

Summary

Meeting dates:	March 17-18, 2017
Agenda item:	Cowlitz River Update – (Briefing and Public Input)
Presenter(s):	Cindy LeFleur, Fish Program, Region 5 Fish Program Manager Eric Kinne, Fish Program, Hatchery Division Systems Manager

Background summary:

The Cowlitz River basin encompasses approximately 2,500 square miles and is a primary tributary to the lower Columbia River, entering at RM 68, approximately 3.5 miles southeast of Longview, WA. For fisheries management purposes, the basin is separated into the Lower and Upper Cowlitz basins demarcated by Mayfield Dam at RM 52, which blocks all volitional passage of anadromous fish to the upper watershed.

Historically, large numbers of adult coho and Chinook salmon, steelhead and cutthroat trout returned to the Cowlitz River. Estimates from 1948 indicated that the Cowlitz River produced 244,800 total adult salmonids with a spawning escapement of 82,700. Today, returns of natural origin fish are greatly depleted from these historical levels and fisheries are supported by hatchery production. While natural production is significantly reduced from historical levels, there is still a significant amount of quality habitat in the basin, especially upstream of Mayfield Dam, to support healthy natural origin populations. There are a total of 15 salmonid populations in the Cowlitz basin that are listed under the Endangered Species Act (ESA) and fishery management actions, including reintroduction, are being implemented to assist in the recovery of these listed species

The Cowlitz River Hydroelectric Project Settlement Agreement (SA) and the Federal Energy Regulatory Commission (FERC) license order provides direction to Tacoma Power to develop a Fisheries and Hatchery Management Plan (FHMP) for managing Cowlitz River salmonid populations as well as plans to provide fish passage between the upper and lower watersheds.

The original Settlement Agreement was driven by mitigation to replace fish production from lost habitat and resulted in construction of the Cowlitz Salmon and Trout hatcheries. In addition to fish production mitigation, the current SA is driven by ESA requirements and prioritizes conservation, recovery and fish passage.

The SA is intended to implement measures to restore and recover natural origin stocks in the Cowlitz River basin while continuing to support important fisheries. This dual mandate of producing hatchery-origin fish while providing for the recovery of indigenous salmonid populations will be considered in the recommended actions in the FHMP that is under development. The plan is currently scheduled for completion this summer and will complement actions focused on reintroduction into the upper basin.

The Cowlitz basin contains three hydroelectric dams; the Mayfield Dam (1962), the Mossyrock Dam (1968) and the Cowlitz Falls Dam (1994). Tacoma Power owns Mayfield and Mossyrock Dams and owns and funds operation of the Cowlitz Salmon Hatchery with its associated Barrier Dam and the Cowlitz Trout Hatchery. Cowlitz Falls Dam is the farthest upstream and is owned by Lewis County Public Utilities District (PUD).

The two hatcheries in the Cowlitz produce and release about 8.9 million salmon, steelhead and cutthroat trout juveniles annually, and contribute to fisheries from Alaska to California. The Cowlitz River is a very popular sport fishing location with year-round angling

opportunity for Chinook, coho and steelhead and producing thousands of angler trips annually. It is an extremely popular summer-run steelhead fishery and is considered one of the largest steelhead fisheries in the state.

Tacoma Power provides funding to the Department of Fish and Wildlife (Department) for intensive evaluation and monitoring throughout the Lower Cowlitz basin. Monitoring activities include but are not limited to; spawner surveys and adult abundance estimates for winter steelhead, coho and spring and fall Chinook, operation of weirs on several lower Cowlitz tributaries to reduce hatchery fish in spawning areas, collect information on natural origin fish and natural origin adults for broodstock, sport creel surveys, biological data collection from hatchery broodstock and juvenile smolt trapping for abundance and genetic sampling. Tacoma Power also funds the Department to oversee the operation of the fish facility at the Cowlitz Falls Dam.

In May-June, 2016, Trout Hatchery managers estimated that about 70 percent of the facility's summer steelhead and sea-run cutthroat trout were unaccounted for. The planned release was 625,900 summer steelhead and 90,600 cutthroat trout. The actual number of smolts released was about 202,200 combined.

In order to better understand the factors leading to the loss, an analysis was conducted by the Department and Tacoma Power. Potential causes pointed towards increased bird predation, ineffective bird hazing techniques, fish counter error, and potential disease or environmental issues. Unfortunately, masking effects from predation made it difficult to quantify each factor. Additionally, hatchery infrastructure does not provide a means to inventory fish until they are released. This makes it extremely difficult to adaptively manage in season.

In the short-term, several strategies have been identified and include; 1) smaller mesh fencing was installed on the submerged portion of the lakes to prevent most birds from getting inside the netted portion of the lakes, 2) the U.S. Department of Agriculture (USDA) hazing contract was increased to all daylight hours, 3) Tacoma Power is in the process of developing a contract with USDA for lethal hazing, 4) the counter was sent in to the manufacturer for recalibration, 5) acquiring shoreline blocking nets to deter Blue Herons and 6) Department staff are testing the use of high visibility fishing line suspended across the open portion of one of the lakes to deter birds.

The long term strategy is to install full bird netting on the rearing lakes and explore more robust inventory systems. This will be part of the hatchery remodel that Tacoma Power is planning and should be completed in three to six years from now. Tacoma Power is working with Department staff and hatchery design experts to explore a variety of options to meet current and future production challenges. The remodel project is in its early stages so timelines have not been finalized.

Moving forward the Department will work with Tacoma Power to continue to evaluate these methods to determine their potential effectiveness. Proportionally, this does represent a reduction in smolt releases, but it is unknown how the adult return will be affected. Ocean conditions play a large role in overall survival of salmon and steelhead stocks. Favorable ocean conditions could still produce an average adult return.

Policy issue(s) you are bringing to the Commission for consideration:

None. Briefing only.

Public involvement process used and what you learned:

None. Briefing only.

Action requested:

None. Briefing only.

Draft motion language:

NA

Justification for Commission action:

NA

Communications Plan:

NA
