

**Questions and/or Requests for Advice from FORUM Participants on Fraser Sockeye
Mar. 12, 2019**

Summary of Questions

1. Do you have any advice on how long the window closure for Early Stuart sockeye should be in 2019? Should there be an additional week added to protect the earliest stocks in the Early Summer aggregate?
2. The Department is seeking feedback on a sharing arrangement for Early Stuart sockeye. A proposal similar to 2018 will be put forward with modifications dependent on the 2019 Forecast for Early Stuart sockeye. Do you have any advice or suggestions for improvements on this proposal?
3. The Department will be seeking feedback on how to manage FSC sockeye fisheries for stocks other than Early Stuart sockeye when there is not enough Total Allowable Catch (TAC) for all to catch the amount as set out in licences issued by DFO.

**Information to support your discussions is provided on the following pages.
The 2019 forecast is on Page 5.**

Length of Early Stuart Window Closure (Question 1)

Do you have any advice on how long the window closure for Early Stuart sockeye should be in 2019? Should there be an additional week added to protect the earliest stocks in the Early Summer aggregate?

In some years, a one week extension of the Early Stuart closure is implemented with the aim of providing some protection to some of the earliest returning Early Summer sockeye (Bowron and Taseko for example). In addition to the window closure, considerations are being given for reducing test fishing activities during the earlier part of the Early Stuart migration. This may take the form of delaying the start of marine gill net test fisheries and/or reducing the number of test fish vessels.

Proposed end dates for a **THREE** and **Four** week window closure:

Area	Start Date	Start Time	3 Week End Date	4 Week End Date	End Time	Management Action
Areas 111, 121, 123 to 127	23-Jun		15-Jul	22-Jul		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Sn, Gn, Tr)
Area 11	23-Jun		15-Jul	22-Jul		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); July 25 (Sn) ^{1,2}
Area 12	23-Jun		15-Jul	22-Jul		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); July 25 (Sn) ^{1,2}
Area 13	23-Jun		15-Jul	22-Jul		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); July 25 (Sn) ¹
Areas 14 to 16	23-Jun		15-Jul	22-Jul		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Gn, Tr); Aug 15 (Sn) ¹
Areas 17, 19, 20 and 21	23-Jun		15-Jul	22-Jul		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 15 (Sn, Gn, Tr)
Areas 18 and 29	27-Jun	Noon	19-Jul	26-Jul	Noon	Earliest potential opening to FNs FSC fishing for Fraser sockeye = July 19, noon
Steveston-Mission Bridge	27-Jun	Noon	19-Jul	26-Jul	Noon	Earliest potential opening to FNs FSC fishing for Fraser sockeye = July 22, 6 AM
Mission Bridge-Sawmill Cr	28-Jun	6:00 AM	22-Jul	29-Jul	6:00 AM	Earliest potential opening to FNs FSC fishing for Fraser sockeye = July 22, 6 AM
Sawmill Cr-Texas Cr	03-Jul	6:00 PM	24-Jul	31-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	03-Jul	6:00 PM	24-Jul	31-Jul	6:00 PM	
Kelly Cr-Deadman	03-Jul	6:00 PM	24-Jul	31-Jul	6:00 PM	
Deadman-Chilcotin	09-Jul	6:00 PM	28-Jul	04-Aug	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	28-Jul	04-Aug	6:00 PM	
Quesnel-Hixon	09-Jul	6:00 PM	28-Jul	04-Aug	6:00 PM	
Hixon-Prince George	11-Jul	6:00 PM	02-Aug	09-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	11-Jul	6:00 PM	02-Aug	09-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.

Early Stuart Sockeye Sharing (Question 2)

The Department is seeking feedback on a sharing arrangement for Early Stuart sockeye. A proposal similar to 2019 will be put forward with modifications dependent on the 2019 Forecast for Early Stuart sockeye. Do you have any advice or suggestions for improvements on this proposal?

2019 Early Stuart FSC Sharing at P50 Forecast

Friday, March 8, 2019

Early Stuart Run Size (p25)	41,000
Total for FSC sharing (under LAER)	3,618

FN Group	Share of available FSC
Carrier-Sekani TC	738
Lheidli T'enneh	44
Carrier-Chilcotin	15
TNG; NSTC; Esket	443
Whispering Pines - High Bar	15
Stl'atl'imx Nation	738
NWSFA; NNTC	738
Above Port Mann	738
Below Port Mann	148
Marine	Incidental
Total	3,618

Implied Spawners to the Grounds

run - Catch	36,900
pMA	0.69
DBE	-40.83%
predicted DBE (# fish) = (run-LAER)*DBE	(15,066)
implied spawners to the grounds	21,834

2019 Early Stuart FSC Sharing at P25 Forecast

Friday, March 8, 2019

Early Stuart Run Size (p25)	27,000
Total for FSC sharing (under LAER)	2,358

FN Group	Share of available FSC
Carrier-Sekani TC	500
Lheidli T'enneh	29
Carrier-Chilcotin	9
TNG; NSTC; Esket	286
Whispering Pines - High Bar	9
Stl'atl'imx Nation	476
NWSFA; NNTC	476
Above Port Mann	476
Below Port Mann	95
Marine	Incidental
Total	2,358

Implied Spawners to the Grounds

run - Catch	24,300
pMA	0.69
DBE	-40.83%
predicted DBE (# fish) = (run-LAER)*DBE	(9,921)
implied spawners to the grounds	14,379

Appendix A: 2019 Sockeye Forecast by stock and timing group

Run timing group	Forecast Model ^a	Probability that Return will be at/or Below Specified Run Size				
		10%	25%	50%	75%	90%
Stocks						
Early Stuart	<i>Ricker (Ei)</i>	18,000	27,000	41,000	61,000	92,000
Early Summer		112,000	221,000	465,000	898,000	1,753,000
(total excluding miscellaneous)		76,000	140,000	277,000	557,000	1,059,000
Bowron	<i>Ricker (Pi)</i>	6,000	9,000	15,000	24,000	39,000
Upper Barriere (Fennell)	<i>PowerAge4 / SiblingAge5</i>	3,000	5,000	10,000	19,000	32,000
Gates	<i>Larkin</i>	12,000	22,000	41,000	81,000	152,000
Nadina	<i>MRJ</i>	29,000	59,000	129,000	283,000	576,000
Pitt	<i>LarkinAge4 / SiblingAge5</i>	13,000	20,000	34,000	57,000	90,000
Scotch	<i>LarkinAge4 / SiblingAge5</i>	4,000	9,000	19,000	38,000	75,000
Seymour	<i>LarkinAge4 / SiblingAge5</i>	9,000	16,000	29,000	55,000	95,000
Misc (EShu) ^b	<i>R/S</i>	30,000	68,000	156,000	253,000	448,000
Misc (Taseko) ^c	<i>R/S</i>	1,000	2,000	3,000	6,000	9,000
Misc (Chilliwack)	<i>Ricker</i>	2,000	5,000	17,000	59,000	195,000
Misc (Nahatlatch) ^d	<i>R/S</i>	3,000	6,000	12,000	23,000	42,000
Summer		1,553,000	2,454,000	3,930,000	7,048,000	11,187,000
(total excluding miscellaneous)		1,526,000	2,398,000	3,835,000	6,852,000	10,789,000
Chilko	<i>Power Juv (Pi)</i>	1,151,000	1,773,000	2,750,000	4,761,000	7,143,000
Late Stuart	<i>R1C</i>	6,000	14,000	39,000	105,000	256,000
Quesnel	<i>Ricker (Ei)Age4 / SiblingAge5</i>	100,000	177,000	333,000	687,000	1,207,000
Stellako	<i>Larkin</i>	175,000	261,000	368,000	572,000	848,000
Harrison ^e	<i>Ricker/Odd(Ei)</i>	71,000	140,000	293,000	646,000	1,205,000
Raft ^e	<i>Ricker(PDO)</i>	23,000	33,000	52,000	81,000	130,000
Misc (N. Thomp. Tribs) ^{e & f}	<i>R/S</i>	1,000	3,000	5,000	10,000	20,000
Misc (N. Thomp River) ^{e & f}	<i>R/S</i>	26,000	53,000	89,000	185,000	375,000
Misc (Widgeon) ^g	<i>R/S</i>	0	0	1,000	1,000	3,000
Late		111,000	189,000	359,000	669,000	1,265,000
(total excluding miscellaneous)		100,000	169,000	320,000	596,000	1,138,000
Cultus	<i>PowerJuv (Pi)</i>	0	0	1,000	2,000	3,000
Late Shuswap	<i>RickerCycAge4 / SiblingAge5</i>	11,000	26,000	61,000	140,000	325,000
Portage	<i>Larkin</i>	0	0	2,000	8,000	29,000
Weaver	<i>Ricker(PDO)Age4 / SiblingAge5</i>	7,000	13,000	27,000	55,000	116,000
Birkenhead	<i>Ricker (Ei)</i>	82,000	130,000	229,000	391,000	665,000
Misc Harrison/Lillooet ^g	<i>R/S</i>	11,000	20,000	39,000	73,000	127,000
TOTAL SOCKEYE SALMON		1,794,000	2,891,000	4,795,000	8,676,000	14,297,000
(TOTAL excluding miscellaneous)		1,720,000	2,734,000	4,473,000	8,066,000	13,078,000

a. See Table 4 for model descriptions

b. Misc. Early Shuswap uses Scotch & Seymour R/EFS

c. Misc. Taseko uses Chilko R/EFS

d. Misc. Nahatlatch uses Early summer-run stocks R/EFS

e. Raft, Harrison, Misc. North Thompson stocks moved to Summer run-timing group

f. Misc. North Thompson stocks use Raft & Fennel R/EFS

g. Misc. Late Run stocks (Harrison Lake down-stream migrants including Big Silver, Cogburn, etc.), and river-type Widgeon use Birkenhead R/EFS

Pre-season Run Timing Curves for 2019 Fraser Sockeye Salmon

