

North of Falcon Planning

Preliminary fall Chinook forecasts – revised post-PFMC

Stock Group	2022		2023
	February Forecasts	Actual Returns	February Forecasts
Lower River Hatchery - LRH	73,000	87,542	77,100
Lower River Wild - LRW	10,800	9,375	8,600
Lower River Bright - LRB	8,700	3,039	4,300
Bonneville Pool Hatchery - BPH	91,200	258,271	136,100
Upriver Bright - URB	230,400	254,880	272,400
<i>Snake River Wild (SRW)¹</i>	<i>11,000</i>	<i>18,945</i>	<i>13,300</i>
Pool Upriver Bright - PUB	70,200	64,622	48,300
Select Area Bright - SAB	600	1,331	600
Columbia River Total	484,900	679,060	547,400

Coho forecast – pre-harvest ocean abundance

2022 abundance and 2023 forecast of ocean coho run components prior to harvest (thousands of fish)				
	2022			2023
	Pre	Post	Pre/Post	Forecast
Columbia River Early	592.5	434.3	136%	481.8
Columbia River Late	404.7	250.9	161%	404.3
<i>Columbia River Subtotal</i>	997.2	685.2	146%	886.1
<i>Coast Subtotal</i>	6.3	10.8	59%	10.8
Total (OPI-H)	1003.5	696.0	144%	896.9
<i>OCN Rivers</i>	209.0	182.0	115%	226.3
<i>OCN Lakes</i>	13.4	9.6	140%	12.5
OCN Total	222.4	191.5	116%	238.8
Grand Total	1,225.9	887.5	138%	1,135.7

Considerations for 2023 fisheries

- Upper Columbia Summer Chinook
 - In-river allocations of upper Columbia River summer Chinook for 2023 will be finalized after April PFMC.
 - Non-concurrent allocation <PRD: 70% recreational; 20% commercial; 10% unallocated.
- Sockeye
 - 1.0% Snake River ESA allowable rate for non-treaty fisheries (NT).
 - Non-concurrent allocation: 70% recreational; 20% commercial; 10% unallocated.
 - Wenatchee escapement goal forecasted to be met.
- Upriver Summer Steelhead
 - Preseason forecasts indicate the 2023 return could be very low again this year.
 - Continued restriction of steelhead fisheries similar to years past.
- Fall 2023 constraints are similar to what occurred in 2022 given allowable ESA-impact rates due to similar abundances and associated commission guidance if not identical.
- Fall Chinook allocation is concurrent: no more than 70% of the most constraining stock to the recreational fishery.
- URB/SRW
 - Preseason URB and SRW forecast provides for a 15.0% URB/SRW harvest rate (200,000 URB; 8,000 SRW).
- LRH
 - The preseason LRH forecast abundance allows for a total exploitation rate (ER) of 38.0% and is shared between in-river and ocean fisheries.
- Columbia River Coho
 - Lower River Natural Coho ESA impacts are limited to 23.0% ER and is shared between the in-river and ocean fisheries.
- Chum
 - The ESA-impact limit is 5.0% HR for Columbia River fisheries.
- March PFMC ocean preliminary alternatives include the same in-river rates as the final 2022 pre-season rate.
 - Alternative 1 (High); Chin0423; Coho2301
 - LRH: 39.1% total ER; 9.7% in-river ER
 - LCN Coho: 18.5% ER
 - Upper Columbia Summer: 5,849 ocean NT; 25,554 in-river NT fisheries
 - Alternative 2 (Medium); Chin0523; Coho2302
 - LRH: 37.7% total ER; 9.9% in-river ER
 - LCN Coho: 16.7% ER
 - Upper Columbia Summer: 4,952 ocean NT; 25,464 in-river NT fisheries

- See table below for LRH breakout for current ocean alternatives under consideration.

Table 7 PFMC Preseason Report--ER by fishery LCN

	Chin0423	Chin0523	Chin0623
	Alt 1	Alt 2	Alt 3
SEAK	2.9%	3.0%	3.0%
BC	13.0%	13.1%	13.4%
PS, JDF, WACoast	0.3%	0.3%	0.3%
NoF			
Treaty Troll	2.5%	2.0%	1.5%
Recreational	4.4%	3.9%	3.4%
Non-Indian Troll	5.9%	5.2%	4.5%
SoF			
Recreational:	0.2%	0.2%	0.1%
Troll:	0.2%	0.0%	0.0%
River	9.7%	9.9%	10.1%
TOTAL	39.1%	37.7%	36.4%

- Following tables are 2022 pre-season and post-season in-river modeling results.

2022 Upper Columbia Summer Chinook Allocations
(All data preliminary and includes kept + release mortalities)

	Pre		Post	
Runsize	56,346	78,494		
Harvest allocated	Allowed		Actual	Actual/
Fishery	Pre	Post	Take	Allowed
PFMC Ocean Fisheries	7,880	7,010	7,010	100%
Below Priest Rapids Dam (PRD)	22.7%	35.7%	33.5%	
Commercial below BON	361	1,200	65	5%
Recreational Below Bonneville	1,074	3,569	3,549	99%
Recreational BON to PRD	190	630	302	48%
Unallocated	180	600		0%
Below PRD Total	1,805	5,999	3,916	65%
Above Priest Rapids Dam (PRD)	77.3%	64.3%	66.5%	
Wanapum Tribal	94	314	19	6%
Colville Tribal	3,075	5,943	1,202	20%
Recreational above PRD	2,981	4,548	6,561	144%
Above PRD Total	6,150	10,805	7,782	72%
Non-Treaty Total	15,835	23,814	18,708	79%

2023 DRAFT Preseason planning doc

Columbia River Fall Chinook Fishery Model Summary															
Ocean Option:	Chin2522	12-Apr	MR2022-Preseason Final												
Columbia River Model Option:	Model	MR2022-Preseason Final													
Management Guidelines			Goal/Guideline	SRW	Total URB										
Harvest Rate	45.00%	43.0%	43.4%												
Non-Treaty	15.00%	12.78%	13.33%												
Treaty	30.0%	30.214%	30.0273%												
% of Harvestable Surplus			Total												
Non-Treaty	50%	36%													
Treaty	50%	44%													
McNary Escapement	60,000	112,200													
LRH Ocean/Inriver Exp. Rate	38%	38.0%													
Non-Treaty Wild B Index Steelhead	2%	0.86%													
Treaty Total B Index Steelhead	13%	13%													
Upriver Coho to Bonneville Dam	50%	63%													
Lower Columbia Chum	5%	1.17%													
Non-Treaty Catch Sharing															
SRW - IMPACTS						Brights - Mainstem									
Sport	Impact	Percent				Sport	Mortalities	Percent							
Comm	7.73%	61%				Comm	29,900	63%							
Total	5.05%	39%				Comm	17,300	37%							
Total	12.78%														
LRH - Impacts						Chinook - Mainstem									
Sport	Impact	Percent				Sport	Mortalities	Percent							
Comm	6.87%	70.0%				Comm	54,300	61%							
Total	2.95%	30.0%				Comm	34,900	39%							
Total	9.82%														
Ocean Harvest															
				Total	LRH	LRW	BPH	URB	LRB	PUB	SAB	SRW	LRH ER	SRW HR	
				73,610	12,830	2,820	21,190	27,140	1,010	8,620					
Columbia River Run															
				485,510	73,630	10,920	92,150	229,690	8,680	69,830	600	11,000	9.82%	12.78%	
Harvest Below Bonneville															
2022 Fishery Description															
Zone 4-5 Wk 32. Aug 1-7	0			0	0	0	0	0	0	0	0	0.00%	0.00%		
Zone 4-5 Wk 33. Aug 8-14	1			420	40	0	140	220	0	20	0	10	0.03%	0.10%	
Zone 4-5 Wk 34. Aug 15-21	2			4,000	340	0	1,960	1,340	10	340	0	60	0.29%	0.58%	
Zone 4-5 Wk 35. Aug 22-28	2			8,620	850	10	4,660	2,300	110	690	0	110	0.71%	1.00%	
Zone 4-5 Wk 36. Aug 29-Sep 4	3			13,500	1,290	0	6,300	3,350	330	2,230	0	160	1.14%	1.46%	
Zone 4-5 Wk 38. Sep 12-18	0			0	0	0	0	0	0	0	0	0	0.00%	0.00%	
Zone 4-5 Wk 39. Sep 19-25	<1			2,530	270	50	640	990	90	500	0	50	0.27%	0.43%	
Zone 4-5 Wk 40. Sep 26-Oct 2	1			1,870	0	0	770	710	200	200	0	30	0.00%	0.31%	
Zone 4-5 Wk 41-43 October	1			1,890	0	0	190	900	250	550	0	40	0.00%	0.39%	
Fall Tanglenet Wk 40-44				2,040	100	110	10	1,500	60	260	0	70	0.10%	0.65%	
Select Areas				4,750	3,710	0	440	280	10	100	200	10	0.40%	0.12%	
Buoy 10 to WPI Kept + Morts	2 fish/1 CHF	Aug1-24MSF;Aug25-Sep7nMSF;Sep8-Sep30 Coho only;Oct1-Dec31nMSF		32,850	11,400	920	8,720	7,690	160	1,630	420	310	3.87%	2.80%	
WPI to Lewis	2 fish/1 CHF	Aug1-Sep7nMSF;ClosedSep8-30;Oct1-Dec31nMSF		7,040	1,440	440	630	3,280	120	1,000	0	230	1.40%	1.43%	
Lewis to Bonn	2 fish/1 CHF	Aug1-Sep13nMSF;ClosedSep14-30;Oct1-Dec31nMSF		9,930	1,220	250	10	6,180	240	2,040	0	230	1.30%	2.69%	
Tributary Sport	MSF	Average season		2,270	1,680	590	0	0	0	0	0	0	0.30%	0.00%	
Lower River Total				91,720	22,330	2,360	24,470	28,750	1,600	9,550	620	1,320	9.82%	11.97%	
Bonneville Dam Passage				316,330			58,300	200,950			57,080			9,680	
Harvest Above Bonneville															
Z6 - Bonn to Hwy 395	2 fish/1 CHF			6,500			990	1,860			3,650			90	
Treaty Comm. and C&S				143,660			44,750	68,910			30,000			3,320	
Hanford Reach Sport				8,010				8,010						0	
McNary Dam Passage				112,210				112,210							
Lower Granite Dam Passage														6,563	
Escapement															
Hatchery				51,300	8,560	12,570			7,090	23,430			(20)		
Natural				26,240		10,960				9,710			(10)		
				25,060	8,560	1,610	112,210	7,090	13,720			(10)			
Hatchery Surplus				13,840			3,960			730			(1,210)		
Natural Surplus					1,815	310	52,210								

2023 DRAFT Preseason planning doc

Columbia River Fall Chinook Fishery Model Summary				MR2022-PostseasonDraft 3-9-23															
Ocean Option: SLC-Chin2522_PrelimPostseason		Columbia River Model Option: Model MR2022-PostseasonDraft 3-9-23																	
Management Guidelines				Goal/Guideline		SRW		Total URB											
Harvest Rate		45.0%		27.7%		29.1%													
Non-Treaty		15.0%		11.3%		12.9%													
Treaty		30.0%		16.4%		16.2%													
% of Harvestable Surplus				Total															
Non-Treaty		50%		26%															
Treaty		50%		36%															
McNary Escapement		60,000		155,400															
LRH Ocean/Inriver Exp. Rate		38%		31%															
Non-Treaty Wild B Index Steelhead		2%		<1%															
Treaty Total B Index Steelhead		15%		11.1%															
Upriver Coho to Bonneville Dam		50%		79%															
Lower Columbia Chum		5%		0.7%															
										Non-Treaty Catch Sharing									
										SRW - IMPACTS		Brights - Mainstem							
										Impact Percent		Mortalities Percent							
										Sport 7.94% 70%		Sport 31,100 73%							
										Comm 3.35% 30%		Comm 11,400 27%							
										Total 11.30%									
										LRH - Impacts		Chinook - Mainstem							
										Impact Percent		Mortalities Percent							
										Sport 4.57% 58%		Sport 50,700 63%							
										Comm 3.29% 42%		Comm 30,000 37%							
										Total 7.85%									
				Total	LRH	LRW	BPH	URB	LRB	PUB	SAB	SRW	LRH ER	SRW HR					
Ocean Harvest				80,170	10,250	1,680	39,440	19,010	560	9,230									
Columbia River Run				679,060	87,540	9,370	258,270	254,880	3,040	64,620	1,330	18,950	7.85%	11.30%					
Harvest Below Bonneville				2022 Fishery Description															
Zone 4-5 Wk 32. Aug 1-7				0	0	0	0	0	0	0	0	0	0.00%	0.00%					
Zone 4-5 Wk 33. Aug 8-14				1	160	0	0	90	0	30	0	10	0.00%	0.04%					
Zone 4-5 Wk 34. Aug 15-21				2	1,330	150	150	200	650	10	110	0	50	0.13%	0.26%				
Zone 4-5 Wk 35. Aug 22-28				2	6,670	740	0	2,360	2,930	30	380	0	220	0.54%	1.15%				
Zone 4-5 Wk 36. Aug 29-Sep 4				3	16,060	1,070	0	11,740	2,170	40	630	0	160	0.55%	0.85%				
Zone 4-5 Wk 38. Sep 12-18				0	0	0	0	0	0	0	0	0	0.00%	0.00%					
Zone 4-5 Wk 39. Sep 19-25				3	4,820	970	0	910	2,060	70	700	0	150	1.21%	0.81%				
Zone 4-5 Wk 40. Sep 26-Oct 2				2	1,110	460	0	0	220	0	420	0	20	0.60%	0.08%				
Zone 4-5 Wk 41 October				2	580	0	0	0	170	0	350	0	10	0.00%	0.07%				
Fall Tanglenet Wk 40-44				25	Coho target	220	30	80	0	0	20	50	0	0	0.03%	0.00%			
Select Areas				Full Season															
Buoy 10 to WPI Kept + Morts				2 fish/1 CHF	Aug1-24MSF;Aug25-Aug30nMSF;Aug31-5	33,060	7,650	0	8,400	12,400	110	3,020	370	610	3.95%	3.24%			
WPI to Lewis				2 fish/1 CHF	Aug1-Sep1nMSF;Closed Sep2-30;Oct1-7r	4,340	300	180	0	2,530	70	590	0	190	0.26%	0.99%			
Lewis to Bonn				2 fish/1 CHF	Aug1-Sep1nMSF; >Reed Is Sep15-30;>W	7,390	0	0	2,050	3,250	70	910	0	240	0.00%	1.28%			
Below Bonn Tributary Sport				MSF	Average season	3,390	2,260	890	0	0	0	10	0	0.35%	0.00%				
Lower River Total					85,300	17,390	1,310	26,960	26,730	420	7,290	770	1,680	7.85%	8.86%				
Bonneville Dam Passage					589,590			230,500	228,150		52,910		17,270						
Harvest Above Bonneville																			
Z6 - Bonn to Hwy 395				2 fish/1 CHF	Aug1-Oct7 nMSF;Oct8-Dec31 Coho only	10,430		1,220	6,200		1,390		460		2.43%				
Treaty Comm. and C&S					Average season	185,350		120,970	41,220		14,070		3,110		16.2%				
Hanford Reach Sport					Average season	11,250			9,990				0						
McNary Dam Passage					155,360			155,360											
Lower Granite Dam Passage													13,963						
Escapement																			
Hatchery					69,730	8,040	90,860		2,630	28,190	560								
Natural					47,140		86,720			15,790	520								
Hatchery Surplus					22,590	8,040	4,140	155,360	2,630	12,410	40								
Natural Surplus					14,410		79,720			6,810	(680)								
						1,001	2,840	95,360											

2022 Coho Catch and Impact Summary (preseason)						
Fishery	Total Mortality	Unmarked morts (kept + rel. mort)			Kept Catch	
		Early	Late	Total	Early	Late
Mainstem commercial	30,858	2,976	1,106	4,082	10,000	16,776
Youngs Bay	33,634	489	-	489	33,144	-
Blind/Knappa	17,722	659	-	659	17,063	-
Tongue Point	18,537	600	-	600	17,937	-
Deep River	2,000	-	360	360	-	1,640
LCR Sport Catch	5,696	416	112	528	2,480	2,689
B10 Catch	63,441	6,963	488	7,451	45,213	10,777
Ocean Catch	330,664	30,735	7,681	38,416	141,991	150,257
Sum	502,553	42,838	9,748	52,587	267,828	182,138
Exploitation Rates						
Fishery		Unmarked			Marked	
		Early	Late	Total	Early	Late
Lower Mainstem		0.38%	1.52%	0.95%	1.15%	4.36%
Upper Mainstem		0.41%	0.66%	0.54%	0.99%	0.25%
Select Areas		0.11%	0.07%	0.09%	18.36%	0.46%
B10 Sport		2.97%	0.92%	1.95%	12.18%	3.02%
LCR Sport		0.18%	0.21%	0.19%	0.67%	0.75%
Ocean		13.21%	14.45%	13.82%	38.25%	42.07%
Sum		17.26%	17.84%	17.55%	71.59%	50.92%

2022 Coho Catch and Impact Summary (post-season)						
Fishery	Total Mortality	Unmarked morts (kept + rel. mort)			Kept Catch	
		Early	Late	Total	Early	Late
Mainstem commercial	7,293	1,126	282	1,408	2,494	3,391
Youngs Bay	35,136	713	-	713	34,424	-
Blind/Knappa	15,206	715	-	715	14,490	-
Tongue Point	25,794	1,124	-	1,124	24,670	-
Deep River	1,936	-	205	205	-	1,731
LCR Sport Catch	2,021	53	336	389	316	1,316
B10 Catch	9,940	916	78	994	7,561	1,385
Ocean Catch	145,154	15,598	5,081	20,679	64,434	60,041
Sum	242,481	20,245	5,982	26,228	148,389	67,864
Exploitation Rates						
Fishery		Unmarked			Marked	
		Early	Late	Total	Early	Late
Lower Mainstem		0.06%	0.22%	0.13%	0.36%	1.35%
Upper Mainstem		0.42%	0.44%	0.43%	0.19%	0.20%
Select Areas		0.24%	0.05%	0.16%	27.59%	0.84%
B10 Sport		0.54%	0.17%	0.38%	2.84%	0.67%
LCR Sport		0.03%	0.75%	0.35%	0.12%	0.64%
Ocean		9.31%	11.34%	10.22%	24.16%	29.14%
Sum		10.60%	12.98%	11.67%	55.26%	32.84%