



2023 Escapement Planning

Fraser Sockeye and Pink Salmon



Photos by Maxime Veilleux

Presented to: JTWG/Forum.

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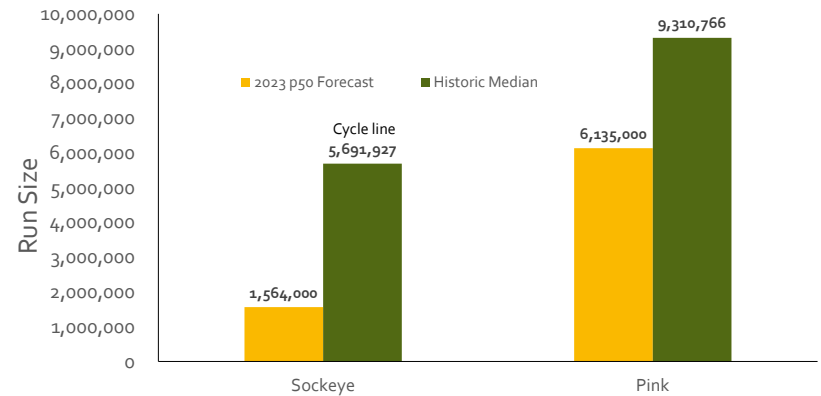
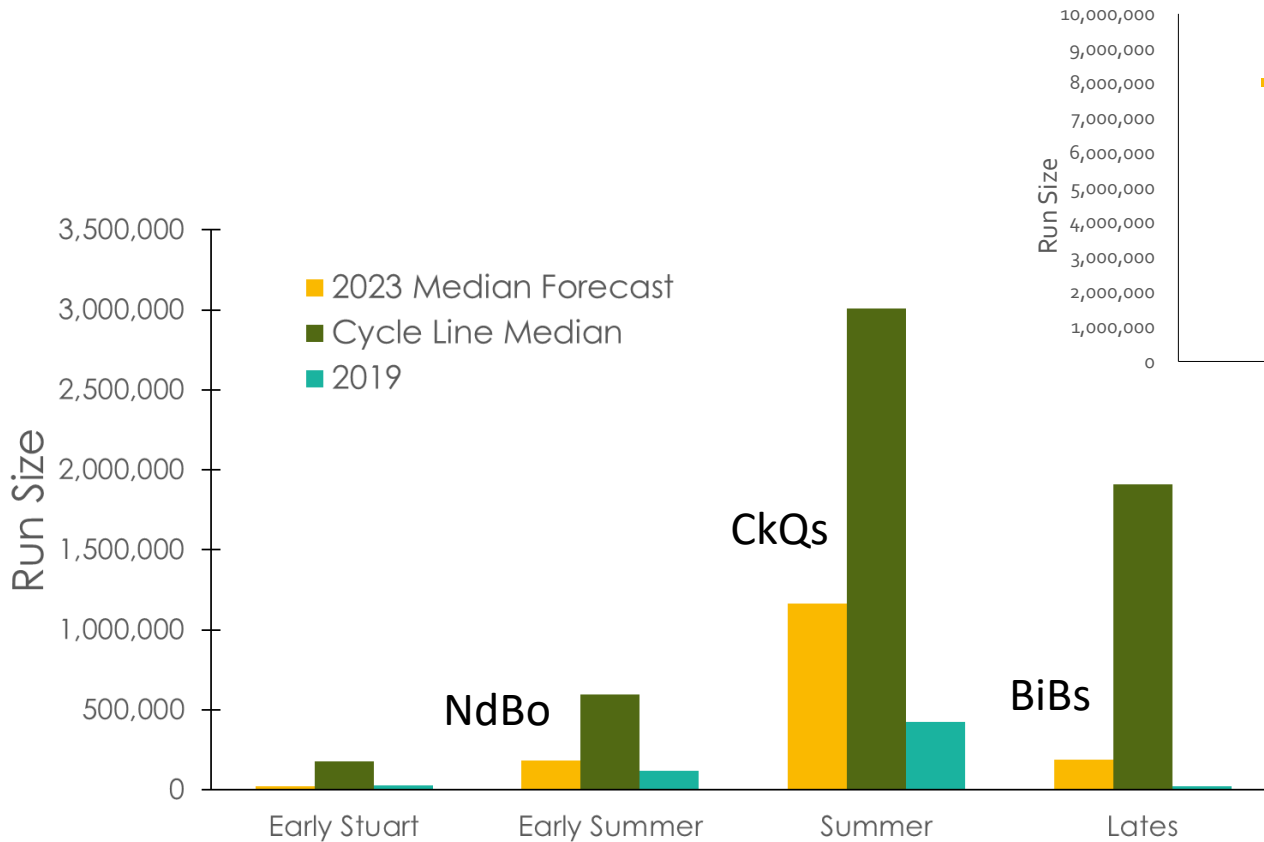
Overview

- Review Pre-season Forecast
- Draft Escapement Options
 - Run Timing
 - Reference Points, LAER and TAM
 - Review 2023 Escapement Options
- Other Management Considerations
 - Window Closures
 - Cultus



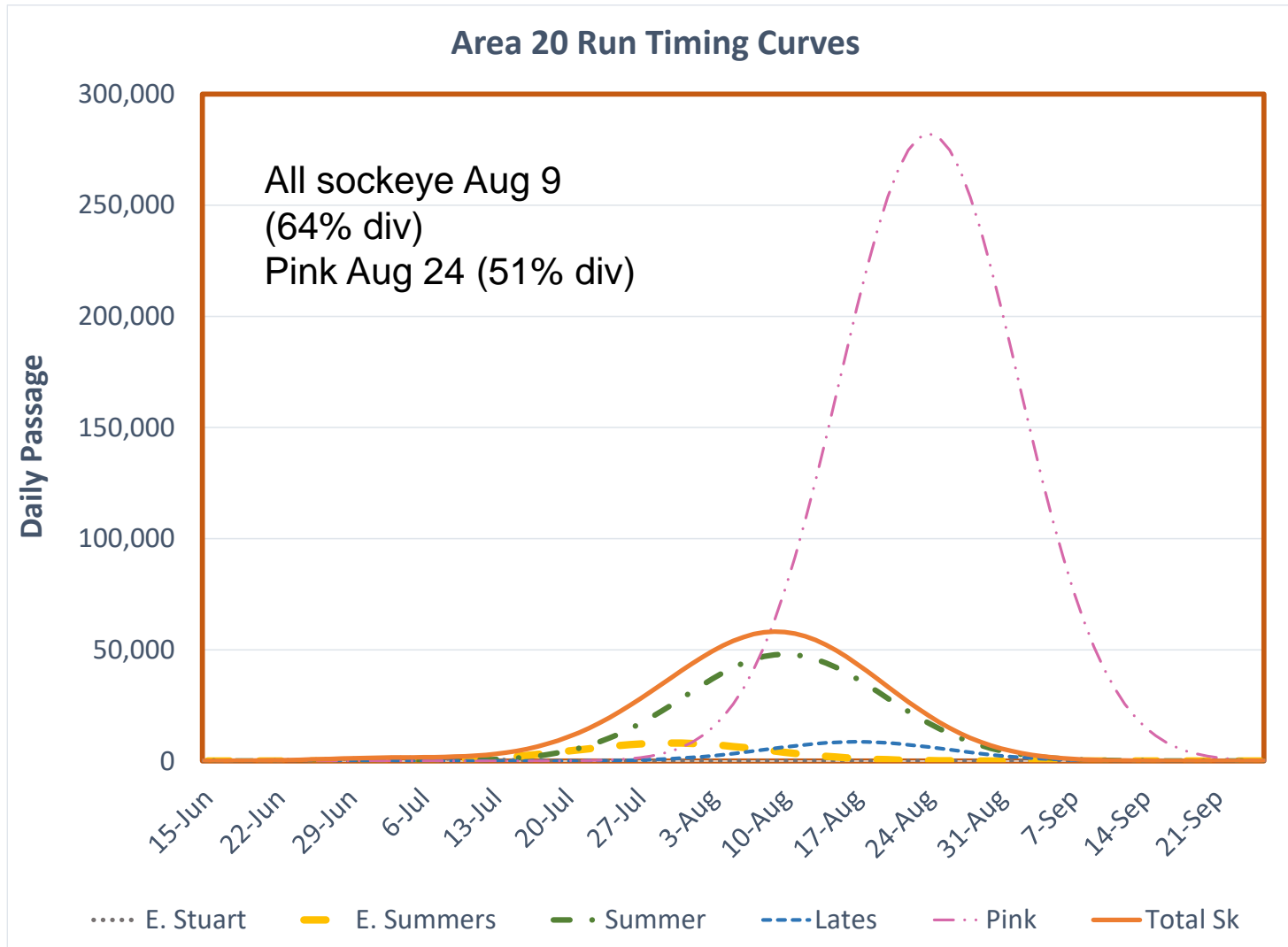


Preliminary Sockeye Forecast



- P50 pink forecast of 6.1M, lower than cycle median
- P50 Sockeye = 1.56M
- First return of 4-YO BB brood
- Strong 5 YO contribution

Sockeye Run Timing Considerations





Draft Sockeye Escapement Options

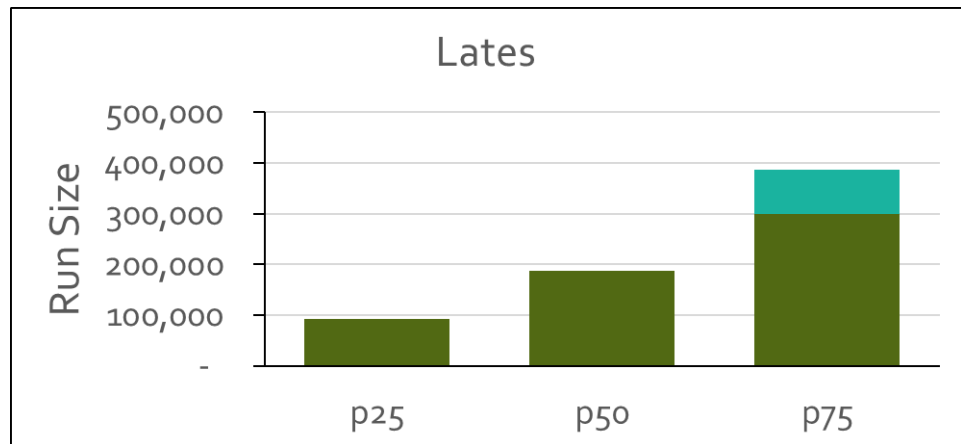
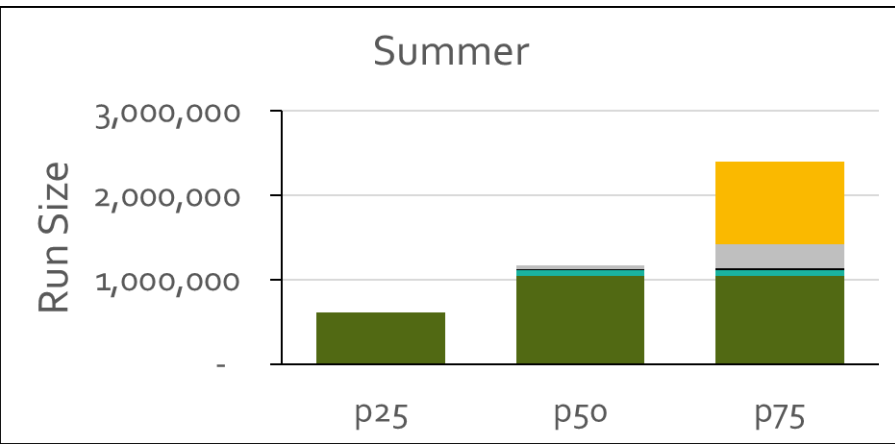
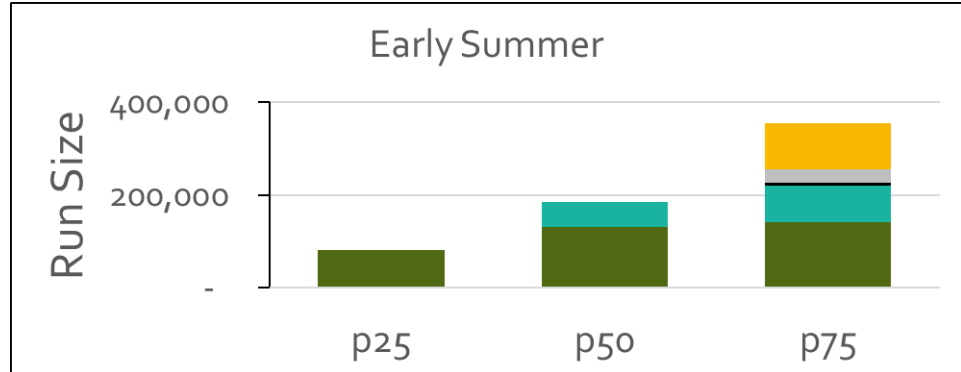
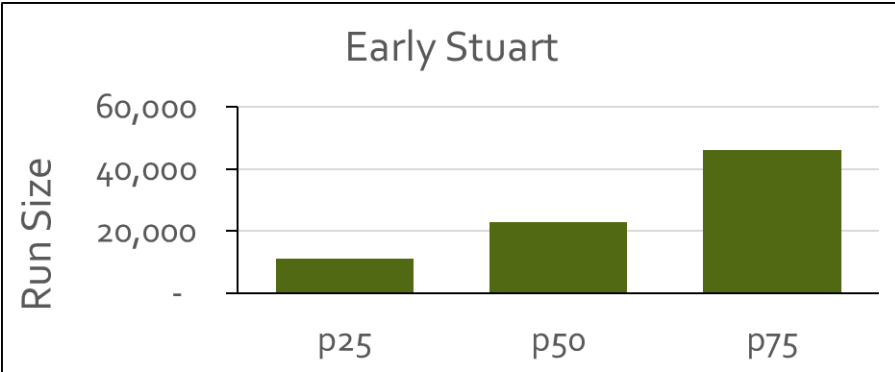
Option 1- Brood Year (2019) Escapement Plan

Management Unit	Harvest Rule Parameters				Pre-season pMA @p50
	Low Abundance ER (LAER)	TAM Cap	Lower Fishery Reference Point	Upper Fishery Reference Point	
Early Stuart	10%	60%	108,000	270,000	1.08
Early Summer (w/o misc)	20%	60%	100,000	250,000	0.52
Summer (w/o misc)	20%	60%	1,000,000	2,500,000	0.08
Late (w/o misc)	20%	60%	300,000	750,000	1.04

Option 2- Precautionary Escapement Plan

Management Unit	Harvest Rule Parameters				Pre-season pMA @p50
	Low Abundance ER (LAER)	TAM Cap	Lower Fishery Reference Point	Upper Fishery Reference Point	
Early Stuart	10%	20%	108,000	135,000	1.08
Early Summer (w/o misc)	10%	50%	100,000	200,000	0.52
Summer (w/o misc)	10%	50%	1,000,000	2,000,000	0.08
Late (w/o misc)	10%	50%	300,000	600,000	1.04

Potential Harvest Opportunities - Sockeye



Biological Considerations

Management Considerations

Summary



Draft Escapement Option Summary

	p10	p25	p50	p75	p90
Option 1					
Max Allowable Harvest Rate	20%	20%	20%	47%	49%
Allowable Harvest (TF, US, CDN)	89,942	158,922	310,560	1,485,992	2,925,220
Total projected spawners	310,300	544,800	1,050,000	1,354,700	2,338,800
Option 2					
Max Allowable Harvest Rate	10%	10%	10%	39%	38%
Allowable Harvest (TF, US, CDN)	45,221	79,961	156,430	1,227,996	2,267,410
Total projected spawners	348,800	612,300	1,179,900	1,561,100	2,880,600

- Department seeking input on two options (all feedback considered)
- Early Stuart and Lates expected to be in LAER across entire forecast range
- Option 1 provides additional flexibility for incidental mortality; Option 2 provides additional protection for earlier-timed stocks
- Early Summer and Summer Harvestable surplus potential at p75
- Don't expect FSC needs to be met at or below p50 for either option
- Commercial TAC above p50 possible, opportunities uncertain for rec and comm (restricted to FSC requirements and bycatch in pink fisheries)
- Early summers and lates (LAER) will constrain summer run fishery access



Draft Pink Escapement Option

Run Size	Escapement Plan				
Less than 7.059M	Exploitation rate increases linearly from 0% at run size = 0 to 15% at run size = 7.059M				
Between 7.059M-20M	Fixed Escapement. Escapement goal = 6,000,000				
Greater than 20M	Exploitation Rate Cap = 70%				
2023 Pre-season Forecast Return					
	p10	p25	p50	p75	p90
forecast	3,247,000	4,389,000	6,135,000	8,575,000	11,591,000
escapement target	3,023,000	3,980,000	5,335,000	6,000,000	6,000,000
allowable ER	7%	9%	13%	30%	48%
Available Harvest (TF, US, CDN)	224,000	409,000	800,000	2,575,000	5,591,000

- Significant uncertainty in forecast (2021 flooding)
- Some allowable harvest expected throughout the forecast range
- Commercial and rec access unlikely below p50 but FSC expected to be met at all run sizes
- Likely some constraints from co-migrating stocks of concerns (e.g., Lates/Cultus)
 - Overlapping run timing and potential for earlier pink return.
- A pre-season fishing plan will be developed by DFO and the Fraser River Panel
 - This plan considers concerns for other species, pre-season forecasts, timing, and diversion rate



Photo by Maxime Veilleux

2023 management Issues and Key Considerations



Proposed Window Closure

Areas	Start Date	End Date ~3 Weeks	End Date ~4 Weeks	End Date ~5 weeks
Areas 11 to 17, 19 to 21, 121 and 123 to 127	June 19	July 15	July 22	July 29
Areas 18 and 29	June 28	July 20	July 27	Aug 3
Steveston to Mission	June 28	July 20	July 27	Aug 3
Mission to Sawmill	June 30	July 22	July 29	Aug 5
Sawmill to Deadman	July 3	Jul 25	Aug 1	Aug 8
Deadman-Hixon	July 9	Jul 31	Aug 7	Aug 14
Hixon to Prince George	July 11	Aug 2	Aug 9	Aug 16
Prince George to Stuart River	July 13	Aug 11	Aug 11	Aug 18

Note: Actual dates may be adjusted based on feedback and in-season run timing

- Sakinaw considerations in some marine areas
- Proposed 5-week option to provide added protection to Early Summers impacted by Big Bar



Key Considerations and Questions

- Later run fisheries constrained by Lates / Cultus Sockeye record low forecast
 - Cultus Sockeye to be managed in-line with Late Run ER (10% LAER)
 - Cultus objectives unlikely to be met
 - Early arriving pinks
- Given recent returns and uncertainty in the forecast, are there additional actions that should be considered to address returns at the lower end of the forecast?
- Are there additional measures that should be considered for specific stocks within the aggregates that are a concern as far as expected escapements, large or weak?
- Given the return forecast distribution and potential constraints to access allowable harvest, should additional harvest in terminal areas where surpluses are expected be considered?



2023 In-season Circumstances

- Run size, timing, diversion rate and stock composition*
- River conditions
- Big Bar landslide
- Differences between estimates





Thank you