



# WATERSHED TALK

## NEWSLETTER

Produced by the Fraser River Aboriginal Fisheries Secretariat

### 2017 FRASER SALMON UPDATE

*By: Pete Nicklin and Aidan Fisher (Neill), FRAFS Biologists*

There have been some fisheries in the Fraser this week, and hopefully fishers have been able to harvest some salmon. All Fraser and approach fisheries have had extreme limitations on sockeye harvest. Overall total Fraser sockeye migration trend is similar to last week, and the chances of a delayed run of sockeye is extremely low. Total migration of Fraser sockeye continues to track between p10 and p25, which means that all aggregates are still being managed within the LAER. This is turning out to be another difficult year for Fraser sockeye, and hopefully fishers and communities have been able to catch other stocks to at least partially off-set the lack of sockeye.

The Fraser pink salmon situation has not continued to show strong returns since last week. Marine test fisheries have not sustained the strong initial catches, and pinks have not shown up in the in-river test fisheries as we had hoped. It is still a few days before the expected peak of pink salmon migration in the marine area, and although there is the possibility of a second bump of pink salmon. It is starting to look as though the pink run will not meet the P50 forecast. Regardless of the run-size, there is a 15% TAC for Fraser pinks, although we are still early and an in-season run size has not been adopted yet by the Fraser Panel. Over the next week there will be more discussion around commercial fisheries for pinks, and we will have to watch for the impact on Fraser sockeye from commercial pink fisheries.

Issues around differentiation between sockeye and pink at the hydroacoustic sites persist because of the low sockeye escapement, and a pulse of pinks this week. In addition, anecdotal reports of smaller than average sockeye could add to uncertainty around the daily pink and sockeye migration.

Most Fraser sockeye stocks continue to track around the P25 to P10 forecast, which means restricted FSC fishing for First Nations, and no commercial or recreational directed Fraser sockeye fisheries. Summer Run stocks continue to be the dominant management group identified in marine and in-river test fisheries, but model estimates indicate a return in the range of the P10 forecast abundance.

There was a small US pink directed fishery in the marine approach. This fishery was limited, and took a small amount of Fraser pinks and sockeye.

Sockeye Management Group	Pre-Season Planning Forecast (P50)	In-Season Adopted Run Size	Area 20 Timing (for 50% of run)
<b>Early Stuart</b>	99,000	<b>46,000</b>	<b>July 3</b>
<b>Early Summer</b>	343,000	<b>150,000</b>	<b>Aug 2</b>
<b>Summer</b>	3,407,000	<b>1,000,000</b>	<b>Aug 11</b>
<b>Lates</b>	583,000	<b>247,000</b>	<b>Aug 18</b>
<b>TOTAL</b>	<b>4,432,000</b>	N/A (too early for run size update)	N/A

On the environmental conditions side of things, current Fraser River temperatures are slightly above average but are forecasted to decrease slightly. Discharge Flows have stayed low, and are tracking near the lowest discharge in the range from 1981-2010. This is good for upstream migration, although very low flows can also be a hindrance to migration in some areas if they continue to drop. The downside to the low flow is the river is more sensitive to daily air temperatures and river temperature can change quickly.

### Early Stuarts

The last of the Early Stuarts arrived on the spawning grounds, and the management of this stock group is in the enumeration phase, which is wrapping up on the spawning grounds. The accounted run to date is almost 46,600, and no changes will be made to the in-season adopted run size of 46,000.

### Early Summers

The Early Summers group was upgraded to 150,000 on August 18<sup>th</sup>. The Panel acknowledged that Pitt sockeye are the dominant stock to date, and now the Early Summer aggregate has exceeded the previously adopted in-season run-size of 125,000. The Pitt sockeye leave the mainstem Fraser downstream from Mission, which means there are very few Early Summer sockeye expected to return to the Thompson system and the Upper Fraser. At this current run size there is no international TAC available.

### Summer Run

Summers were forecasted at 3,407,000 (P50). **The Panel adopted a 1,000,000 Summer run size at today's Panel meeting** with an August 11<sup>th</sup> run timing through Area 20. The Chilko sockeye return was the key driver of pre-season expectations, and all indications from the data indicate an overall return of less than the P10 forecast abundance (model estimate of 511,000). The lone bright spot (and it's only a relatively bright spot), is the Quesnel run estimated at 132,000 compared to a P50 forecast of 192,000 (a return somewhere between the P25 and P50 forecast). There is no TAC at this run size abundance, and First Nations fisheries will be managed under the LAER.

### Late Sockeye

**Lates** are forecasted at 583,000 (P50). **The Panel kept a preliminary in-season run size of 247,000** with a run-timing peak of August 18<sup>th</sup>. Late run sockeye are well into the marine migration and into the Fraser, and are not meeting the P50 forecast. There is no TAC at this run size, and the Late run sockeye will be managed under the LAER of 20% instead of 10% like the other 3 aggregates.

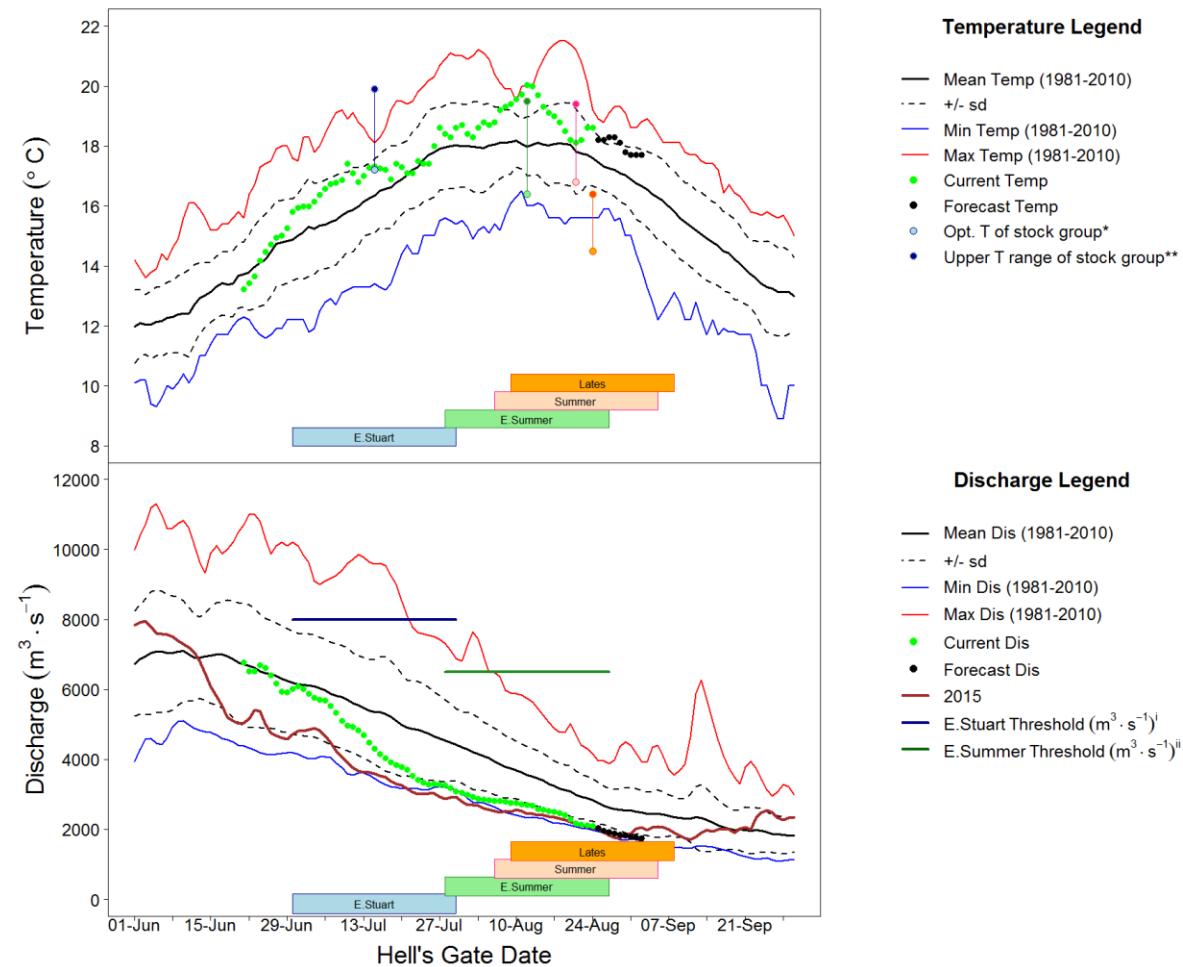
## Fraser River Conditions

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 24<sup>th</sup>, 2017):



The Fraser River water temperature at Hope is currently 18.6 degrees Celsius (1.0 degrees Celsius above average for this time of year), and is forecast to decrease to 17.8 degrees Celsius by August 30<sup>th</sup>. The Fraser River discharge continues to track near historic low levels for this time of year with a flow of 2,088  $m^3$ /sec at the Qualark water station on August 24<sup>th</sup> (26% below

average for this time of year). The discharge is predicted to continue tracking below average, with a forecast discharge of 1,821 m<sup>3</sup>/s by August 30<sup>th</sup>.

## 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 have distributed 9 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 & Pink 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 25<sup>th</sup>, 2017) and the Fraser River Panel meeting from the same day.

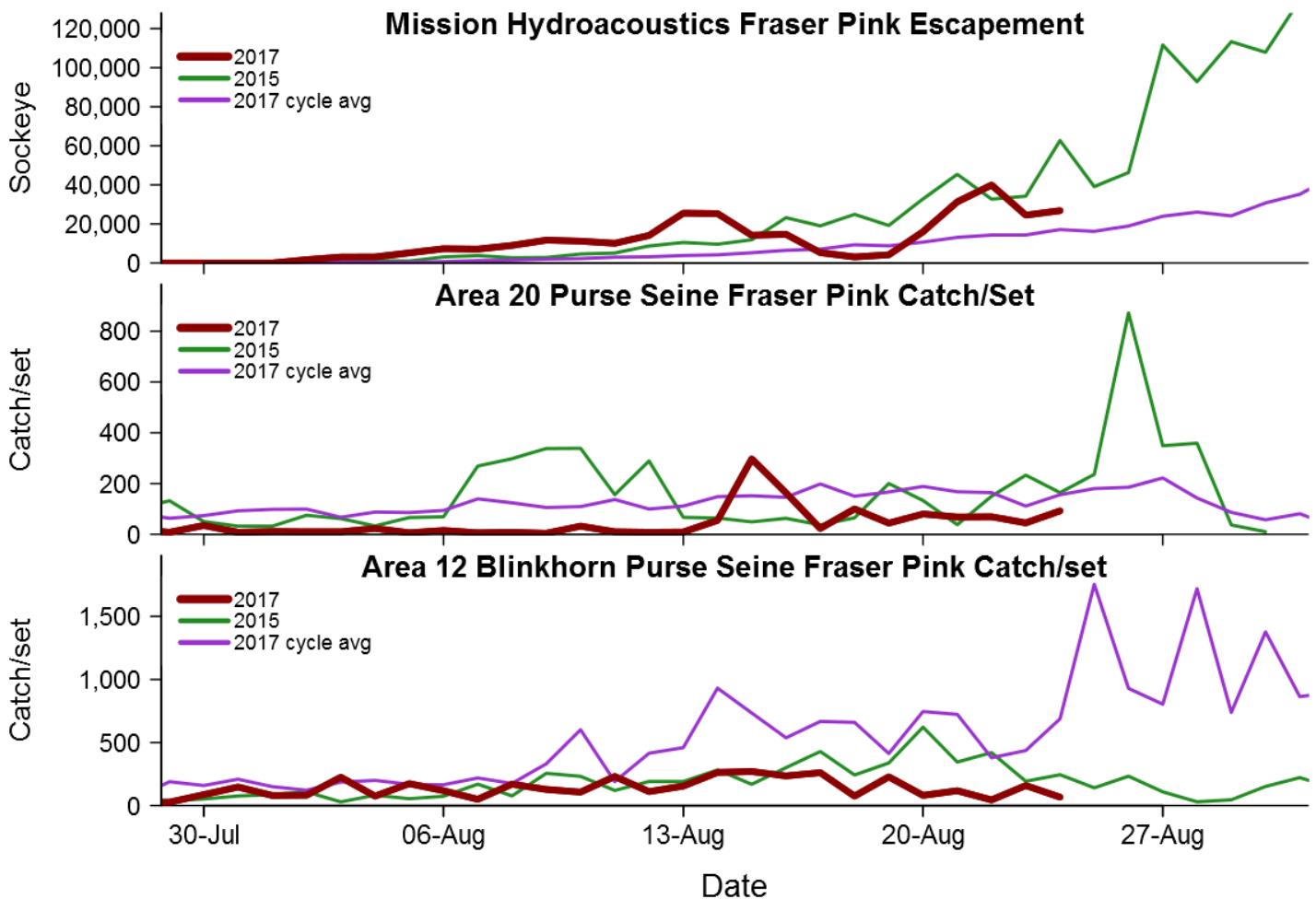
The Fraser River Panel adopted an **in-season run size of 1,000,000 Summer run sockeye**, with no other recommendations on adjusting in-season run sizes for Early Summers or Lates. There is no TAC at these abundances, and First Nations fisheries will be managed under the LAER (Low Abundance Exploitation Rate). FSC fisheries throughout the marine approach and in-river, are being managed to a 10% LAER for Early Stuart, Early Summer, and Summers, while the Late aggregate will be managed to a 20% LAER. There is no explicit allocation of the LAER between groups (Marine, Lower Fraser, BC Interior), but DFO is using a proportional communal licence amount method to guide fisheries management by dividing the LAER for operational purposes.

**A total of 1,114,200 Fraser sockeye has been accounted-to-date past Mission, comprised of almost 46,400 Early Stuart sockeye, 153,500 Early Summer run sockeye, 848,000 Summers, 66,300 Lates and 343,500 Fraser pinks.** The abundance of sockeye catch in marine test fisheries is tapering off. Stock identification in the marine area shows the Summer Run continuing to dominate the recent samples, but the proportion of Late run sockeye in recent samples is likely indicating the end of the Fraser sockeye run, rather than a late bump of fish.

Fraser pink abundance is still uncertain, but is tracking below the P25 forecast. The early bump of pink migration has not continued over this week, and is now looking like it may have been the peak abundance. Pinks have shown up in the Mission hydroacoustic program, but are not showing up in similar abundance at the Qualark test fishery. This could mean that most of the pinks to date are staying in the lower Fraser.

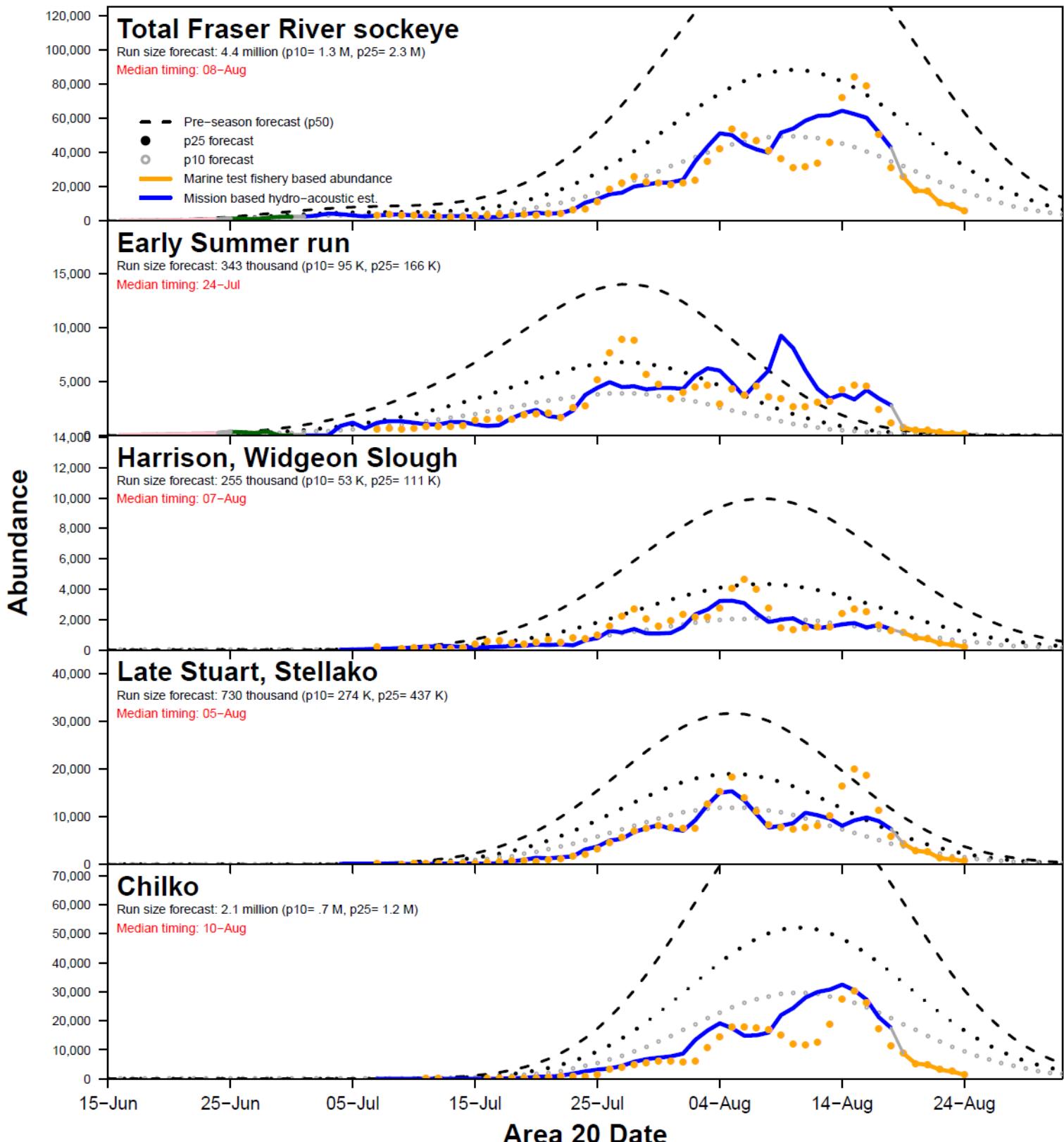
There has been a US Pink fishery for Treaty Tribal fishers. These fishers are using reef nets, seines and gillnets to harvest pinks, with incidental catch of sockeye. There has not been consistent effort in this fishery, and total catch has been low to date.

Test fishing graphs (sockeye and pink salmon), Mission hydro-acoustics and Daily Migration information from the PSC distribution package are below, please note that some of the daily migration run timing curves show P10 as well as P25, P50 and P75, make sure to check the legend on each graph to read them accurately:



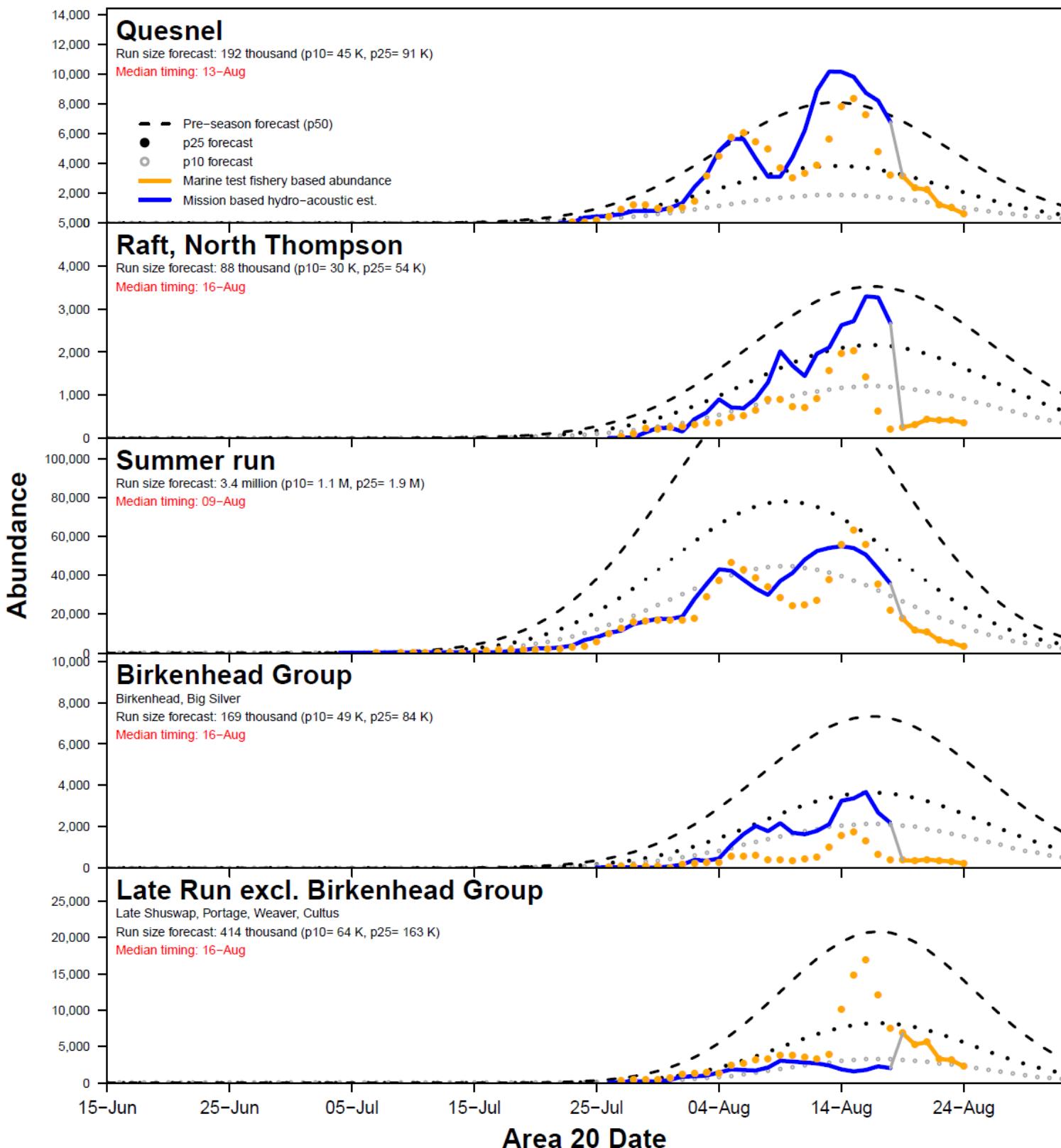
# 2017 Fraser River sockeye daily migration abundance

## Using median timing estimates



# 2017 Fraser River sockeye daily migration abundance

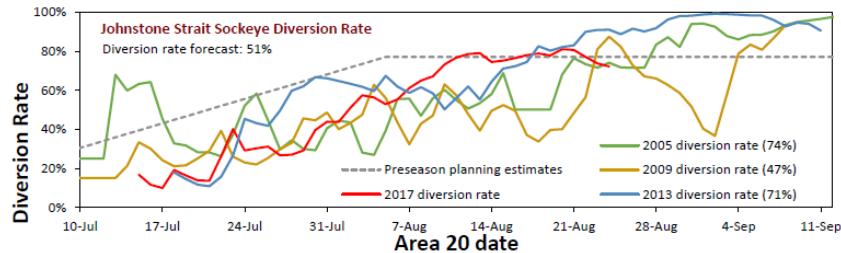
## Using median timing estimates



We've included the Johnstone Strait diversion graphs (following) to illustrate the pink salmon migration pattern. Migration through Johnstone Strait has come down to near preseason forecast amounts, in the 40-50% range over the past few days.

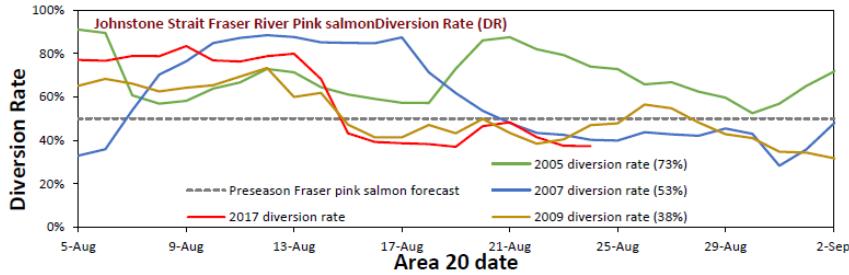
### 2017 Fraser River sockeye diversion rates through Johnstone Strait

Diversion rate	5-day average
Gillnet	#N/A
Purse Seine	72%



### 2017 Fraser River Pink salmon diversion rates through Johnstone Strait

	5-day-average
Total pink salmon	39%
Fraser pink salmon	37%



The next Fraser River Panel meeting is scheduled for noon on Monday August 29<sup>th</sup>.

## Weekly Technical Updates with FRAFS Biologist Mike Staley

### Thursday afternoons at 4:00pm

Beginning Thursday, July 13th at 4:00 pm, FRAFS Biologist Mike Staley will host weekly in-season teleconferences for First Nations. Mike will provide updates on current discussions from both the Pacific Salmon Commission Fraser River Panel (FRP) and FRP Technical Committee. Participants are welcome to ask questions.

#### Phone in:

**Tel: 1-866-512-0904 • Participant code: 4954972#**

#### GoToMeeting Link:

<https://global.gotomeeting.com/join/558627029>

#### PSC FRASER PANEL SCHEDULE:

**July 11, 14, 18, 21, 25\*, 28,  
August 1\*, 4, 8\*, 11, 15\*, 18, 22\*, 25, 28,  
September 1, 5, 8**

**Most dates above are calls, start time 11:00am. Dates marked in red are in-person meetings and begin at 10:30am (except the 28<sup>th</sup> which starts at noon)**

**The PSC provides a listen-in line for interested First Nations:**

**Canada 1-888-299-2873 • USA: 1-888-585-9008**

**Conference ID: 902-802-337**

## Links

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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