



# WATERSHED TALK

## NEWSLETTER

Produced by the Fraser River Aboriginal Fisheries Secretariat

### 2016 FRASER SALMON UPDATE

By: Pete Nicklin & colleagues

We are still in the early part of the Fraser sockeye season, but the season is starting to take shape with Early Stuarts arriving on the spawning grounds and First Nations fisheries directed on Fraser Early Summer and Summer sockeye occurring in the marine approach areas and into the lower portion of the Fraser river. The Early Stuart window closure is still in effect for the upper part of the Fraser River.

The following table has been updated, and this week's information includes updated information related to Early Summers from the July 29<sup>th</sup> Fraser River Panel meeting.

Canada has initiated smaller-scale First Nations Food, Social & Ceremonial (FSC) fisheries directed on Fraser sockeye in the marine approach areas and the Lower Fraser (areas that are not under the Early Stuart Closure window – *refer to information later in this article*). FSC fisheries in the middle Fraser and north to Hixon will be opening Friday July 29<sup>th</sup>.

| Sockeye Management Group | Pre-Season Planning Forecast (P50) | In-Season Adopted Run Size          | Area 20 Timing (for 50% of run) |
|--------------------------|------------------------------------|-------------------------------------|---------------------------------|
| Early Stuart             | 36,000                             | <b>22,000</b>                       | <b>July 3</b>                   |
| Early Summer             | 447,000                            | N/A                                 | <b>July 21</b>                  |
| Summer                   | 1,677,000                          | N/A (too early for run size update) | <b>Aug 6</b>                    |
| Lates                    | 111,000                            | N/A (too early for run size update) | <b>Aug 14</b>                   |
| <b>TOTAL</b>             | <b>2,271,000</b>                   | N/A (too early for run size update) |                                 |

On the environmental conditions side of things, current Fraser River temperatures are on the rise and now at 19.3 degrees Celsius. 18 degrees is considered the start of stressful temperatures for sockeye migration. Discharge flows continue to track a little lower than average but have been up and down with recent rain events. Current discharge shouldn't be a problem for sockeye

migration, but the downside to the lower flow is the river is more sensitive to daily air temperatures (hot days can move the river temperature quickly).

### Early Stuarts

**Early Stuarts** are arriving in the main spawning creeks in the Stuart system. Sockeye are reported to be in good condition and thus far, reports are saying the fish appear to be larger than last year's average body size. The in-season estimate of 22,000 was unchanged at today's Panel meeting, but run size estimates are a little lower than the in-season estimate and about half the pre-season forecast of 36,000.

### Early Summers

**Early Summers** are forecasted at 447,000 (P50). The estimated A20 50% timing of the Early Summer management group is July 21 (weighted average), so an in-season run size update is not far off. Current info shows a model run size estimate of 83,000 for the Chilliwack component, which compares to a pre-season forecast of 138,000. The Early Summer run had been tracking between P25 and P50 abundances (see graphs later in article). The Panel chose to defer making an in-season run size update on Early Summers at today's Panel meeting. They also deferred planned fisheries in US Areas 7 and 7a until earliest Tuesday, to be reviewed on Monday.

### Summer Run

**Summers** are forecasted at 1,677,000 (P50). It is still too early for an in-season run size estimate for this management group, with an expected A20 50% timing of August 6. However, all stock components of the Summer management group are showing in stock identification analysis of approach test fisheries, and are building in abundance over the past couple of days. However, at this point in the migration the proportion of 4<sub>2</sub>'s is lower than expected. The major component of the Summer Aggregate is Chilko. This stock should mainly 4<sub>2</sub>'s. The Panel will be keeping a close watch on these data over the next few days.

### Late Sockeye

**Lates** are forecasted at 111,000 (P50). It is still too early for an in-season run size estimate for this management group, but stock identification analysis of test fisheries is showing the arrival of the Birkenhead and Late Shuswap component of this management group. The portion of the sockeye on the Marine test fisheries is projected to be 10% Lates by July 31, given the low forecast abundance this group will be managed as a LAER and may constrain Summer directed fisheries as we move in to August as their timing is expected to be August 14<sup>th</sup>, some 8 days later than the Summer runs.

### Sockeye Closures

The Early Stuart window closure is still in place for some of the Fraser River, but is off in the Fraser up to Deadman Creek, and will be coming off from Deadman Creek to Hixon at 6PM Friday July 29<sup>th</sup> (tonight). The closure will be finishing for the rest of the upper Fraser over the next week.

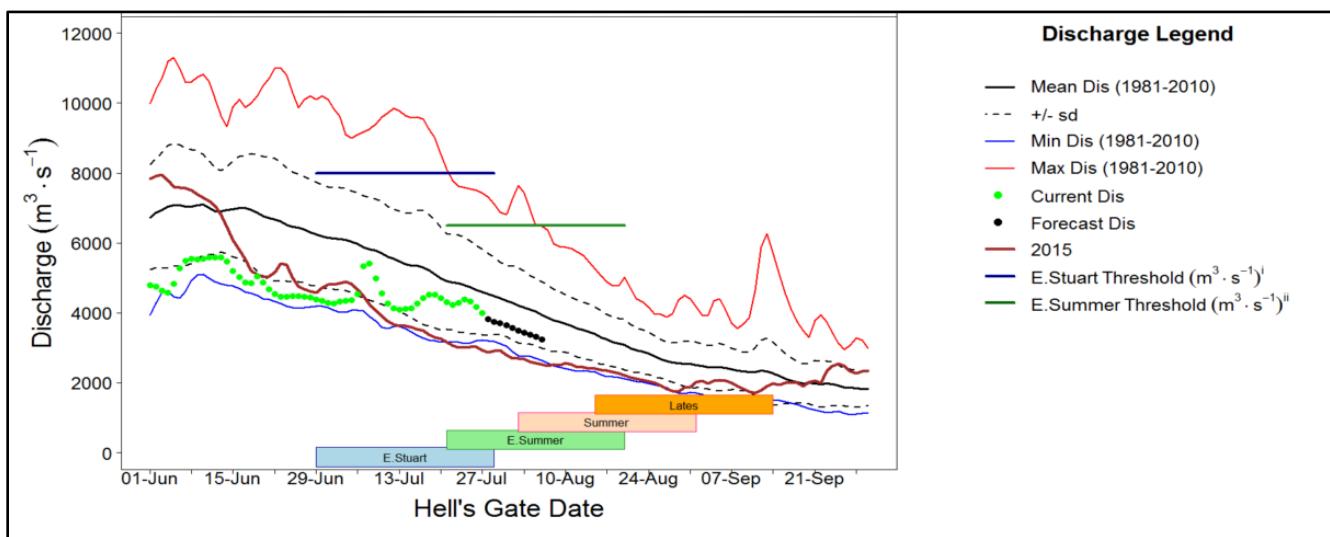
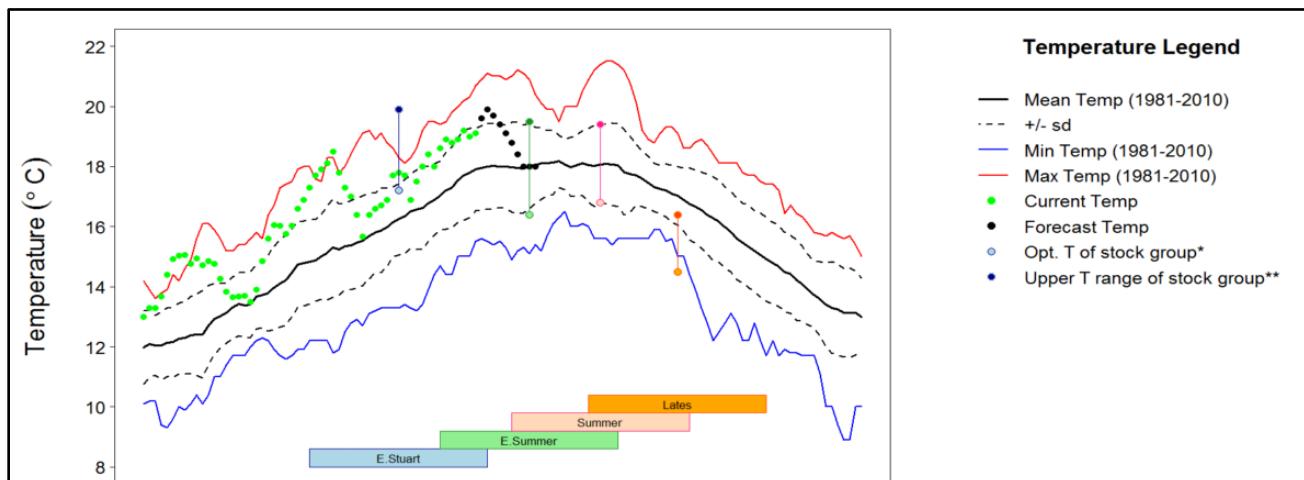
### Fraser River Conditions

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 July 27<sup>th</sup>, 2016):



The Fraser River water temperature is currently 19.3 degrees Celsius (1.3 degrees Celsius above average for this time of year), and is forecast to decrease to a temperature of 18.4 degrees Celsius by August 3rd. The Fraser River discharge continues to track at low levels for this time of year with a flow of 3868  $m^3/sec$  at the Qualark water station on July 28<sup>th</sup> (15% below average for this time of year). The discharge is predicted to continue tracking below average, with a forecast discharge of 3437  $m^3/sec$  by August 3rd.

## Fraser River Fisheries Information

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

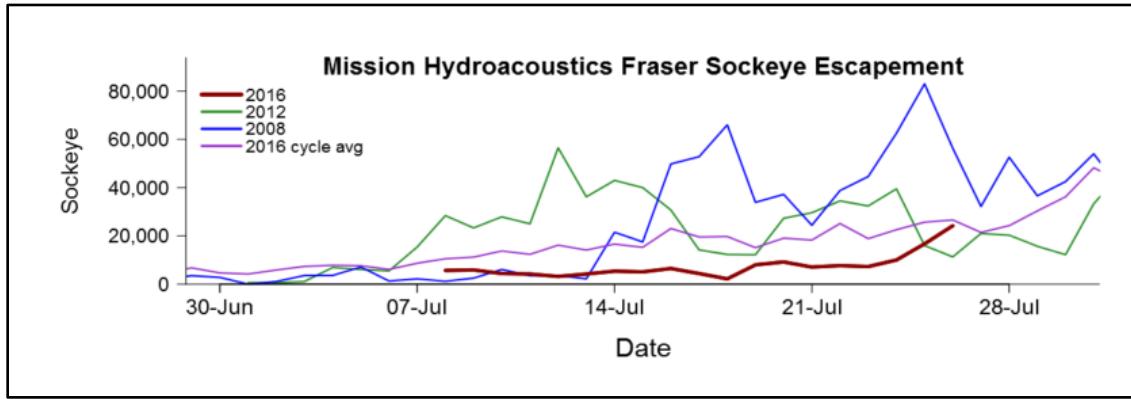
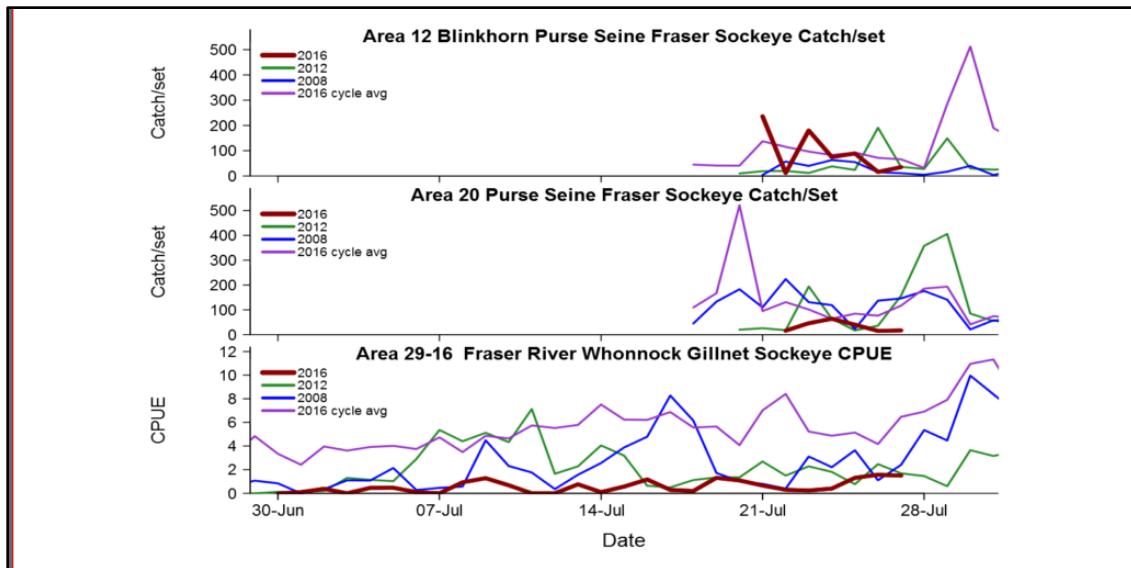
<http://www.pac.dfo-mpo.gc.ca/fm-gp/fraser/index-eng.html>

## Fraser Sockeye

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 (July 29<sup>th</sup>, 2016) and the Fraser River Panel meeting from the same day.

Test fisheries are in place in the Fraser River (gill net) and both marine-approach areas (Strait of Juan de Fuca and Johnstone Strait – purse seine and gillnet). Hydroacoustics programs are in operation at Mission and Qualark (Yale). A total of 247,400 Fraser sockeye have been accounted-to-date, comprised of 16,800 Early Stuart sockeye, 148,700 Early Summer run sockeye, 80,000 Summers and 900 Lates. Stock Identification analysis from the marine and river test fisheries shows Early Stuart, Early Summers, Summers and the very beginning of the Late migration.

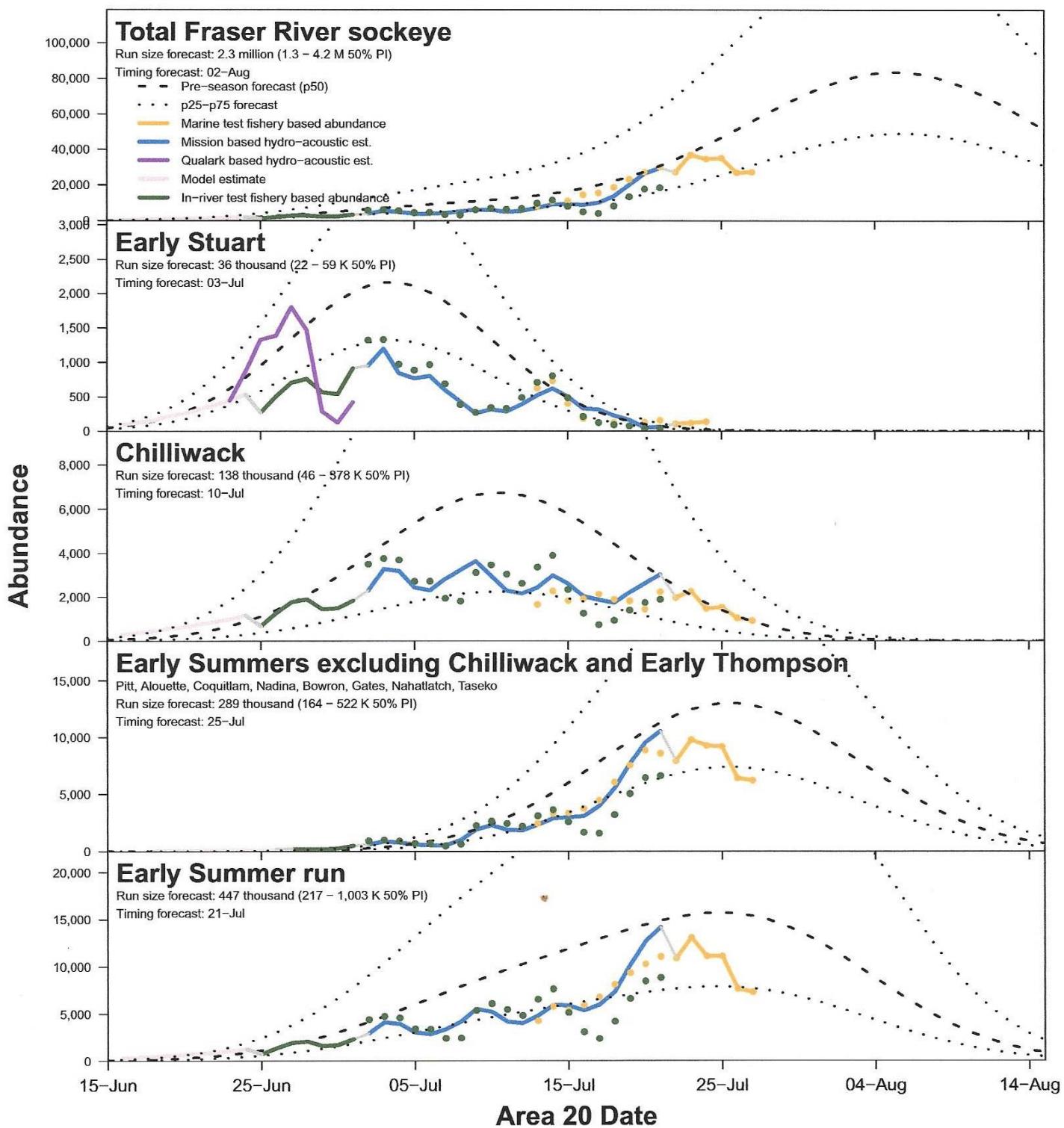
Test fishing graphs and Mission hydro-acoustics information from the PSC distribution package look like this:



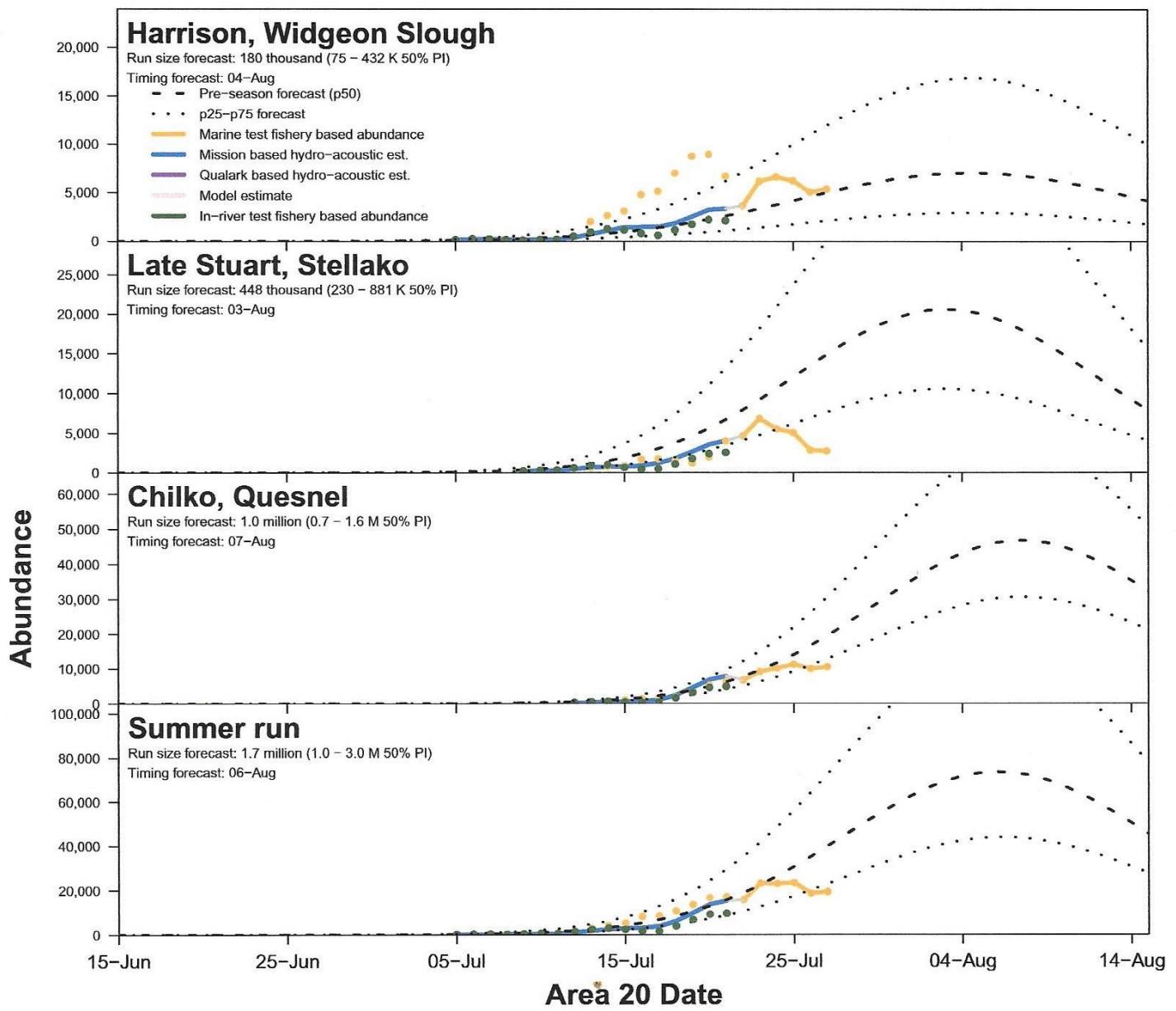
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## Estimated Abundance and In-Season Timing Compared to Forecast

### 2016 Fraser River sockeye daily migration abundance



## 2016 Fraser River sockeye daily migration abundance



- The next Fraser River Panel meeting is scheduled for 10:30AM Tuesday August 2<sup>nd</sup>

## Links

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

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

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/news\\_frpnews.htm](http://www.psc.org/news_frpnews.htm)

Fraser River Mission Escapement Reports: [http://www.psc.org/info\\_inseasonfraserescapement.htm](http://www.psc.org/info_inseasonfraserescapement.htm)

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>

*For more information contact Pete Nicklin by email: [pnicklin@telus.net](mailto:pnicklin@telus.net)*