WATERSHED TALK
NEWSLETTER
Produced by the Fraser River Aboriginal Fisheries Secretariat

2018 FRASER SALMON UPDATE

By: Aidan Fisher, FRAFS Biologist

Welcome back to Sockeye season 2018. This is the first official 2018 Fraser Salmon Update in Watershed Talk. It is still early in the season, and the overall flow of information and picture will change rapidly over the next few weeks. No decisions have been made by the Fraser panel yet, but the early in-season information is looking better than the past few years.

For 2018, we will be summarizing the Fraser sockeye forecasts and the Fraser River Panel in-season adopted run sizes at the beginning of each update. We have not received much feedback on the format to date, if there is anything you consider important that has not been included and you would like to see presented and discussed please send me an email.

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

Sockeye Management Group	**Pre-Season Planning Forecast (P50)**	**In-Season Adopted Run Size**	**Area 20 Timing (for 50% of run)**
Early Stuart	84,000	**N/A (too early for run size update)**	**Preseason (July 2)**
Early Summer	2,155,000	**N/A (too early for run size update)**	**Preseason (August 8)**
Summer	4,344,000	**N/A (too early for run size update)**	**Preseason (Aug 11)**
Lates	7,398,000	**N/A (too early for run size update)**	**Preseason (Aug 17)**
TOTAL	**13,981,000**	**N/A (too early for run size update)**	**Preseason (Aug 14)**

On the environmental conditions side of things, current Fraser River temperatures are above average but below 18 degrees Celsius (when temperature begins to noticeably affect sockeye). Temperature is projected to increase over 18 degrees Celsius

over the weekend. Discharge Flows are slightly low for the time of year but within the range of expected flows. 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 (hot days can move the river temperature quickly).

Early Stuart proportional Management Adjustments (pMA) are being calculated at below average rates than forecasted. For Early Stuarts pMAs can be a substantial factor in Fraser salmon management. A reminder in how pMA's work, it is the factor applied to the escapement goal for the spawning grounds to be applied to the amount of fish required to pass through the marine waters and lower river (escapement goal x pMA = fish required for passage). It essentially accounts for en-route mortality of sockeye as they migrate up the Fraser to their spawning grounds, the model is informed by temperature and river discharge. The preseason pMA for Early Stuarts was 0.69, but current information is showing a substantially lower pMA of 0.46. A final in-season pMA has not been decided on by the Fraser Panel, but it will be an important part of management that we will keep a keen eye on. If the pMA is shifted substantially, there may be a few more Early Stuarts available to harvest.

Early Stuarts

The P50 pre-season forecast for Early Stuarts is 84,000. To date, the Mission hydroacoustic passage has accounted 75,000 sockeye. The hydroacoustic data shows the Early Stuart run tracking closer to the p75 forecast line, but there is still significant uncertainty in the in-season information. It was noted that on the Fraser Panel call next week there will be a much better idea of the in-season run for Early Stuarts. The test fishery information shows similar trends, at or above p50 for Early Stuarts. It is still too soon for an in-season run size adoption by the Fraser Panel, but it looks like there are more Early Stuarts than the preseason forecast at p50 provided the trends hold over this weekend.

Currently, DFO is maintaining management of Early Stuarts using the Lower Abundance Exploitation Rate (LAER), for Early Stuarts it is 10% of the run-size. In absence of an in-season run-size, the preseason forecast is used which provides 8,400 sockeye for the LAER. Of which 7,488 are available for FSC sharing and the remainder of the LAER are set aside for the test fisheries.

Additionally, some work being done by researchers on Early Stuarts indicates greater than average fat content, and body size. This could be indicative of greater ocean productivity, but results are preliminary. More information will be available as the work continues.

Early Summers

Early Summers are forecasted at 2,155,000 (P50). It is still too early for an in-season run size estimate for this management group.

Summer Run

Summers are forecasted at 4,344,000 (P50). It is still too early for an in-season run size estimate for this management group.

Late Sockeye

Lates are forecasted at 7,398,000 (P50). It is still too early for an in-season run size estimate for this management group.

Sockeye Closures

The Early Stuart window closure is in place for the Fraser River and the marine approach area. The dates for each region are in the table below, from the 2018-2019 Southern Salmon IFMP (p. 392):

Area	Start (date, time)	End (date, time)	Management Action
Areas 111, 121, 123 to 127	Open 15-Jul, 7 days/week		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Sn, Gn, Tr)
Area 11	Open 15-Jul, 7 days/week		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); July 25 (Sn)[1,2]
Area 12	Open 15-Jul, 7 days/week		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); July 25 (Sn)[1,2]
Area 13	Open 15-Jul, 7 days/week		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); July 25 (Sn)[1]
Areas 14 to 16	Open 15-Jul, 7 days/week		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); Aug 15 (Sn)[1]
Areas 17, 19, 20 and 21	Open 15-Jul, 7 days/week		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Sn, Gn, Tr)
Areas 18 and 29	27-Jun Noon	20-Jul Noon	Earliest potential opening to FNs FSC fishing for Fraser sockeye = July 20, noon
Steveston-Mission Bridge	27-Jun Noon	20-Jul Noon	
Mission Bridge-Sawmill Cr	29-Jun 6:00 AM	22-Jul 6:00 AM	Earliest potential opening to FNs FSC fishing for Fraser sockeye = July 22, 6am
Sawmill Cr-Texas Cr	04-Jul 6:00 PM	25-Jul 6:00 PM	FN's FSC: Open to selective fishing for chinook (dip net, angling and potential for 8" mesh gill net) and open in tribs for sockeye and chinook.
Texas Cr-Kelly Cr	04-Jul 6:00 PM	25-Jul 6:00 PM	
Kelly Cr-Deadman	04-Jul 6:00 PM	25-Jul 6:00 PM	
Deadman-Chilcotin	09-Jul 6:00 PM	30-Jul 6:00 PM	FN's FSC: Open to selective fishing for chinook (dip net, angling) and open in tribs for sockeye and chinook.
Chilcotin-Quesnel	09-Jul 6:00 PM	30-Jul 6:00 PM	
Quesnel-Hixon	09-Jul 6:00 PM	30-Jul 6:00 PM	
Hixon-Prince George	12-Jul 6:00 PM	02-Aug 6:00 PM	FN's FSC: Open to selective fishing for chinook (dip net and 8" mesh gill net) and open in tribs for sockeye and chinook.
Prince George-Stuart R	12-Jul 6:00 PM	02-Aug 6:00 PM	FN's FSC: some allowable harvest in terminal areas.

[1] Gear restrictions remain in place to protect Sakinaw sockeye until July 25 (Queen Charlotte and Johnstone Straits) and August 15 (northern Strait of Georgia).

[2] Additional sockeye closures will remain in place in portions of Areas 11 and 12 until late July in waters north of Lewis Point to protect Nimpkish sockeye.

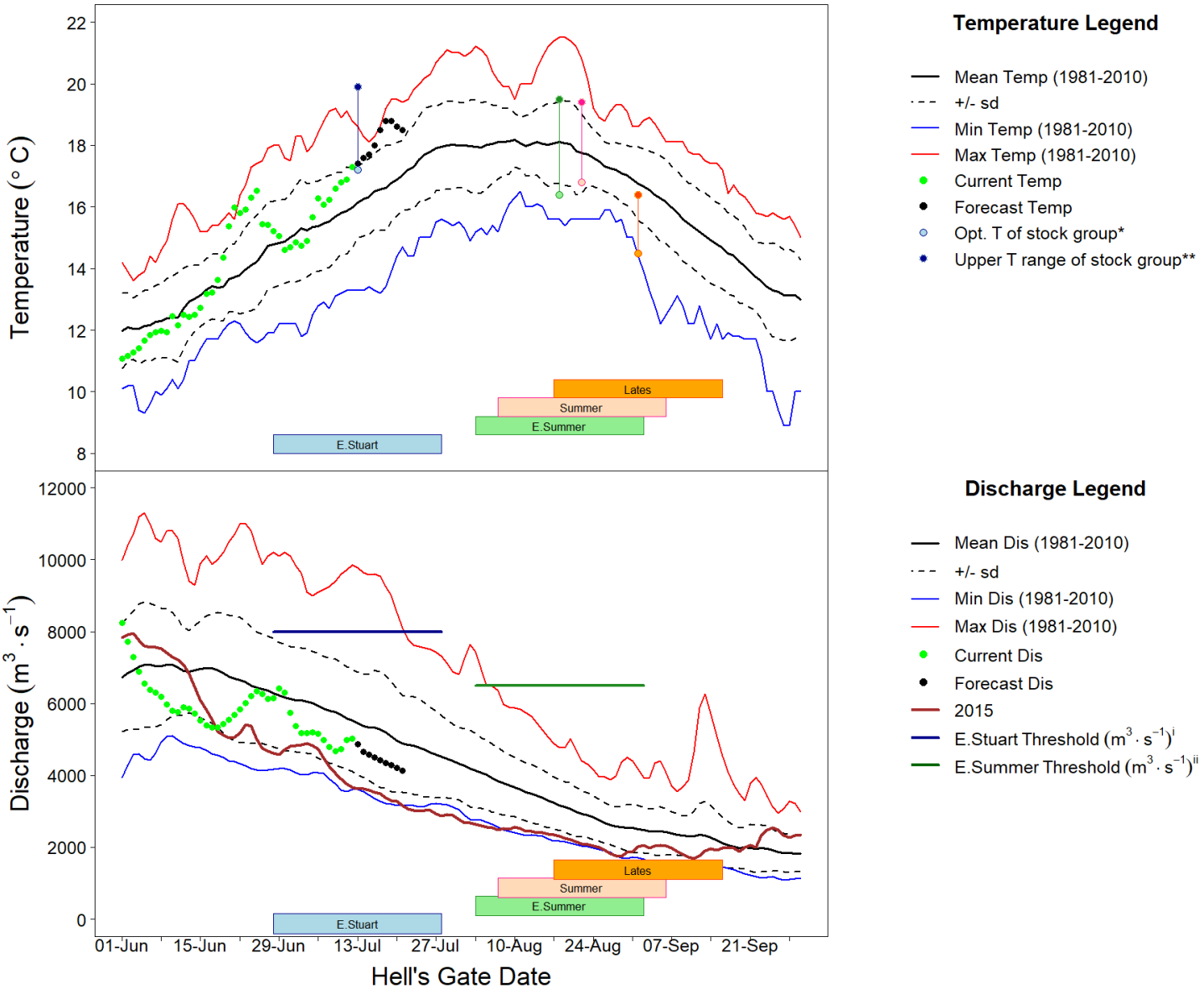
Fraser River Conditions

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 13th, 2018):



The Fraser River water temperature at Hope is currently 17.3 degrees Celsius (1.3 degrees Celsius above average for this time of year), and is forecast to increase to 18.8 degrees Celsius by July 18th. The Fraser River discharge is within the usual annual differences at 5,021 m^3/sec at the Qualark water station on July 12th (9% below average for this time of year). The discharge is predicted to continue tracking below average but within the usual annual variation, with a forecast discharge of 4,355 m^3/sec by July 18th.

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 11 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 (July 13th, 2018) and the Fraser River Panel meeting from the same day.

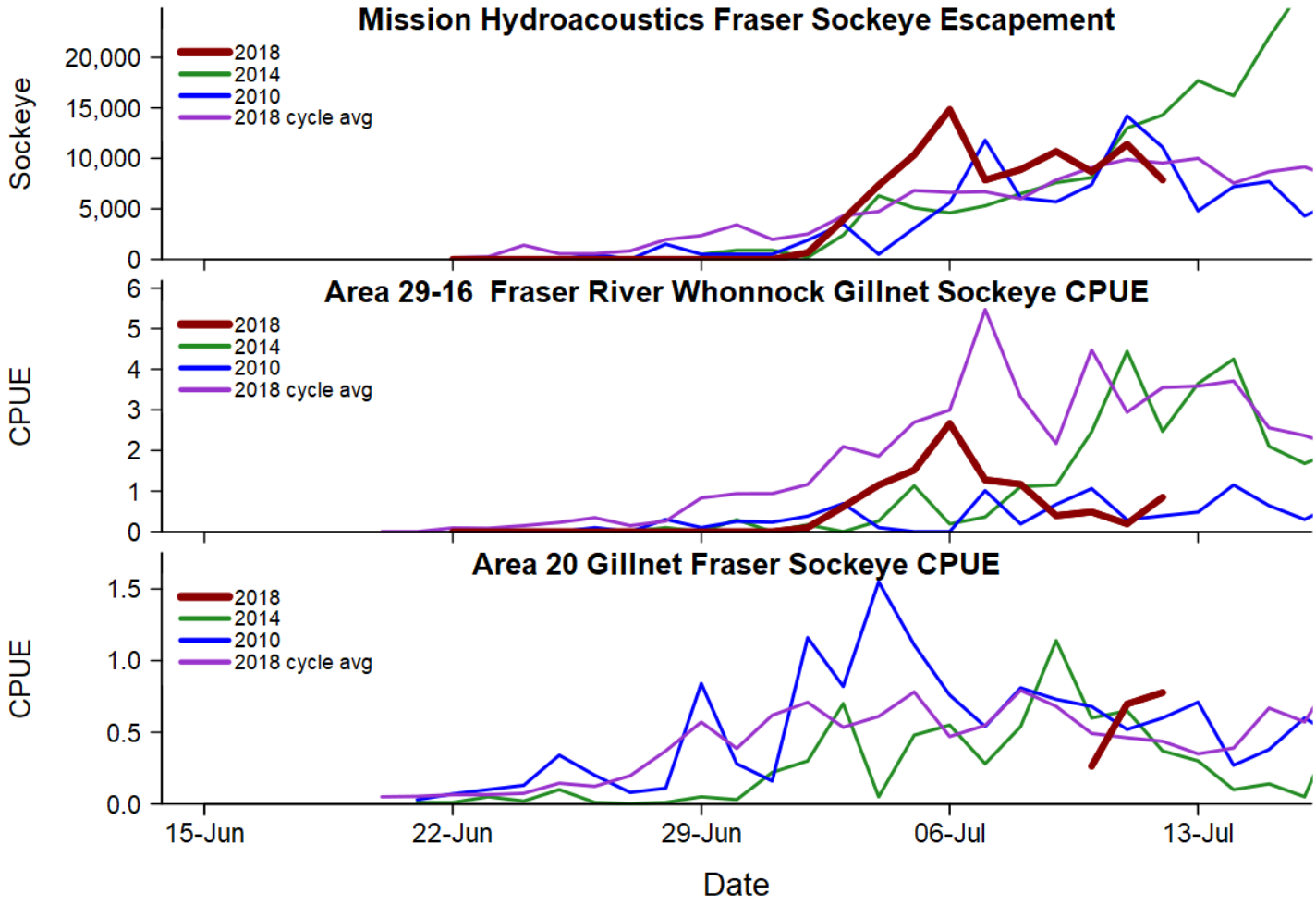
Stock Identification

Marine test fisheries to date are almost exclusively Fraser bound sockeye (90% Fraser in marine test fisheries), in addition a few early Thompson fish have been identified which has been noted as surprisingly early for their stock group. Marine test fisheries are showing fewer proportions of Early Stuart and a growing amount of Nadina sockeye. In-river test fisheries are still showing majority Early Stuart sockeye with a few Nadina sockeye. Samples sizes have been growing as test fishery catches increase, which means that there is more certainty in the estimates of stock identification.

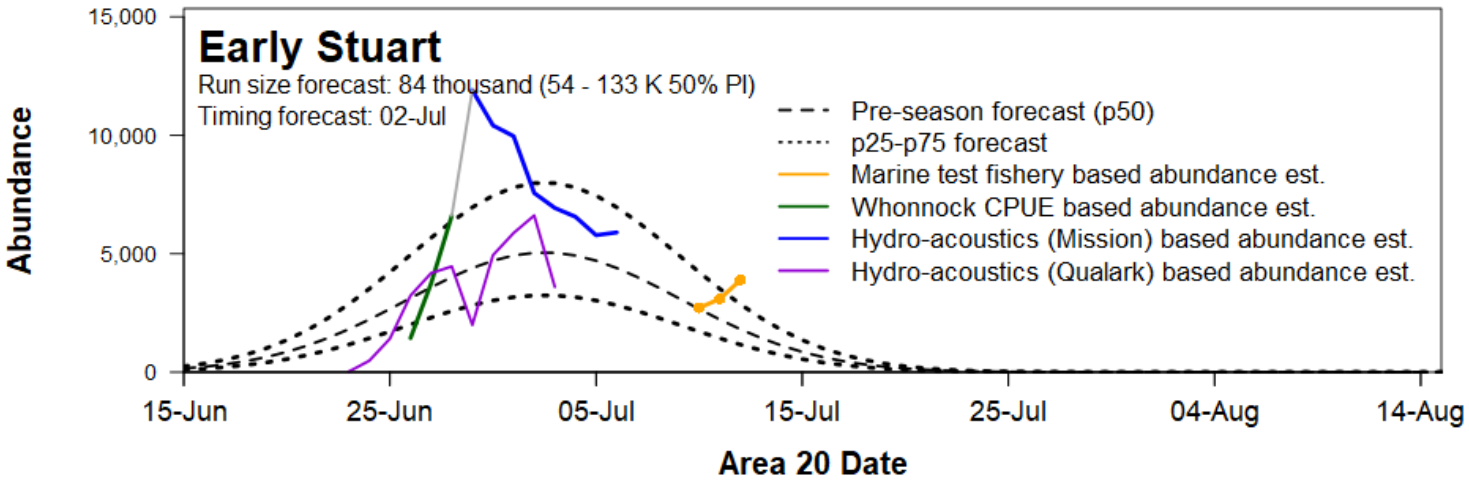
Test Fisheries

Test fisheries (gillnet) are in place in the Fraser River and one marine-approach (Strait of Juan de Fuca and Johnstone Strait). Hydroacoustics programs are in operation at Mission and Qualark (Yale). A total of 92,500 Fraser sockeye have been accounted-to-date, comprised of 75,000 Early Stuart sockeye, 17,500 Early Summer run sockeye. Test fishery catch to date has been 300 Early Stuarts and 200 Early Summers.

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 11AM Tuesday July 17th.

Fraser River Panel Schedule:
July 6, 10, 13, 17, 20, 24, 27 (Tuesdays and Fridays) 11am
July 31 (Tuesday), August 7, 14, 21 (all Tuesdays) 10:30am
August 3, 10, 17, 24, 31 (all Fridays) 11 am
September 4, 7, 11, 14 (Tuesdays and Fridays) 11am (TBC)

Canada dial-in: 1-888-299-2873
(USA dial-in: 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

Pacific Salmon Commission Website: www.psc.org

Pacific Salmon Commission Test Fisheries: 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

For more information contact Aidan Fisher and/or Pete Nicklin by email: pnicklin@telus.net, Aidan.Fisher@lffa.ca