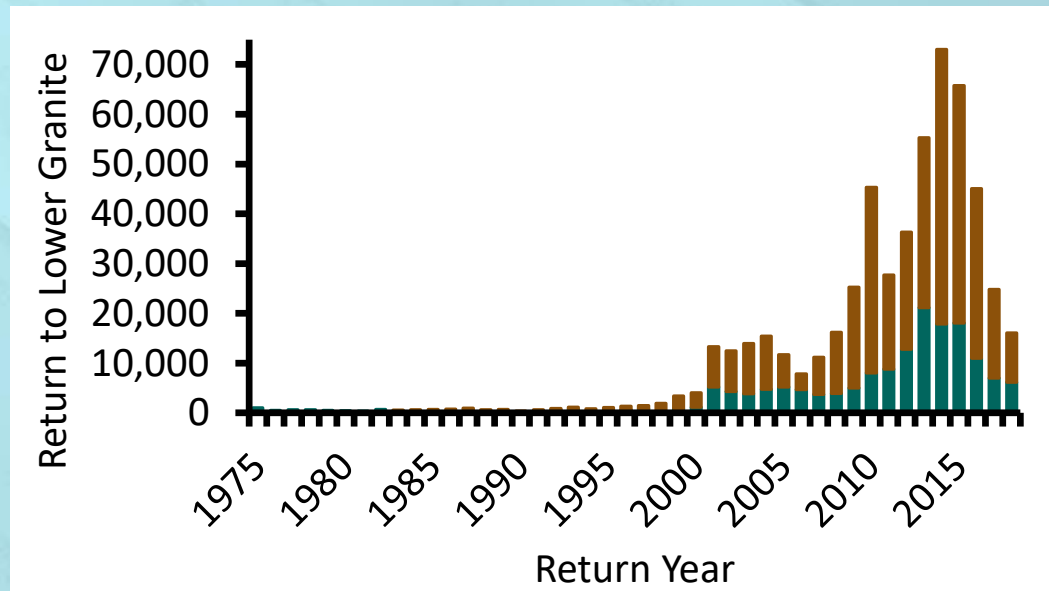
575

1990

130 Fold Increase

75,835

2013



Natural-origin Adult Returns

78

260 Fold Increase

1990

20,829

2013

