



# WATERSHED TALK

## NEWSLETTER

Produced by the Fraser River Aboriginal Fisheries Secretariat

Volume XVI, Issue 5

### 2019 FRASER SALMON UPDATE

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Catch and escapement has been slightly higher this week compared to last week, although not nearly enough to bring us out of the extremely low numbers observed. Estimated abundance in the marine approach and in river is still very small, daily passage is still being estimated below 8,000 sockeye past the Mission hydroacoustic site. There has been voiced concern at the Panel regarding low abundances for the observed stocks to date. Most notably for Early Summer, Early Thompson sockeye do not seem to be showing up in any substantial abundance, and they are driving a large portion of the Early Summer MU. Summer run stocks also do not seem to be appearing in any substantial abundance to date, which is the driving MU for the forecasted abundance of Fraser sockeye in 2019.

The Fraser Panel adopted an in-season run size of p10 for Early Summer 112,000 and a median run timing of August 2. The p25 forecast for Summers was adopted for management purposes but not as an official run size. The Fraser Panel has made it clear they are planning for Summer run to be well below the p25, and are expected to make a decision on an official in-season run size next week. The Panel also noted the uncertainty in management based on the impacts of the Big Bar slide to Fraser sockeye stocks above the site. Further reducing the Summer run size does not affect sockeye directed fisheries because there are no sockeye directed fisheries currently licenced. Reducing the Summer run size does affect the LAER available for fisheries that encounter Fraser sockeye as bycatch, like FSC chinook or future commercial pink fisheries.

Some Fraser pinks have shown up in marine test fisheries, but it is still early in the Fraser pink migration for any usable data for in-season management. The preseason forecast for Fraser pinks is 5,018,600 at p50. As more Fraser pinks enter the Fraser, identifying daily passage of sockeye will become more of a challenge if abundances do not increase soon. Pinks and sockeye are extremely difficult to differentiate via hydroacoustic methods, so a small daily passage of sockeye could get swamped by a larger daily migration of pink salmon making estimation of daily passage very difficult.

This summary table will be updated throughout the season as information and decisions become available.

Sockeye Management Group	Pre-Season Planning Forecast (P50)	Run Accounted to Date	In-Season Adopted Run Size	Area 20 Timing (for 50% of run)
Early Stuart	41,000	25,900	<b>27,000</b>	<b>July 8</b>
Early Summer	465,000	57,600	<b>112,000</b>	<b>August 2</b>
Summer	3,393,000	28,900	*2,454,400 For Mgmt unofficial	Preseason (Aug 10)

Lates	<b>359,000</b>	1,100	N/A (too early for run size update)	Preseason (Aug 18)
<b>TOTAL</b>	<b>4,795,000</b>	77,300	N/A (too early for run size update)	Preseason (Aug 9)

### Big Bar Slide

Crews continue working on the Big Bar slide site and fish transport operations are ramping up. Since last week the rock manipulations were temporarily halted due to high water levels. Crews are continuing to work on installing gear to continue work once the water levels retreat to safer heights. One of the major tasks this week was to clear woody debris from below the slide site. A heavy lift helicopter was brought on site this week to assist with this task.

As of August 4, 144 salmon have been radio tagged downstream of the landslide. None of these radio-tagged salmon have been recorded passing on their own above the landslide. There is now evidence that two radio-tagged salmon, transported past the landslide by helicopter, have made it to the northern portion of the province.

To date 6,700 chinook and sockeye have been transported over the slide site via helicopter.

### Sockeye Closures

The Early Stuart window closure is up for all areas of the Fraser River and the marine approach. However, to date no sockeye fisheries have yet been licenced due to extremely low abundances observed.

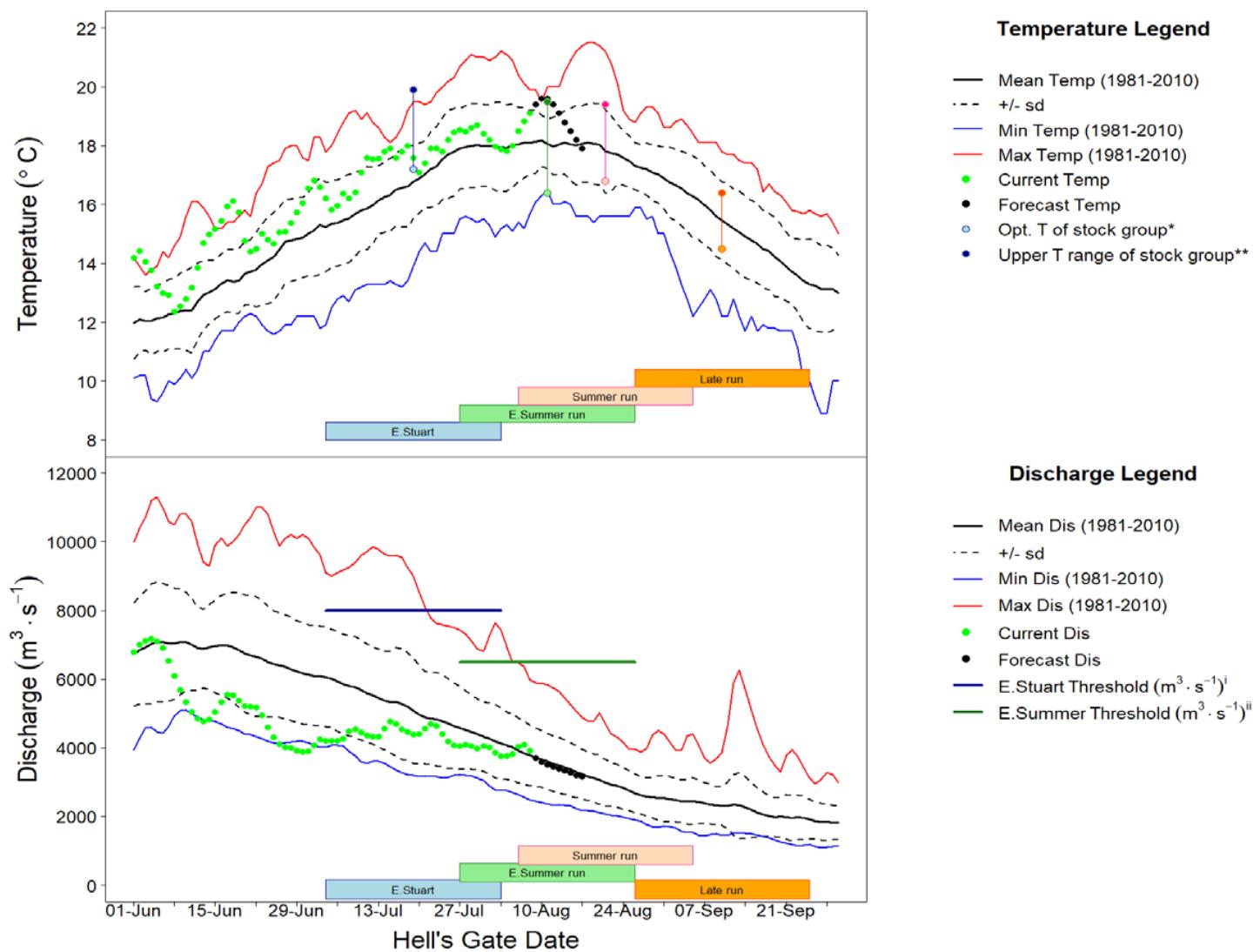
### **Fraser River Conditions**

The main source of information for Temperature and Discharge data and forecasts is DFO's Environmental Watch Program (see link below).

The BC River Forecast Centre website (see links below) has information and links related to discharge and temperatures at various monitoring stations throughout the Fraser watershed, including snow pillow and melt updates.

Environment Canada's Water Office webpage provides access to real time hydrometric data at many locations throughout the Fraser watershed (see links below).

Fraser Discharge and temperatures at Hope and Qualark Creek (near Hope) respectively look like this (graphs from the Fraser River Panel Distribution August 8<sup>th</sup>, 2019):



The Fraser River water temperature at Hope is currently 19.1 degrees Celsius (1.0 degrees Celsius above average for this time of year), and is forecast to decrease to 18.8 degrees Celsius by August 14<sup>th</sup>. The Fraser River discharge is within the usual annual differences at 3,921  $m^3/sec$  at the Qualark water station on August 8<sup>th</sup> (4% above average for this time of year). The discharge is continuing to track at the average discharge, with a forecast discharge of 3,334  $m^3/sec$  by August 14<sup>th</sup>.

Environmental data and observations are critical in identifying Management Adjustments (MA) in-season. Currently, the flow and temperature data are sitting within the historic range for preseason MA forecasts, we are currently not expecting a major change in MAs compared to preseason forecasts. The panel may announce a change in MAs for each sockeye MU in-season, based on changing environmental conditions or other factors (ie Big Bar slide).

## Fraser River Fisheries Information

Fraser First Nations Fisheries information can be found on the DFO website at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/fraser/index-eng.html>

DFO staff will be distributing Fraser Salmon Bulletins, and we strongly encourage people to review and comment on the DFO bulletin if time and resources permit. Contact your local DFO Resource Manager for a copy, and addition to the distribution list.

## **Fraser Sockeye Salmon**

The Pacific Salmon Commission (PSC) distributes the Fraser River Panel meeting agenda and technical information for Panel members and observers to the process. The following information is a summary of key information from that document (August 9<sup>th</sup>, 2019) and the Fraser River Panel meeting from the same day.

### *Stock Identification*

Marine approach test fisheries are catching sufficient amounts of sockeye to produce good sample sizes for stock ID analysis. In Johnstone Straits, Early Stuart have fallen out of all samples and Early Summers are starting to tail off, with the stock of significance still Nadina complex. Summer and Late run sockeye have been identified, the dominant stock in the samples is Chilko/Quesnel as expected in the preseason forecast but the expected associated abundance of these stocks is not showing up. Late run sockeye are present, but small in the stock proportion. The Juan de Fuca stock ID, the sample sizes are much lower, therefore confidence in the accuracy of the proportions is not as strong. No Early Stuart were identified in the latest batch, and most of the Early Summers are through, with the Nadina complex as the majority of Early Summers. Summer stocks are the majority in the samples, with a variable mix of Harrison, Late Stuart and Chilko/Quesnel. 1 Late run fish was identified in the JdeF samples.

In-river test fisheries are still plagued with small sample sizes due to limited catch. No recent stock ID samples were available for this week.

Overall proportions of age 4 fish are increasing, closer to expected proportions but still lower than expected. This is of interest because age 4 sockeye are usually the dominant age class, compared to age 5.

### *Test Fisheries*

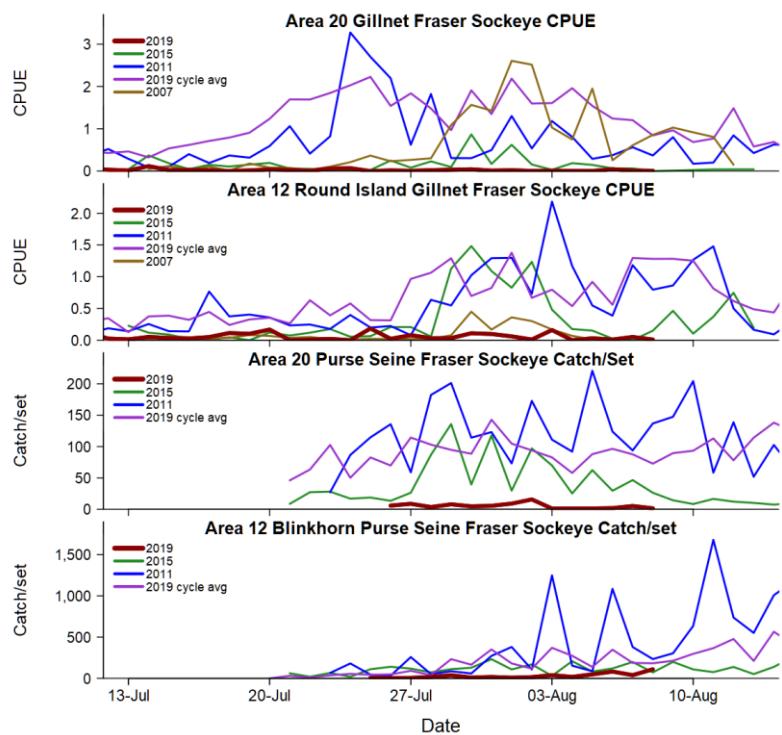
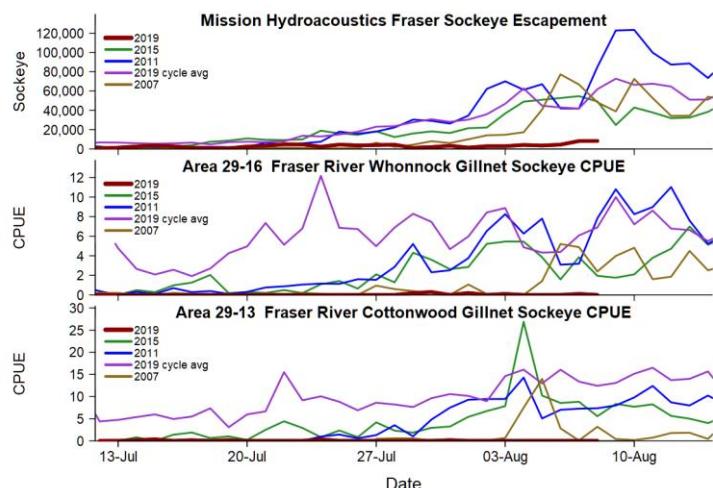
Test fishery catch across the south coast and in-river is continues to be low.

Marine test fisheries have consistently caught very few fish in both Johnstone Strait and Juan de Fuca compared to expectations. Some of the marine gillnet test fisheries will be removed, but the purse seine test fisheries will continue in both approaches.

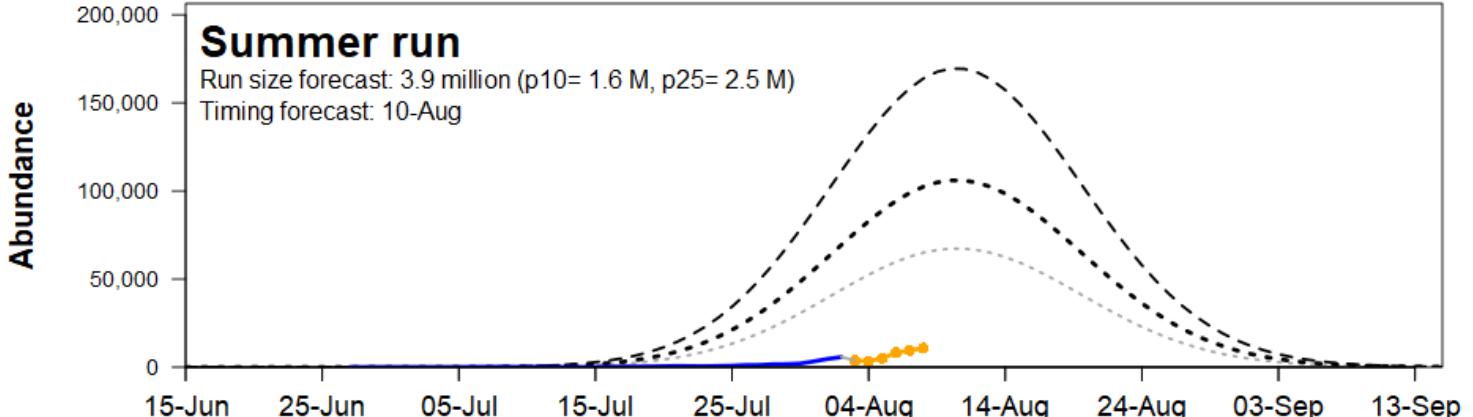
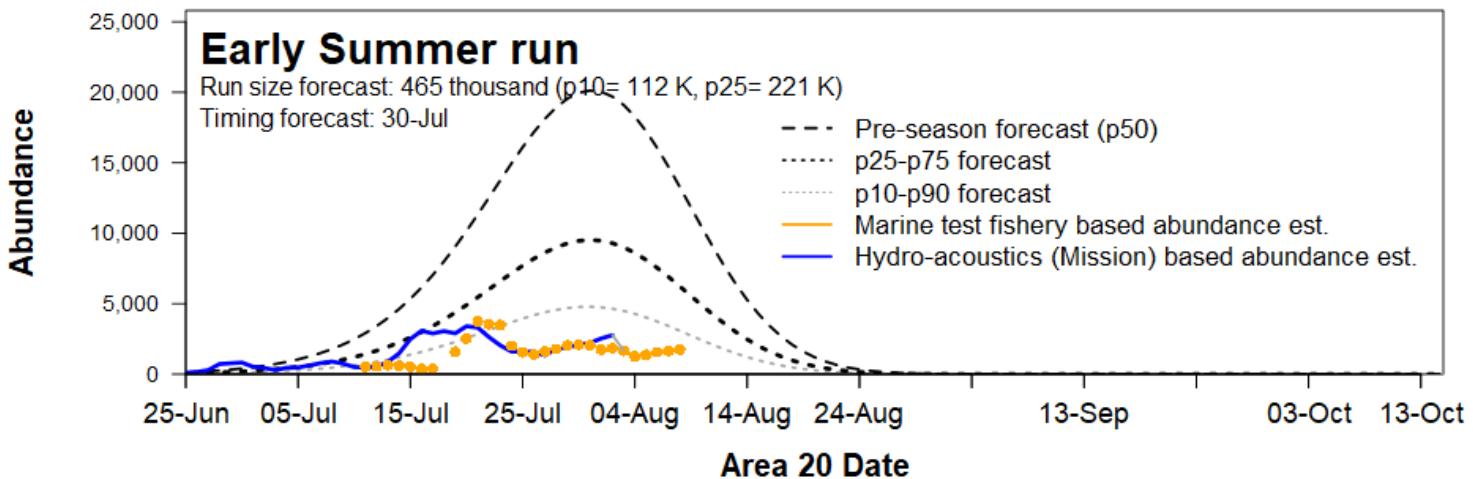
In-river test fisheries continue to predominantly catch 0 sockeye daily. There are a few instances of encounters over the past few weeks, but the skunked days outnumber the days with sockeye catch at Cottonwood and Whonnock. The Qualark test fishery has consistently caught sockeye, but the numbers are equally worrisome at less than 10 daily.

Diversion rate based on test fishery catch is showing high diversion through JST, projected at 90%.

Test fishing graphs and Mission hydro-acoustics information from the PSC distribution package:



### Estimated Abundance and In-Season Timing Compared to Forecast



## Links

Big Bar Slide Updates are available: <https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/emergency-response-and-recovery/incident-summaries/big-bar-landslide-incident>

With Chinook and sockeye approaching and in the Fraser, these links may be of interest:

BC River Forecast Centre Website: <http://bcrfc.env.gov.bc.ca>

Environment Canada's Water Office Website: [http://www.wateroffice.ec.gc.ca/index\\_e.html](http://www.wateroffice.ec.gc.ca/index_e.html)

Pacific Salmon Commission Website: [www.psc.org](http://www.psc.org)

Pacific Salmon Commission Test Fisheries: [http://www.psc.org/info\\_testfishing.htm](http://www.psc.org/info_testfishing.htm)

Pacific Salmon Commission News and Regulatory announcements: <http://www.psc.org/publications/fraser-panel-in-season-information/fraser-river-panel-regulatory-announcements/>

Fraser River Mission Escapement Reports: <http://www.psc.org/publications/fraser-panel-in-season-information/fish-passage-past-the-psc-hydroacoustic-counting-station-near-mission-bc/>

Fraser River Environmental Watch Reports: <http://www.pac.dfo-mpo.gc.ca/science/habitat/frw-rfo/index-eng.html>

The Albion Test Fishery information can be found at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/fraser/docs/commercial/albionchinook-quinnat-eng.html>

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