

Columbia River Fishery Policy Review Workgroup Meeting

Narrative Descriptions and Analysis of Policy Issues, Alternatives under Consideration

SPRING CHINOOK

May 27, 2020

Issue 2: Allowable mainstem commercial gear

Description

This issue involves establishing allowable commercial gear types for non-treaty commercial fisheries targeting spring Chinook in the mainstem Columbia River. Prior to 2002, large -mesh gill nets were the primary gear used in this fishery. Beginning in 2002, tangle nets (combined with other live-capture regulations) were implemented as a new gear to implement a mark-selective fishery and maximize harvest of hatchery spring Chinook. Both gear types were used for mark-selective fishing during 2002-2016 with large mesh gill nets primarily used early and/or late in the season when steelhead and/or shad were more abundant. Non-treaty commercial fisheries in the mainstem have not occurred since 2016 due to policy changes.

- Status Quo
 - February PRC Recommendation/Current WA Policy
 - Allowed mainstem gear types include tangle nets prior to the Upriver spring Chinook runsize update (pre-update) and tangle nets and gill nets post-update.
 - Oregon has yet to formally act on the PRC recommendation of February 26, and current policy in Oregon restricts commercial gear in mainstem areas to tangle nets for use after a run size update only.
- Alternative 3
 - Allow tangle net, alternative gear or gill net gear to be used before or after the run size update.

Status of Consideration: Active for further analysis.

Results:

The management measures that were employed during 2002-2016 used a combination of selective fishing tools; avoidance and live-release. While the post-release mortality rate (per fish) for gill nets is higher than that of tangle nets, gill nets were used to reduce encounters of non-target species such as steelhead and shad. Tangle nets were used less during periods of higher steelhead and shad abundance as encounter rates of these non-target species are higher with the smaller nets, and this can lead to higher total mortalities if encounters are high enough. Tangle nets have a lower post-release mortality (per fish) and were focused during periods of lower steelhead abundance to minimize encounters and total mortality of steelhead. Spring Chinook and steelhead that are caught in tangle nets are caught in the teeth or mouth and tend to tangle in the net and have a lower post-release mortality rate (14.7% for spring Chinook and 18.5% for steelhead). The regulations during the spring live-capture commercial fisheries, include the use of recovery boxes to resuscitate lethargic fish, and reduced drift times.

Table 2 shows the harvest of spring Chinook in tangle nets and gill nets during mark-selective mainstem non-treaty commercial fisheries in 2003 through 2018. The vast majority of mainstem spring Chinook harvest since 2003 has occurred using tangle nets, with an average of 87% during the three years prior to Harvest Reform (2010-2012), and 61% since implementation of Harvest Reform. The

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lower percentage of tangle net harvest since 2013 is the result of lower commercial allocations of spring Chinook impacts, which reduced opportunities to implement pre-update tangle net fisheries. Overall, tangle nets have been used extensively in mark-selective mainstem commercial spring Chinook fisheries, and have made a significant contribution to the ex-vessel value and economic viability of these fisheries (Table 3).

The recent 10-year 50% run timing of the Upriver Spring Chinook over Bonneville Dam is May 9, but has been later during more recent years; 2017 and 2018 have had the latest run timings of May 21 and May 16, respectively. Non-treaty fisheries, excluding SAFE, are managed on a buffered forecasted run size prior to the run update which reduces the risk of exceeding ESA as the run size gets updated around mid-May. Commercial fisheries occurring after the run update coincide with an increasing abundance of shad and sockeye and limits the ability to effectively fish and are more challenging with a late-timed run (Figure 1). Small mesh gear, including tangle nets, are more challenging to fish when small bodied fish in large numbers are present.

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Table 2. Harvest of spring Chinook in mainstem non-treaty commercial fisheries, by gear, 2003-2018.			
Year	Tangle Net	Gill Net	% Tangle Net
2003	2,634	541	83%
2004	9,960	3,621	73%
2005	3,667	1,697	68%
2006	0	4,389	0%
2007	2,292	658	78%
2008	5,938	14	100%
2009	4,150	18	100%
2010	8,966	75	99%
2011	2,021	2,518	45%
2012	6,111	7	100%
2013	1,276	937	58%
2014	2,450	1,624	60%
2015	4,350	2,881	60%
2016	2,394	1,219	66%
2017 ¹	0	0	--
2018 ¹	0	0	--
2010-2012 Avg	5,699	867	87%
2013-2018 Avg	1,745	1,110	61%

¹ No mainstem non-treaty commercial spring Chinook fishery took place in 2017 and 2018 because Oregon policy permitted a post-update mainstem fishery only if commercially allocated ESA impacts were not fully utilized in SAFE fisheries (no surplus impacts were available in 2017 and 2018), and Washington policy at the time did not allow a mainstem commercial spring Chinook fishery.

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Table 3. Comparison of landings and ex-vessel value to estimated harvest costs for the 2013-2016 spring mainstem commercial tangle net/gillnet fisheries.

Year	Days Fished	Avg # of Vessels ¹	Chinook Landed ²	Total Ex-Vessel Value	Costs			Net Fishery Return	Net Return/Vessel
					Annual	Daily	Total		
2013	4	75	2,213	\$202,405	\$49,692	\$44,700	\$94,392	\$108,013	\$1,450
2014	5	71	4,074	\$322,675	\$47,090	\$52,950	\$100,040	\$222,634	\$3,153
2015	8	67	7,231	\$580,660	\$44,772	\$80,550	\$125,322	\$455,338	\$6,783
2016	6	65	3,613	\$415,641	\$43,355	\$58,500	\$101,855	\$313,786	\$4,827
Avg	6	69	4,283	\$380,345	\$46,227	\$59,175	\$105,402	\$274,943	\$4,054

¹ Average number of vessels fishing during the season. Approximated using average number of deliveries per day.
² Includes adults and jacks.

Figure 1. Average daily counts of salmon, steelhead, and American Shad at Bonneville Dam, 2008-2019.

