

Cowlitz Satellite Rearing Facilities Update

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Federal License Requirements and Goals

We will build three satellite rearing facilities as indicated in our federal license:

2.2 2002 Federal Energy Regulatory Commission (FERC) Order Approving Settlement Agreement

Article 5: Fish Production and Hatcheries:

The Licensee shall be responsible for funding the operation and maintenance of the Cowlitz Hatchery Complex consisting of the remodeled Cowlitz Salmon Hatchery, the remodeled Cowlitz Trout Hatchery, **and three satellite rearing facilities**, for the duration of this license.

The principle stocks of fish to be produced are the indigenous stocks of spring Chinook, fall Chinook, coho, sea-run cutthroat trout, and late winter-run steelhead. Non-indigenous stocks, such as early winter and summer steelhead, may be produced, provided that production shall emphasize the recovery of indigenous stocks, and production and management of all stocks shall be consistent with that goal...

Cowlitz Satellite Rearing Facilities Project

- Partnership between Tacoma Power and the Cowlitz Fisheries Technical Committee (FTC).
- The FTC is responsible for making recommendations to Tacoma Power on actions to maximize the effectiveness of fisheries mitigation, and protection and enhancement measures in the Cowlitz River Project area.
- It includes representatives from:
 - Tacoma Power
 - National Marine Fisheries Service
 - U.S. Fish and Wildlife Service
 - Washington Department of Fish and Wildlife
 - Washington Department of Ecology
 - Yakama Nation
 - Trout Unlimited
 - American Rivers
- With the partnership of the FTC, Tacoma Power has evaluated many potential satellite rearing facility locations and programs.
- We have worked for years on this project and are excited to have selected our first site.



Satellite Rearing Facilities Objectives

The ideal satellite rearing facilities will:

- Achieve compliance with Article 5 of our FERC license.
- Assist with recovery of wild stocks:
 - First priority: spring Chinook
 - Second priority: winter steelhead
- Increase the number of reproductively isolated local populations to help buffer against environmental variability.
- Facilitate imprinting and adult returns to localized upper basin spawning areas.
- Increase adult abundance of natural spawning adults in the upper Cowlitz River basin.

Satellite Rearing Facilities Objectives – Cont.

- Allow for local adaptation that ensures life history expression matches for current environmental conditions.
- Mimic natural growth rates and sizes at release.
- Increase Cowlitz Salmon Hatchery program flexibility and decrease densities in existing hatchery facilities while maintaining production.
- Encourage natural foraging and reduce feeding to minimize risk of fish disease and potential genetic effects.

Satellite Rearing Site Evaluation Criteria

We used these criteria to evaluate the potential success and constructability of three sites.

Physical Location

Does the location provide a benefit to the satellite rearing program fish without harming NOR fish?

Land Ownership

Does the land ownership suggest a lasting partnership is feasible?

Land Area Required

Will the footprint of the project have detrimental impacts to the environment or immediate area?

Potential Water Source

Is the proposed water source reliable and of high quality?

Satellite Rearing Site Evaluation Criteria – Cont.

Adult Access

Is the site suitable for returning adults?

Power

What are the power requirements and what is the feasibility of obtaining power?

Road Access

Is the site accessible for fish trucking and maintenance requirements year-round?

Permitting

Are there any permitting hurdles that make the proposed site or program not feasible?

Additional Comments

Other criteria were considered, such as site security, program flexibility and rearing capacity potential, resilience to climate change, and other metrics related to long-term reliability.

Biological Relevance

This is how we evaluate the potential impact, both positive and negative, of the program.

Number of returning adults/in-gravel production

Effects of domestication from program

Spatial distribution in the basins

Impacts to NOR populations of interest

Sites We Considered

Site	Basin	Water source	Fish Reared	Infrastructure	Biological Benefit
Energy Northwest	Upper Cowlitz	Power Pool	Spring Chinook: 100,000+	Water Road Power River Access	<ul style="list-style-type: none"> • 500-1,500 adults • Alt juvenile LH • Increased spat dist. • Resiliency/stability • Program impacts can be controlled
Tower Rock U-Fish	Cispus	Spring	Spring Chinook: 35,000+	Water Road Power River Access	<ul style="list-style-type: none"> • 175-525 adults • Alt juvenile LH • Increased spat dist. • Resiliency/stability • Program impacts can be controlled
Net Pen Program	Tilton	Mayfield	Coho: 300,000	Inside project boundary	<ul style="list-style-type: none"> • Better rearing for HOR spring Chinook

Sites We Considered

Site	Notes
Energy Northwest/Tower Rock U-Fish	Energy Northwest and Tower Rock both had similar biological benefits and site reliability, however, Energy Northwest had significantly higher rearing capacity.
Net Pen Program	<p>The net pen program effectively removes 300k coho from the Cowlitz Salmon Hatchery and places them into net pens in order to provide space to rear more spring Chinook at the hatchery.</p> <p>However, the additional spring Chinook reared at the hatchery would not benefit from the natural rearing, water temperatures, and upper basin location like the other two sites.</p>

Preferred Location – Energy Northwest

- Cool water source
- Stable supply
- Significant amount of reliable flow throughout the year
- More program flexibility
- Good site security
- Excellent access
- Flat work area near pool
- Power nearby
- Potential tank and pump options
- Multiple release strategies
- Land ownership
- We will keep the other two sites as backup options



Preferred Option – Energy Northwest

Biological benefits:

- Helps with spatial distribution
- Potential path toward starting an integrated program
- Small enough that it does not require a large number of NORs
- Small enough that returning HORs will not dominate returning adults
- Potential to recondition kelts
- May help with life history diversity due to thermal profile
- Natural rearing environment



Next Steps

- We look forward to your feedback on the proposed Energy Northwest location. Please send your comments to: eshoblom@cityoftacoma.org by April 27, 2023.
 - *We'd also like to hear if you have ideas for locations of the two other future facilities. Please refer to the Article 5 license language (slide 2) and stated objectives (slides 4 and 5) when considering potential new locations or programs.*
 - *Thank you in advance for your participation!*
- The FTC will discuss the comments and any remaining concerns at their May meeting.
- Tacoma Power is working on an easement and access agreement with Energy Northwest.
- Tacoma Power will continue site planning and program logistics and provide monthly updates to the FTC.

