



Fisheries and Oceans
Canada

Pêches et Océans
Canada

An underwater photograph of a large school of salmon swimming in clear, blue water. The fish are seen from various angles, some swimming towards the camera and others away. The lighting is bright, creating a clear view of the fish's scales and fins.

2023 Post-season Review Fraser Sockeye and Pink Salmon

Fraser Forum
31 January 2024



Overview

- Post-season summary
- Fraser River Panel update



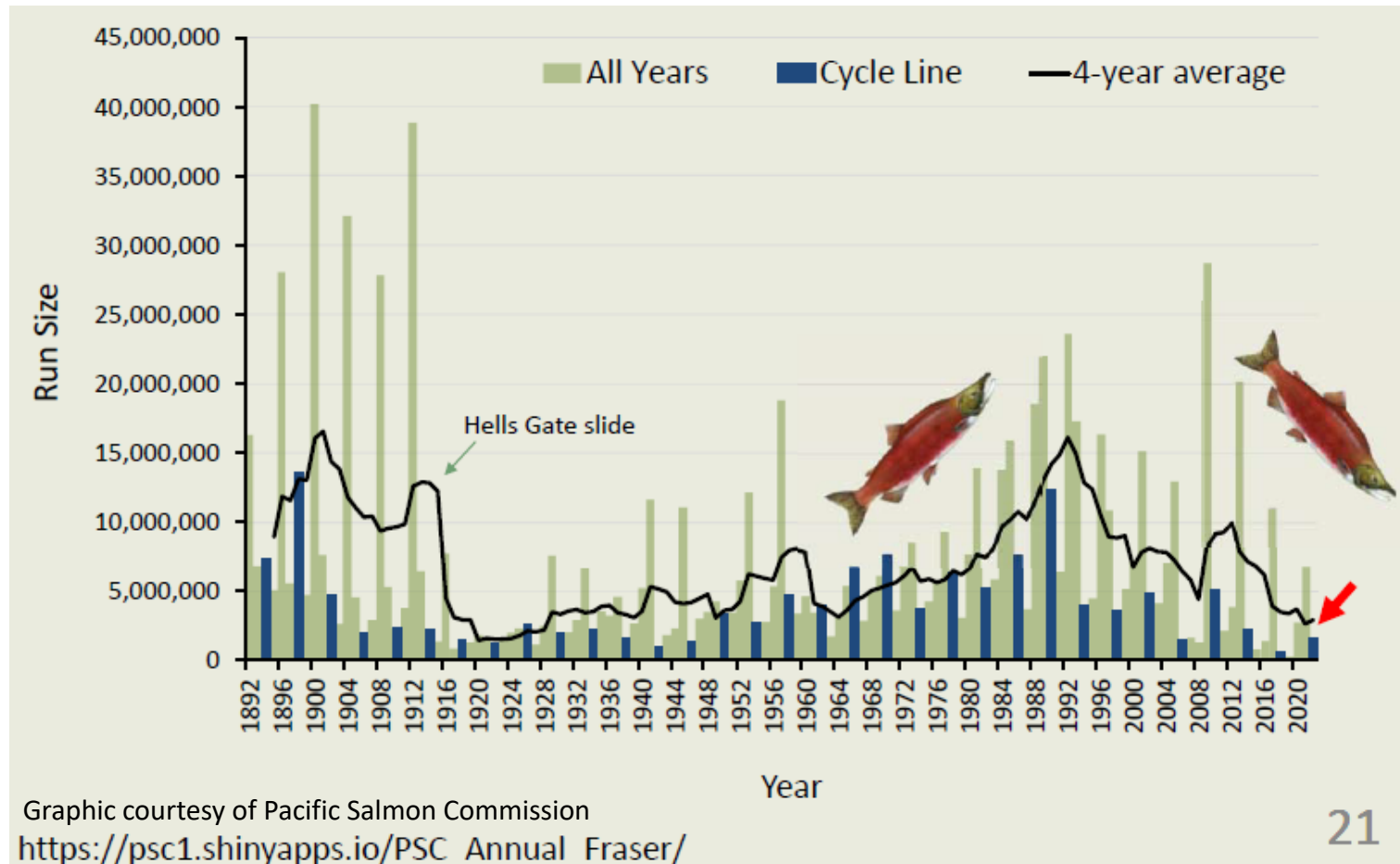
Fraser River Panel governance changes

- Canadian Section implemented changes to internal governance process by piloting a new leadership position at the Panel: Marcel Shepert as Canadian Section First Nations Chair
- Function is to bring increased attention to Canadian Indigenous perspectives and interests during Fraser River Panel discussions
- Further information and a pilot evaluation are planned for the PSC Annual Meeting

Post-Season Summary



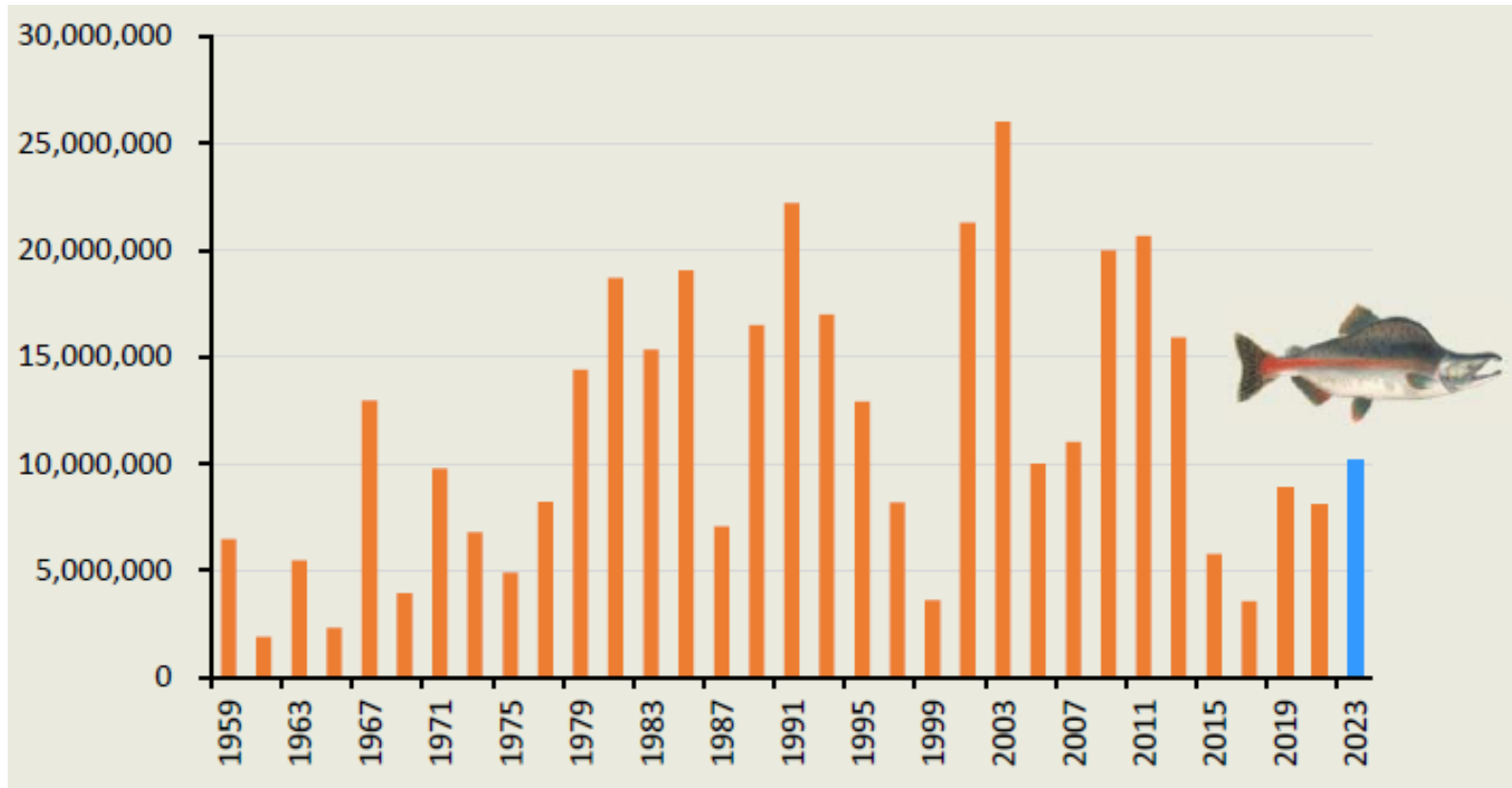
Sockeye Run Size Time Series



The red arrow indicates the preliminary estimate of the 2023 run size



Pink Run Size Time Series



Graphic courtesy of Pacific Salmon Commission



Pre-season forecast

- Fraser Sockeye p50 level: 1,564,600 salmon
 - 800,000 - 3,185,000 (p25-p75)
 - p50 forecast was 62% lower than cycle average since 1983 (4.1M)
- Fraser Pink p50 level: 6,135,000
 - 4,389,000 - 8,575,000 (p25-p75)
 - p50 forecast was 47% lower than historical average since 1959 (11.5M)
- Run timing forecasts were some of the earliest on record
 - Early Stuart, July 7; Lates, Aug 24; Pink, Aug 25

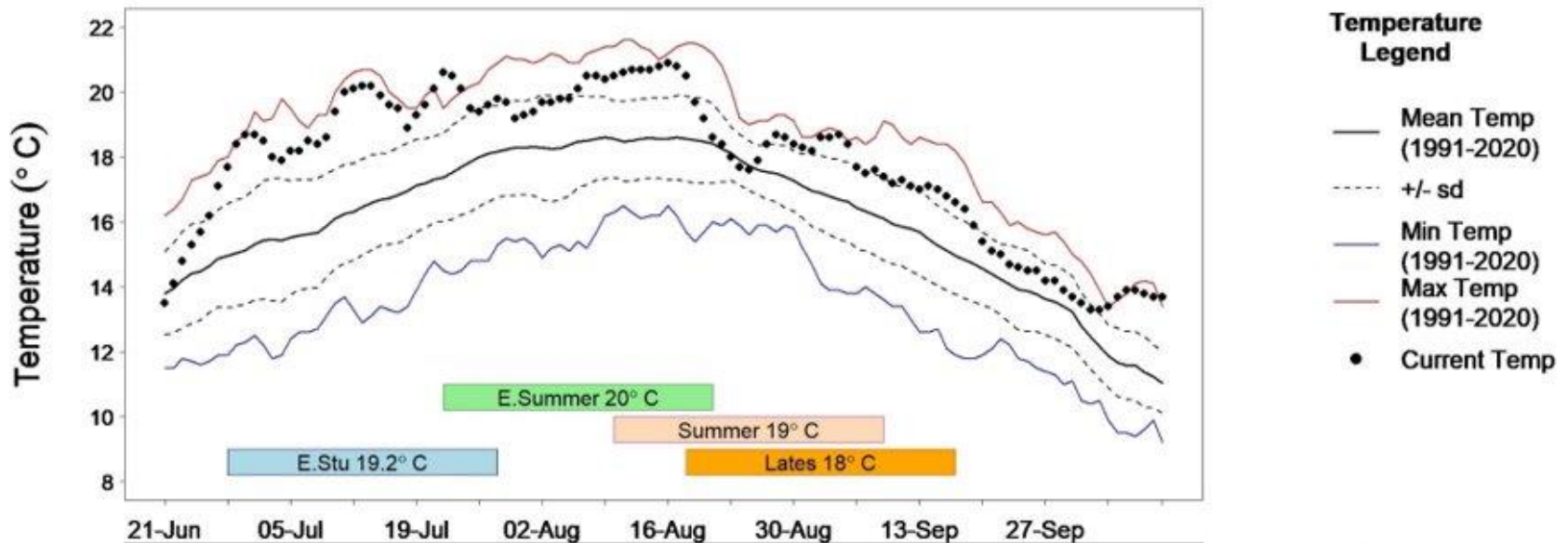


Pre-season forecast

- No Fraser River Sockeye TAC forecast at p50
 - Not meeting FSC needs; no commercial or recreational opportunities
- Fraser River Pink TAC at p50 forecast: 800,000 with 25.7% was allocated to the U.S.

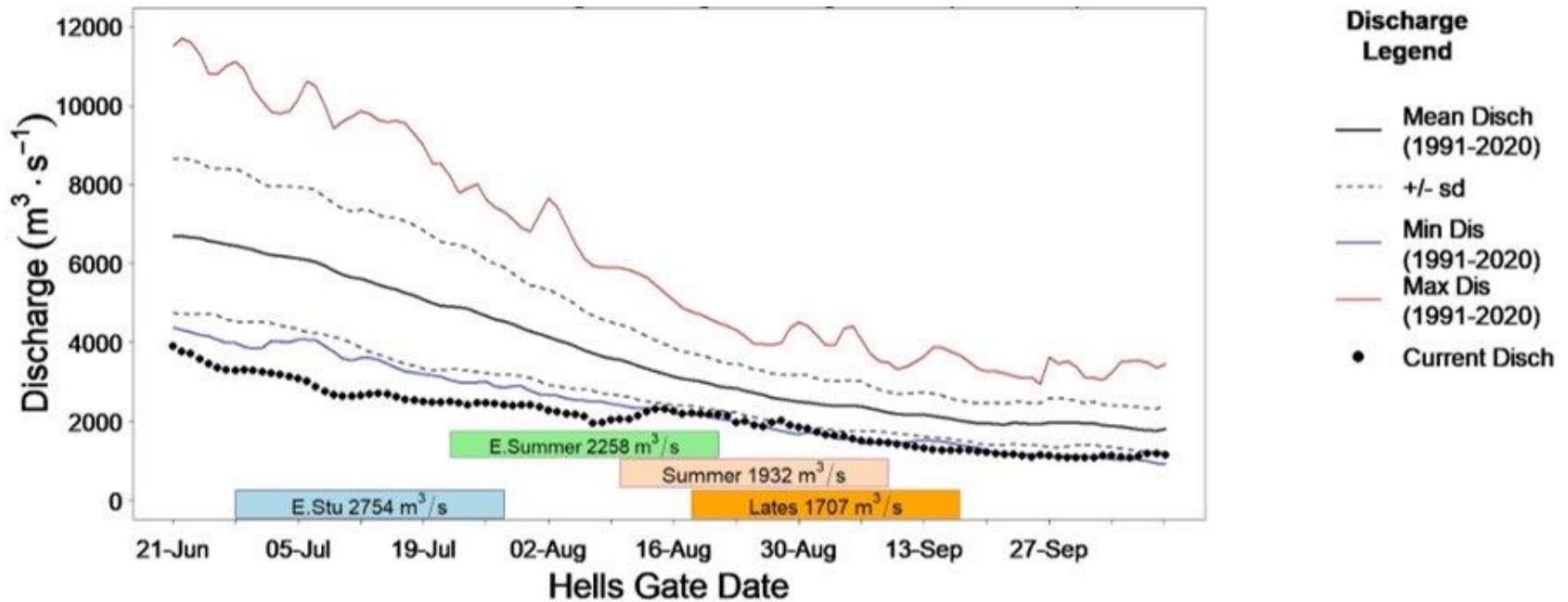


Fraser River temperature





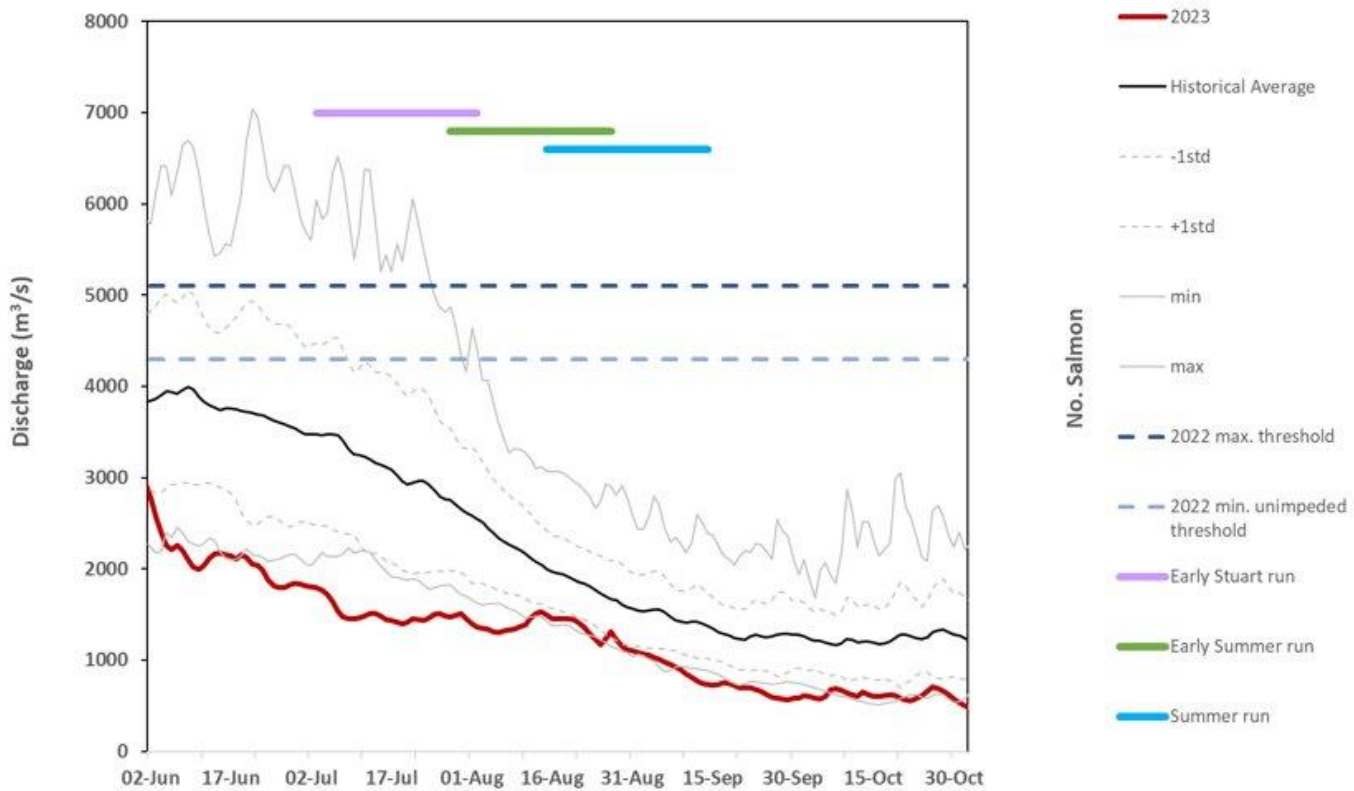
Fraser River discharge





Fraser River discharge at Big Bar

2023 Fraser River at Big Bar (WSC station 08MD013)





Stock Group	Pre-season p50 Run Size	End-of-season Run Size ¹	Difference
Early Stuart	23,000	41,000	78%
Early Summer Run	186,000	340,000	83%
Chilliwack	2,000	32,000	1500%
Pitt/Alouette/Coquitlam	31,000	40,000	29%
Nadina/Bowron/Gates/ Nahatlatch/Taseko	92,000	215,000	134%
E. Thompson/North Barriere	61,000	53,000	-13%
Summer Run	1,167,000	936,000	-20%
Harrison/Widgeon	51,000	51,000	0%
Late Stuart/Stellako	196,000	160,000	-18%
Chilko	591,000	573,000	-3%
Quesnel	319,000	123,000	-61%
Raft/North Thompson	10,000	29,000	190%
Late Run	188,000	353,000	88%
Birkenhead group	92,000	199,000	116%
L.Shuswap/Portage	32,000	59,000	84%
Weaver/Cultus	64,000	95,000	48%
Total Fraser Sockeye	1,564,000	1,670,000	7%
Total Fraser Pinks	6,135,000	10,521,000	71%



2023 fisheries

- No fisheries directed on Fraser River Sockeye were licensed in Panel waters.
- In non-Panel waters, the retention of Sockeye (direct or bycatch) was not authorized by Fisheries and Oceans Canada except for a few, small terminal fisheries
 - FSC-ESSR: Chilliwack, Chilko (partial), and Nadina stocks
 - LAER or a small FSC harvest given no other harvest opportunity (Late Stuart).



2023 fisheries

- Pink fisheries for FSC and Economic Opportunity were very limited with little interest from most Nations for Pink fisheries.
- U.S. commercial fisheries for Pink began in mid-August with Canadian fisheries shortly after.
 - Prices were at record lows and there was limited interest in commercial fisheries.
- Recreational Pink fisheries in marine waters were open throughout the summer, and fisheries in-river opened on September 3.

Preliminary post-season estimate of retained catch

	Sockeye Retained Catch (pcs)	Pink Retained Catch (pcs)
Canada	23,431	494,330
U.S.	2,370	436,482
Test Fisheries	16,658	14,273
Total	42,459	945,084

- Estimated Canadian retained catch includes 17,463 pieces from fisheries not authorized by Fisheries and Oceans Canada.
- Fisheries impacts on Sockeye (between 1.6% and 3.7% by stock management group) were **limited to levels well below the 10% LAER limit** identified in the escapement plan.
- Fisheries impacts on Pink (9.2%) were **well below the 41.7% Total Allowable Mortality cap** identified in the escapement plan.

Post-season run timing

Stock Management Group	Pre-season forecast	Post-season estimate	Difference
Early Stuart Sockeye	7-Jul	2-Jul	-5
Early Summer Sockeye	6-Aug	28-Jul	-9
Summer Sockeye	17-Aug	13-Aug	-4
Late Sockeye	24-Aug	18-Aug	-6
Fraser Pink	25-Aug	17-Aug	-8

Post-season estimate run size

Stock Management Group	Pre-season forecast	Post-season estimate	Difference
Early Stuart Sockeye	23,000	41,000	78%
Early Summer Sockeye	186,000	340,000	83%
Summer Sockeye	1,167,000	936,000	-20%
Late Sockeye	188,000	353,000	88%
Total Fraser Sockeye	1,564,000	1,670,000	7%
Fraser Pink	6,135,000	10,521,000	71%

Sockeye run size: 192% above the brood year (0.6M) and 60% lower than the cycle average (4.1M)

Pink run size: 30% above the brood year (8M) and 9% below the historical average (11.5M)

Fraser River Panel update



Issues of Note at Fraser Panel

1. Canada-US fishery disagreement

- CND identified concerns about August 18 and August 25 US fishery proposals
- CND requested that the PSC Secretariat prepare a report as per Chapter 4, section 13(e).

2. Canada FSC-ESSR fisheries

- U.S. Panel raised concerns about FSC-ESSR fisheries
- Canadian Panel has submitted a briefing note that describes the FSC-ESSR process



CND-US Fishery Disagreement

- US pink fisheries were proposed on August 18 and August 25, but CND disagreed
 - Chapter 4, sections 13(e) triggered
 - Disagreement about treaty language interpretation anticipated to persist
- CND request to Secretariat: recommendations on what information can be used in season to inform trade-offs between incidental mortality and directed harvest



Canadian View

- CND believe sufficient efforts were not made by the US 'to the extent practicable' to minimize impacts on Sockeye in their Pink fisheries
 - US choices about fishing area, gear, and retention of Sockeye were inconsistent with Ch 4 s10 objectives
 - Without international TAC, fisheries should not be designed to retain Sockeye
- Prioritized domestic objectives over spawning escapement goals



US View

- US believes that Sockeye retention is permitted, even if there is no TAC, so long as the resulting harvest is small but acceptable
- Regulations about fishing area, gear, and retention of Sockeye are US domestic fishery decisions



PSC Secretariat Recommendations

- Define a 'small but acceptable' mortality rate = landed sockeye/total run size
- When there is no Sockeye TAC, do not trade-off Sockeye harvest with Pink harvest
- Avoid subjective criteria such as 'to the extent practicable'
- Clarify the treaty language to permit Sockeye retention without TAC
- Identify methods to reduce unauthorized bycatch retention
- Improve incidental mortality estimates and reporting



FSC-ESSR fisheries

- US Panel requested further information about Canadian domestic, single-stock fisheries that occurred in 2023
- FSC-ESSR framework is described within the IFMP
 - Guides fishery management and harvest decisions where abundance returning to spawning grounds exceed spawning requirements.
 - Designed to create a structure for fishery planning which is precautionary and responsive to in-season information.



Post-season Meeting Summary

- Preliminary Fraser Sockeye return was 1,670,000 (~60% below historical cycle-line average) and was approximately 25% below the escapement target
- Preliminary Fraser Pink return was 10,521,000 (~10% below the historical average) and exceeded the escapement target
- High water temperatures and low discharge persisted throughout the migration period - increased enroute loss
- Fisheries impacts on Sockeye (between 1.6% and 3.7% by stock management group) were **limited to levels well below the 10% LAER limit** identified in the escapement plan.
- Fisheries impacts on Pink (9.2%) were **well below the 41.7% Total Allowable Mortality cap** identified in the escapement plan.
- Canada – US fishery proposal disagreement; Ch 4, s13(e) triggered
 - PSC Secretariat report provides recommendations which will likely require Commissioner guidance prior to endorsement

Additional slides



Preliminary Post-Season Retained Catch

2023 Catch-to-date by fishery

Date: Dec. 12, 2023

Week of: Dec. 10 - Dec. 16, 2023		Sockeye		Pink	
		Total	Fraser	Total	Fraser
Canada		23,432	23,431	621,686	494,330
Commercial		0	0	522,407	442,982
B Purse Seine		0	0	519,227	440,272
H Troll		0	0	3,180	2,710
First Nations		1,272	1,272	9,564	7,802
Food, Social & Ceremonial (FSC)		1,272	1,272	8,389	6,627
Marine		0	0	3,835	2,073
Fraser R.		1,272	1,272	4,554	4,554
Economic Opportunity (EO) & Demonstration (Demo)		0	0	1,175	1,175
Escapement Surplus to Spawning Requirements (ESSR)		3,989	3,989	0	0
Recreational		0	0	89,107	42,938
Charter (Albion & A12 Chum test fishery)		707	707	608	608
Other****		17,464	17,463	0	0
United States		2,371	2,370	570,986	436,482
Commercial		0	0	570,666	436,264
Treaty Tribes (TRB)		0	0	436,839	330,560
All Citizen (AC)		0	0	133,827	105,704
Treaty Tribes Ceremonial & Subsistence (C&S)		2,211	2,211	320	218
All Citizen Recreational		0	0	0	0
Other****		160	159		
Alaska *		na	na	na	na
Panel-approved Test Fisheries		17,198	16,658	23,873	14,273
Panel Waters		11,608	11,315	12,303	8,272
Canada		11,608	11,315	8,389	5,998
U.S.		0	0	3,914	2,275
Non-Panel Waters**		5,590	5,343	11,570	6,000
Total		43,001	42,459	1,216,545	945,084
Catch Seaward of Mission ***		19,500	18,958	1,213,707	942,246
Catch Upstream of Mission		23,501	23,501	2,838	2,838

* Alaska data not yet available

** Includes Qualark

*** All catches in marine areas and in Fraser d/s of Mission

**** May include unauthorized directed retention or unauthorized bycatch retention in fisheries directed at other species

Does not include fisheries induced mortalities (FIMs)



Chapter 4, section 3(g)

“ To the extent practicable, the Panel shall develop and implement a fishing plan that provides the U.S. fishery with the opportunity to harvest its 25.7 percent share of the Fraser River pink salmon TAC. To accomplish this, the Panel shall take into consideration the availability of both the sockeye salmon TAC and pink salmon TAC, through the entire fishing season, while to the extent practicable, minimizing the impacts on overlapping sockeye management groups with little or no TAC. It is understood that the overlapping of sockeye and pink salmon migrations may result in a small but acceptable rate of incidental harvest on one or more overlapping sockeye management groups that have little or no TAC as defined in this Chapter.”