

Columbia River Summer Chinook – (Briefing/Public Comment)

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Summary Sheet

Meeting dates: June 15, 2018

Agenda item: Columbia River Summer Chinook – (Briefing/Public Comment)

Presenter(s): Ron Warren, Fish Program, Assistant Director, Bill Tweit, Fish Program, Special Assistant, Ryan Lothrop, Fish Program, Columbia River Fishery Manager

Background summary:

Summer Chinook enter the Columbia River in June and July on their migration to the upper Columbia River Basin. Historically, the bulk of the spawning occurred in the upper Columbia River above Grand Coulee Dam and access to that area was blocked by the construction of the dam, which was completed in 1941. They are one of the few salmon runs in the Columbia River that are not listed under the Endangered Species Act (ESA).

Fisheries were closed in 1964 (commercial) and 1973 (sport) because of poor returns. Fisheries reopened in the early 2000's when returns began to increase. From 1980-2017, returns to the Columbia River increased from a low of 9,400 in 1992 to a high of 126,900 in 2015 and averaged 41,700 adults.

The *U.S. v Oregon* goal at Priest Rapids Dam is 20,000 hatchery and natural origin summer Chinook. From 2008-2017, Priest Rapids Dam counts have averaged 60,000 adults and Columbia River mouth returns averaged 75,300.

Natural production of summer Chinook occurs in the Wenatchee, Entiat, Chelan, Methow, Okanogan and Columbia rivers. During 2008-2017, interim escapement goals have been achieved on the Okanogan River, in about half of the years on the Methow but has not been achieved for the combined Wenatchee, Entiat, Chelan population.

There are currently two signed policies or agreements covering summer Chinook fisheries in the Columbia River; the Columbia River Basin Salmon Management Policy C-3620 and the "Agreement between the Confederated Tribes of the Colville Reservation and the Washington Department of Fish and Wildlife on Jointly managed salmon and steelhead populations" (Colville Tribal Agreement). Policy C-360 specifies commercial fisheries would occur using alternative gears that have yet to be determined.

2018 Fisheries were developed during the North of Falcon process. Total harvest expectations are 3,500 adults below Priest Rapids Dam and 7,400 above the dam.

Attachment 1 is a Summer Chinook Fact Sheet which provides additional details, including tables and a graph.

Staff recommendation:

Policy issue(s) and expected outcome:

Consistency throughout the Columbia basin approach with mark-selective fisheries to manage pHOS and meet natural escapement should be considered. Adaptive management approach in Policy C-3620 allows for consideration outside the prescriptive language within the policy itself.

Fiscal impacts of agency implementation:

Public involvement process used and what you learned:

Commission meetings have been open for public viewing and comment during the 2018 April and June meetings. Additionally staff has scheduled Columbia River Commercial and Recreational advisory group meetings on May 15 where this topic came up as well.

Action requested and/or proposed next steps:

Draft motion language:

Motion: I move to _____ (adopt/amend/deny) _____ (rule(s)/petition) as presented by staff (if appropriate)

Is there a "second"?

If so, then motion maker discusses basis for motion; other Commissioners discuss views on motion; amendments, if any, proposed and addressed

Post decision communications plan:

Form revised 2-15-18

Attachment 1. Summer Chinook Fact Sheet

Background and Run Sizes

Summer Chinook enter the Columbia River in June and July on their migration to the upper Columbia River Basin. Summer Chinook are defined as fish crossing Bonneville Dam from June 16 through July, returning to the upper Columbia River above Priest Rapids Dam and are not listed under the Endangered Species Act (ESA). Historically, the bulk of the spawning occurred in the upper Columbia River above Grand Coulee Dam and access to that area was blocked by the construction of the dam, which was completed in 1941.

During 1980-2000, the upper Columbia River summer Chinook adult returns to the mouth of the Columbia River were at low levels, but fairly stable, ranging between 9,400 and 22,700 (Figure 1). Due to a combination of improved ocean conditions and substantial changes in the hydro-system to improve downriver passage conditions, the return in 2001 increased significantly to 53,000 adults. During 2002-2017, the run has averaged 72,900 fish, ranging from a low of 37,000 in 2007 to a high of 126,900 in 2015 (Figure 1).

Historical Fisheries

Commercial seasons for summer Chinook closed in 1965 and sport seasons closed in 1974. The states opened the summer Chinook fishery below Bonneville Dam on June 28, 2002 for the first time since 1973 with mark-selective regulations to protect other ESA-listed stocks.

A sport fishery opened in 2005 in the lower Columbia and began with mark-selective regulations, but was changed to allowing retention of hatchery and wild fish during July as the run was tracking close to projections. A commercial fishery consisted of six fishing periods using 8-inch minimum mesh. In 2006, the commercial fishery consisted of thirteen fishing periods with the same regulations as in 2005. From 2007 through 2016, the commercial season structure averaged three fishing periods (range one to five) in Zones 1–5 with an 8-inch minimum mesh restriction.

Non-mark-selective summer Chinook sport fisheries occurred during 2006–2009. Summer Chinook run sizes during 2007–2009 were not large enough to allow full, non-mark-selective recreational fisheries, and seasons were shortened to an average of twelve days during those years. In an effort to expand the recreational fishing opportunity for summer Chinook and in order to meet the requirements of the new Upper Columbia management plan which adopted revised spawning escapement and pHOS goals, the states adopted mark-selective (adipose fin-clipped) regulations for fisheries during 2010–2014 and 2016-2017 and extended the open area from Tongue Point downstream to the Astoria-Megler Bridge.

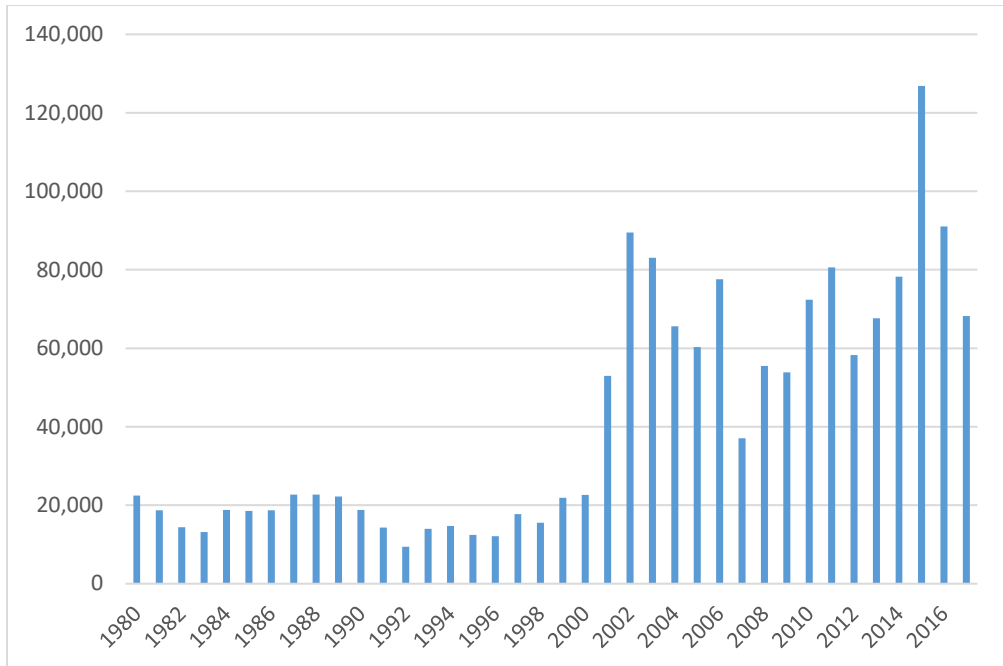


Figure 1. Columbia River Mouth Run Sizes of Upper Columbia Summer Chinook

Escapement Estimates and Goals

Natural production of summer Chinook occurs in the Wenatchee, Entiat, Chelan, Methow, Okanogan and Columbia rivers. The amount of natural production that occurs in the Columbia River between Priest Rapids Dam and Chief Joseph Dam is unknown but could be significant. Table 1 shows Columbia River mouth run sizes and wild fish escapements to the tributaries in the upper Columbia River and associated escapement goals.

Table 1. Upper Columbia Summer Chinook Returns to the Columbia River and to Escapement Areas

	Columbi River Run Size	Priest Rapids Dam	Wild Fish Escapement					
			Wenatchee	Entiat	Chelan	Wen,Ent, Che Combined	Methow	Okanogan
2008	55,532	39,305	4,794	238	258	5,290	1,227	2,930
2009	53,881	49,417	7,113	203	25	7,341	1,020	4,149
2010	72,346	49,265	5,879	319	481	6,679	1,271	3,155
2011	80,574	50,865	8,155	570	563	9,288	1,459	4,453
2012	58,300	50,667	7,327	1,063	262	8,651	1,680	4,688
2013	67,603	71,083	7,449	843	606	8,898	1,720	5,818
2014	78,254	78,434	9,607	594	583	10,784	1,463	10,583
2015	126,882	78,139	4,070	269	719	5,058	3,162	10,706
2016	91,048	80,288	5,321	613	396	6,330	1,457	9,014
2017	68,204	52,981	6,534	415	378	7,327	1,056	5,098
Goal 1/		20,000				13,500	1,500	2,000

1/ The goals shown here are from the U.S. v OR Management Agreement and are composite wild and hatchery goals. WDFW currently uses them for the wild escapement goals.

Policies

There are currently two signed policies or agreements covering summer Chinook fisheries in the Columbia River; the Columbia River Basin Salmon Management Policy C-3620 and the “Agreement between the Confederated Tribes of the Colville Reservation and the Washington Department of Fish and Wildlife on Jointly managed salmon and steelhead populations” (Colville Tribal Agreement).

Columbia River Basin Salmon Management Policy C-3620

“The objectives of this policy are to promote orderly fisheries (particularly in waters in which the states of Washington and Oregon have concurrent jurisdiction), advance the conservation and recovery of wild salmon and steelhead, and maintain or enhance the economic well-being and stability of the fishing industry in the state.”

Summer Chinook

1. The Department will manage the upper Columbia summer Chinook populations for sustainable natural production and for the artificial production programs that are necessary to meet mitigation requirements and provide conservation safeguards.
2. The Department will manage for population specific performance goals for Wenatchee, Methow and Okanogan natural populations, and for hatchery escapement goals.
3. Non-treaty sharing above and below Priest Rapids Dam. The highest priority for state managed summer Chinook fisheries is recreational fishing opportunity above Priest Rapids Dam. (Harvest sharing based on matrix).
4. Nontreaty Sharing Below Priest Rapids Dam. The harvestable surplus available for nontreaty fisheries below Priest Rapids Dam will be allocated as follows:
 - c. Beginning in 2017, assign 80% of the harvestable surplus to the recreational fishery and the balance (20%) to the commercial fishery. Of the commercial share, up to 75% may be used for mainstem fisheries using non-gill net selective gear and fishing techniques (currently undetermined) that minimize impacts on sturgeon, steelhead, and sockeye. If the commercial share is unlikely to be used, transfer the allocation to the recreational fishery upstream of Bonneville Dam (if it can be utilized) or to aid spawning escapement (see below for a summary of Oregon rules)
5. Provide for in-season management flexibility to utilize the non-treaty summer Chinook harvest to meet the objectives of all fisheries.

Adaptive Management

“The Commission recognizes that appendix tables A-E describe a presumptive path forward for salmon fishery management in the Columbia Basin. Uncertainty exists in some aspects of the presumptive path, including the development and implementation of alternative selective fishing gear, the securing of funding for enhanced hatchery production, and the expansion or development of off-channel fishing areas. Under these conditions, adaptive management procedures will be essential to achieve the purpose of this policy. As indicated in the General Policy statement, management actions will be evaluated and, as appropriate, implemented in a progressive manner”.

“State-managed fisheries pursuant to this Policy will be adaptive and adjustments may be made to mainstem fisheries if policy objectives, including catch or economic expectations for commercial or recreational fisheries, are not achieved consistent with the principles of this plan”.

“Reconsideration of state-managed mainstem fisheries may take place under the following circumstances:

1. Lower than anticipated catch and economic expectations to the commercial salmon fishing industry, or
2. Insufficient space within off-channel sites to accommodate the commercial fleet, or
3. Biological, fiscal and/or legal circumstances that delay or preclude implementation of alternative selective gear, buyback of commercial fishing permits, and/or additional off-channel hatchery investments, or
4. Management objectives are not achieved for commercial or recreational fisheries, or
5. Conflicts with terms of U.S. v Oregon management agreements with Columbia River Tribes, or
6. Failure to meet conservation objectives”.

Oregon Department of Fish and Wildlife Rules Regarding Summer Chinook

OAR 635-500-6720

Summer Chinook

(2) Long Term (April 5, 2017 and Beyond).

(a) Assign 80% of the harvestable surplus available for use downstream from Priest Rapids Dam to mainstem recreational fisheries.

(b) Assign 20% of the harvestable surplus available for use downstream from Priest Rapids Dam to off-channel and mainstem commercial fisheries using gears other than gill nets. Unused commercial harvest will not be transferred to recreational fisheries.

Colville Tribal Agreement

“This agreement addresses salmon and steelhead fisheries regulated by the Colville Tribes in the Okanogan River and its tributaries within the Colville Reservation and North Half and in the mainstem Columbia River from the confluence of the Okanogan River upstream to Chief Joseph Dam.” The agreement also addresses production of hatchery and natural origin fish from these waters.

The agreement states that fisheries downstream and in the ocean must allow for sufficient numbers of fish to return to provide the Tribes with stable and equitable fisheries and natural and hatchery production. State managed fisheries will provide fishing opportunities when they can be directed at healthy wild and hatchery stocks while minimizing impacts on depressed stocks. In cooperation with Oregon Department of Fish and Wildlife, “commercial and recreational fishing opportunity will be schedule to optimize the non-treaty harvest of Chinook and coho and to provide a balanced opportunity to each fleet”. “When developing recreational and commercial fishing options, the Department shall consider fair and reasonable catch

opportunity, stability and duration of fisheries, as well as sharing of the conservation responsibility”.

A preseason plan will be developed and includes in-season and post-season coordination. Harvest sharing uses the same matrix that is included in Policy C-3620. The natural escapement objective for the Methow/Okanogan population is 3,500 summer Chinook above Wells Dam. “This value represents an estimate of maximum sustainable yield (MSY) for the two large tributary streams (Methow and Okanogan) and portion of the mainstem Columbia River”. The agreement also includes harvest and escapement objectives for spring Chinook, sockeye and steelhead.

2018 Run Size and Fisheries

Table 2 below shows the forecast to the Columbia River mouth and preseason harvest allocations.

Table 2. 2018 Run Size and Harvest Expectations.				
	Total	Hatchery	Wild*	Percent Hatchery
Forecast	67,300	40,380	26,920	60%
Harvest Below PRD	3,541			
Below Bonn Sport	2,361	2,174	187	65% June/55% July
Bonn to PRD Sport	425	255	26	60%
Commercial	708	389	319	55% July
Harvest Above PRD	7,387			
Sport	6,180	3,811	515	41%
*The number of wild fish shown in the harvest category are wild mortalities. For recreational fisheries, wild fish mortalities are calculated by multiplying the wild fish released by 15%.				

Expected Impacts from Alternative Gear versus Gill nets

The commission posed the following question for staff: What are the incidental impacts to non-target species in large mesh traditional gillnets during the summer period, in comparison to the kind of alternative gear originally envisioned when the Columbia River Policy was adopted?

The recommendation from the Work Group¹ prior to the Policy implementation was that mainstem commercial fisheries targeting summer Chinook would be eliminated in the long-term, so no expectations of non-target fish handled were estimated. Both states include

¹ In September 2012, the Washington and Oregon Fish and Wildlife Commissions agreed to work together, with agency staff, and key stakeholders in an effort to develop alternative approaches to management of the sport and commercial fisheries on the Columbia River. A Workgroup was formed consisting of three commissioners from each state, sport and commercial advisors and a county commissioner.

language in current policies/rules that presume annual harvest of summer Chinook by the commercial fishery with gear to be determined.

During the development of the Policy, modeling was conducted to estimate harvest and bycatch of seines during the summer Chinook season. Seine gear modeling indicates that 15.8 sockeye per marked adult Chinook would occur and that steelhead encounters would be nearly identical to the marked Chinook encounters. Staff also estimated that if seines were used during the summer Chinook fishery, the handle of sockeye and steelhead would be considerably greater than what would be handled in an 8-inch or 9-inch gillnet. Seine fishing would occur during the peak shad run and would increase the difficulty to release sockeye and steelhead in addition to plugging up the nets. Large mesh gillnets are effective at avoiding steelhead, sockeye and shad, but cannot be used as a mark-selective gear for summer Chinook without a high mortality on released unmarked Chinook.

Expectations for handle of sockeye, steelhead and sturgeon in a summer Chinook fishery in 2018 using large mesh gill nets is estimated to be approximately 50 or less of each and is dependent on effort, fishery dates and run sizes.

Expected Effort in a Commercial Fishery and Potential Ex-Vessel Values

Effort is estimated to be 30-50 fishers per day. Ex-vessel value is estimated to be \$6-\$7 per pound and average weight is estimated to be 16 pounds. Total ex-vessel value from the fishery would be \$68,000 – \$79,000 for summer Chinook. Additional estimates would need to be made to include sockeye and sturgeon harvest.