

Pre-update SAF Impacts $\geq 0.15\%$
 Pre-update Above Bonneville Sport Fishery = 10%

OPTION 2c
A near-term management scenario for sport and commercial spring Chinook fisheries in the Columbia River
Assumes sport and commercial fisheries use all impacts available to them

Table 1. Allowable impacts assigned to and estimated numbers of upriver spring Chinook harvested by sport and commercial fisheries before the run-size forecast is updated (pre-update) for run sizes forecast in 1999-2008, and for a hypothetical run-size forecast with a low Willamette return. Total allowable impacts equal those allowed under the U.S. v Oregon harvest rate schedule. The share of total allowable impacts assigned to sport and commercial fisheries was determined using a matrix based on run sizes of upriver Columbia and Willamette spring Chinook. For the period before the run-size forecast is updated, sport fisheries are managed not to exceed 75% of their total allowable impacts and commercial fisheries are managed not to exceed 50% of their total allowable impacts. As a result, approximately thirty-five percent of the total impacts allowed under U.S. v. Oregon are held in reserve as a “buffer” until the run-size forecast is updated to account for uncertainty. Seven and one-half percent of the pre-update impacts, not to be less than 0.15%, are assigned to select area and winter sturgeon fisheries. Sport fisheries include areas downstream and upstream of Bonneville Dam. Harvest estimates assume the mainstem commercial fishery uses tangle-net gear.

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average (1999-2008)	Hypothetical w/ low Willamette run size
Forecasted run size	24,600	134,000	364,600	333,700	145,400	360,700	254,100	88,400	78,500	269,300	225,411	300,000
Total allowable impact	0.000%	1.700%	2.300%	2.300%	1.900%	2.300%	2.000%	1.600%	1.500%	2.000%	2.000%	2.200%
Sport/commercial fishery shares of total allowable impact	70/30%	60/40%	50/50%	50/50%	60/40%	50/50%	60/40%	60/40%	60/40%	60/40%	60/40%	55/45%
Pre-update sport fishery impact (75% of its share of total allowable)	0.000%	0.765%	0.863%	0.863%	0.855%	0.863%	0.900%	0.720%	0.675%	0.900%	0.900%	0.908%
Pre-update commercial fisheries impact (50% of its share of total allowable)	0.000%	0.340%	0.575%	0.575%	0.380%	0.575%	0.400%	0.320%	0.300%	0.400%	0.400%	0.495%
Pre-update commercial fisheries impact assigned to Select Area and winter sturgeon fisheries	0.000%	0.150%	0.173%	0.173%	0.150%	0.173%	0.150%	0.150%	0.150%	0.150%	0.150%	0.165%
Pre-update commercial fisheries impact assigned to mainstem salmon fisheries	0.000%	0.190%	0.403%	0.403%	0.230%	0.403%	0.250%	0.170%	0.150%	0.250%	0.250%	0.330%
Pre-update sport fishery harvest of upriver fish (assuming 75% mark rate)	0	7,688	23,585	21,586	9,324	23,333	17,152	4,774	3,974	18,178	15,215	20,419
Pre-update select area fishery harvest of upriver fish	0	201	629	576	218	622	381	133	118	404	338	495
Pre-update mainstem commercial fishery harvest of upriver fish (assuming 75% mark rate)	0	1,299	7,487	6,853	1,706	7,407	3,241	767	601	3,435	2,875	5,051

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Table 2. Allowable impacts assigned to and estimated numbers of upriver spring Chinook harvested by sport and commercial fisheries after the run-size forecast is updated (post-update) for run sizes occurring in 1999-2008, and for a hypothetical run-size forecast with a low Willamette return. These impacts equal those allowed under the U.S. v Oregon harvest rate schedule for the final run size minus the impact used before the run size update adjusted for the difference between pre- and post-update run size. Available post-update impacts are shared between the sport and commercial fisheries so that the final percent of impacts used by each fishery approximates that in the matrix for the final upriver Columbia spring Chinook run size. None of the commercial share of the post-update impacts needs to be assigned to select area fisheries because their season is over. Sport fisheries include areas downstream and upstream of Bonneville Dam. Harvest estimates assume the mainstem commercial fishery uses large-mesh gear.

Year	1999	2000	2001	2002	2003	2004 ^a	2005 ^a	2006	2007	2008 ^a	Average (1999-2008)	Hypothetical w/ low Willamette run size
Final run size	38,700	178,600	416,500	295,100	208,900	193,400	106,900	132,100	86,200	178,700	199,600	300,000
Total allowable impact	1.000%	1.900%	2.500%	2.200%	1.900%	1.900%	1.600%	1.700%	1.600%	1.900%	1.900%	2.200%
Sport/commercial fishery shares of total allowable impact	65/35%	60/40%	50/50%	50/50%	60/40%	60/40%	60/40%	60/40%	60/40%	60/40%	60/40%	55/45%
Post-update allowable impact (total minus impact used before the run-size update, adjusted for difference in pre- and post-update run size)	1.000%	1.071%	1.242%	0.575%	1.041%	0%	0%	1.004%	0.712%	0%	0.432%	0.798%
Post-update sport fishery impact (adjusted so overall share approximates that in matrix)	0.650%	0.566%	0.495%	0.125%	0.545%	0%	0%	0.538%	0.345%	0%	0.124%	0.303%
Post-update commercial fisheries impact (adjusted so overall share approximates that in matrix)	0.350%	0.505%	0.747%	0.450%	0.496%	0%	0%	0.466%	0.367%	0%	0.308%	0.495%
Post-update sport fishery harvest of upriver fish (assuming 75% mark rate and sport fishery uses all its impacts)	1,887	7,582	15,462	2,760	8,537	0	0	5,332	2,232	0	1,851	6,806
Post-update mainstem commercial fishery harvest of upriver fish (assuming 75% mark rate and commercial fishery uses all its impacts)	254	1,691	5,831	2,489	1,941	0	0	1,154	593	0	1,154	2,784

a: final run size and total allowable impact were less than forecasted and impacts used by the fisheries pre-update would have exceeded those allowed under the final run size. As a result, no impacts would be available for fisheries post-update.

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Table 3. Summary of allowable impacts assigned to and estimated numbers of upriver spring Chinook harvested by sport and commercial fisheries for run sizes occurring in 1999-2008, and for a hypothetical run-size forecast with a low Willamette return. Assumes fisheries are able to use all the impacts assigned to them. Total allowable impacts equal those allowed under the U.S. v Oregon harvest rate schedule for the final run size. Sport fisheries include areas downstream and upstream of Bonneville Dam. Commercial fisheries include select areas and winter sturgeon.

Year	1999	2000	2001	2002	2003	2004 ^a	2005 ^a	2006	2007	2008 ^a	Average (1999-2008)	Hypothetical w/ low Willamette run size
Forecasted run size	24,600	134,000	364,600	333,700	145,400	360,700	254,100	88,400	78,500	269,300	225,411	300,000
Final run size	38,700	178,600	416,500	295,100	208,900	193,400	106,900	132,100	86,200	178,700	199,600	300,000
Total allowable impact	1.000%	1.900%	2.500%	2.200%	1.900%	1.900%	1.600%	1.700%	1.600%	1.900%	1.900%	2.200%
Total sport fishery harvest of upriver fish (assuming 75% mark rate and sport fishery uses all its impacts)	1,887	15,270	39,047	24,346	17,861	23,333	17,152	10,106	6,206	18,178	17,066	27,225
Projected closing date for sport fishery downstream from Bonneville Dam pre-update (assumes open 7 days/ week)	1-Jan	9-Apr	16-Apr	16-Apr	10-Apr	10-May	14-May	7-Apr	9-Apr	29-Apr	16-Apr	18-Apr
Projected closing date for sport fishery downstream from Bonneville Dam pre-update (assumes open 3 days/ week)	1-Jan	17-Apr	14 May	14 May	17-Apr	14-May	14-May	12-Apr	16-Apr	14-May	14-May	14-May
Total commercial fishery harvest of upriver fish (assuming 75% mark rate and commercial fishery uses all its impacts)	254	3,191	13,947	9,917	3,865	8,029	3,622	2,053	1,311	3,839	4,367	8,330
Total sport fisheries impact	0.650%	1.140%	1.250%	1.100%	1.140%	1.491%	1.844%	1.020%	0.960%	1.302%	1.140%	1.210%
Total commercial fisheries impact	0.350%	0.760%	1.250%	1.100%	0.760%	1.072%	0.951%	0.680%	0.640%	0.603%	0.760%	0.990%
Final sport fisheries share of allowable impacts	65%	60%	50%	50%	60%	58%	66%	60%	60%	68%	60%	55%
Final commercial fisheries share of allowable impacts	35%	40%	50%	50%	40%	42%	34%	40%	40%	32%	40%	45%

a: final run size and total allowable impact were less than forecasted. As a result, no fishing would have occurred post-update and total impacts used by sport and commercial fisheries would have exceeded those allowed. Sport/commercial shares of impacts used approximate that planned pre-update.

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Assumes lower Columbia River sport fisheries cannot use all the post-update impacts available to them and the balance is transferred to commercial fisheries

Table 4. Summary of allowable impacts assigned to and estimated numbers of upriver spring Chinook harvested by sport and commercial fisheries for run sizes occurring in 1999-2008, and for a hypothetical run-size forecast with a low Willamette return. Assumes lower Columbia River sport fisheries cannot use all the post-update impacts available to them and the balance is transferred to commercial fisheries. Balances were calculated using catch curves developed by the Washington Department of Fish and Wildlife. Total allowable impacts equal those allowed under the U.S. v Oregon harvest rate schedule for the final run size. Sport fisheries include areas downstream and upstream of Bonneville Dam. Sport fisheries post-update are assumed to be open seven days per week. Commercial fisheries include select areas and winter sturgeon.

Year	1999	2000	2001	2002	2003	2004 ^a	2005 ^a	2006	2007	2008	Average (1999-2008)	Hypothetical w/ low Willamette run size
Final run size	38,700	178,600	416,500	295,100	208,900	193,400	106,900	132,100	86,200	178,700	199,600	300,000
Total allowable impact	1.000%	1.900%	2.500%	2.200%	1.900%	1.900%	1.600%	1.700%	1.600%	1.900%	1.900%	2.200%
Post-update impacts unused by sport fisheries after run-size update	0.466%	0.432%	0.399%	0.010%	0.387%	0.000%	0.000%	0.415%	0.206%	0.000%	0.046%	0.197%
Additional number of upriver fish harvested in commercial fishery if unused sport fishery impacts are available	338	1,448	3,117	56	1,517	0	0	1,028	332	0	173	1,106
Total sport fishery harvest of upriver fish (assuming 75% mark rate and sport fishery cannot use all its impacts)	534	9,483	26,583	24,124	11,798	23,281	14,199	5,994	4,875	18,174	16,377	22,793
Total commercial fishery harvest of upriver fish (assuming 75% mark rate and commercial fishery uses its impacts and the balance unused by the sport fishery)	592	4,639	17,064	9,973	5,382	8,029	3,622	3,081	1,643	3,839	4,540	9,436
Total sport fisheries impact	0.184%	0.708%	0.851%	1.090%	0.753%	1.605%	1.771%	0.605%	0.754%	1.356%	1.094%	1.013%
Total commercial fisheries impact	0.816%	1.192%	1.649%	1.110%	1.147%	1.072%	0.951%	1.095%	0.846%	0.603%	0.806%	1.187%
Final sport fisheries share of impacts used	18%	37%	34%	49%	40%	60%	65%	36%	47%	69%	58%	46%
Final commercial fisheries share of impacts used	82%	63%	66%	51%	60%	40%	35%	64%	53%	31%	42%	53%

a: final run size and total allowable impact were less than forecasted. As a result, no fishing would have occurred post-update and total impacts used by sport and commercial fisheries would have exceeded those allowed. Sport/commercial shares of impacts used approximate that planned pre-update.