Senate Natural Resources Committee

February 20, 2024

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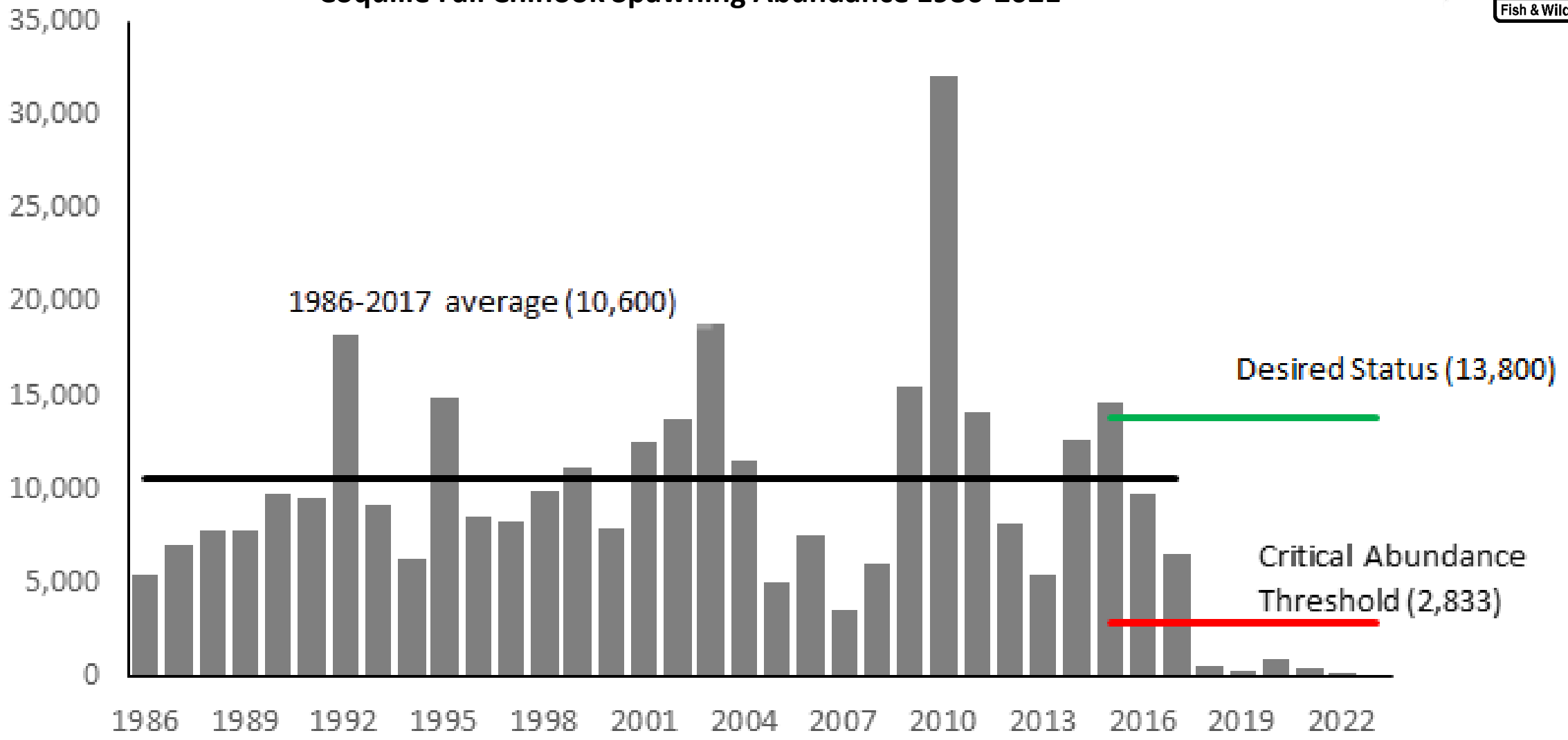
ODFW/CIT Co-Management

OFWC/ODFW and CIT Memorandum of Agreement (MOA) for cooperative management:

“The Parties will coordinate the use of their respective authorities, expertise, and influence as regulatory or voluntary opportunities are presented to protect, enhance, and restore fish and wildlife habitat in the geographic scope of this Agreement.”

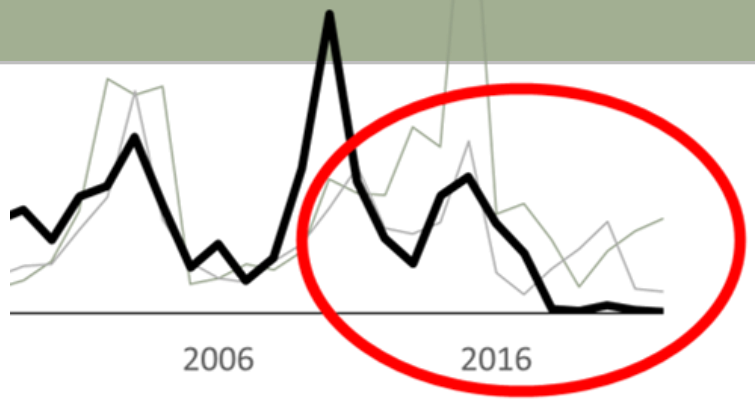
Oregon Administrative Rules 635-800-0100

Coquille Fall Chinook Spawning Abundance 1986-2021

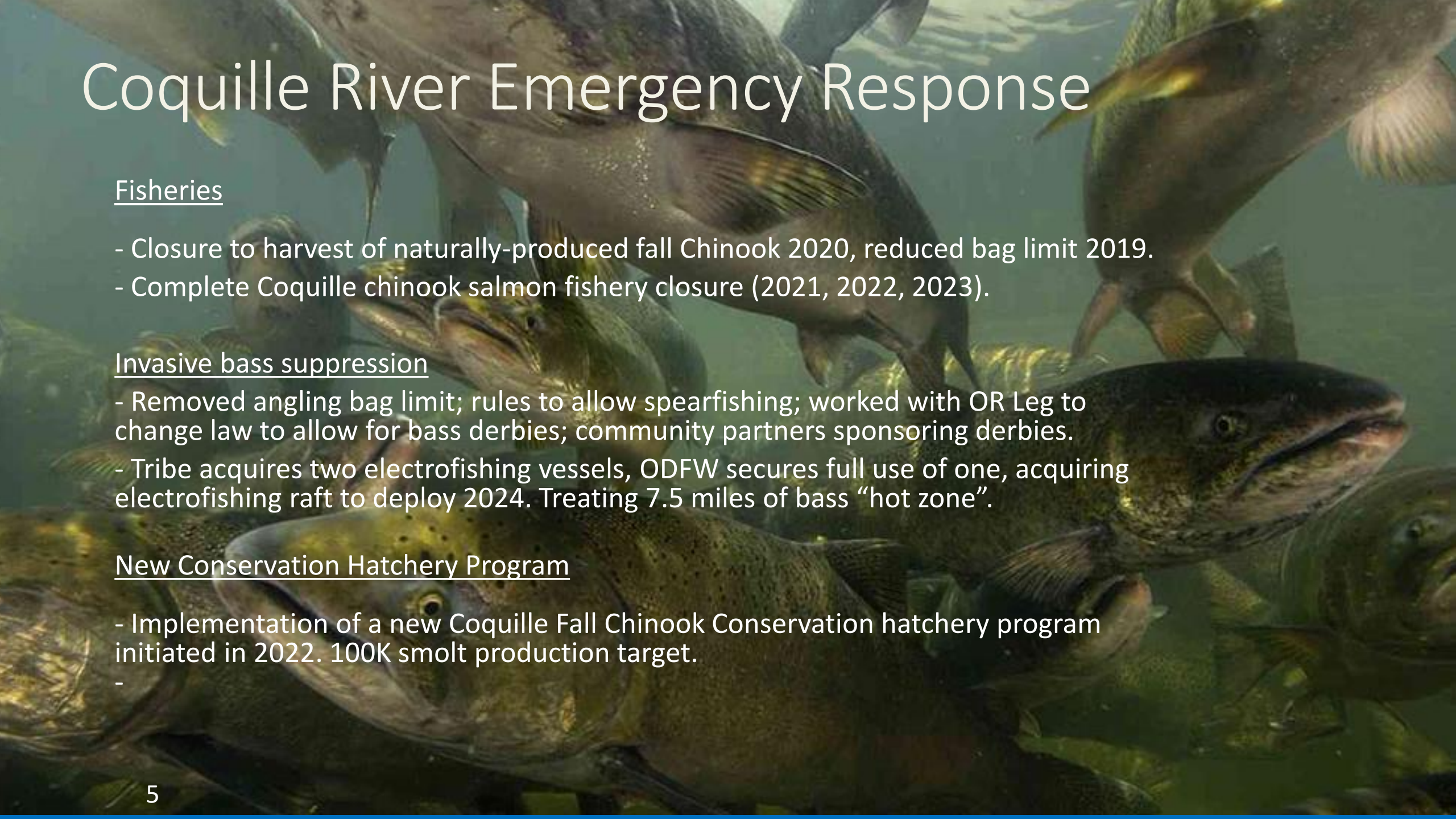


Conclusions

The primary cause of the decline of Coquille fall Chinook is likely *predation by non-native fish*. The impacts are further exacerbated by environmental factors in freshwater and the ocean



Coquille River Emergency Response



Fisheries

- Closure to harvest of naturally-produced fall Chinook 2020, reduced bag limit 2019.
- Complete Coquille chinook salmon fishery closure (2021, 2022, 2023).

Invasive bass suppression

- Removed angling bag limit; rules to allow spearfishing; worked with OR Leg to change law to allow for bass derbies; community partners sponsoring derbies.
- Tribe acquires two electrofishing vessels, ODFW secures full use of one, acquiring electrofishing raft to deploy 2024. Treating 7.5 miles of bass “hot zone”.

New Conservation Hatchery Program

- Implementation of a new Coquille Fall Chinook Conservation hatchery program initiated in 2022. 100K smolt production target.
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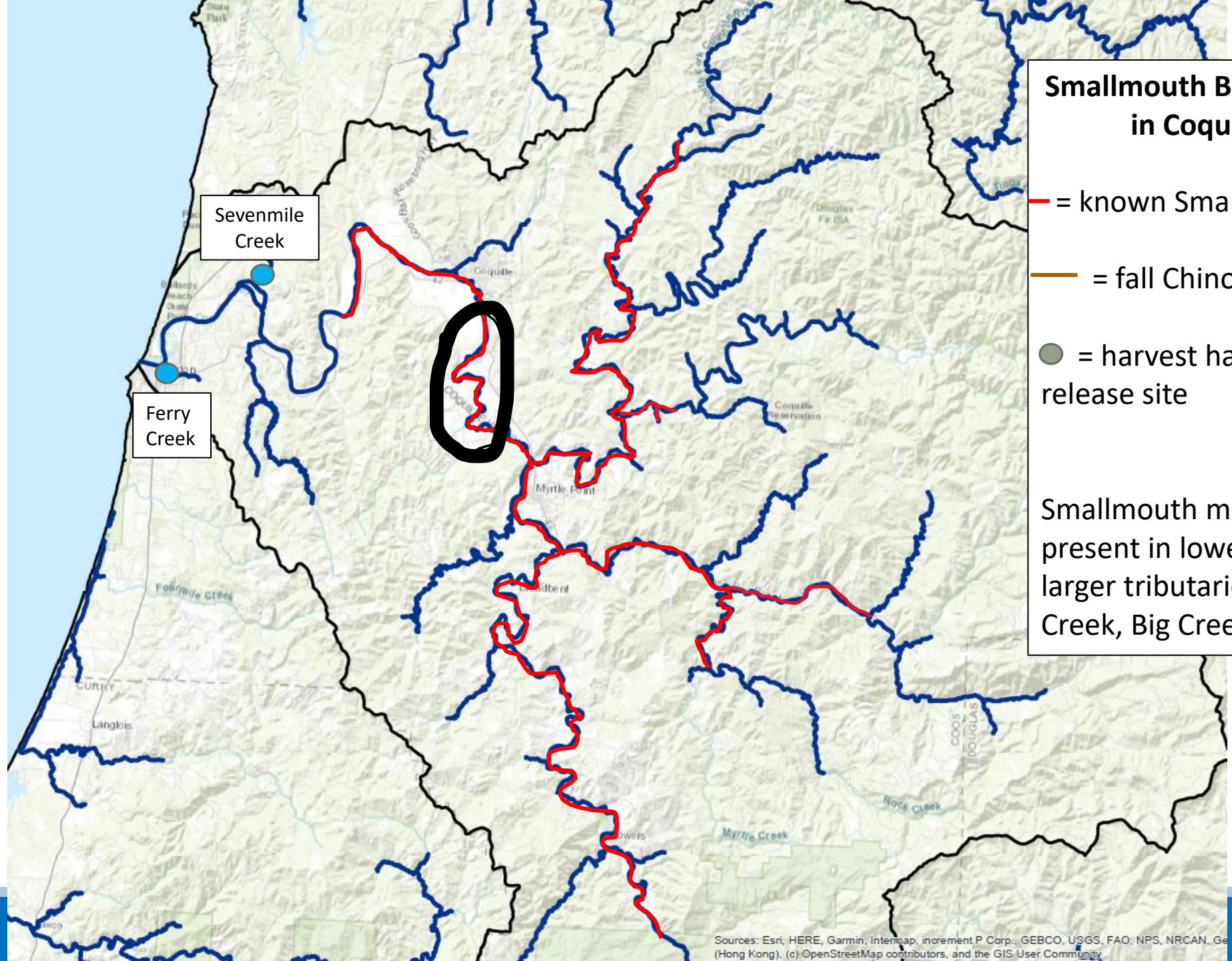


Smallmouth Bass distribution in Coquille Basin

= known Smallmouth present

= fall Chinook habitat

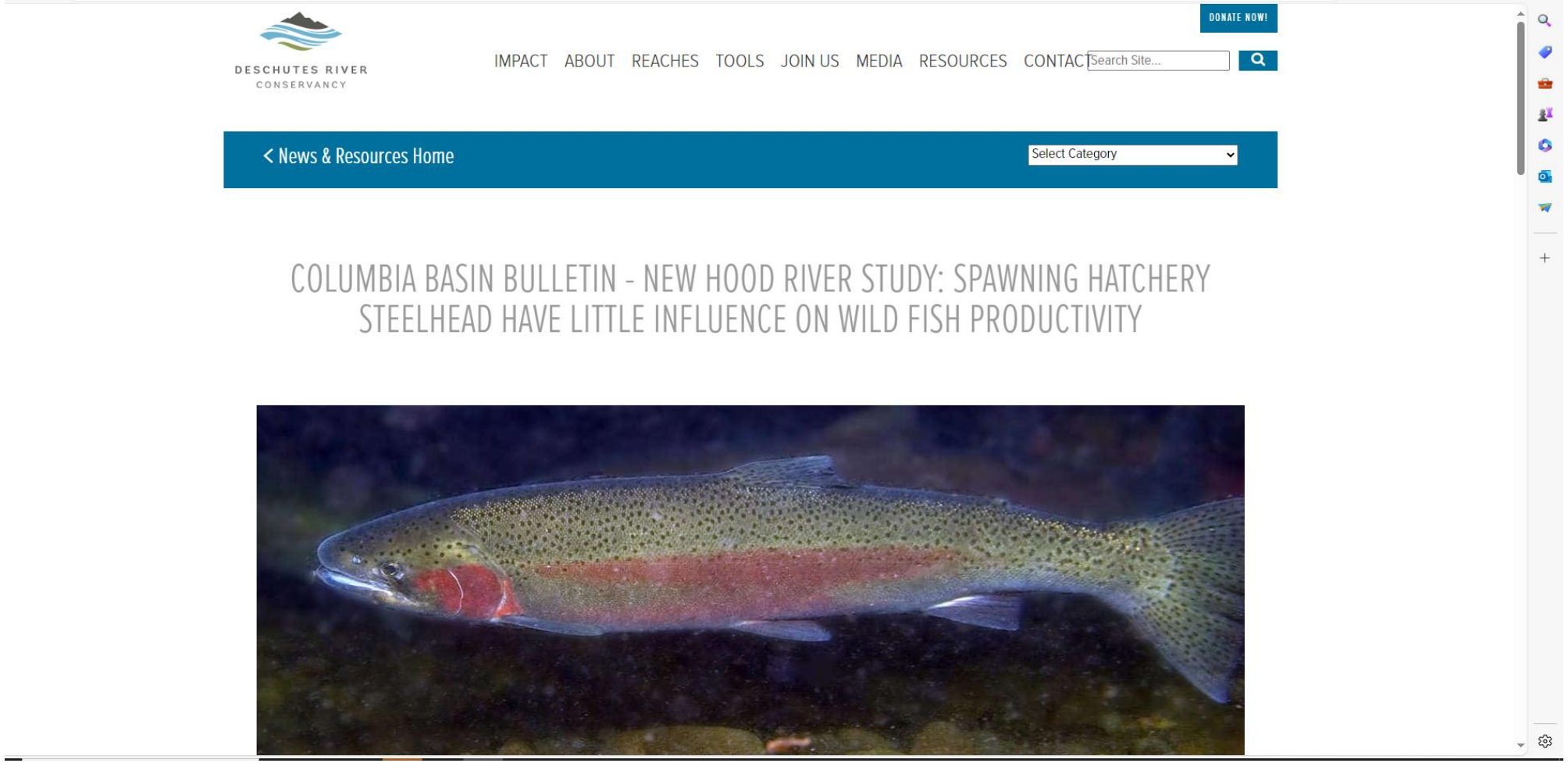
= harvest hatchery Chinook release site

Smallmouth most likely present in lower portions of larger tributaries like Middle Creek, Big Creek

Coquille population at very high risk

- Habitat improvements and reducing predation will take time to accrue population benefits.
- Population remains at very high risk until limiting factors are addressed.
- Conservation hatchery program is a **"lifeboat"** for the wild population while actions on limiting factors are underway.
- **Current ODFW controlled hatchery facilities adequate to produce less than 50% of approved smolt target for emergency conservation program**. ***How did we get here?***
  - Hatcheries inadequately funded.
  - OFWC policies of early 2000's assume wild salmon populations are put at high risk by hatchery salmon.
  - Wild v. Hatchery salmon has become "political" . . . Or "religion"

Wild/Hatchery Salmon Interactions is not “settled science”



Current research concluding hatchery interventions can benefit naturally spawning or “wild” salmon populations

Northwest Power and Conservation Council

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Study Demonstrates Hatchery Fish Can Successfully Contribute to Reintroduction and Restoration Efforts

JULY 17, 2023 | MAUREEN HESS

In the Columbia River Basin, where dramatic and extensive alterations to habitat for fish and wildlife have occurred, the Columbia Basin Partnership Taskforce estimated that 35% of historical populations of anadromous salmon and steelhead have been extirpated. Efforts to reintroduce fish populations to areas where they were once abundant generally relies on the help of hatchery fish. Hatchery supplementation and reintroduction programs use hatchery fish to re-establish or increase the naturally reproducing populations in a targeted area with the hope that they retain the adaptive potential to restore and sustain a population.

Scientific studies indicate that because hatchery fish may adapt to their hatchery environment (i.e., domestication), they generally have lower reproductive output than their natural-born counterparts when they return to spawn. The ability of a hatchery stock to successfully adapt to a new location and positively contribute to a reintroduction effort may be impacted by domestication effects associated with hatchery rearing. However, a recent peer-reviewed publication following a reintroduction of Chinook salmon to Lookingglass Creek in Northeast Oregon shows that a hatchery stock can indeed possess the adaptive capacity to positively contribute to natural production and recovery goals.

Hayley Nuetzel, Fishery Scientist with the Columbia River Inter-Tribal Fish Commission, in collaboration with scientists with the Confederated Tribes of the Umatilla Indian Reservation, **presented these results** to the Council’s Fish and Wildlife Committee at its July 2023 meeting.

“We conclude that fish chosen for hatchery rearing did not have a detectable negative impact on the fitness of wild fish by mating with them for a single generation. Results suggest that supplementation following similar management practices (e.g. 100% local, wild-origin brood stock) can successfully boost population size with minimal impacts on the fitness of salmon in the wild.”

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Mol Ecol. 2012 Nov; 21(21): 5236–5250.
Published online 2012 Oct 1. doi: 10.1111/mec.12046
PMCID: PMC3490153
PMID: 23025818

Journal Article

Supportive breeding boosts natural population abundance with minimal negative impacts on fitness of a wild population of Chinook salmon

Maureen A Hess,* Craig D Rabe,† Jason L Vogel,‡ Jeff J Stephenson,* Doug D Nelson,† and Shawn R Narum*

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Conclusion

- The wild ***or*** hatchery salmon debate is behind us. We need to confront the question of the moment – will Oregon have abundant salmon populations at all?
- The science was not “settled” in 2005. More recent research is finding flaws with conclusions of early studies. Finding reformed hatchery interventions can be ***beneficial*** to wild populations and replace those that are extirpated or at risk of blinking out - like fall chinook in the Coquille River.
- Oregon’s salmon management regulatory framework needs a comprehensive and unbiased review and adapted to account for more recent hatchery/naturally produced salmon interaction research.
- We need to invest in restoring Oregon’s coastal salmon/steelhead hatchery capacity quickly.