SALMON TECHNICAL TEAM REPORT 1: UPDATE OF ESTIMATED IMPACTS OF MARCH 2024 ALTERNATIVES FOR OCEAN SALMON FISHERY MANAGEMENT MEASURES

PFMC
04/06/24

Preseason Report II, TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2024 ocean fishery Alternatives - STT analyzed[a/] (Page 1 of 5)

Key Stock/Criteria	PROJECTED Alt I	Alt II	Alt III	2024 Criteria	Spawner Objective or Other Comparative Standard as Noted [b/]
CHINOOK		**CHINOOK**			**CHINOOK**
SRKW PREY ABUNDANCE:					
North of Falcon	815.8	815.8	815.9	≥ 623.0	Oct 1 starting abundance of age 3+ Chinook from U.S./Canada Border to Cape Falcon
Oregon Coast	443.6	443.7	444.0	NA	Oct 1 starting abundance of age 3+ Chinook from Cape Falcon to Horse Mt.
California Coast	291.7	292.0	292.6	NA	Oct 1 starting abundance of age 3+ Chinook south of Horse Mt.
Southwest WCVI	669.6	669.6	669.6	NA	Oct 1 starting abundance of age 3+ Chinook off Southwest Vancouver Island
Salish Sea	1,181.8	1,181.8	1,181.8	NA	Oct 1 starting abundance of age 3+ Chinook in the Salish Sea
PUGET SOUND:					
Elwha Summer/Fall	5.9%	5.7%	5.6%	≤ 10.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Dungeness Spring	5.3%	5.2%	5.1%	≤ 10.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Mid-Hood Canal Summer/Fall	16.4%	15.5%	14.6%	TBD	Preterminal Southern U.S. exploitation rate consistent with NMFS guidance.
Skokomish Summer/Fall	**53.1%**	**52.5%**	**51.9%**	≤ 50.0%	Total exploitation rate (NMFS ESA consultation standard).
Nooksack Spring	**12.9%**	**12.4%**	**12.0%**	≤ 10.9%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
	TBD	TBD	TBD	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Skagit Summer/Fall	**16.7%**	**16.6%**	**16.5%**	≤ 15.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
	0.60	0.59	0.59	≤ 0.95	ISBM obligation applicable, escapement goal not expected to be met. Compliance assessed postseason by the PSC.
Skagit Spring	25.5%	25.4%	25.3%	≤ 36.0%	Total exploitation rate (NMFS ESA consultation standard).
	--	--	--	≤ 0.95	ISBM obligation not applicable, escapement goal expected to be met. Compliance assessed postseason by the PSC.
Stillaguamish Summer/Fall	**11.8%**	**11.7%**	**11.6%**	≤ 9.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
	0.85	0.84	0.83	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Snohomish Summer/Fall	**10.0%**	**9.8%**	**9.5%**	≤ 8.3%	Southern U.S. exploitation rate limit (NMFS ESA consultation standard).
	1.03	**1.01**	0.98	≤ 1.00	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Lake Washington Summer/Fall	0.648	0.654	0.660	≥ 0.500	Natural spawning escapement in the Cedar River (NMFS ESA consultation standard).
Green River Summer/Fall	3.473	3.521	3.562	≥ 2.744	Natural spawning escapement in the Green River (NMFS ESA consultation standard).
White River Spring	17.3%	17.1%	17.0%	≤ 22.0%	Southern U.S. exploitation rate (NMFS ESA consultation standard).
Puyallup Summer/Fall	3.043	3.066	3.087	>1.170	Natural spawning escapement in the Puyallup River (NMFS ESA consutation standard).
Nisqually River Summer/Fall	**47.6%**	**47.1%**	46.5%	≤ 47.0%	Total exploitation rate (NMFS ESA consultation standard).
Puget Sound Spring	2.2%	2.0%	1.7%	≤ 3.0%	Exploitation rate in PFMC fisheries (NMFS ESA consultation standard).
Puget Sound Summer/Fall	5.9%	5.3%	4.6%	≤ 6.0%	Exploitation rate in PFMC fisheries (NMFS ESA consultation standard).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2024 ocean fishery management measures - STT Analyzed.[a/] (Page 2 of 5)

Key Stock/Criteria	PROJECTED Alt I	Alt II	Alt III	2024 Criteria	Spawner Objective or Other Comparative Standard as Noted [b/]
CHINOOK		**CHINOOK**			**CHINOOK**
WASHINGTON COAST:					
Hoko Fall	3.122	3.125	3.129	0.85	FMP MSY spawning escapement objective.
	1.8%	1.7%	1.7%	≤ 10.0%	Calendar year exploitation rate ISBM obligation. Compliance assessed postseason by the PSC.
Quillayute Fall	>3.0	>3.0	>3.0	3.0	FMP MSY spawning escapement objective.
	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
Hoh Fall	>1.2	>1.2	>1.2	1.2	FMP MSY spawning escapement objective.
	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
Queets Fall	>2.5	>2.5	>2.5	2.5	FMP MSY spawning escapement objective.
	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
Grays Harbor Fall	>13.3	>13.3	>13.3	13.3	FMP MSY spawning escapement objective.
	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
COLUMBIA RIVER:					
Columbia Upriver Brights	261.5	263.0	265.7	74.0	Minimum ocean escapement to attain 40.0 adults over McNary Dam, with normal distribution and no mainstem harvest. The management goal has been increased to 60.0 by Columbia River managers.
Mid-Columbia Brights	64.2	64.5	65.2	14.9	Minimum ocean escapement to attain 7.9 for Little White Salmon egg-take, assuming average conversion and no mainstem harvest.
Columbia Lower River Hatchery Tules	85.1	86.2	87.1	25.0	Minimum ocean escapement to attain 14.8 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest.
Columbia Lower River Natural Tules (threatened)	40.5%	39.4%	38.4%	≤ 41.0%	Total adult equivalent fishery exploitation rate (2024 NMFS ESA guidance).
Columbia Lower River Wild[e/] (threatened)	10.6	10.6	10.7	6.9	Minimum ocean escapement to attain MSY spawner goal of 5.7 for N. Lewis River fall Chinook (NMFS ESA consultation standard).
Spring Creek Hatchery Tules	128.5	131.4	133.4	8.2	Minimum ocean escapement to attain 6.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Upper Columbia River Summer	52.2	53.1	54.0	29.0	Aggregate escapement to mouth of Columbia River.
Snake River Fall (threatened) SRFI	54.8%	50.4%	46.8%	≤ 70.0%	Of 1988-1993 base period exploitation rate for all ocean fisheries (NMFS ESA consultation standard).

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2024 ocean fishery management measures - STT Analyzed.[a/] (Page 3 of 5)

Key Stock/Criteria	PROJECTED Alt I	Alt II	Alt III	2024 Criteria	Spawner Objective or Other Comparative Standard as Noted [b/]
CHINOOK		**CHINOOK**			**CHINOOK**
OREGON COAST:					
Nehalem Fall	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
Siletz Fall	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
Siuslaw Fall	--	--	--	≤ 0.85	ISBM obligation applicable when escapement goal is not met. Compliance assessed postseason by the PSC.
South Umpqua	--	--	--	≤ 0.85	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
Coquille	--	--	--	≤ 0.85	ISBM obligation applicable, as this stock lacks a CTC agreed escapement goal. Compliance assessed postseason by the PSC.
CALIFORNIA:					
Klamath River Fall	36,511	36,511	36,511	≥ 36,511	2024 minimum natural area adult escapement (reflects Council guidance for KRFC ER ≤ 20.0%).
Federally recognized tribal harvest	50.0%	50.0%	50.0%	50.0%	Equals 6,619, 6,565, and 6,305 adult fish for Yurok and Hoopa Valley tribal fisheries.
Exploitation (spawner reduction) rate	20.0%	20.0%	20.0%	≤ 20.0%	Council guidance
Adult river mouth return	63.5	63.6	66.1	NA	Total adults in thousands.
Age-4 ocean harvest rate	6.0%	5.9%	0.2%	≤ 6.0%	NMFS guidance.
KMZ sport fishery share	7.9%	5.8%	69.2%		
River recreational fishery share	47.4%	50.2%	96.1%		Equals 3,135, 3,297, and 6,059 adult fish for recreational inriver fisheries.
Sacramento River Winter (endangered)	2.8%	1.7%	0.0%	≤ 12.3%	Age-3 ocean impact rate in fisheries south of Pt. Arena. In addition, the following season restrictions apply: Recreational- Pt. Arena to Pigeon Pt. between the first Saturday in April and the second Sunday in November; Pigeon Pt. to the U.S./Mexico border between the first Saturday in April and the first Sunday in October. Minimum size limit ≥ 20 inches total length. Commercial- Pt. Arena to the U.S./Mexico border between May 1 and September 30, except Pt. Reyes to Pt. San Pedro between October 1 and 15 (Monday-Friday). Minimum size limit ≥ 26 inches total length (NMFS 2024 ESA
Sacramento River Fall	188.0	181.0	183.0	≥ 180.000	2024 minimum hatchery and natural area adult escapement (NMFS Guidance).
Sacramento Index Exploitation Rate	12.0%	15.3%	14.3%	≤ 42.9%	FMP control rule.
Ocean commercial impacts	16.8	11.9	0.0		Includes fall (Sept-Dec) 2023 impacts (12 SRFC).
Ocean recreational impacts	5.7	4.0	0.8		Includes fall (Sept-Dec) 2023 impacts (141 SRFC).
River recreational impacts	3.1	16.8	29.8		Alt 1 and 2 equal 9.2% and 50% of total harvest (Council guidance), Alt 3 based on historical allocation.

TABLE 5. Projected key stock escapements (thousands of fish) or management criteria for 2024 ocean fishery management measures - STT Analyzed.[a/] (Page 4 of 5)

Key Stock/Criteria	PROJECTED Alt I	Alt II	Alt III	2024 Criteria	Spawner Objective or Other Comparative Standard as Noted [b/]
COHO	**COHO**				**COHO**
Interior Fraser (Thompson River)	9.7%(4.9%)	8.8%(4.0%)	7.8%(3.1%)	≤ 10.0%	2024 Southern U.S. exploitation rate ceiling; PSC coho agreement.
Skagit	44.7%(4.3%)	44.2%(3.5%)	43.6%(2.7%)	≤ 60.0%	2024 total exploitation rate ceiling; FMP matrix[d/]
Stillaguamish	39.1%(3.1%)	38.6%(2.5%)	38.2%(1.9%)	≤ 50.0%	2024 total exploitation rate ceiling; FMP matrix[d/]
Snohomish	**41.7%(3.1%)**	**41.2%(2.5%)**	**40.8%(1.9%)**	≤ 40.0%	2024 total exploitation rate ceiling; FMP matrix[d/]
Hood Canal	**45.2%(4.6%)**	44.6%(3.8%)	44.0%(3.0%)	≤ 45.0%	2024 total exploitation rate ceiling; FMP matrix[d/]
Strait of Juan de Fuca	12.8%(4.5%)	12.1%(3.7%)	11.3%(3.0%)	≤ 40.0%	2024 total exploitation rate ceiling; FMP matrix[d/]
Quillayute Fall	9.6	9.7	9.7	6.3	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
	42.2%	**41.7%**	**41.3%**	≤ 39%	PST total exploitation rate constraint for 2024.[d/f/]
Hoh	4.1	4.1	4.2	2.0	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
	51.0%	50.0%	49.1%	≤ 59%	PST total exploitation rate constraint for 2024.[d/f/]
Queets Wild	10.5	10.7	10.9	5.8	FMP MSY adult spawner estimate. Value depicted is ocean escapement.
	41.4%	40.2%	39.1%	≤ 55%	PST total exploitation rate constraint for 2024.[d/f/]
Grays Harbor	73.4	74.2	75.0	35.4	FMP MSP natural area adult spawner estimate. Value depicted is ocean escapement.
	55.8%	55.2%	54.7%	≤ 57%	PST total exploitation rate constraint for 2024.[d/f/]
Willapa Bay	34.5	35.1	35.8	17.2	FMP MSY natural area adult spawner estimate. Value depicted is ocean escapement.
Lower Columbia River Natural (threatened)	**17.0%**	14.9%	13.4%	≤23.0%	Total marine and mainstem Columbia R. fishery exploitation rate (2024 NMFS ESA guidance). Value depicted is marine ER before Buoy 10.
Upper Columbia	58.8%	60.2%	61.4%	≥ 50%	Minimum percentage of the run to Bonneville Dam.
Columbia River Hatchery Early	145.0	146.8	147.5	77.2	Minimum ocean escapement to attain hatchery egg-take goal of 21.7 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Hatchery Late	97.6	103.2	110.4	9.7	Minimum ocean escapement to attain hatchery egg-take goal of 6.4 late adult coho, with average conversion and no mainstem or tributary fisheries.
Oregon Coastal Natural[c/]	26.3%	24.8%	24.6%	≤ 30.0%	Marine and freshwater fishery exploitation rate (NMFS ESA consultation standard).
Southern Oregon/Northern California Coast (threatened)					
Trinity Natural	**16.3%**	**16.6%**	15.7%	≤ 16.0%	Total exploitation rate ceiling (NMFS ESA consultation standard).
Klamath Natural	8.6%	9.0%	8.0%	≤ 15.0%	Total exploitation rate ceiling (NMFS ESA consultation standard).
Rogue Natural	7.6%	8.0%	7.1%	≤ 15.0%	Total exploitation rate ceiling (NMFS ESA consultation standard).
Other Natural	2.8%	3.1%	2.2%	≤ 15.0%	Total exploitation rate ceiling (NMFS ESA consultation standard).

a/ Reflects 2024 fisheries and abundance estimates.

b/ ISBM obligation is assessed as a proportion of the 2009-2015 average calendar year exploitation rate. Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spawner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area ERs for Puget Sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. Values reported for Klamath River fall Chinook, Grays Harbor coho, and Willapa Bay coho are natural area adult spawners. Values reported for Sacramento River fall Chinook are hatchery and natural area adult spawners.

c/ Includes projected impacts of inriver fisheries that have not yet been shaped.

d/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. It is anticipated that fishery management will be adjusted by state and tribal comanagers during the preseason planning process to comply with stock management objectives.

e/ Includes minor contributions from East Fork Lewis River and Sandy River.

f/ Management criteria depicted represent the lower of the FMP and PST Southern Coho Management Plan ER constraints in a given year (see Table III-5 in most recent Preseason Report I). PST ER constraints represent an approximation of the maximum ER associated with achieving the escapement goal. Per the provisions of the PST Southern Coho Management Plan, Parties may request increases to management unit specific ER caps, so long as it occurs prior to March 31 in a given year.

Preseason Report II, TABLE 7. Expected coastwide exploitation rates by fishery for 2024 ocean fisheries management Alternatives for lower Columbia Natural (LCN) coho, Oregon coastal natural (OCN) coho, Lower Columbia River (LCR) tule Chinook, and Southern Oregon Northern California Coastal (SONCC) coho salmon by natural-origin subcomponent - STT Analyzed (Page 1 of 2).

	Exploitation Rate (Percent)								
Fishery	LCN Coho			OCN Coho			LCR Tule Chinook		
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	1.9%	1.9%
BRITISH COLUMBIA	0.2%	0.2%	0.2%	0.5%	0.5%	0.5%	13.9%	14.1%	14.2%
PUGET SOUND/STRAIT	0.2%	0.2%	0.2%	0.0%	0.0%	0.0%	0.4%	0.4%	0.4%
NORTH OF CAPE FALCON									
Treaty Indian Ocean Troll	2.3%	1.8%	1.3%	0.5%	0.4%	0.3%	2.2%	2.0%	1.8%
Recreational	6.4%	5.7%	4.6%	1.1%	1.0%	0.8%	4.6%	4.2%	3.9%
Non-Indian Troll	1.7%	1.5%	1.2%	0.4%	0.3%	0.3%	6.1%	5.6%	5.1%
SOUTH OF CAPE FALCON									
Recreational:							0.2%	0.1%	0.1%
Cape Falcon to Humbug Mt.	5.7%	5.1%	4.5%	14.5%	13.1%	12.0%	-	-	-
Humbug Mt. to OR/CA border (KMZ)	0.1%	0.1%	0.1%	0.6%	0.5%	0.4%	-	-	-
OR/CA border to Lat.40°10' N. (KMZ)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
Fort Bragg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
South of Pt. Arena	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
Troll:							0.8%	0.4%	0.2%
Cape Falcon to Humbug Mt.	0.2%	0.2%	1.1%	0.2%	0.1%	1.9%	-	-	-
Humbug Mt. to OR/CA border (KMZ)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
OR/CA border to Lat. 40°10' N. (KMZ)	0.0%	0.1%	0.0%	0.1%	0.4%	0.0%	-	-	-
Fort Bragg	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	-	-	-
South of Pt. Arena	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
BUOY 10	2.6%	3.1%	3.5%	0.2%	0.2%	0.2%	10.5%	10.7%	10.9%
ESTUARY/FRESHWATER	NA	NA	NA	8.2%	8.2%	8.2%			
TOTAL[a/]	**17.0%**	14.9%	13.4%	26.3%	24.8%	24.6%	40.5%	39.4%	38.4%

TABLE 7. Expected coastwide exploitation rates by fishery for 2024 ocean fisheries management measures for lower Columbia Natural (LCN) coho, Oregon coastal natural (OCN) coho, Lower Columbia River (LCR) tule Chinook, and Southern Oregon Northern California Coastal (SONCC) coho salmon by natural-origin subcomponent - STT Analyzed (Page 2 of 2).

	Exploitation Rate (Percent)											
Fishery	Trinity Natural			Klamath Natural			Rogue Natural			Other SONCC		
SOUTHEAST ALASKA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BRITISH COLUMBIA	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
PUGET SOUND/STRAIT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NORTH OF CAPE FALCON												
Treaty Indian Ocean Troll	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recreational	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Indian Troll	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SOUTH OF CAPE FALCON												
Recreational:												
Cape Falcon to Humbug Mt.	0.9%	0.7%	0.6%	0.9%	0.7%	0.6%	0.9%	0.7%	0.6%	0.9%	0.7%	0.6%
Humbug Mt. to OR/CA border (KMZ)	1.1%	1.0%	0.9%	1.1%	1.0%	0.9%	1.1%	1.0%	0.9%	1.1%	1.0%	0.9%
OR/CA border to Lat.40°10' N. (KMZ)	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%
Fort Bragg	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
South of Pt. Arena	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Troll:												
Cape Falcon to Humbug Mt.	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.3%
Humbug Mt. to OR/CA border (KMZ)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
OR/CA border to Lat. 40°10' N. (KMZ)	0.2%	0.9%	0.0%	0.2%	0.9%	0.0%	0.2%	0.9%	0.0%	0.2%	0.9%	0.0%
Fort Bragg	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	0.1%	0.0%
South of Pt. Arena	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BUOY 10	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ESTUARY/FRESHWATER	13.5%	13.5%	13.6%	5.9%	5.9%	5.9%	4.9%	4.9%	4.9%	0.0%	0.0%	0.0%
TOTAL[a/]	**16.3%**	**16.6%**	15.7%	8.6%	9.0%	8.0%	7.6%	8.0%	7.1%	2.8%	3.1%	2.2%

a/ Totals do not include Buoy 10 and estuary/freshwater for LCN. For OCN, SONCC, and LCR Tule Chinook, includes projected impacts of inriver fisheries that have not yet been shaped. Bolded values identify ocean exploitation rates that, when combined with freshwater harvest rates, would exceed the total allowable exploitation rate.