



Fisheries and Oceans
Canada

Pêches et Océans
Canada

2024 Post-season Review Fraser Sockeye Salmon

Southern BC Salmon Post Season Review
11 December 2024



Pre-season forecast

- Fraser Sockeye p50 level: 567,000 salmon
 - 167,000 - 2,173,000 (p10-p90)
 - p50 forecast was the lowest on record and 85% below the historical cycle-line return (3.1M)
 - 20% above the 2020 brood year return (400k)
- Run timing forecasts by Management Unit were:
 - Early Stuart: July 7
 - Early Summer: July 19
 - Summer: July 30
 - Lates: August 7



Escapement Plan and Harvest Rule

- Proportion of a stock that may be harvested depends on abundance from 0%, up to a maximum rate of 50%.
- Total Allowable Mortality (TAM) cap is the maximum harvest rate
 - Applied when the number of spawners is greater than the Upper Reference Point.
- When the number of spawners is less than the Lower Reference Point, no directed fisheries occur and the harvest rate is the Low Abundance Exploitation Rate (LAER).
- The LAER is a threshold to stay below, allowing for only incidental harvest in fisheries on co-migrating stocks and species.

| Stock Management Group | Low Abundance Exploitation Rate (LAER) | Total Allowable Mortality (TAM) Cap | Lower Fishery Reference Point | Upper Fishery Reference Point |
|------------------------|--|-------------------------------------|-------------------------------|-------------------------------|
| Early Stuart | 5% | 20% | 108,000 | 135,000 |
| Early Summer | 7% | 50% | 100,000 | 200,000 |
| Summer | 10% | 50% | 640,000 | 1,280,000 |
| Late Run | 10% | 50% | 300,000 | 600,00 |



Fishery Planning

- Fraser River sockeye salmon projected number spawning adults (spawners) and total allowable harvest (the sum of Test Fisheries (TF), United States harvest (US), and Canadian harvest (CDN)) at 10%, 25%, 50%, 75% and 90% probability distribution (p) of forecast run abundance.

| Probable Run Abundance – Projected Spawners (p%) | p10 | p25 | p50 | p75 | p90 |
|--|---------|---------|---------|---------|-----------|
| Max Allowable Harvest Rate | 9% | 9% | 9% | 13% | 20% |
| Allowable Harvest (TF, US, CDN) | 14,961 | 27,201 | 51,999 | 145,884 | 445,217 |
| Total projected spawners | 120,100 | 215,500 | 406,500 | 766,900 | 1,328,000 |

- At the median run size forecast, no Fraser Sockeye TAC is available. No directed harvest of Sockeye was planned, with the only planned sources of mortality being test fisheries and incidental catch.
- No Fraser Pink return in 2024



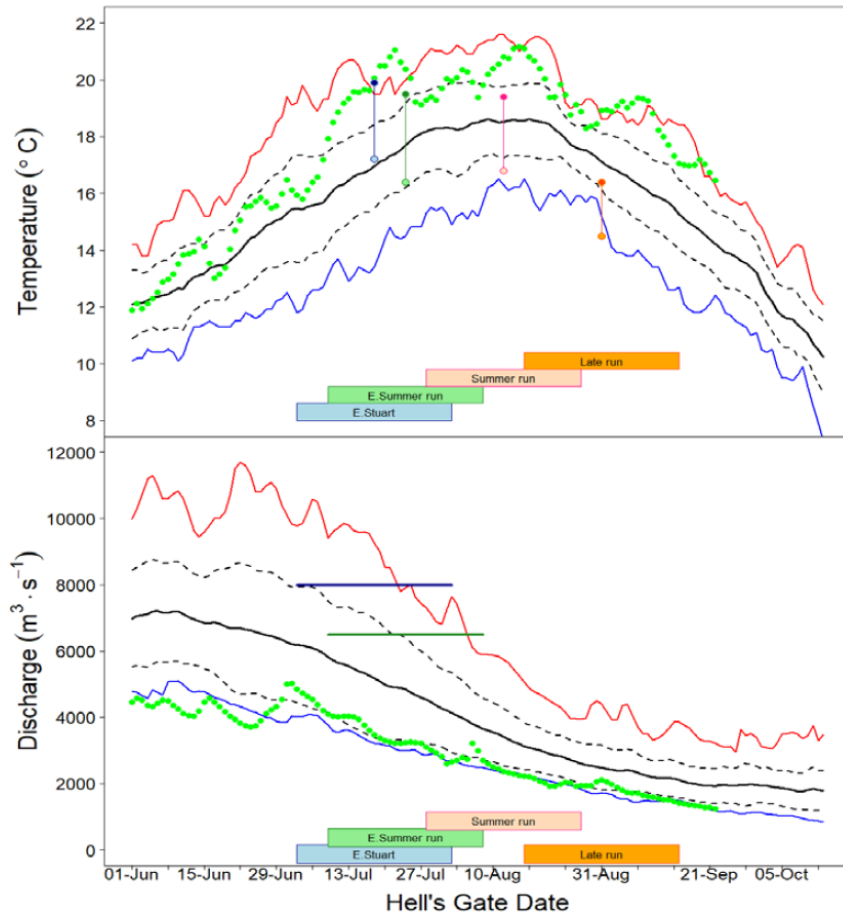
Preliminary post-season estimate of retained catch

- Fisheries impacts on Sockeye (between 0% and 7.6 % by stock management group) were **limited to levels below the LAER limit** identified in the escapement plan.
- Estimated Canadian retained catch includes 15,595 pieces from fisheries not authorized by Fisheries and Oceans Canada.

| | Early Stuart | Early Summer | Summer | Late | Total Sockeye |
|--------------------------------|--------------|--------------|---------|--------|---------------|
| Post-Season Run Size | 180 | 142,000 | 307,000 | 25,000 | 474,000 |
| * Kept Catch | 0 | 2,450 | 19,010 | 280 | 21,740 |
| LAER | 5% | 7% | 10% | 10% | N/A |
| Exploitation Rate (incl. FIMs) | 0% | 1.8% | 7.6% | 0.9% | 5.2% |

* Kept Catch does not include fisheries induced mortalities (FIMs).

Environmental conditions



High water temperatures and low discharge persisted throughout the freshwater migration period

High temperatures in July and August created difficult migration conditions and triggered increases in enroute loss forecasts for Early Stuarts and Summers



Chilcotin River Landslide

- A major landslide occurred on the Chilcotin River upstream of Farwell Canyon on July 30, 2024.
- Many salmon populations including Chilko and Taseko Sockeye experienced significant migration delays, due initially to blockage/velocity barrier, and then to ongoing high sediment levels; migration challenges persisted throughout much of August
- 49K Chilko Sockeye reached the spawning grounds (more than expected) of the 115k estimated to have passed Mission; sex ratio was highly skewed to males
- Area remains geomorphologically unstable, potential for additional blockages in 2025 and beyond; Chilko is expected contribute ~50% of 2025 return



2024 Fraser Sockeye Fisheries Summary

- No FSC or commercial fisheries directed on Fraser Sockeye in Panel waters
- Retention of Fraser Sockeye was authorized as part of LAER for two small terminal fisheries targeting Nadina/Stellako and Birkenhead
- Impacts to Sockeye were primarily attributed to unauthorized retention in Canada and test fisheries; no reported Fraser Sockeye catch in US southern waters

Additional slides

Preliminary Post-Season Kept Catch

2024 Catch-to-date by fishery

Date: Sep. 24, 2024

| Week of: Sep. 22 - Sep. 28, 2024 | | Sockeye | |
|---|--|---------------|---------------|
| | | Total | Fraser |
| Canada | | 15,965 | 15,946 |
| Commercial | | 0 | 0 |
| | B Purse Seine | 0 | 0 |
| | H Troll | 0 | 0 |
| First Nations | | 112 | 112 |
| | Food, Social & Ceremonial (FSC) | 112 | 112 |
| | Marine | 0 | 0 |
| | Fraser R. | 112 | 112 |
| | Economic Opportunity (EO) & Demonstration (Demo) | 0 | 0 |
| Escapement Surplus to Spawning Requirements (ESSR) | | 0 | 0 |
| Recreational | | 0 | 0 |
| Charter (Albion & A12 Chum test fishery) | | 240 | 240 |
| Other**** | | 15,613 | 15,595 |
| United States | | 0 | 0 |
| Commercial | | 0 | 0 |
| | Treaty Tribes (TRB) | 0 | 0 |
| | All Citizen (AC) | 0 | 0 |
| Treaty Tribes Ceremonial & Subsistence (C&S) | | 0 | 0 |
| All Citizen Recreational | | 0 | 0 |
| Other**** | | 0 | 0 |
| Alaska * | | na | na |
| Panel-approved Test Fisheries | | 6,005 | 5,797 |
| Panel Waters | | 3,478 | 3,427 |
| | Canada | 3,478 | 3,427 |
| | U.S. | 0 | 0 |
| Non-Panel Waters** | | 2,527 | 2,370 |
| Total | | 21,970 | 21,743 |
| Catch Seaward of Mission *** | | 5,318 | 5,092 |
| Catch Upstream of Mission | | 16,652 | 16,652 |

* 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, **but**

**FIMs in non-sockeye fisheries are not
included in this table**