

Columbia River Fishery Policy Review Workgroup

Narrative Descriptions and Analysis of Policy Issues, Alternatives and Options

SPRING CHINOOK – Issue 1, Alternative 2: Allocation of upriver spring Chinook impacts between non-treaty fisheries, abundance-based matrix: *Snake River recreational fishery*

July 1, 2020

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Description

This issue specifically involves the allocation of Upriver spring Chinook impacts between recreational and non-treaty commercial fisheries using an abundance-based matrix approach (Alternative 2), with an emphasis on effects to the Snake River recreational fishery. Allocation sharing applies to the fisheries occurring in concurrent Columbia River waters downstream of Highway 395 near Pasco, WA, the Snake River downstream of Lower Granite Dam, and Select Areas. The allocations (% share) of Upriver spring Chinook are of the available ESA impact allowance for non-treaty fisheries, not total harvest.

The *U.S. v Oregon* Management Agreement specifies that fisheries occurring prior to an in-season run size update will be buffered by assuming a run size of no more than 70% of the pre-season forecast. The buffer is intended to ensure that fisheries occurring prior to an in-season run size update do not exceed allowable ESA impacts in the event the run comes in below the pre-season forecast.

The *U.S. v Oregon* Management Agreement also specifies that non-treaty fisheries are to be managed to not catch more total Upriver spring Chinook than treaty fisheries are allowed to catch. This requirement for 'Catch-Balancing' applies to all fishery-related mortality in non-treaty fisheries (harvested fish plus released fish that subsequently die). This requirement is intended to ensure that non-treaty fisheries using mark-selective techniques do not harvest more Upriver spring Chinook than treaty fisheries are allowed to harvest. Staff accounts for these factors, as well as Commission allocation policies, in developing and implementing non-treaty fisheries.

The current WA policy is that 70% of the non-treaty Catch Balance is reserved for the recreational fisheries and the remaining 30% is for the commercial fisheries. Within the recreational fishery allocation, 75% are allocated to lower river recreational fisheries and 25% are allocated to recreational fisheries above Bonneville Dam; within the 25% allocation to recreational fisheries above Bonneville Dam, 10% is allocated to OR/WA fisheries from Bonneville Dam up to the state line and 15% is allocated to the WA fisheries in the Snake River and Upper Columbia River areas.

This issue also addresses the effects to the Snake River recreational fishery, and associated allocation. More detailed information on the Snake River recreational fisheries/allocation occurred during the Joint-state Columbia River Salmon Fishery Policy Review Committee meetings, and were discussed on August 29 and October 1, 2019, and can be found [here](#).

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Columbia River Fishery Policy Workgroup June 10, 2020 recommendation:

- Alternative 2
 - Use an abundance-based matrix for recreational/commercial allocation.
 - Describe the effects of the spring Chinook abundance-based allocation approach on recreational fisheries in Washington waters of the Snake River

Results

Staff analysis focused on the June 10 CRW recommendation for the abundance-based matrix, and provided a comparison to the current WA policy for the Snake River recreational fishery. The general concept of an abundance-based matrix is that as abundance increases, additional allocation is provided to the commercial fishery, and alternatively under low abundance scenarios, additional allocation is provided to the recreational fishery.

This abundance-based matrix approach uses 1) only Upriver spring Chinook abundances to the Columbia River, 2) 80%/20%, 70%/30%, and 65%/35% allocation for low, medium, and high run sizes, respectively (Table 1). This abundance-based matrix aligns with the *U.S. v Oregon* Management Agreement abundance tiers.

Table 1. Abundance-based matrix metrics for mainstem sport and commercial spring Chinook fisheries below Bonneville Dam at different combinations of allocation shares.

Upriver Spring Chinook Adult Run	Allocation of Allowable Upriver Run ESA Impacts	
	Recreational Fisheries	Commercial Fisheries
< 82,000	80%	20%
82,001 – 217,000	70%	30%
> 217,000	65%	35%

Within the recreational fishery allocation, 75% are allocated to lower river recreational fisheries and 25% are allocated to recreational fisheries above Bonneville Dam; within the 25% allocation to recreational fisheries above Bonneville Dam, 10% is allocated to OR/WA fisheries from Bonneville Dam up to the state line and 15% is allocated to the WA fisheries in the Snake River and Upper Columbia River areas.

The frequency of run sizes during 2005-2019 and 2015-2019 was also reviewed when determining the appropriate tiers for consideration; the average Upriver spring Chinook run size was 170,600 fish and 156,100 fish, respectively. Table 2 provides the frequency each of the allocation percentages that would have occurred from both 2005-2019 and 2015-2019.

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Table 2. Abundance-based matrix metrics for mainstem sport and commercial spring Chinook fisheries below Bonneville Dam at different combinations of allocation shares and frequency of run sizes.

Upriver Spring Chinook run size	Allocation (recreational/commercial)	Frequency ¹	Non-Treaty Upriver Spring Chinook Impact Rate ²
<82,000	80%/20%	7% (20%)	0.5-1.5%
82,001-217,000	70%/30%	67% (60%)	1.6-1.9%
>217,000	65%/35%	27% (20%)	2.0-2.7%

¹ 2005-2019 (2015-2019) frequency for Upriver Spring Chinook run sizes.

² U.S. v Oregon Management Agreement allowable ESA impact rate for combined commercial and recreational non-treaty fisheries.

2005-2019 average run sizes and mark rates for each associated abundance tier was used to estimate Catch Balance for the Snake River recreational fishery (Table 3). Angler trips and days open were also generated from recent year fisheries. Under an average low abundance run size, 80% of the non-treaty allocation would be applied to the sport fishery, of which 15% is used by the Snake River recreational fishery and would provide a Catch Balance of 511 and results in an estimated 3,098 angler trips with 14 days to fish. Under an average medium abundance run size, 70% of the non-treaty allocation would be applied to the sport fishery, of which 15% is used by the Snake River recreational fishery and would provide a Catch Balance of 1,059 and results in an estimated 5,587 angler trips with 19 days to fish. Under an average high abundance run size, 65% of the non-treaty allocation would be applied to the sport fishery, of which 15% is used by the Snake River recreational fishery and would provide a Catch Balance of 2,311 and results in an estimated 11,275 angler trips with 31 days to fish. Days open reflects the maximum an individual geographical section of the Snake River (i.e., Little Goose) would be open, as the fishery rotates locations open by specific days.

Table 3. Snake River recreational fishery effects from Abundance-based matrix.

Run size	Tier	Non-treaty ESA	Allocation (recreational/commercial)	Recreational Allocation ²	Snake River Recreational Fishery			
					ESA	Catch Balance	Angler trips	Days open ³
73,101	Low	1.5%	80%/20%	75%/10%/15%	0.18%	511	3,098	14
141,859	Medium	1.9%	70%/30%	75%/10%/15%	0.20%	1,059	5,587	19
267,020	High	2.0%	65%/35%	75%/10%/15%	0.20%	2,311	11,275	31

¹ Projections primarily based upon 2005-2019 run sizes, mark rates, catch balance, angler trips, and days open.

² 75% below Bonneville Dam, 10% Bonneville Dam to OR/WA state line, 15% Snake/Upper Columbia.

³ Days open reflect maximum days open for any single area open (i.e., Little Goose).

The WA policy in comparison would result in the same non-treaty ESA and recreational (geographical) allocations, however the recreational/commercial allocation would be 70% recreational/30% commercial for all run sizes. The existing WA policy has a reduced recreational

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allocation under a low abundance run size tier, and results in an estimated 499 Catch Balance, 3,046 angler trips and 14 days open for the Snake River recreational fishery (2% decrease compared to Table 3). A run size in the medium abundance tier would result in the same estimates of Catch Balance, angler trips, and days open. With a run size in the high abundance tier, the WA policy has an increased recreational allocation, and results in an estimated 2,336 Catch Balance, 11,387 angler trips, and 32 days open (1% increase compared to Table 3).