

File: 71007

**DRAFT AGENDA
PACIFIC SALMON COMMISSION
FRASER RIVER PANEL
Friday July 28, 2023 at 11:00 am.
Via Zoom Webinar
<https://psc-org.zoom.us/j/88416242194>**

- 1) Roll Call (Panel and Tech members, others please email [Julie, ehrmantraut@psc.org](mailto:Julie_ehrmantraut@psc.org))
- 2) Webinar Etiquette:
 - a) Mute Phone: Please mute phone unless you are asking a question
 - b) Chat feature: Please use for questions regarding the distribution only
- 3) Agenda
- 4) Run status of Fraser River sockeye salmon relative to forecasts and adopted run sizes PSC Staff
- 5) In-season data flow for updating objectives PSC staff
 - a) Test fishing catches and acoustics
 - b) Mission and Qualark comparisons: Total salmon and sockeye
 - c) Stock proportions
 - d) Environmental conditions
 - e) Big Bar update
 - f) Observations from the watershed DFO
- 6) Assessments and recommendations PSC Staff
 - a) Migration graphs, escapement projections, run size assessments
- 7) Review any decisions on staff recommendations Panel
- 8) Other Business Panel
 - a) Weekly Report
- 9) Next FRP Meeting, Tuesday August 1, 11:00 a.m. via Zoom Webinar Panel
 Next Technical Committee meeting, Thursday August 3, 1:00 p.m. via Zoom TC

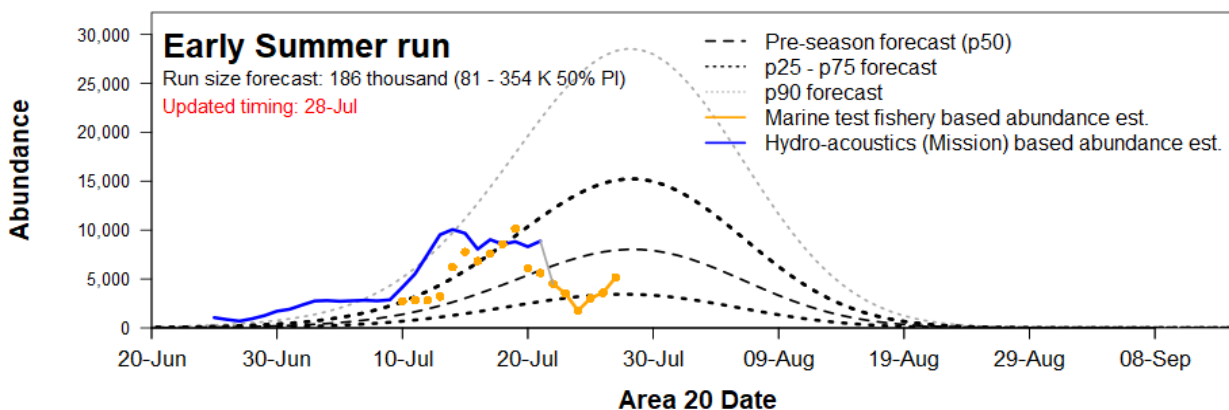
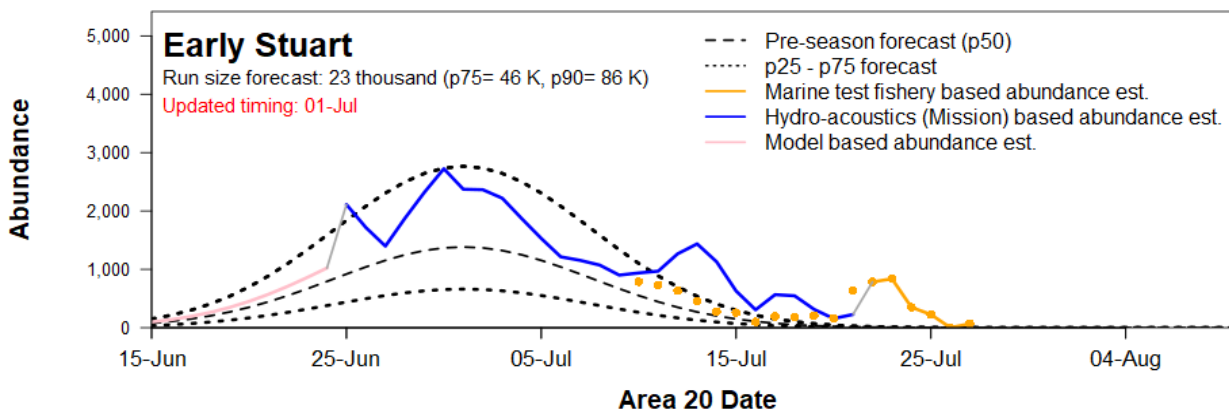
2023 Run status of Fraser sockeye and pink salmon

Date: Jul. 28, 2023

The information presented in this distribution has been prepared by PSC Secretariat staff and should be considered preliminary until reviewed by the Fraser River Panel

Week of: Jul. 23 - Jul. 29, 2023	Sockeye				Pink	
	Management Group				Total Fraser	Total Fraser
	E.Stuart	E.Summer	Summer	Late		
Mission passage (incls Pitt, Alouette, Coquitlam)	39,900	129,900	12,100	300	182,200	0
Catch downstream of Mission	200	1,900	700	0	2,800	100
Accounted Run To Date	40,100	131,800	12,800	300	185,000	100
Run size adopted in-season ²	na	na	na	na	na	na
Run size forecasted pre-season	23,000	186,000	1,167,000	188,000	1,564,000	6,135,000
Area 20 timing adopted in-season	na	na	na	na	na	na
Area 20 timing expected pre-season	7-Jul	6-Aug	17-Aug	24-Aug	16-Aug	24-Aug
Johnstone Str. Diversion Rate	In-season 5-day average				61%	na
	Preseason forecast of annual rate:				67%	53%

² Run sizes are usually not adopted until after the peak of the run has passed through marine test fishery areas in Juan de Fuca and Johnstone straits.



2023 Fraser Sockeye Test Fishing & Escapement Summary

Area/Gear Location From A20	Johnstone Strait		Juan de Fuca Strait		Fraser River									
	A12 GN Round Is (-2 days)	A12 PS Blinkhorn (-1 day)	A20 GN* Port Renfrew (0 days)	A20 PS Port Renfrew (0 days)	A29-13 GN Cottonwood (+5 days)	A29-17 GN Brownsville Bar ¹	A29-16 GN Whonnock (+6 days)	Whon CPUE Estimate (+6 days)	Qualark GN Catch (+8 days)	Qualark Estimate ²	Method ³	Mission Hydroacoustics Estimate ⁴ (+6 days)	Method ⁵	Hells Gate Estimates ⁶ (+10 days)
7-Jul							0	0.00	8	2,845	RB x 2	4,600	S1+M+A2	No Count
8-Jul							0	0.00	3 **	1,256	RB + LB	4,500	S1+M+A2	No Count
9-Jul							0	0.00	1 **	1,715	RB + LB	5,000	S1+M+A2	0
10-Jul			57				0	0.00	2 **	2,253	RB + LB	5,400	S1+M+A2	0
11-Jul	1		129				3	0.28	4 **	3,372	RB + LB	3,600	S1+M+A2	0
12-Jul	6		90			20	0	0.00	5 (Two sets)	4,078	RB + LB	3,800	S1+M+A2	170
13-Jul	2		39				14	0.29	14 **	4,082	RB + LB	4,600	S1+M+A2	300
14-Jul	17		48			12	13	1.17	9 **	4,777	RB + LB	3,400	S1+M+A2	370
15-Jul	9		146			19	13	1.17	8 **	3,765	RB + LB	3,200	S1+M+A2	530
16-Jul	2		26			25	29	2.45	11 **	4,754	RB + LB	4,100	S1+M+A2	580
17-Jul	10		15			21	29	2.37	4 **	3,245	RB + LB	7,000	S1+M+A2	620
18-Jul	11		194			12	40	3.03	5 **	5,724	RB + LB	6,100	S1+M+A2	670
19-Jul	18		73			7	28	2.18	9 **	6,009	RB + LB	9,400	S1+M2+A2	900
20-Jul	10	67	72			7	18	1.48	10 **	7,528	RB + LB	11,800	S1+M2+A2	560
21-Jul	3	31	28	167		13	1	0.09	15 **	7,162	RB + LB	7,800	S1+M2+A2	1,580
22-Jul	3	62	69	28		50	0	0.00	6	4,652	RB + LB	9,000	S1+M2+A2	No Count
23-Jul	1	349	53	62 (5 sets)		48	2	0.17	12	7,054	RB + LB	8,000	S1+M2+A2	1,880
24-Jul	15	7 (4 Sets)	10	70		18	5	0.48	27 (5 sets)	8,566	RB + LB	11,500	S1+M2+A2	730
25-Jul	7	134	6	50		43	2	0.19	15 (5 sets)	9,079	RB + LB	9,200	S1+M2+A2	1,970
26-Jul	6	1,390	52	73	16	42	4	0.37	15	9,408	RB + LB	10,900	S1+M2+A2	1,880
27-Jul	15	106	60	127	9	40	2	0.17				8,900	S1+M2+A2	5,000
28-Jul														
29-Jul														

¹ Alternative Lower River Test Fishery - Southern Endowment Fund Project

² Qualark escapement estimate - does not include Chilliwack, Pitt, Harrison, Birkenhead, Big Silver, Weaver, and Cultus

³ Qualark source:

RB x 2 = Right-bank (RB) x 2

RB + LB = Right-bank (RB) + Left-bank (LB)

⁴ Mission escapement estimate - does not include Pitt

⁵ Mission source:

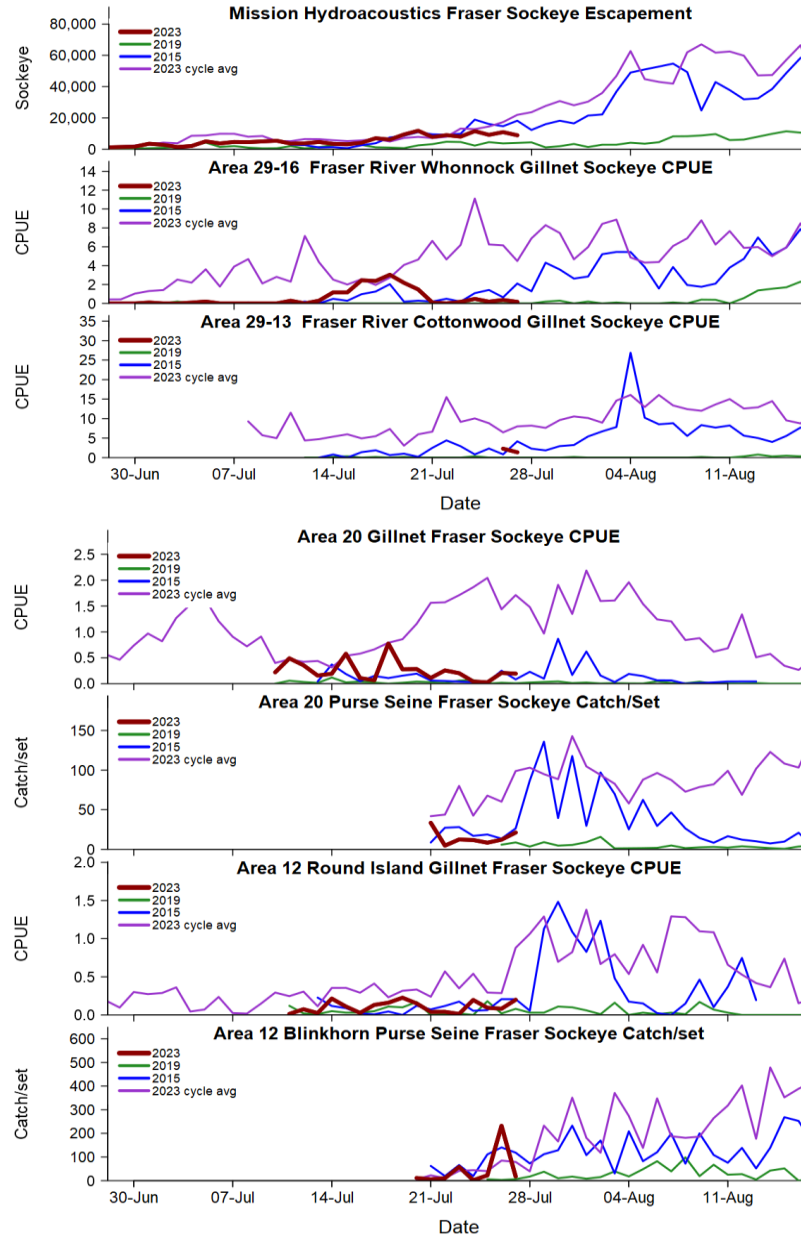
S1+M+A2 = Left bank split-beam (S1) + Mobile split-beam (M) + Right bank ARIS (A2)

S1+M2+A2 = Left bank split-beam (S1) + Mobile ARIS (M2) + Right bank ARIS (A2)

⁶ Daily Hells Gate abundance estimate; actual daily count has been expanded.

* Area 20 Gillnet - two boats fishing each day, unless specified otherwise. One boat is fishing with a 5" Alaska twist net, while the other is fishing a 5 1/8" multistrand net.

** Three sets performed for Qualark Gillnet



2023 Fraser Pink Test Fishing & Escapement Summary

Area/Gear Location From A20	Johnstone Strait		Juan de Fuca Strait		Fraser River				Fraser River			Mission Hydroacoustics		Hell's Gate
	A12 GN Round Is (-2 days)	A12 PS Blinkhorn (-1 day)	A20 GN * Port Renfrew (0 days)	A20 PS Port Renfrew (0 days)	A29-13 GN Cottonwood (+5 days)	A29-17 GN Brownsville Bar ¹	A29-16 GN Whonnock (+6 days)	Whon CPUE Estimate (+6 days)	GN Catch (+8 days)	Qualark Estimate ²	Method ³	Estimate ⁴ (+6 days)	Method ⁵	Estimates ⁶ (+10 days)
7-Jul							0	0.00	0	0	RB x 2	0	S1+M+A2	No Count
8-Jul							0	0.00	0	0	RB x 3	0	S1+M+A2	No Count
9-Jul							0	0.00	0	0	RB x 4	0	S1+M+A2	0
10-Jul			5				0	0.00	0	0	RB x 5	0	S1+M+A2	0
11-Jul	1		14				0	0.00	0	0	RB x 6	0	S1+M+A2	0
12-Jul	3		34			0	0	0.00	0	0	RB x 7	0	S1+M+A2	0
13-Jul	0		9			0	0	0.00	0	0	RB+LB	0	S1+M+A2	0
14-Jul	7		31			0	0	0.00	0	0	RB+LB	0	S1+M+A2	0
15-Jul	3		94			0	0	0.00	0	0	RB+LB	0	S1+M+A2	0
16-Jul	1		10			0	0	0.00	0	0	RB+LB	0	S1+M+A2	0
17-Jul	7		36			0	0	0.00	0	0	RB+LB	0	S1+M+A2	0
18-Jul	11		56			0	0	0.00	0	0	RB+LB	0	S1+M+A2	0
19-Jul	48		220			0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
20-Jul	24	302	45			0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
21-Jul	27	931	50	128		0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
22-Jul	9	549	281	410		0	0	0.00	0	0	RB+LB	0	S1+M2+A2	No Count
23-Jul	3	1,782	112	1344 (5 sets)		0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
24-Jul	24	69 (4 sets)	36	2,440		0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
25-Jul	11	927	34	1,150		0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
26-Jul	8	9,305	191	3,364	0	0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
27-Jul	19	3,334	136	10,148	0	0	0	0.00	0	0	RB+LB	0	S1+M2+A2	0
28-Jul														

¹ Alternative Lower River Test Fishery - Southern Endowment Fund Project

² Qualark escapement estimate - does not include Chilliwack, Pitt, Harrison, Birkenhead, Big Silver, Weaver, or Cultus

³ Qualark source:

RB x 2 = Right-bank (RB) x 2
 RB+LB = Right-bank (RB) + Left-bank (LB)

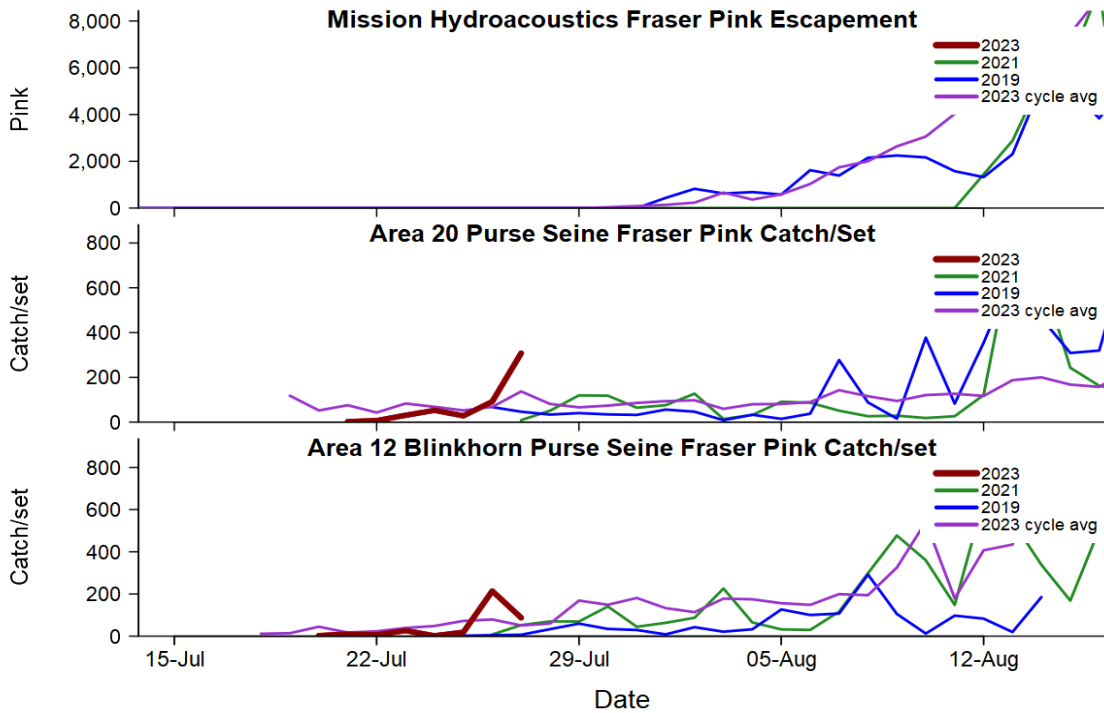
⁴ Mission escapement estimate - does not include Pitt

⁵ Mission source:

S1+M+A2 = Left bank split-beam (S1) + Mobile split-beam (M) + Right bank ARIS (A2)
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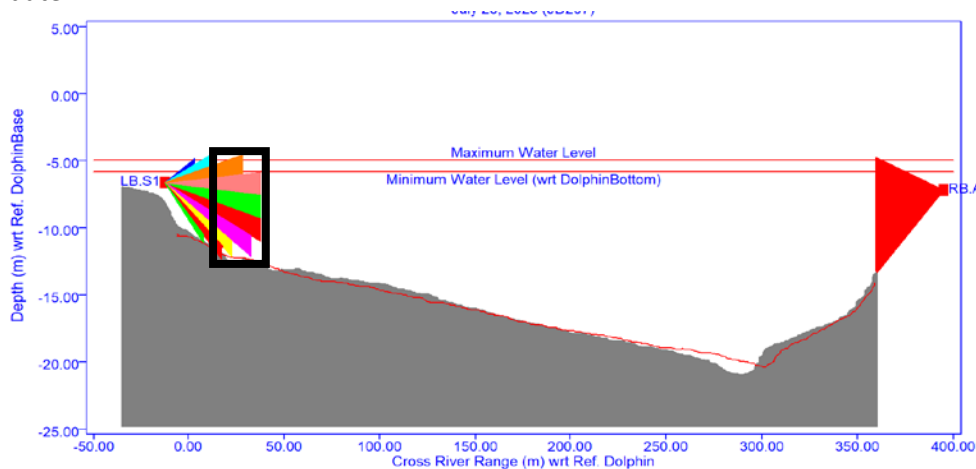
⁶ Daily Hells Gate abundance estimate; actual daily count has been multiplied by 2.

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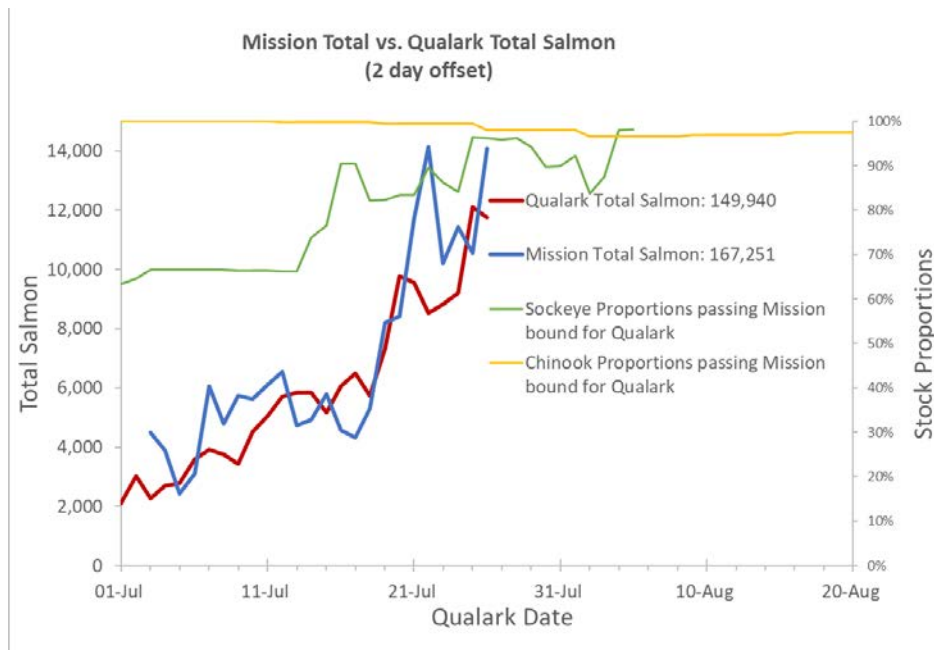


Mission Estimate Updates

- Historically, the mobile estimate covering the mid-section of the river is the most uncertain part of the Mission estimate¹. In 2023, the impact of the uncertainty and potential bias associated with the mobile split-beam estimate is larger compared to other years due to the higher offshore migration.
- Alternative mobile ARIS technology has been explored recently² but has not yet been used in-season to estimate offshore abundance as we have limited historic data (2022 onward).
- However, looking at the common area of overlap between the two shore based estimates and the two mobile estimates, the results indicate that the mobile splitbeam system is an underestimate and the mobile ARIS system might provide more accurate offshore estimates, based on information from 2022 and 2023 season to date.



- As a result, the mobile ARIS system has been adopted as the official offshore estimator from July 19 onwards. We will continue to closely monitor comparisons between all these systems.



¹ Conrad, B., A. Dufault, M. Hawkshaw, A. Huang, E. Jenkins, C. Lagasse, M. Lapointe, M. Litz, F. Martens, C. Michielsens, J. Scroggie, M. Staley, T. Whitehouse, C. Wor, and Y. Xie. 2019. Hydroacoustics Review Technical Summary. Pacific Salmon Comm. Tech. Rep. No 41: 369 p.

² Hornsby, R. et al. 2023. Mobile ARIS data update. April FRP presentation, Squamish, BC.

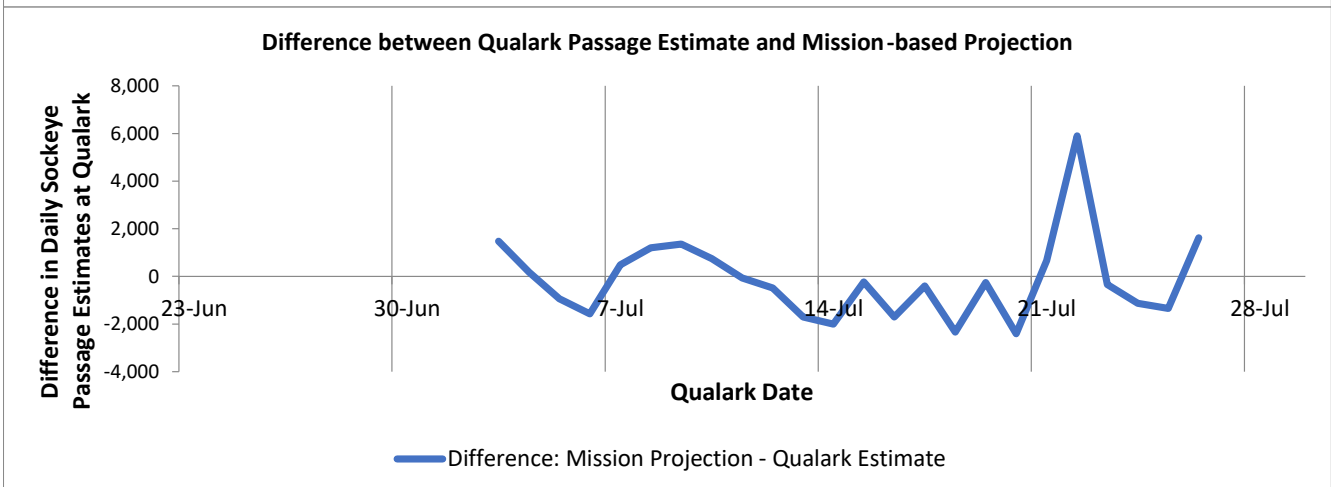
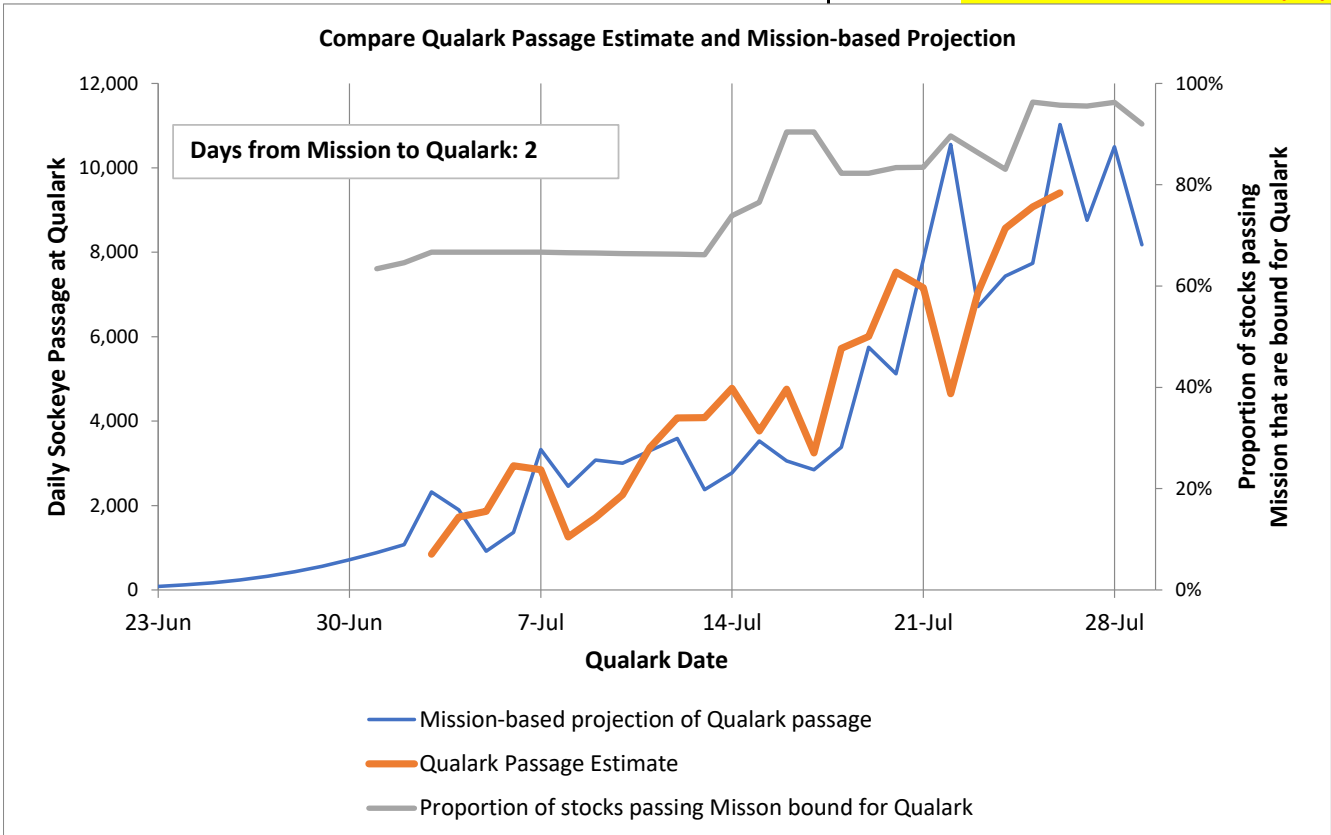
Fraser Sockeye: Qualark Passage Estimate and Mission-based Projection

Year: **2023**

Date: 28-Jul-23

Time: 9:51 AM

	All Days	Common Days
Mission projection	137,412	105,373
Qualark estimate	108,696	108,696
Difference		-3,324
%Difference		(3%)



2023 Fraser River Sockeye Salmon Stock identification Review

Recent stock composition estimates for sockeye salmon

Fishing						Fraser-only Stock Proportions by Reporting Group ⁴ (%)											Age (%)						
						Area/Gear ¹	Sector ²	Date	Type ³	Sample Size (n) %Fraser	Early Stuart	Early Summer				Summer				Late			Overall Stocks
											Early Stuart	Chilli-wack	Pitt Alouette	Nadina Bowron Gates Nahat-latch	Early Thompson	Early Summer sub-total	Harri-son	Widg-eon	Late Stuart	Stellako	Chilko Ques-nel	Raft North Thompson	Summer sub-total
Johnstone Strait & Queen Charlotte Strait																							
A12 ps	tf	Jul20-21	DNA	88	77%	5%	6%	4%	56%	4%	70%		21%	3%		24%					0%	38%	
A12 ps	tf	Jul 23	DNA	97	90%	2%	2%	1%	39%	2%	44%		32%	18%		50%				3%	3%	35%	
A12 ps	tf	Jul 25	DNA	100	87%	0%		6%	36%	6%	48%	1%	27%	22%		50%	2%				2%	48%	
A12 gn	tf	Jul 24	DNA	15	73%	0%		18%	55%	9%	83%		17%			17%					0%	NA	
A12 gnps		Jul 30	Prediction	1	94%	0%		2%	12%	2%	16%	1%	47%	36%		83%	1%				1%	NA	
Juan de Fuca Strait & Washington & Other																							
A20 ps	tf	Jul21-22	DNA	118	86%	0%	2%	8%	55%	3%	68%	6%	14%	11%		31%				1%	1%	26%	
A20 at	tf	Jul22-24	DNA	70	85%	6%	4%	22%	42%	4%	72%	9%	3%	5%	5%	21%					0%	35%	
A20 ps	tf	Jul 23	DNA	56	86%	0%	2%	11%	47%	12%	72%	4%	20%	4%		28%					0%	29%	
A20 ps	tf	Jul 25	DNA	45	89%	0%	5%	10%	36%	12%	63%	13%	12%	10%		34%	2%	0%			2%	33%	
A20 gnps		Jul 30	Prediction	1	94%	0%	1%	3%	8%	4%	15%	15%	43%	25%		83%	1%				1%	NA	
In-river																							
AB gn	tf	Jul24-25	DNA	6	100%	0%			50%		50%	17%	33%			50%					0%	50%	
BB gn	tf	Jul24-25	DNA	58	100%	0%	1%	4%	59%	9%	73%	2%	13%	11%		27%					0%	33%	
BB gn	tf	Jul 26	DNA	38	100%	0%	3%	13%	55%	3%	74%	5%	16%	2%		24%			3%		3%	29%	
Hop-Qua gn	tf	Jul23-24	DNA	19	100%	10%			84%		84%	5%				5%					0%	NA	

2023 Fraser River Pink Salmon Stock identification Review

Recent stock composition estimates for pink salmon

Fishing					DNA % Estimates by Group		
Area/Gear ¹	Sector ²	Date	Type ³	Sample Size (n)	Canada		
					Fraser River	Washington	South Coast
Johnstone Strait							
A12 PS	TF	Jul21	DNA	96	10%	15%	76%
A12 PS	TF	Jul24-25	DNA	96	7%	16%	77%
A12		Jul29	Prediction	1	17%	20%	63%
Juan de Fuca Strait							
A20 PS	TF	Jul24	DNA	95	12%	19%	69%
A20		Jul29	Prediction	1	19%	26%	55%
Washington							

Notes for sockeye and pink tables:

- ¹ BB GN=29_13 (Cottonwood,Brownsville), AT = Alaska Twist, AB GN=29_16 (Whonnock), MA FW=Matsqui Fish Wheel, QU GN=Qualark
- ² TF=sample from test fishery catch, CM=sample from commercial catch, C&S=ceremonial & subsistence catch, FSC=food, social, & ceremonial catch, rec= recreational catch
- ³ Predictions for sockeye are multinomial extrapolations of current year data to 5 days after the last observation; Predictions for pink salmon are projections of stock compositions based on historic and current data
- ⁴ Further information relating stock group descriptions to spawning ground locations and population definitions can be found at http://www.psc.org/FRPWeb/Escapement/PSC_Fraser_Sockeye_Stock_Group_Definitions.pdf

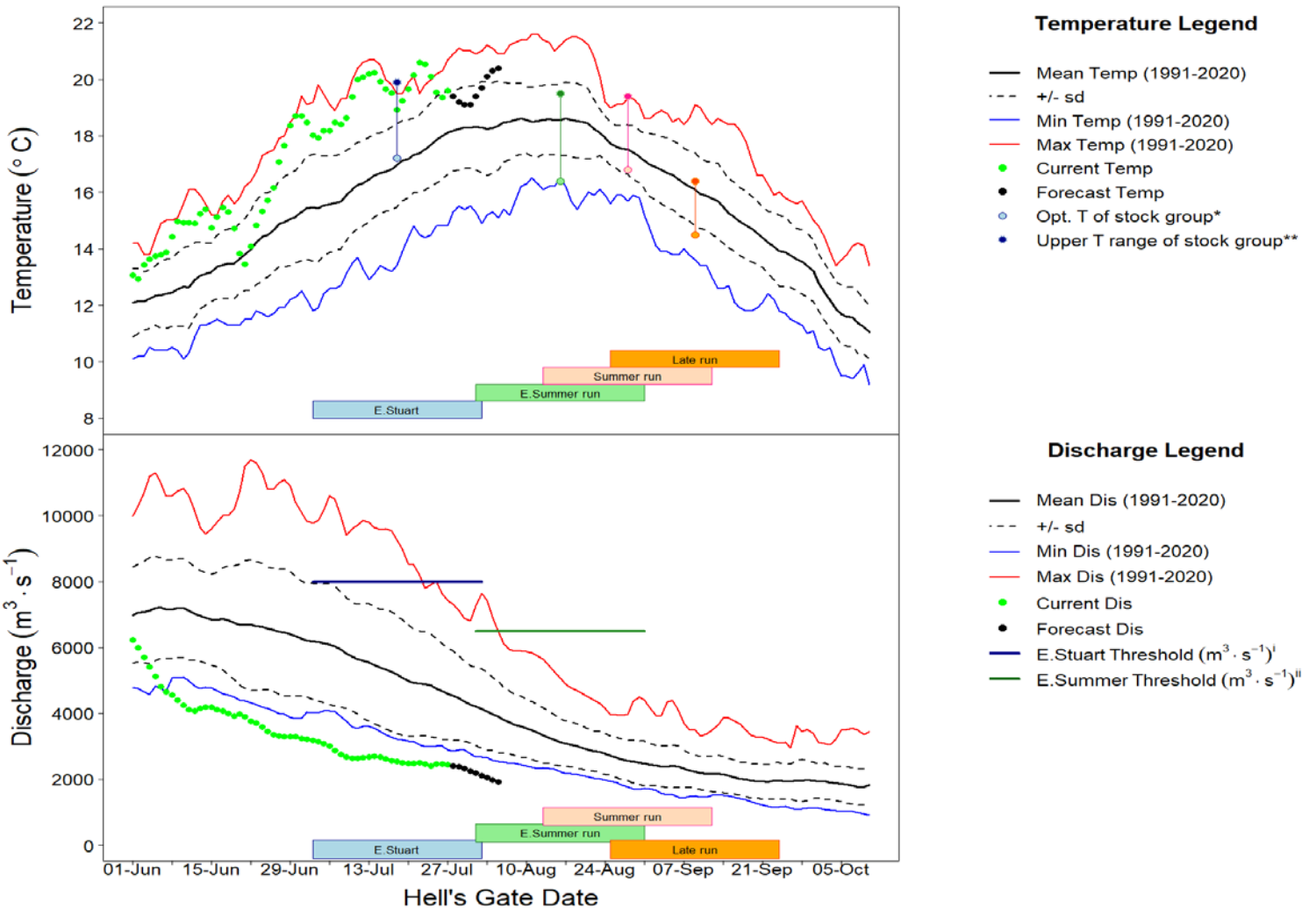
Results in grey text have been presented to the Panel previously

Observed Fraser River Temperature at Qualark for 27-Jul	19.6°C
Average (1991-2020) Historical Temperature on this day	18.1°C
Deviation from Average	1.5°C
Forecast Temperature for 02-Aug-23	19.7°C

The forecast in Kamloops is for below average air temperatures until July 28 and variable for the rest of the forecast period. The forecast for Prince George is for below average air temperature until Aug 1 and above average temperature for the rest of the forecast period.

Observed Fraser River Discharge at Hope for 27-Jul	2447 m ³ ·s ⁻¹
Average (1991-2020) Historical Discharge on this day	4591 m ³ ·s ⁻¹
% above or below Historical Discharge	-47%
Forecast Discharge for 02-Aug-23	2118 m ³ ·s ⁻¹

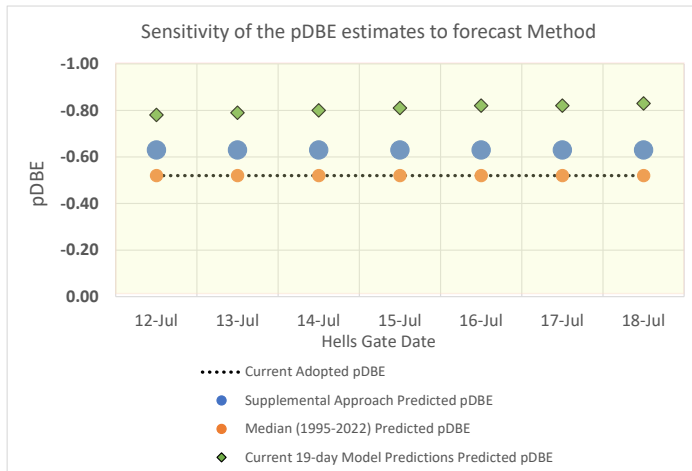
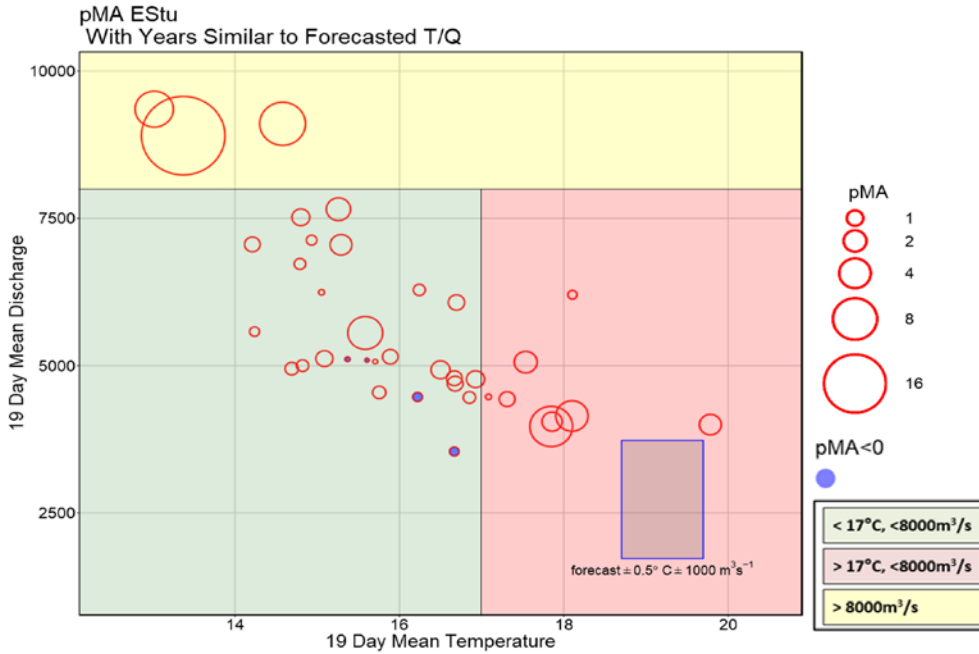
The forecast in Kamloops is for 8 mm precipitation. The forecast in Prince George is for 16 mm of precipitation.



Run timing bars represent a 31 day spread of the run centered around the Hell's Gate date. Hell's gate timing is 5 days from Mission for Early Stuart and Late run; and 4 days from Mission for Early Summer and Summer run. ⁱpMA is the proportional increase to spawning escapement targets to help ensure targets are achieved. ⁱⁱ%DBE is %difference between estimates of potential spawning escapement and spawning escapement. *This is the optimum temp for aerobic swimming - T_{opt} (Eliason et al. (2011). Science 332: 109-112)**This is the upper range of the optimum temp for aerobic swimming - T_{pejus}. ⁱDischarge threshold of 8000cms for Early Stuart from Macdonald (2000). Can. Tech. Rep. Fish. Aquat. Sci. 2315: 120p. ⁱⁱDischarge threshold of 6500cms for Early Summer run from Macdonald et al. (2010). Trans. Am. Fish. Soc. 139: 768-782. 19 days of T & Q data are required to calculate a pMA - 15 days before the Hell's Gate Date and 3 days after. MA estimates can be calculated 4 days after the Area 20 date.

Early Stuart pDBE Forecast and Sensitivity Analysis for July 28, 2023

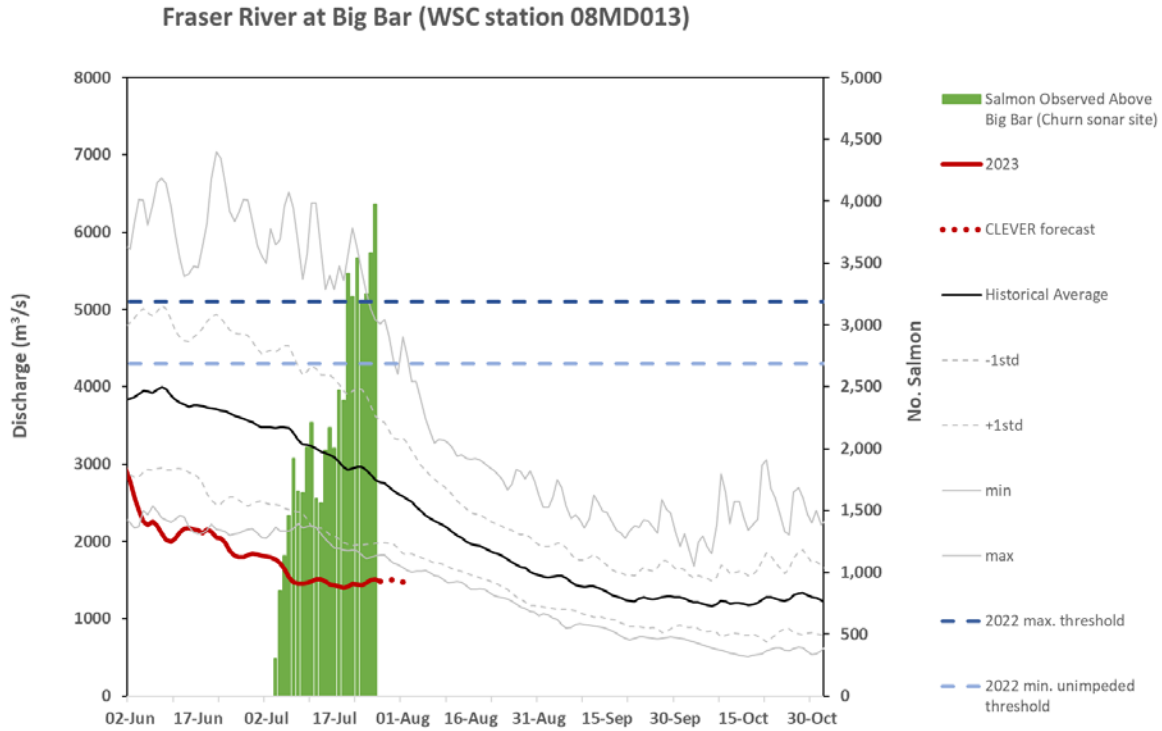
Based on the retrospective analysis evaluation of 2010-2021 for Early Stuart the best performing in-season model is the Supplemental Approach





Model Performance Based on "In-season pDBE Approach"				Retrospective				
				Best	2	3		
				Current Adopted	Supplemental Approach	Median (1995-2022)	Current 19-day Model Predictions	
Area	Hells Gate Date	Average Temperature °C	Average Discharge m ³ /s	pDBE	Predicted pDBE	Predicted pDBE	Predicted pDBE	
01-Jul	12-Jul	18.8	2966	-0.52	-0.63	-0.52	-0.78	
02-Jul	13-Jul	18.9	2930	-0.52	-0.63	-0.52	-0.79	
03-Jul	14-Jul	19.0	2891	-0.52	-0.63	-0.52	-0.80	
04-Jul	15-Jul	19.0	2851	-0.52	-0.63	-0.52	-0.81	
05-Jul	16-Jul	19.1	2809	-0.52	-0.63	-0.52	-0.82	
06-Jul	17-Jul	19.1	2768	-0.52	-0.63	-0.52	-0.82	
*	07-Jul	18-Jul	19.2	2730	-0.52	-0.63	-0.52	-0.83
Implied pMA								
*	07-Jul	18-Jul	19.2	2730	1.08	1.70	1.08	4.88

* Currently adopted timing with updated forecast information (19 observed and 0 forecast days)

Fraser River Discharge at Big Bar



Data made available by:  Environment and Climate Change Canada and  northwest hydraulic consultants

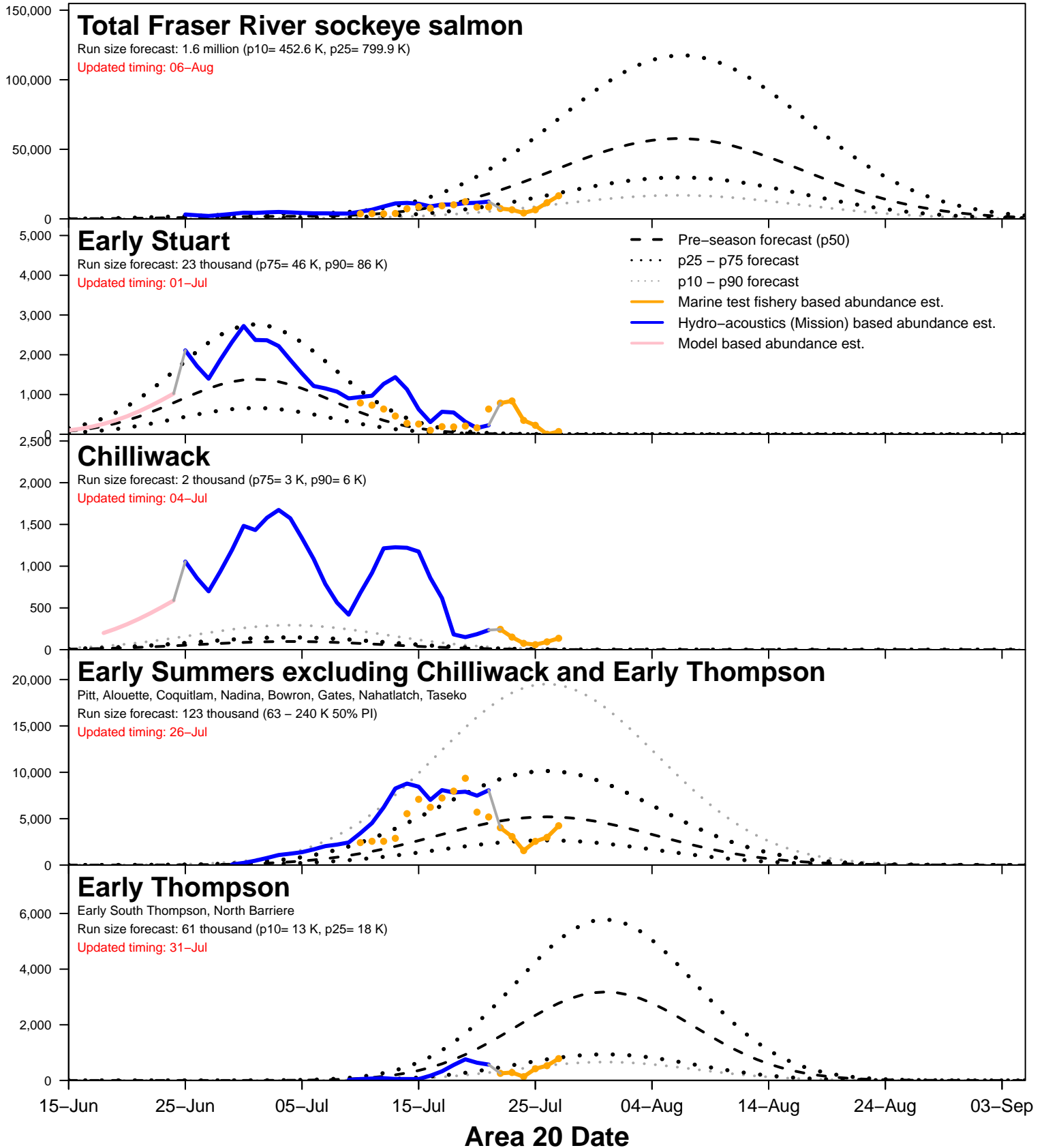
Migration passage at Big Bar

Big Bar Update

- There have been no upstream migration problems reported at Big Bar.
- A total of 51,522 salmon have been observed 40 km upstream of Big Bar (Churn Creek).
- A total of 64,986 salmon have been observed below Big Bar (Alfalfa).
- The Sonars will run throughout this weekend and the demobilization will take place next week.
- A total of 164 sockeye have been tagged (July 28 is the last day of tagging).

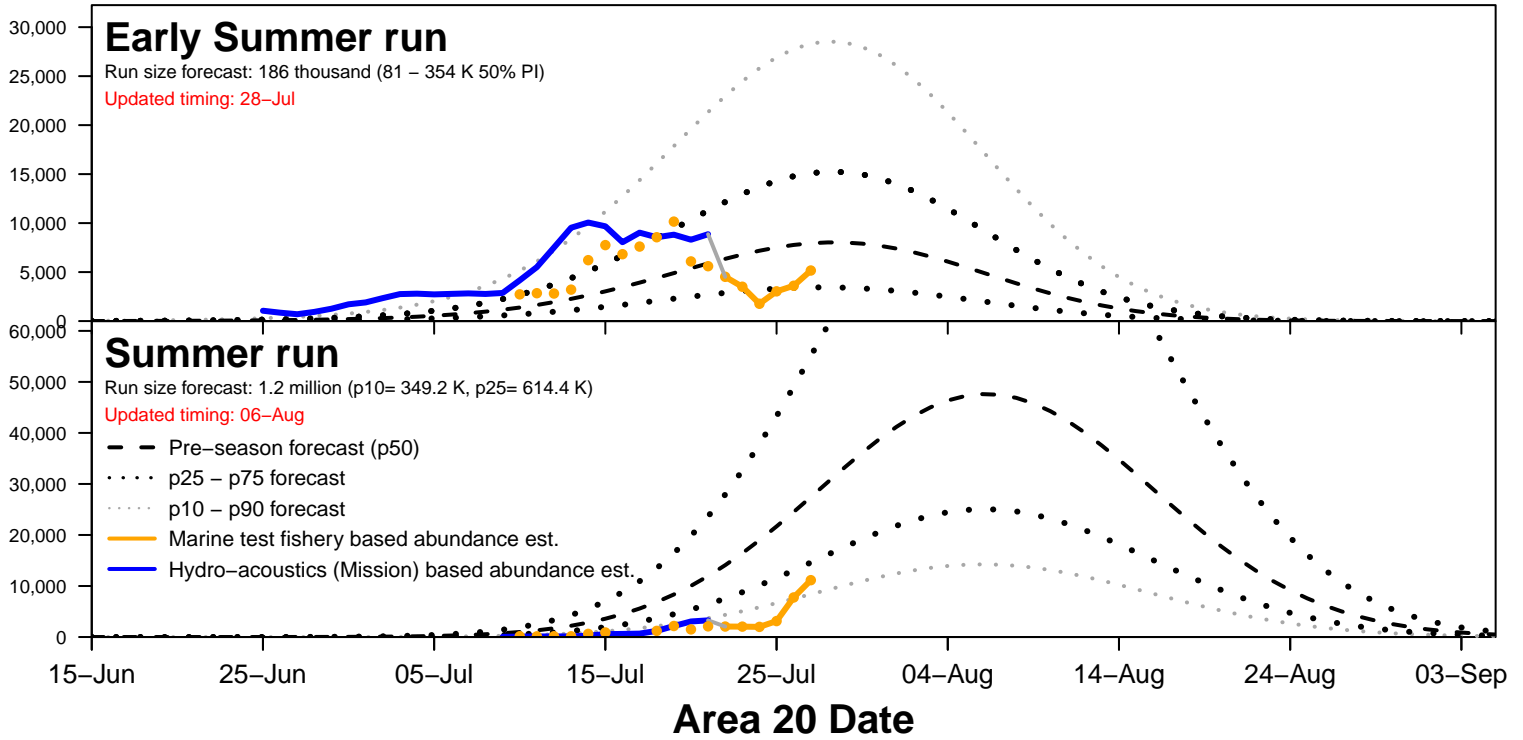
2023 Fraser River sockeye salmon daily migration

Timing updated based on Timing Correlations



2023 Fraser River sockeye salmon daily migration

Timing updated based on Timing Correlations



2023 Fraser River sockeye abundance en-route to Mission

Current date: 28-Jul

Area 20 date	Escapement past Mission through 27-Jul	Projected abundance en route to Mission based on marine test fishery data ^{1,2}							Total	80% PI ³		Escapement + projections through 02-Aug	
		22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul		29-Jul	30-Jul		31-Jul
Total Fraser	182,200	8,600	5,800	4,800	1,500	12,800	20,200	53,700	30,000	92,200	235,900		
Early Stuart	39,900	1,500	600	400	100	0	100	2,700	1,300	5,600	42,600		
Early Summer Run	129,900	5,700	3,500	1,000	400	7,400	2,800	20,800	10,200	43,100	150,700		
Chilliwack	28,000	200	200	0	0	100	100	600	300	1,200	28,600		
Pitt/Alouette/Coquitlam	14,800	1,500	1,000	300	100	1,500	400	4,800	2,400	9,900	19,600		
Nadina group ⁴	83,900	3,500	2,100	600	300	4,700	1,800	13,000	6,400	26,900	96,900		
Early Thompson ⁵	3,200	500	200	100	0	1,100	500	2,400	1,200	5,000	5,600		
Summer Run	12,100	1,400	1,700	3,000	900	5,200	16,900	29,100	17,800	41,900	41,200		
Harrison / Widgeon ²	1,800	600	500	300	300	900	1,300	3,900	2,400	5,600	5,700		
Late Stuart / Stellako	6,700	300	700	1,800	400	2,800	9,400	15,400	9,400	22,200	22,100		
Chilko / Quesnel	3,500	200	300	900	200	1,500	6,200	9,300	5,700	13,400	12,800		
Raft / North Thompson	100	300	200	0	0	0	0	500	300	700	600		

¹ En route catches are incomplete: catches from present and future fisheries must be deducted from projections and added to the catches removed

² Projected abundances en route to Mission include Harrison and Late runs, an uncertain number of which are expected to delay

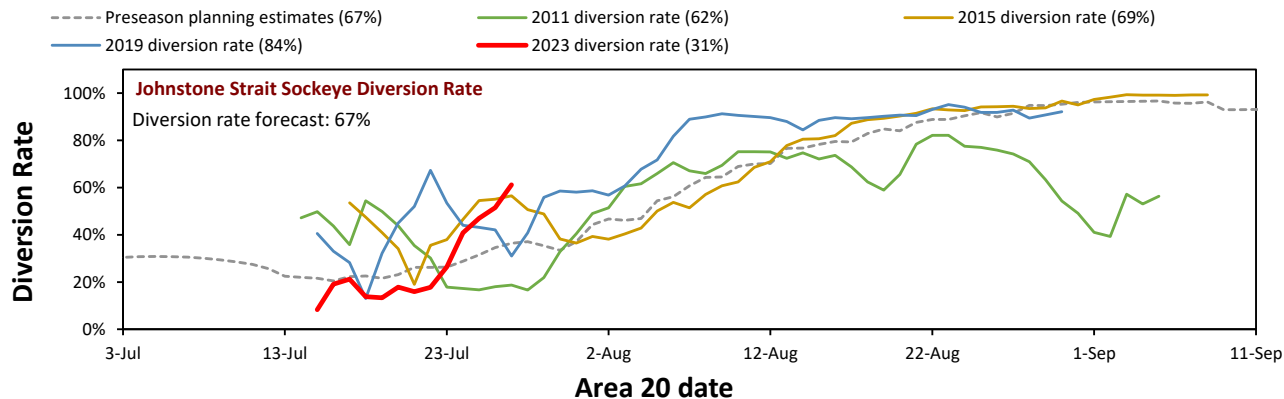
³ 80% Probabability Interval: there exists an 80% chance that the true abundance lies within this interval

⁴ Nadina / Bowron / Gates / Nahatlatch / Taseko

⁵ Early South Thompson / North Barriere

2023 Fraser River sockeye diversion rates through Johnstone Strait

	5-day-average
Diversion rate	61%



2023 Fraser River run size and timing estimates

The information presented on this page has been prepared by PSC Secretariat Staff. All in-season estimates of run size and timing should be considered draft preliminary estimates unless adopted by the Fraser River Panel.

Preseason forecasts, inseason estimates, and official estimates of run size and associated timing

	Run Size						Run size components			Run Timing ¹					
	Inseason Adopted	Preseason Forecast	Inseason estimate	Inseason 80% PIs ²		Method	Catch + Escapement	6-day Projection ³	Seaward Abundance	Inseason Adopted	Preseason Forecast	Inseason estimate	Inseason 80% PIs ²		Method
				10% PI	90% PI								10% PI	90% PI	
Early Stuart Run	NA	23,000	● 43,000	42,000	44,000	Recon	40,000	3,000	0	NA	07-Jul	02-Jul	02-Jul	03-Jul	Recon
Early Summer Run	NA	186,000					132,000	43,000		NA	06-Aug				
Chilliwack		2,000	✓ 29,000	28,000	29,000	Recon	28,000	1,000	0		20-Jul	04-Jul	04-Jul	04-Jul	Recon
Pitt/Nadina Group ⁴		123,000	▲ 186,000	124,000	265,000	Model	100,000	40,000	46,000		05-Aug	21-Jul	17-Jul	25-Jul	Model
Early Thompson ⁵		61,000					4,000	2,000			09-Aug	31-Jul			Timing Corr.

¹ Run timing refers to the date when 50% of the run migrated past the Area 20 reference point.

² 80% Probability Interval: there exists an 80% chance that the true abundance lies within this interval

³ Normally based on test fishery data. Based on Model if Method = Recon(2).

⁴ Pitt / Alouette / Coquitlam / Nadina / Bowron / Gates / Nahatlatch / Taseko

⁵ Early South Thompson / North Barriere.

Methods for run size & timing estimation

Model Run size assessment model (median)

Recon Catch + escapement + 6-day test fish projection + model seaward projection

Run Size Uncertainty Legend[†]

- ✓ ≥ 95% of the run size has been accounted for in catch + escapement. Clear indication of run size; minor run size updates still expected
- ≥ 70% of the run size has been accounted for in catch + escapement. Good indication of run size; peak fo the run has been observed at Mission, uncertainty relates to seaward abundance
- ▲ ≥ 50% of the run size has been accounted for in catch + escapement. Decent indciation of run size; ≥ 50% confirmed at Mission
- ◇ < 50% of the run size has been accounted for in catch + escapement. Uncertain or early indciation of run size based on marine data

[†] The Run Size Uncertainty Indicator is a categorical indication of the degree of uncertainty present in the run size estimate. Estimates are categorized quantitatively based on the proportion of the run that has been accounted for with high certainty in catch + escapement.

