

Cowlitz Annual Program Review and Science Conference

Fish Hatchery Operations

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Sept 4, 2024

Overview

- Hatchery performance
- Fish Health
- Trout Hatchery Remodel
- Mayfield Net Pens

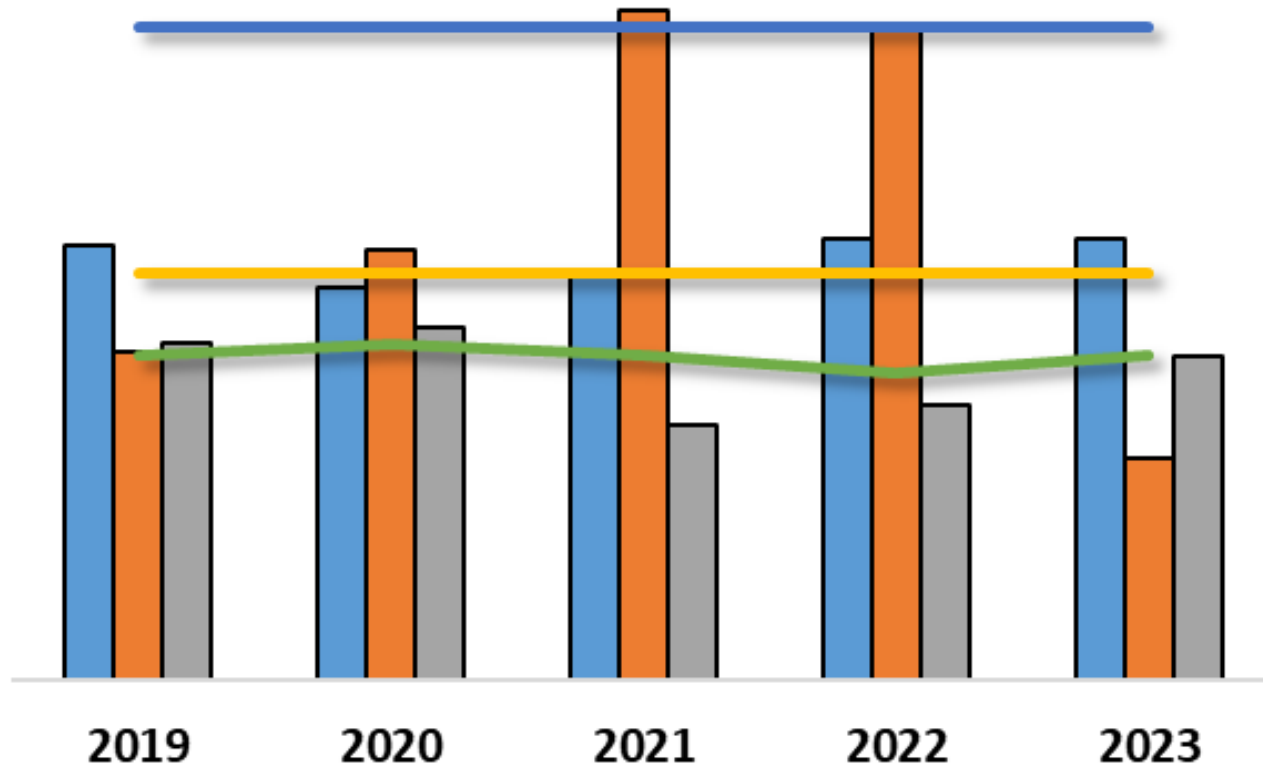


Cowlitz Salmon Hatchery



Cowlitz Salmon Hatchery Releases (5 Years)

4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0



Coho Released

Fall Chinook Released

Spring Chinook Released

Coho Goal

Fall Chinook Goal

Spring Chinook Goal

Fish Health - Fall Chinook

Last APR:

Challenge:

- Difficult to quickly mark millions of fish, can lead to space bottlenecks
- Nutritional gill disease



Recommendation:

- Continued coordination and monitoring
- Work with feed companies to optimize strategies

This year:

In spring 2024, lower number of returning adults resulted in lower egg take. The upshot of the decrease in eggs was that hatchery could keep density index low (<0.10) throughout rearing

Fish Health – Spring Chinook

Last APR:

Challenge:

- Gut parasite, *C. shasta*, in Spring Chinook



Recommendation:

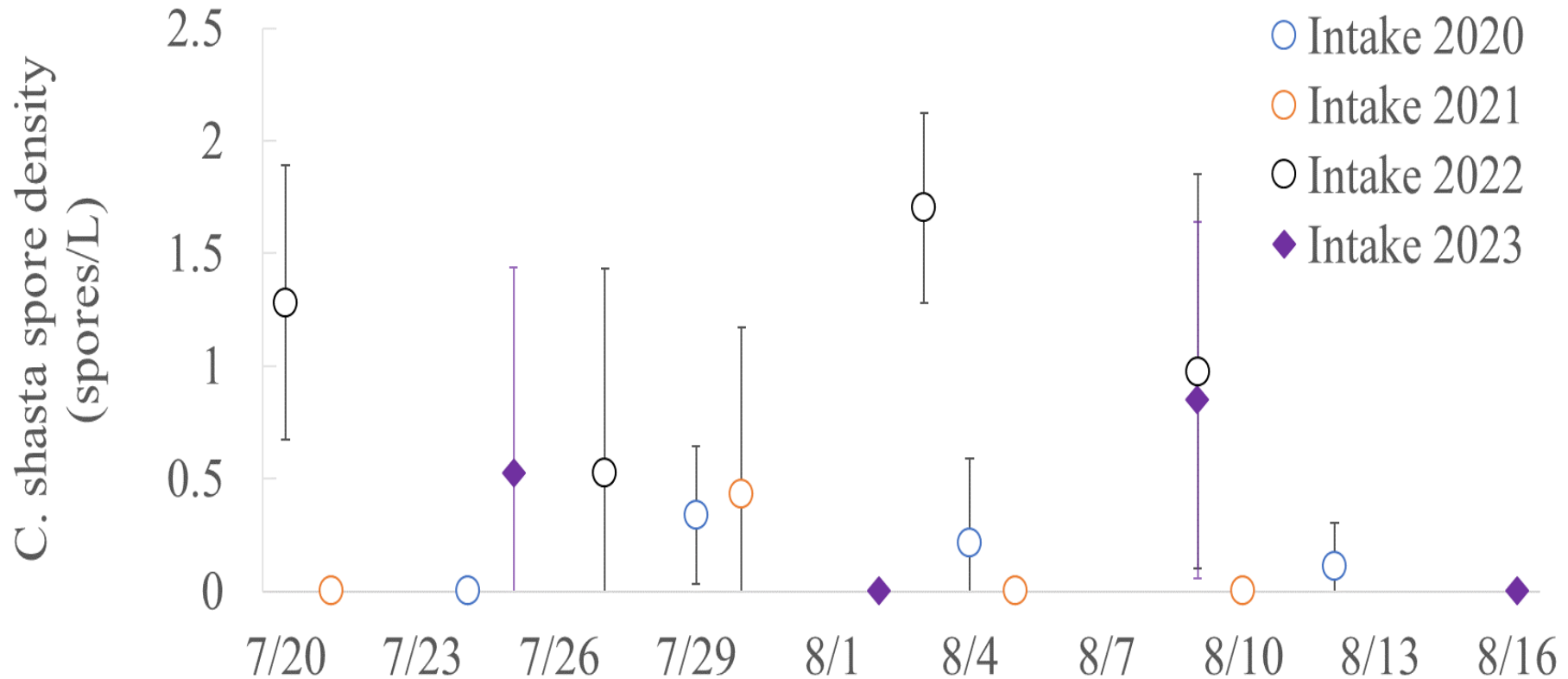
- Monitor long term effects of dredging intake for *C. shasta* within hatchery

This year:

- Chronic loss typically August/September
- Vitamin supplementation mitigates for emaciation
- Intake dredging

Hatchery Intake Dredging

C. shasta eDNA monitoring

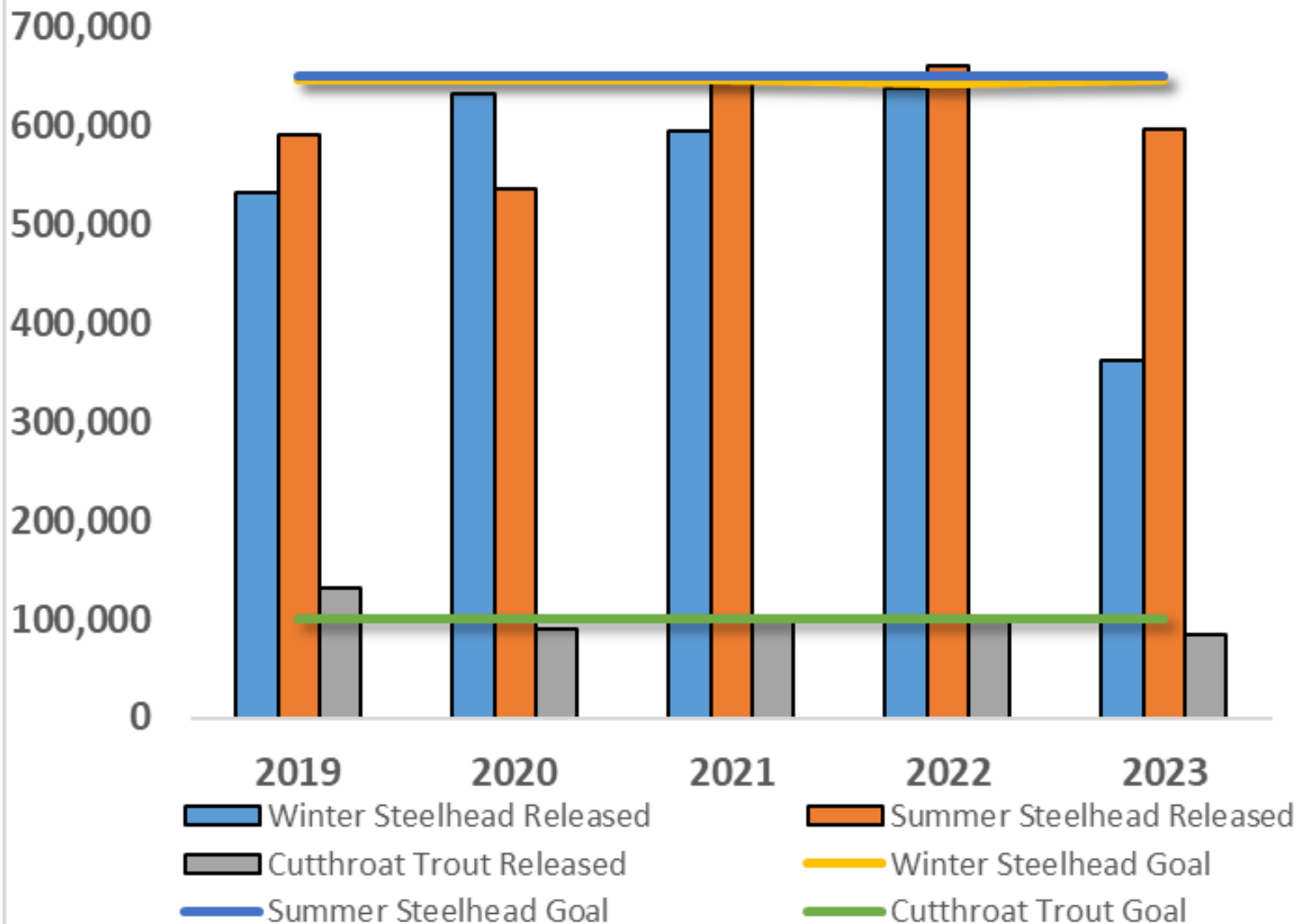


No dredging occurred from 2020 – 2022 (open circles) and did occur again in 2023 (closed diamonds)

Cowlitz Trout Hatchery



Cowlitz Trout Hatchery Releases (5 Years)



Cowlitz Trout Hatchery

Recent improvements:

- Shade Covering
- REDD Zone Incubator
- HOR - Late Winter Steelhead, Earlier Adult Collection time frame
- NOR - Late Winter Steelhead, Doubling of the programs



Fish Health – Trout Hatchery

- Bacterial coldwater disease (BCWD)
 - Many presentations throughout steelhead lifecycle
 - Multi-factor stressors lead to disease development from fry to smolt
 - Improvements
 - Ovadine (iodophore) flushes on eggs
 - Lighter loadings in early incubation
 - Vacuuming raceways
 - Routine topical treatments

Fish Health – Trout Hatchery

Current fish health pilot studies for bacterial coldwater disease (BCWD)

- Investigating the effect of probiotics to combat BCWD
- Further trial and optimization of alternative topical treatment protocols for external bacteria

Cowlitz Trout Hatchery Remodel

- **Phase 1: Planning to 10% Design**
- **Phase 2: Design & Permitting**
- **Phase 3: Go/No Go for Construction Phasing**
- **Phase 4: Phased Construction/Commissioning**

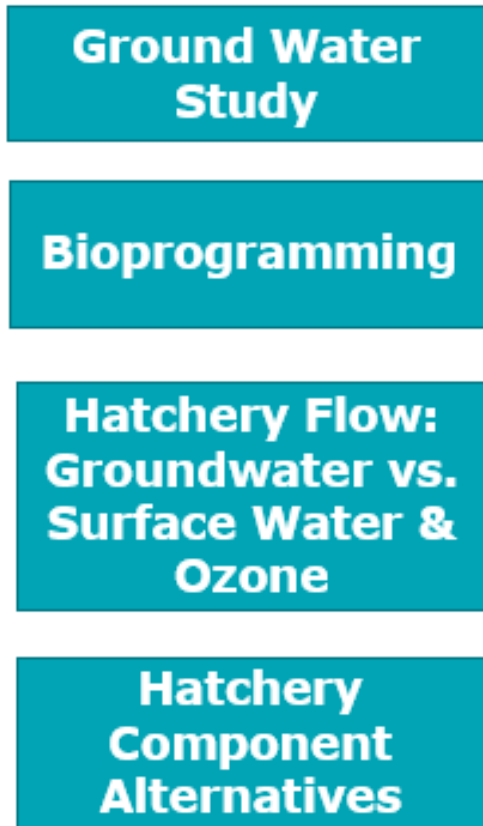


★ **We are here**

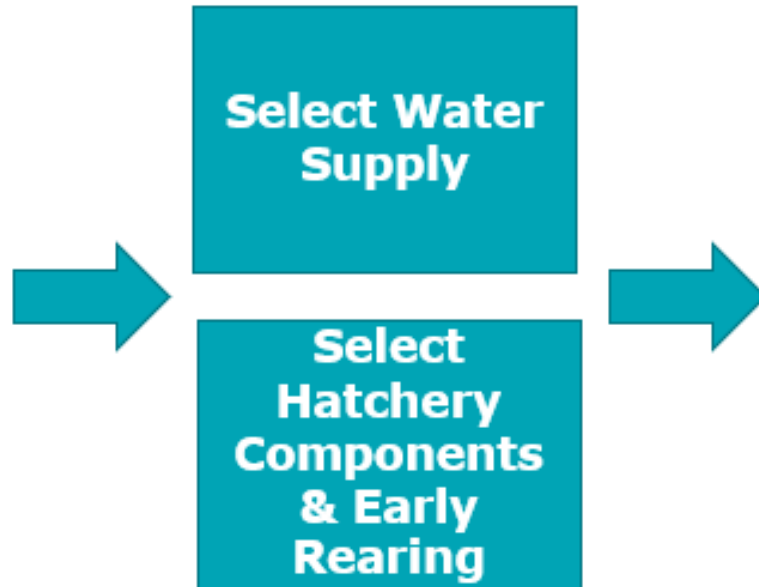
Trout Hatchery 8-Year Program

Phase 1: Planning to 10% Design

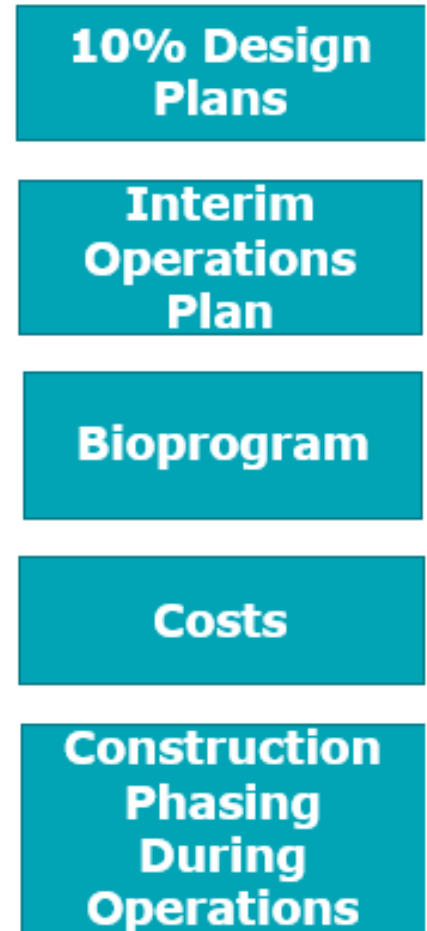
Major Activities



Decisions



Outputs



Mayfield Net Pens

Supplies on order

Fish are marked
and tagged

Separated and
awaiting transfer





Questions?

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