Cowlitz River Advisory Group
Updates for 2/28/19 meeting

Spring Chinook Forecast and Fishery: A summary of information provided to the Columbia River Recreational Advisory Group was forwarded to the CRAG on 2/14/19. This outlined the challenge we are facing this year with a Cowlitz River Spring Chinook forecast which is below hatchery broodstock needs. As a result, the Cowlitz River fishery will be closing to spring Chinook retention beginning March 1, 2019. Additionally, the lower Columbia River spring Chinook fishery has been set to occur above Warrior Rock from March 1 through April 10, to further protect Cowlitz and Lewis River returns.

Coho/Chinook - Fall 2018 Egg takes: Final egg take numbers have been tallied from fall 2018. Fall Chinook returns were very low last fall and broodstock goals at the hatchery were not achieved.

	Fall 2018			
Hatchery Program	**Egg Take Goal**	**Actual Egg Take**	**Difference**	**% of Goal**
Coho				
Integrated	1,259,851	1,278,300	18,449	101%
Segregated	1,443,976	1,451,400	7,424	101%
Fall Chinook				
Integrated/Segregated	4,556,511	2,062,800	-2,493,711	45%

Tilton River - Second Release Site: Tacoma Power provided an update at the February 5, 2019 meeting (conference call) on progress towards developing a second release site on the Tilton River. A preferred location has been identified at the SR 508 Bridge below Morton. This site is owned by the Washington Department of Transportation (WSDOT). Procurement of a use permit from WSDOT for this activity requires the development of an engineered design to be submitted with the permit application. Tacoma Power has assigned this task to an engineering team. Timelines for completion of this task and permit application submittal are being reviewed and will be reported at a future FTC meeting.

Bird and Marine Mammal Predation

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.

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 (e.g., migratory birds) are federally managed. Tacoma Power and

state agencies lack the authority to control those populations through direct measures (i.e., lethal removal) without working through federal regulatory processes.

Current actions to address predation being undertaken by Tacoma Power, WDFW and the FTC are:

1) Predator control at hatchery facilities through fencing and netting of hatchery ponds and raceways to minimize bird and otter predation.
2) Hazing (including lethal removal) of bird predators at the Cowlitz Trout hatchery, where full netting and fencing is not yet in place. This is accomplished through federal authorization and use of US Department of Agriculture approved personnel.
3) Evaluation of predation on naturally produced juvenile salmonids by hatchery smolt, after release. This is outlined in the current FHMP and preliminary work has been started by the M&E workgroup to better understand and quantify predation by hatchery smolt. This is the first step in understanding the magnitude of this issue and determining if changes are needed.

In addition to these actions, the State of Washington has been actively supporting congressional actions to address changes to the Marine Mammal Protection Act through Senate Bill 3119 (Endangered Salmon and Fisheries Predation Prevention Act). This bill has recently passed the US House of Representatives and Senate and has been signed by the President.

Also, the Washington and Oregon Fish and Wildlife Commissions were recently briefed on predation issues in the Columbia river (from marine mammals, birds and fish). The following are links to the information presented at the November 1-3, 2018 Joint commission meeting:
https://wdfw.wa.gov/commission/meetings/2018/11/nov0118_05_summary.pdf

https://wdfw.wa.gov/commission/meetings/2018/11/nov0118_05_presentation.pdf

Legislative Updates: An update from WDFW's Legislative Affairs Office was forwarded to CRAG members on 2/11/19 and 2/22/19. As additional updates become available, we will continue to forward them to CRAG members. Additional questions can be directed to legaffairs@dfw.wa.gov.

- Southern Resident Killer Whales (SRKW) - several bills are in play regarding SRKW recovery.

Early winter steelhead hatchery program modeling: WDFW and Tacoma Power staff are working to use the ISIT model to evaluate potential options for Cowlitz steelhead hatchery programs in preparation for FHMP and HGMP updates. Staff have finished incorporating the most recent (i.e., 2016 and 2017) data into the data set used for ISIT modeling. The next step is for the Cowlitz River M&E team (FTC subgroup) to identify the initial scenarios for ISIT models runs. Program options discussed at the September 25, 2018 CRAG meeting will be included in the model runs and results will be shared when available.

Hatchery Production Options Update

WDFW/Tacoma Power Coordination

- At the September CRAG meeting, WDFW presented some options for restructuring and/or increasing hatchery production to optimize programs to meet conservation and harvest goals. Many of these were based on CRAG member suggestions. WDFW and Tacoma Power staff agreed to continue discussions regarding this topic.
- On 11/27/18, WDFW and Tacoma Power met to continue discussion on this topic. This discussion focused primarily on spring Chinook and coarse-level options for additional hatchery production on the Cowlitz River.
- Discussions included short-term, mid-term and long-term production options.
    - General long-term options ranged from added infrastructure at existing sites up to a new facility.
    - Mid-term options included ideas such as re-modeling the "kettles" at Cowlitz Salmon Hatchery and potentially increasing capacity in the remodel design of the Cowlitz Trout Hatchery.
    - The potential for re-use ponds at hatcheries and or the operation of large net pen arrays for coho to increase spring Chinook capacity within existing infrastructure was also discussed.
    - All options are contingent on funding availability.
- The majority of the discussion focused on a number of short-term production options with both groups agreeing to work on further developing these options for additional review.
- On 12/13/18 WDFW and Tacoma hatchery staff met to further discuss short term options.
    - Four short-term options were developed.
    - Three of these free up additional rearing space in existing facilities to grow a portion of the existing "fall release" group to a larger size at release. This should increase the SARs and ultimately return more adults to the system.
    - The fourth option would be additional production utilizing the North Toutle Hatchery to produce one million "zero age" Spring Chinook for release on the Cowlitz.

NEXT STEPS:

- Expand details for four short term options including a list of pros and cons, refined cost estimates, risk factors for each alternative.
- Determine ESA constraints through ISIT modeling to determine overall allowable program sizes.

PRELIMINARY - Short Term Additional Production Options for Cowlitz River – for CRAG Discussion.

Option 1: - Mayfield Net Pen Coho Production

Utilize existing Mayfield net pens for coho production (from Dec. – April). Grow a portion of the Spring Chinook 16fpp group to a larger size at Cowlitz Salmon Hatchery (CSH) and release them in the spring to increase smolt to adult return (SAR):

- Net Pen Capacity (coho): 40,000lbs @ 15fpp = 500,000 coho
  - This opens 2 ponds for additional spring chinook for a spring release.
- 2 ponds can hold 20,000lbs of spring Chinook in March (time of release).

Total estimated cost: ~$160,000 (Rough estimate only, pricing dependent on procurement process, staffing rates etc.)

Option 2: - Additional Spring Chinook production at FOC Net Pens

Increase number of FOC Net Pens for additional spring Chinook production

- Current program: FOC (Toledo Sand and Gravel) receives 55,000 at 12fpp in November and release 50,000 at 5fpp in March.
- Could rear any number of the Spring Chinook 16fpp group to a larger size to increase SAR.

Size of program is dependent upon rearing capacity of the gravel pits/lakes and ESA constraints up to 500k of the 16fpp group.

Total estimated cost: ~$TBD (Cost based on scale of operation)

Option 3: - Cowlitz Falls Fish Collection Facility Raceways

- Utilize the Cowlitz Falls raceways to grow a portion of the Spring Chinook 16fpp group to a larger size and release them in the spring to increase SAR:
  - 6 ponds x 1,083lbs / pond = 6,500lbs total

Total estimated cost: ~$TBD (Cost based on TPU salaries, trucking, marking and operating costs)

Option 4. - Additional 1 million zero age Spring Chinook production

Zero age release utilizing North Toutle Hatchery incubation and hatching.

- Spawn approximately 580 spring Chinook adults at CSH to produce 1,000,000 fry.
- Hold in CSH incubation until eyed. Transfer eyed eggs to North Toutle Hatchery.
- In April, coho would be released from CSH and North Toutle would begin transferring spring Chinook fry back to the empty ponds at CSH. Released in June at approximately 60-80fpp.

***Total estimated cost: ~$* 135,000** (Rough estimate only)