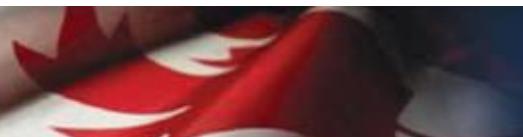




Fraser Sockeye and Pink Management

Considerations for 2015

FORUM Meeting,
March 10 & 11, 2015





Early Stuarts

- Forecast for a total return of 30,000 (p50) which is well below the cycle average of 162,000. Return is expected to be largely 5 year old fish due to very low escapement in 2011 of 200 effective females.
- At this level likely management approach will be to implement the normal 3 week moving window closure for all fisheries.
- Impacts on Early Stuart sockeye in all fisheries directed on other species such as chinook or other sockeye stocks needs to be considered. Larger 5 year old sockeye may be more susceptible to being caught in large mesh chinook fisheries.
- Start up of gillnet test fisheries (Area 20, Whonnock and Qualark) may be delayed by up to 3 to 4 weeks.



Potential Early Stuart Window Closure Dates

Area	Actual Dates Start (date, time)		End (date, time)		Management Action
Area 127			Open July 22, 7days/wk		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 22 (Sn, Gn, Tr)
Area 11			Open July 22, 7days/wk		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 22 (Gn, Tr); July 25 (Sn) ¹
Area 12			Open July 22, 7days/wk		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 22 (Gn, Tr); July 25 (Sn) ¹
Area 13			Open July 22, 7days/wk		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 22 (Gn, Tr); July 25 (Sn) ¹
Area 20			Open July 22, 7days/wk		Earliest potential opening to FN FSC fishing for Fraser sockeye = July 22 (Sn, Gn, Tr)
Areas 18 & 29	28-Jun	midnight	29-Jul	noon	Earliest potential opening to FNs FSC fishing for Fraser sockeye = July 29, noon
Steveston-Port Mann Br	28-Jun	midnight	29-Jul	noon	Potential for FNs FSC Chinook directed fisheries. Earliest potential communal opening to fishing for Fraser sockeye = July 29, noon.
Port Mann Br-Sawmill Cr	29-Jun	midnight	31-Jul	noon	Potential for FNs FSC Chinook directed fisheries. Earliest potential communal opening to fishing for Fraser sockeye = July 31, noon.
Sawmill Cr-Texas Cr	03-Jul	6pm	01-Aug	6pm	FNs FSC: Open to selective fishing for Chinook (dip net, rod and reel and potential 8 inch mesh Gn).
Texas Cr-Kelly Cr	03-Jul	6pm	01-Aug	6pm	
Kelly Cr-Deadman	03-Jul	6pm	01-Aug	6pm	
Deadman-Chilcotin	08-Jul	6pm	07-Aug	6pm	
Chilcotin-Quesnel	08-Jul	6pm	07-Aug	6pm	FNs FSC: Open to selective fishing for chinook and open in trib for sax and chinook.
Quesnel-Hixon	08-Jul	6pm	07-Aug	6pm	
Hixon-Prince George	12-Jul	6pm	10-Aug	6pm	FNs FSC: Open to selective fishing for chinook (dip net and 8 inch mesh Gn) and open in trib for sax and chinook.
Prince George-Stuart R	12-Jul	6pm	10-Aug	6pm	

¹ Gear restrictions remain in place to protect Sakinaw sockeye until July 25, 2015.

Early Summers

- Implications on fishing plans will be strongly influenced by in-season run size estimates and management adjustments (MAs) for environmental conditions as well as Early Stuart management approach. Earliest timed stocks (Bowron and Nadina) forecast to be returning at very low levels.
- One week window closure has been used in past to address poor returns of the earliest stocks in this run timing group. Recently has been added onto the back end of the Early Stuart window closure. Other options are for reduced weekly fishing times.
- Forecasts for individual stocks (relative to stock cycle avg):
 - Bowron – p50 forecast 21k vs avg of 75k
 - Nadina – p50 forecast 31k vs avg of 81k
 - Gates – p50 forecast well above cycle average, 141k vs 31k
 - Chilliwack p50 forecast of 18k.
 - Fennell, Scotch and Seymour – p50 forecast well above cycle average largely 5 years olds in 2015.



Summers

- Summer Run sockeye make up a majority (69%) of the 2015 total forecast return and will be focus of harvest opportunities.
- p50 forecast is 4.675 million; forecast range of 1.7 to 16.5 million, while cycle average is 2.5 million. Chilko and Harrison comprise 56% of the forecast summer return.
- Expecting a large return of 5 year olds to several of the component stocks such as Quesnel, Late Stuart and Stellako.
- Harvest may be limited by constraints on co-migrating stocks of concern (Early Summers and Lates).
- Forecasts for individual stocks:
 - Chilko, Quesnel, Harrison and Raft – above cycle average (but Raft a small contributor) High uncertainty in Chilko and Harrison forecasts.
 - Stellako and Late Stuart - well below cycle average for both.

Lates

- Total forecast return of Late Run in 2015 is 1.236 million compared to cycle average of 2.061million.
- Late Shuswap (517k), Weaver (346k) and Birkenhead (299k) are the largest contributors at the p50 run size.
- Late Shuswap is less than 50% of cycle average (1.357m) while Weaver is above cycle average (222k) and Birkenhead below cycle average (222k).
- Cultus p50 forecast of 6,000 well below the cycle average of 81,000.
- Late Run sockeye make up 18% of the p50 total run size forecast.
- Since mid-1990s, Late Run sockeye have entered the Fraser River much earlier, and have experienced very high levels of en-route and/or pre-spawn mortality. In recent years delay has been highly variable. Discussions to occur in Fraser Panel to determine pre-season planning approach to dealing with delay.



Lates cont.

- Management approach for 2015 to be determined based on feedback from proposed escapement plan options.
 - whether Lates will be in LAER scenario depends on escapement option, run size, and pMA
- Need to consider appropriate ER if other sockeye returns are at p25 or lower. Should lower LAER remain at 20% or be lowered to 10% similar to Early Stuarts.
- minimum Cultus recovery objectives 1&2 expected to be achieved at forecast return and ERs within the described range above.

Cultus Recovery Objectives (pt 1)

- **Objective 1** - Ensure the genetic integrity of the population by exceeding a four-year arithmetic mean of 1,000 successful adult spawners with no fewer than 500 successful adult spawners on any one cycle. This objective secures genetic variability.
 - i.e. 4 year average $> 1,000$
- **Objective 2** - Ensure growth of the successful adult spawner population for each generation (that is, across four years relative to the previous four years), and on each cycle (relative to its brood year) for not less than three out of four consecutive years. This objective ensures the population is growing.
 - i.e. 4 year average $>$ previous 4 yr average

Cultus Recovery Objectives (pt 2)

- ***Objective 3*** - Rebuild the population to the level of abundance at which it can be delisted (designated Not at Risk) by COSEWIC.
- ***Objective 4*** - Rebuild the population to a level of abundance (beyond that of Objective 3) that will support ecosystem function and sustainable use. This long term objective proposes candidate benchmarks for Cultus sockeye that correspond to our current understanding of the dynamics of Cultus sockeye.



Pink Salmon

- At the p50 forecast (14.5 million), should meet spawning escapement goal of 6 million, with some abundance (8.5 million) available for harvest.
- Considerable uncertainty around the forecast.
- Conservation constraints for co-migrating stocks of concern (e.g. Late run and Cultus sockeye, Interior Fraser coho and Interior Fraser steelhead) will likely constrain the ability to harvest all available Fraser River Pink TAC identified in-season.
- Late run sockeye impacts will likely be the largest impact on pink fisheries if the pink return is larger than the p50.

Other Management Considerations

- FSC sharing if sockeye return below forecast or MA's consume most of available TAC. Advice on sharing approach (proportionate sharing or furthest behind, other?) would be appreciated.
- Transfer of Quotas (pinks) was an issue in 2013. Are they expected in 2015 and how do we deal with incidental species mortalities?
- District 104 catch in 2014 of Fraser sockeye revised downward to 185,000 from preliminary estimate of 500,000.