

Conservation Scenarios

Spring Chinook

The table below shows escapement of spring Chinook to Bonneville Dam based on the current policy for allocating upriver spring Chinook to recreational and non-Treaty commercial fisheries and under the transition and long-term allocation scenarios in the proposal being considered by the Columbia River Fishery Management Workgroup.

Table 1. Bonneville Dam Escapement Under Three Scenarios. The Management Guidelines and Catches Shown are for the Recreational Fishery Downstream from Bonneville Dam and for the Non-Treaty Mainstem Commercial Fishery.					
Time Period	Scenario	Management Guideline under ESA	Management Guideline Under <i>US v Oregon</i>	Catch (Kept + Release Mortality)	Escapement to Bonneville Dam
Pre-Update	Current	22,317	18,833	16,994	5,323
	Transition	22,534	18,205	16,294	6,240
	Long term	21,555	17,389	14,639	6,916

Assumptions

- Modeling is based on 225,000 upriver spring Chinook mouth run size
- Assumes mark rate of 75%
- Scenario descriptions
 - Current – Base case allocation is 60% of upriver spring Chinook ESA-impacts are allocated to recreational fisheries and 35% to commercial fisheries; the recreational fishery downstream from Bonneville Dam is allocated 75% of the ESA-impact allocated to recreational fisheries; off-channel fisheries are allocated a fixed ESA impact of 0.15%.
 - Transition – Base case allocation is 70% of upriver spring Chinook ESA-impacts are allocated to recreational fisheries and 30% to commercial fisheries; the recreational fishery downstream from Bonneville Dam is allocated 75% of the ESA-impact allocated to recreational fisheries; off-channel fisheries are allocated a fixed ESA impact of 0.25%.
 - Long term – Base case allocation is 80% of upriver spring Chinook ESA-impacts are allocated to recreational fisheries and 20% to commercial fisheries; the recreational fishery downstream from Bonneville Dam is allocated 75% of the ESA-impact allocated to recreational fisheries; off-channel fisheries are allocated all of the ESA impacts allocated to commercial fisheries.

Summer Chinook

The tables below show escapement of summer Chinook at Wells Dam based on three different fishing scenarios.

Table 1. Wells Dam Escapement Under Three Scenarios			
	Current	No Commercial	Increased Sport
Marked	24,100	26,000	24,100
Unmarked	20,400	21,300	21,300
Total	48,400	52,800	51,100

Table 2. Percent Marked and Unmarked at Wells Dam Under Three Scenarios			
	Current	No Commercial	Increased Sport
Marked	54%	55%	53%
Unmarked	46%	45%	47%

Summary

- About 8% more summer Chinook would reach Wells Dam with no commercial fishing compared to current schedules. If commercial fishery allocation were provided to sport fishery below Bonneville Dam, about 5% more fish would reach Wells Dam.
- The unmarked (wild) percent of the population that reaches Wells Dam would decrease by 1% with no commercial fishing and would increase by 1% if the commercial allocation was provided to sport fishery below Bonneville Dam.

Assumptions

- Modeling is based on 75,000 river mouth run size
- Assumes mark rate of 66%
- Scenario descriptions
 - Current – Modeling based on Management Agreements and commission policy for allocation
 - No commercial – assumes no commercial allocation
 - Increased sport – assumes commercial allocation goes to sport fishery below Bonneville Dam.

Summary of Hypothetical Seine Fishery Effects on Lower River Hatchery Stock (LRH) Tule Escapement

The table below represents a preliminary analysis of a commercial seine fishery in the lower Columbia River at a range of harvest levels (10,000-30,000 LRH Chinook handle), the corresponding effect on LRH escapement from fisheries compared to 2012 escapement, and the approximate percent of Endangered Species Act (ESA) impacts for Lower Columbia River tule Chinook needed to prosecute the seine fishery. A 10% release mortality rate was used for the purpose of this analysis, but research is on-going to determine actual release mortality rates from seines and will be applied when available. The range of fisheries displayed in this table would reduce the LRH Chinook escapement from 18-53% and would require 7-20% of the Lower Columbia tule Chinook ESA impacts that were allotted to other in-river fisheries in 2012.

Handle of LRH and Associated Effects on Hatchery Surplus and ESA Impacts			
LRH ^{1/} Handle	87% ^{2/} Marked	% Hatchery ^{3/} Fish Reduction From 2012 Surplus	% of In-river ^{4/} ESA Impacts Needed
10,000	8,700	18%	7%
20,000	17,400	35%	13%
30,000	26,100	53%	20%

1/ This is the LRH portion of the catch only and does not reflect total Chinook harvest.

2/ Based on 2012 pre-season model with 7.8% LRH ESA-impact rate

3/Reflects percent reduction from 2012 LRH escapement level of 49,400

4/Percent of LRH impacts needed to prosecute seine fishery based on total LRH impacts from 2012 model