

# November 6, 2018 FTC Meeting Q&A Matrix

QUESTIONS	FTC Response
<p><b>QUESTION SET 1:</b></p> <p><i>What is being done for nutrient enhancement?</i></p>	<p>All natural-origin fish above hatchery needs are placed in the upper watershed to spawn. Up to 1,600 live hatchery Chinook and 6,000 live hatchery Coho are also released annually in the Tilton Watershed to provide harvest, recovery and nutrient enhancement benefits. The upper Cowlitz River also receives up to 25,000 hatchery Coho and all hatchery spring Chinook in excess of hatchery needs. In addition to live fish, spawned Coho and fall Chinook carcasses from the hatchery are manually placed in the upper watershed to provide nutrients (approximately 2000 fish annually).</p>
<p><b>QUESTION SET 2:</b></p> <p><i>Can we produce additional fish in the Cowlitz in conjunction with the state Orca Plan?</i></p> <ul style="list-style-type: none"> <li>• <i>Can this be included in the FHMP?</i></li> </ul>	<p>The Cowlitz Basin is believed to have additional carrying capacity within ESA limits to support increased hatchery salmon production, which would have the potential to benefit Southern Residence Killer Whales, reintroduction/recovery efforts in the Cowlitz, and fisheries. Current ESA limits allow for increased production of hatchery Spring Chinook and potentially Coho. However, the current Tacoma Power hatchery facilities are at their maximum capacities based on current rearing and release strategies. Program changes would be required to produce more fish. The FHMP describes these programs with the primary focus on meeting requirements outlined in the programs being implemented per the FERC license Settlement Agreement. However, the FHMP is also intended to provide flexibility for other programs to benefit the basin as well. One purpose of the current FHMP update is to discuss when other programs can or should be implemented; it will be paramount that strong communication is exercised for all programs to leverage as much success for all basin wide objectives as possible. The current FHMP update development process will include model runs that will help identify where additional programs have flexibility within ESA limits to increase and/or if certain programs need to decrease in response to those changes (i.e., to fit within ESA limits, or to fit within existing hatchery infrastructure capacity).</p>
<p><b>QUESTION SET 3:</b></p> <p><i>The Cowlitz fishery has been going downhill for the last 35 years; where does the money go that is supposed to go to produce fish?</i></p> <ul style="list-style-type: none"> <li>• <i>Are we out of the fish business?</i></li>   <li>• <i>Where does the money go for these hatcheries?</i></li> </ul> <p>What's the problem?</p> <ul style="list-style-type: none"> <li>• Not knowing how to raise fish?</li> <li>• Predation?</li> </ul>	<p>Recently, the Cowlitz River has had some of the largest returns on record (Coho: 2014 was the largest since 1967 and Spring Chinook: 2015 was the largest since 1981). Unfortunately, recent poor ocean conditions are negatively impacting salmon and steelhead survival and have caused a downturn in returns the last 2-3 years.</p> <p>Please see the following link for a 2018 PowerPoint presentation on Trends in Cowlitz River Salmon and Steelhead Returns and Hatchery Releases:  <a href="https://www.mytpu.org/file_viewer.aspx?id=68288">https://www.mytpu.org/file_viewer.aspx?id=68288</a></p> <p>Tacoma Power continues to fund annual hatchery operations and maintenance. Additionally, Tacoma Power recently invested heavily in a remodel of the Cowlitz Salmon Hatchery and has been making significant investments to capture outmigrating smolts at Cowlitz Falls. These improvements are anticipated to lead to increased Smolt-to-Adult survival. In addition to funds spent on hatchery production, improvements have been focused on habitat enhancement, improvements to the Cowlitz Trout Hatchery, and outmigration improvements at Mayfield Dam.</p> <p>Adult return rates for Cowlitz hatchery programs have been consistent with other hatcheries in the Lower Columbia Basin; however, fall Chinook have been at the lower end of that range. Unfortunately, recent year returns have been heavily impacted by very poor ocean conditions that impact juvenile salmonid survival (i.e., marine survival). This effect has been seen coast wide from Alaska to California and throughout Columbia Basin stocks.</p> <p>The Monitoring and Evaluation Program represents another area of significant investment and expanded effort. The M&amp;E team is evaluating areas of potential improvement and has been gathering data that can identify where some of the problems exist (hatchery, habitat, ocean, harvest management, hydropower survival, etc.). This information will be critical for adaptively managing programs to develop a productive fishery.</p>

<p><b>QUESTION SET 4:</b></p> <p><i>Is there a predation management plan being developed for the entire Cowlitz watershed?</i></p> <p><i>Why continue to spend money on a program that is not working?</i></p>	<p>There is currently not a formal predation management plan in development for the entire Cowlitz River watershed; however, the current FHMP addresses certain aspects of the predation issue. The predation affecting Cowlitz River adult and juvenile salmonid survival generally occurs from three sources: birds (avian), mammals (e.g., seals/sea lions, otters) and other piscivorous (fish-eating) fish. Management of predation is made challenging by the fact that marine mammals, such as seals/sea lions, and most avian predator populations are (e.g., migratory birds) are federally managed. Tacoma Power and state agencies lack the authority to control those populations (i.e., lethal removal).</p> <p>FTC is committed to continue evaluating programs and seeking ways to improve programs that support recovery and harvest objectives on the Cowlitz River. If there are specific areas of concern or questions about specific programs, we would appreciate your feedback and suggestions.</p>
<p><b>QUESTION SET 5:</b></p> <p><i>Does the FHMP consider 775K lb. production or 650K lb. production?</i></p> <p><i>Since eliminating the upstream passage at the dam is the FTC considering the additional poundage?</i></p> <p><i>Is the money available so we don't have to redesign plans to implement them?</i></p> <p><i>Predators have been a serious problem. Is there a predation management plan for the Cowlitz Basin?</i></p> <p><i>Can we add additional smolt numbers to the rearing lakes to make up for bird predation?</i></p>	<p>The FHMP update will primarily focus on designing a program around the 650K pound cap as identified in the Settlement Agreement, but will also consider program changes within that have ESA limits which will help meet harvest and recovery objectives</p> <p>The issue of the increased poundage cap is addressed in Article 5 of the Settlement Agreement which states:</p> <p>“The remodeled hatchery complex will accommodate a range of possible production levels, up to 800,000 pounds, and the current upper bound permitted by the ESA of 771,500 pounds. The total production level within the remodeled hatchery complex will not exceed 650,000 pounds per year for all stocks until and unless a decision has been made pursuant to Article 3 to not construct volitional upstream passage during the remaining term of the license, at which time hatchery production may be considered as part of the plan to expend the funds in the escrow account for the purposes of protecting and promoting recovery of listed stocks.”</p> <p>The context of this question is not clear. Therefore, no response can be provided at this time.</p> <p>See Response in Question Set 4.</p> <p>Not at this time. Increasing the amount of fish produced at the early stage overcrowds the hatchery and ultimately leads to increased mortality ( i.e., disease outbreaks that affect the entire program prior to placing them in the rearing lakes). The lack of early stage rearing space and associated issues will be addressed in the remodel of the Cowlitz Trout hatchery in the coming years.</p> <p>Tacoma Power and WDFW have collaborated to improve monitoring and hazing efforts at the lakes and this appeared to result in relatively minor loss last year.</p>

<p><b>QUESTION SET 6:</b></p> <p><i>What can be expected in the near future for adult returns?</i></p> <p><i>Is it possible to get some information out to the public so we have an idea of how to conduct our lives?</i></p> <p><i>Are poor adult returns going to be the norm?</i></p>	<p>One of the objectives of the Monitoring and Evaluation team is to develop Cowlitz specific run projection models so we can answer these types of questions more effectively. It is not anticipated this goal will be achieved and be ready for testing for at least another year. Information will be shared with the public as soon as it is available.</p> <p>The WDFW forecast for Columbia River stocks are as follows:</p> <p>2019 Spring Chinook forecasts, including the Cowlitz River run, were finalized in early December. The prediction is for 1,300 spring Chinook to return to the Cowlitz.</p> <p>Columbia River Fall Chinook forecasts, including the Cowlitz River run, for 2019 will be available in Spring 2019. Coho forecasts may be available later in 2019, but are for the entire Columbia River, not split out by tributary. We did see a large number of coho jacks returning to the Cowlitz in 2018, suggesting we could see a decent return of adult coho in 2019.</p> <p>Steelhead forecasts are currently not generated for the Cowlitz River.</p> <p>Columbia River fish forecasts are posted at <a href="https://wdfw.wa.gov/fishing/crc/">https://wdfw.wa.gov/fishing/crc/</a></p> <p>Cowlitz Trout Hatchery release information is posted at <a href="https://www.mytpu.org/file_viewer.aspx?id=71794">https://www.mytpu.org/file_viewer.aspx?id=71794</a></p> <p>Forecasts are released by WDFW for pre-season fishery planning and these are available to the public. Improved forecasting specific to the Cowlitz River is a goal identified in the updated FHMP and discussed in the FTC Monitoring &amp; Evaluation sub-group.</p> <p>See Response to Question Set 3.</p> <p>It is difficult to predict what future ocean conditions will be moving forward. Regardless, the FTC continues to search for ways to improve adult returns through hatchery rearing and release strategies, habitat enhancement, and collection/transport efforts of juveniles and adults.</p>
<p><b>QUESTION SET 7:</b></p> <p><i>Can we have our summer steelhead net pen operations back?</i></p> <p><i>There is only a 1% stray rate. These fish are social and economic engines. The impacts are being felt from Packwood to Kelso. Let's work to produce more fish to increase fishing opportunities. A net pen project on Mayfield Lake will also help the orcas.</i></p>	<p>The size of the current summer steelhead program (~650,000 fish) was determined in combination with the current winter steelhead programs on the Cowlitz. Both programs are currently at the maximum allowable size to remain within ESA limits. Due to uncertainty in the stray rates, a conservative stray rate estimate was used in the modeling to determine these program sizes. More years of data are now available, reducing the uncertainty around the stray rate estimate. During the FHMP update process, we plan to model several scenarios for summer and winter steelhead programs using the latest data available to determine options for these programs. The use of net pens for these programs is an option that can be considered.</p>
<p><b>QUESTION SET 8:</b></p> <p><i>When are we going to do something about sea lion and bird predation?</i></p>	<p>See Response in Question Set 4.</p>

<p><b>QUESTION SET 9:</b>  <i>How do we gain on the Cowlitz River (increased survival)? The C-shasta parasite infects the eggs in the gravel.</i></p>	<p>The FTC is aware that C. shasta is a risk to survival and we continue to investigate opportunities to minimize risks and adaptively manage to address this challenge. The natural environment is largely out of our control, but we are striving to minimize the occurrence of C. shasta in the hatchery.</p> <p><i>*Ceratomyxa shasta is a microscopic myxosporean protozoan parasite that afflicts salmonid fish of the Pacific Northwest.</i></p>
<p><b>QUESTION SET 10:</b>  When will the HSRG be re-evaluated?</p>	<p>The Hatchery Scientific Review Group (HSRG) is an independent scientific review panel established by the U.S. Congress as part of the Pacific Northwest Hatchery Reform project. The HSRG reviewed all Columbia River Basin federal, tribal and state hatchery programs in 2009, and still functions as a review panel for hatchery reform. More information is available at: <a href="http://hatcheryreform.us/">http://hatcheryreform.us/</a>.</p> <p>As to the future of the HSRG and re-evaluation of its role as an independent scientific review panel, that question is outside the purview of the Cowlitz FTC.</p>
<p><b>QUESTION SET 11:</b>  <i>Can I receive a copy of the draft FHMP and be added to the list for updates on the FHMP process?</i></p>	<p>Yes, updated drafts for the FHMP are and will continue to be posted to the Tacoma Power website at: <a href="https://www.mytpu.org/tacomapower/page.aspx?uid=1181&amp;id=1558">https://www.mytpu.org/tacomapower/page.aspx?uid=1181&amp;id=1558</a></p>
<p><b>QUESTION SET 12:</b>  <i>What is the status on satellite pond use?</i></p> <p><i>How are we doing on the bird problem?</i></p>	<p>The Cowlitz programs have developed plans that define appropriate purposes for the satellite ponds and the plans will help evaluate appropriate sites and facility configurations in the future.</p> <p>Bird predation has been curtailed within the hatchery facility for the last two years and will continue until the remodel can address it properly with netting. Based on a joint study conducted by WDFW/Tacoma Power staff minimal loss of fish reared in lakes was observed in 2018.</p>
<p><b>QUESTION SET 13:</b>  <i>What are the expected 2019 returns at Barrier for:</i></p> <ul style="list-style-type: none"> <li>• <i>spring/fall kings</i></li> <li>• <i>summer/winter steelhead</i></li> </ul>	<p>See response to Question Set 6.</p>
<p><b>QUESTION SET 14:</b>  <i>The production of Chinook smolts from the Tilton River has probably been masked by the spring Chinook coming through Riffe Lake (turbines and test spills). With the increased efficiency of Cowlitz Falls trapping of Chinook, the Mayfield trap numbers will probably decline significantly. Is that the case?</i></p>	<p>This is not expected to be the case. In past years, USGS conducted evaluations regarding survival and passage effectiveness through Riffe Lake and it was low for all species, but particularly so with Chinook. It is unlikely that fish from the upper basin are contributing to the estimates coming out of Mayfield or the Tilton River. Chinook Salmon collections of age-1+ at Mayfield Dam actually increased slightly from 2017 to 2018, while age-0 Chinook Salmon collections do appear to have decreased dramatically from 95,064 to 6,577. The 2018 age-0 count is well within the range of counts from the previous 15 years, exceeding the counts of three of those years, which varied widely from 1,753-198,409. It is also worth noting that Chinook Salmon collections at Cowlitz Falls followed the same pattern, with the age-1+ collection increasing (by nearly 400%) and the age-0 collection decreasing (by about 50%), despite an increase in collection efficiency from 46% to 66%. It seems extremely unlikely that a substantial number of spring Chinook Salmon smolts are surviving the trip through/over two dams, through a warm reservoir containing non-native predators, and are captured at high rates at the Mayfield Fish Facility.</p>