



# WATERSHED TALK

## NEWSLETTER

Produced by the Fraser River Aboriginal Fisheries Secretariat

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### 2019 FRASER SALMON UPDATE

By: Aidan Fisher, FRAFS Biologist

Despite potentially the worst sockeye return in recent history (since colonization), there appears to be a strong return of Fraser pinks. It is still early in their return for pinks, but marine test fishery catches are looking strong. If the abundance observed in the marine area is verified in-river, there is likely sufficient Fraser pinks to implement substantial fisheries including commercial fisheries.

Hydroacoustic estimation methods of daily fish passage now have to account for greater pink salmon abundances. Due to the high amounts of pink salmon, the sockeye estimation method needs to be adjusted as they make up a substantially smaller proportion of daily passage past Mission.

The Fraser River Panel adopted in-season run sizes of 90,000 for Early Summers and 400,000 for Summers on Tuesday this week. Today the Panel adopted an in-season run size of 40,000 for Lates. Additionally, the Panel adopted an in-season run size of 7,400,000 for Fraser pinks with a run timing of August 20<sup>th</sup>, which is earlier than the pre-season forecast.

Only chinook FSC fisheries are ongoing for Fraser salmon fisheries to date. No commercial pink salmon fisheries have been approved in Canada. There is likely going to be strong interest to initiate Canadian commercial fisheries for Fraser pinks in the next few weeks.

US All Citizens and Treaty Indian commercial fisheries have been approved by the Panel earlier this week and ongoing over the weekend. The US has agreed to non-retention of sockeye in the All Citizens fishery, and attempt to release all sockeye alive and unharmed from the Treaty Indian fishery. DFO has agreed to retention of sockeye for Ceremonial & Subsistence purposes in the Treaty Indian fishery of mortally wounded or dead sockeye. It should be identified that the All Citizens and Treaty Indian pink fisheries are commercial fisheries, with a catch to date of 116,500 Fraser pinks.

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	85,700	<b>90,000</b>	<b>July 26</b>
Summer	3,393,000	139,100	<b>400,000</b>	<b>August 17</b>
Lates	359,000	6,600	<b>40,000</b>	<b>August 25</b>

<b>TOTAL</b>	4,795,000	257,300	634,000	Preseason (Aug 9)
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	<b>Pre-Season Planning Forecast (p50)</b>	<b>Run Accounted to Date</b>	<b>In-Season Adopted Run Size</b>	<b>Catch to Date</b>	<b>Area 20 Timing (50% of return)</b>
Fraser Pinks	5,018,600	290,500	<b>7,400,000</b>	123,390	<b>August 20</b>

### Big Bar Slide

Crews continue working on the Big Bar slide site. Crews have been working on building an access and staging site for future work at the slide site.

As of last week some natural passage of Fraser chinook has been identified over the Big Bar slide. This is good news, but it is clear that the Big Bar slide is a major migration barrier for the vast majority of the salmon attempting to pass the slide.

To date 28,830 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 directed fisheries have yet been licenced due to extremely low abundances observed.

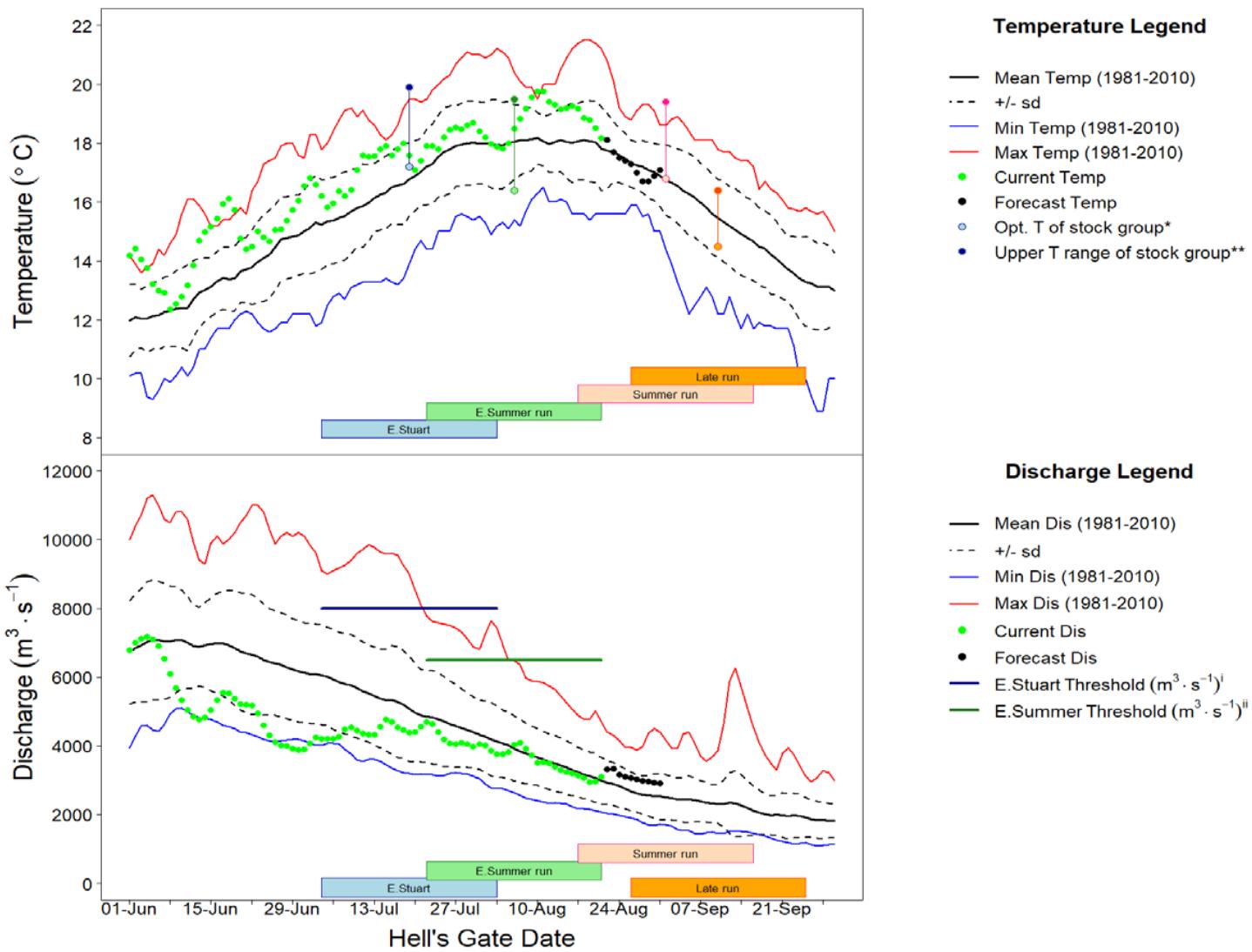
### Fraser River Conditions

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 21<sup>st</sup>, 2019):



The Fraser River water temperature at Hope is currently 18.2 degrees Celsius (0.4 degrees Celsius above average for this time of year), and is forecast to decrease to 17.0 degrees Celsius by August 27<sup>th</sup>. The Fraser River discharge is within the usual annual differences at 3,098 m<sup>3</sup>/sec at the Qualark water station on August 21<sup>st</sup> (3% above average for this time of year). The discharge is continuing to track at the average discharge, with a forecast discharge of 3,032 m<sup>3</sup>/sec by August 27<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 is unlikely to announce a major change in MAs for sockeye MUs based on environmental variables because we are now past the peak of river temperatures and moving into cooler weather. The Panel may still announce changes to the MA based on the Big Bar slide and its impact to Fraser sockeye migration.

## 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 23<sup>rd</sup>, 2019) and the Fraser River Panel meeting from the same day.

### *Stock Identification*

Marine test fisheries in Johnstone Strait and Juan de Fuca are showing predominantly Summer run sockeye, specifically Chilko/Quesnel fish. The stock proportions are showing expected proportions based on the preseason forecast. Small stocks are showing up in numerous samples, and indication of smaller than expected amounts of dominant sockeye stocks like Chilko/Quesnel. If these stocks were showing up in their preseason forecast amounts, then most of the small stocks would not be identified in the DNA samples.

In-river test fisheries are starting to show similarly high proportions of Chilko/Quesnel. Small sample sizes are still an issue for in-river test fisheries. As in the marine test fisheries, small stocks are being identified.

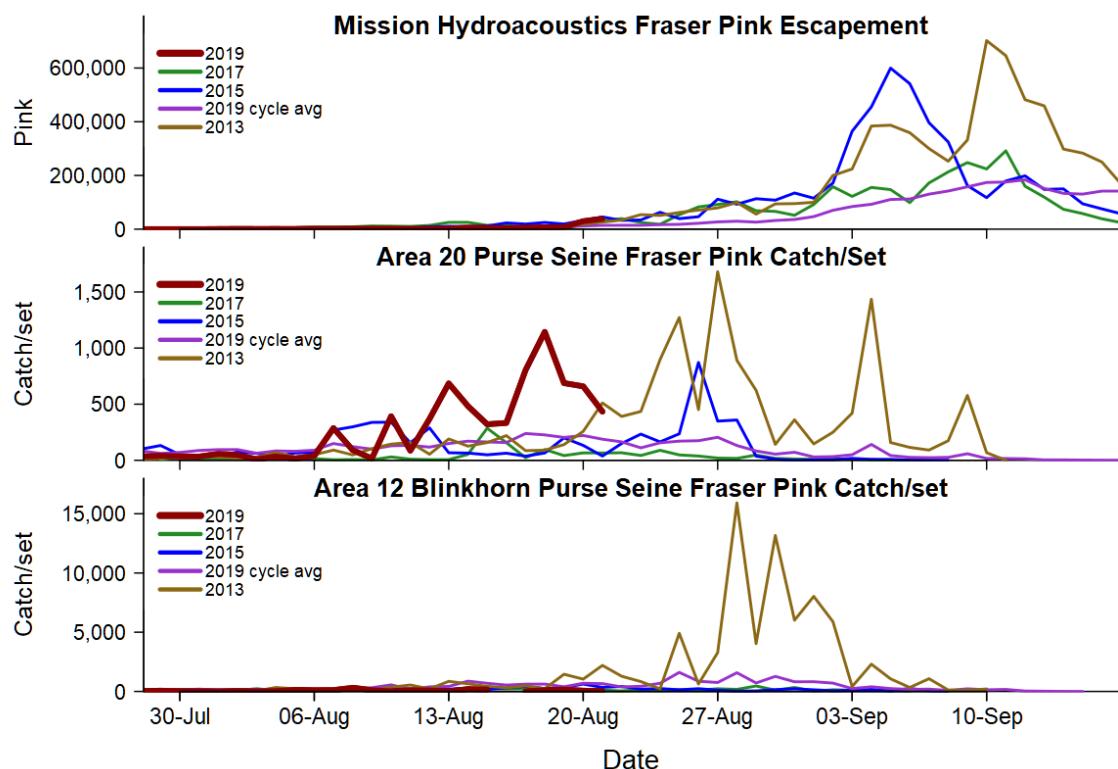
Pink stocks are showing mostly Fraser pinks in the marine test fisheries. It was noted by the US staff that the Washington pink runs are returning near their expected amounts, and further indication that the dominant amount of Fraser pinks is due to abundance, instead of lower amounts of Washington or Non-Fraser Canadian pinks that would result in higher proportions of Fraser pinks in the test fishery catch.

### *Test Fisheries*

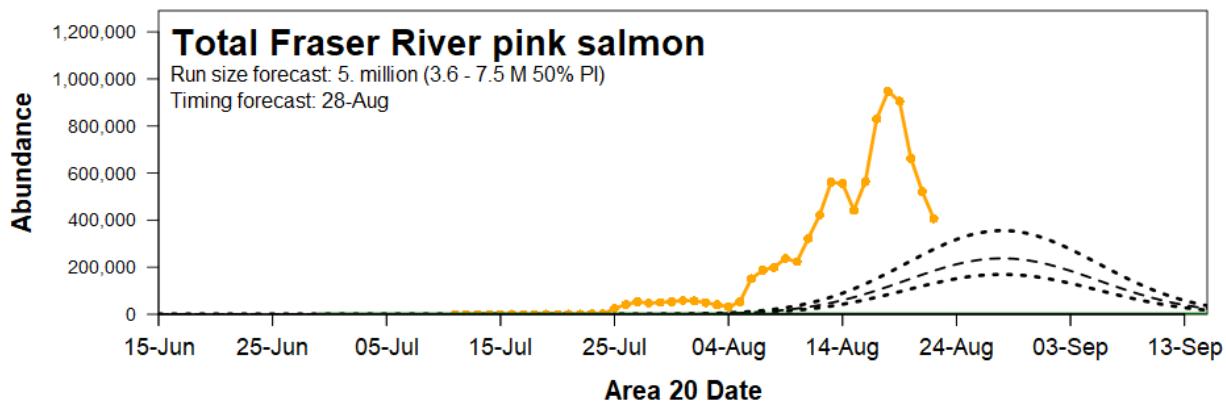
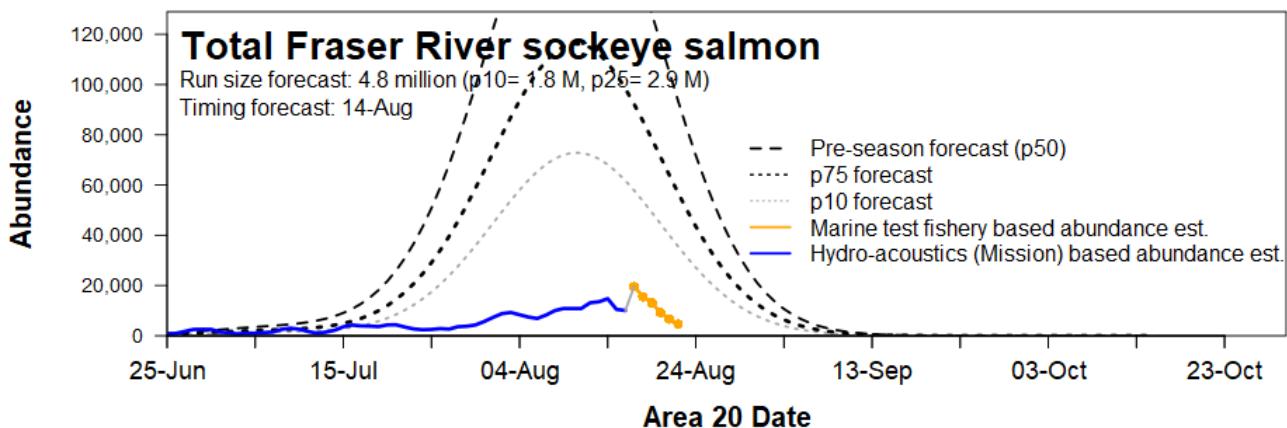
Marine test fisheries are still showing high diversion through Johnstone Strait for sockeye. For pinks, the majority of the run is migrating through Juan de Fuca.

High pink salmon estimates have been predominantly informed by high marine test fishery catch in Juan de Fuca. The Panel is taking a cautious approach to identifying an in-season run size. Based on substantial modelling work by PSC staff, there are a number of assumptions including in the expansion of marine test fishery catch to run size. Based on their work, it is likely that the Fraser pink return is at or above the p50 forecast of 5 million pinks, although identifying a more refined estimate is challenging without corresponding hydroacoustic data. Over the next week the large test fishery catches will be verified in-river and provide two independent data points to inform an in-season run size.

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



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



The next Fraser River Panel meeting is scheduled for 10:30AM Tuesday August 27<sup>th</sup>.

Fraser River Panel Schedule:

**Tuesday and Friday 11am.**

***Canada dial-in: 1-888-299-2873***

***(USA dial-in: 1-888-585-9008)***

***Conference ID: 287-053-397***

## **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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