

2021 Canadian-Origin Mainstem Fall Chum Salmon Forecast

Yukon River Panel Pre-Season Meeting
Agenda Item 9a
13 April 2021 Open Session

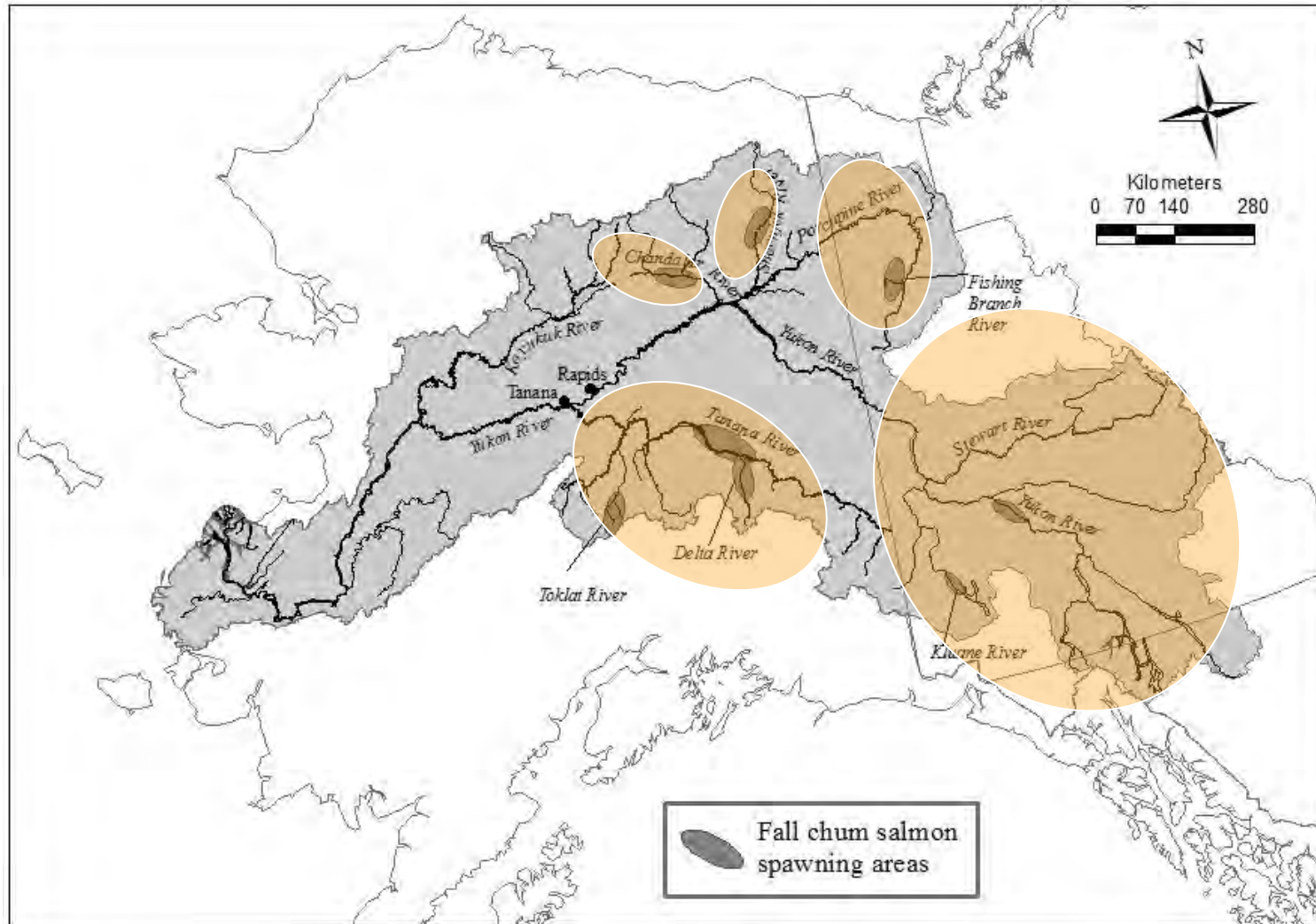
Presented by Bonnie Borba and Oliver Barker



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Fall Chum Salmon Spawning Areas

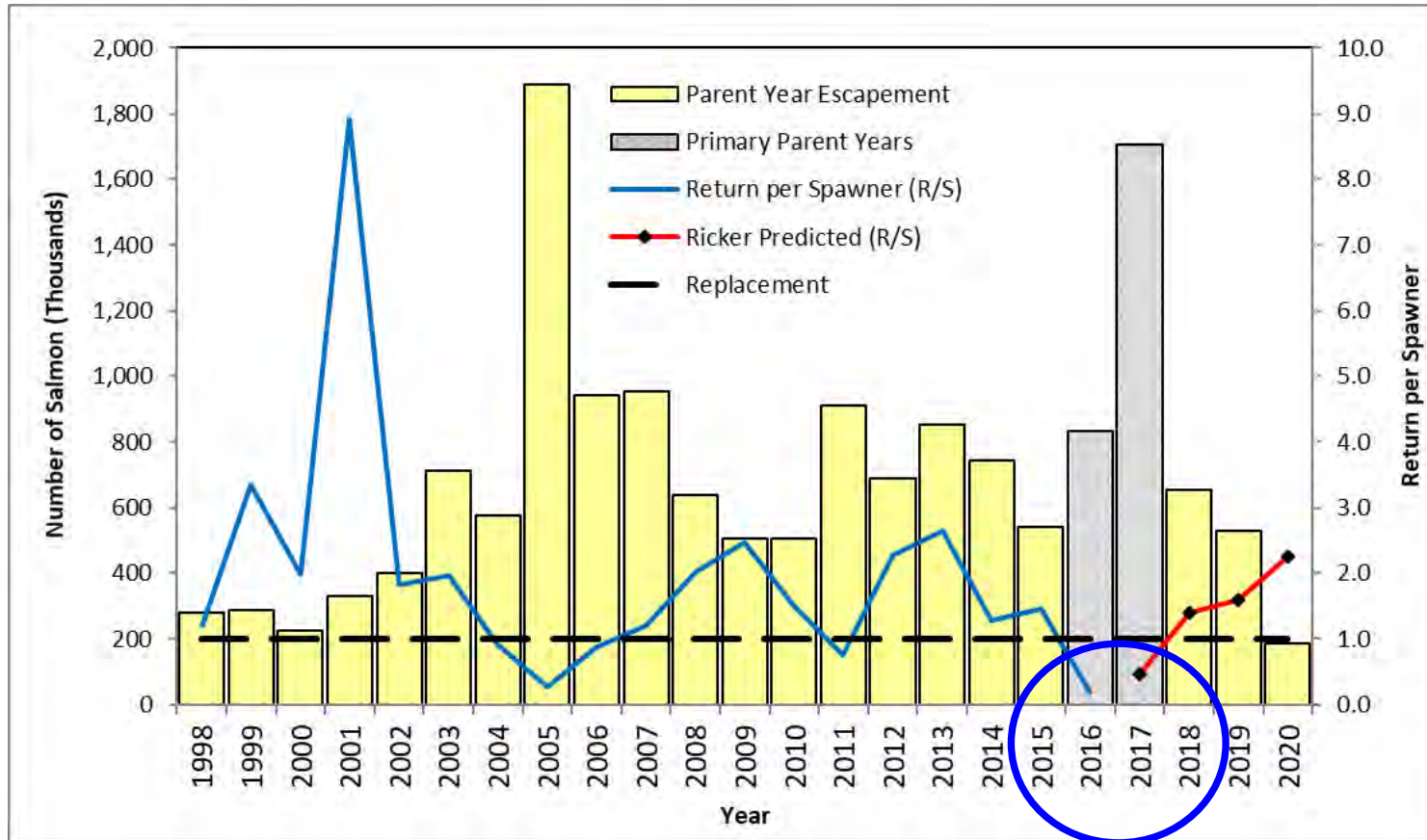


Forecast Components

1. Total U.S. and Canada harvest
 2. Estimates of drainagewide escapement
 3. Age composition
- The drainagewide dataset includes 47 years
 - Equates to 11 chum salmon life cycles



Drainagewide Fall Chum Salmon Escapement and Production




○ = Both primary parent years are below replacement.



2021 Drainagewide Fall Chum Salmon Forecast

Brood Year	Age	Percent of Return	Contribution based on Age
2015	6	1.0%	6,349
2016	5	6.6%	42,890
2017	4	88.4%	576,275
2018	3	4.0%	26,152
Total expected run:			652,000

 = Primary parent years for 2021 return

- Evaluate age classes inseason using the Lower Yukon Test Fish project



2021 Drainagewide Fall Chum Salmon Forecast

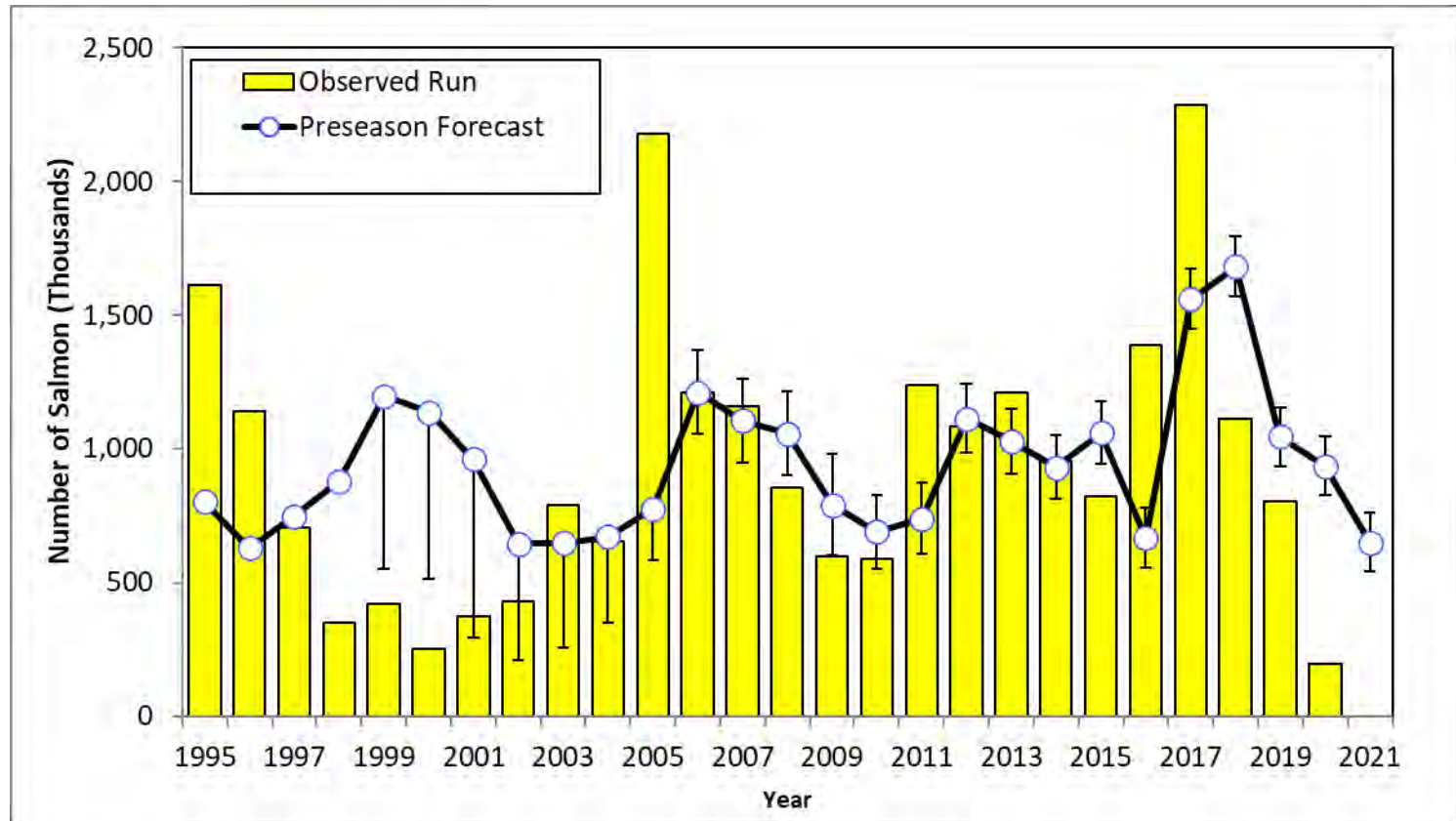
Range (80% CI) = 542,000 – 762,000

Point estimate = 652,000

Average run size 1974 – 2019 = 1,014,000



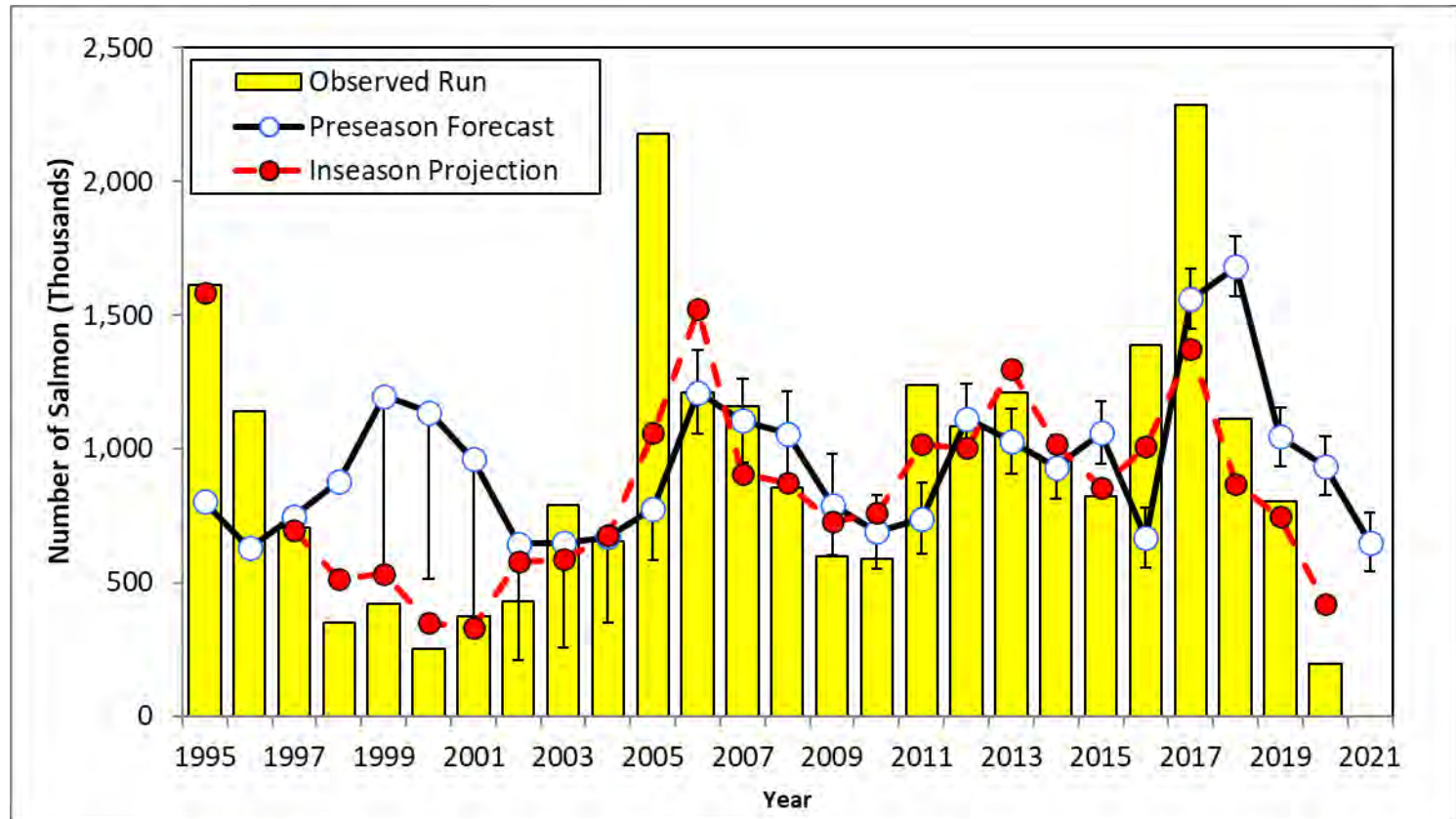
Drainagewide Fall Chum Salmon Forecast Performance



2021 Forecast 542,000–762,000



Drainagewide Fall Chum Salmon Forecast Performance



2021 Forecast 542,000–762,000



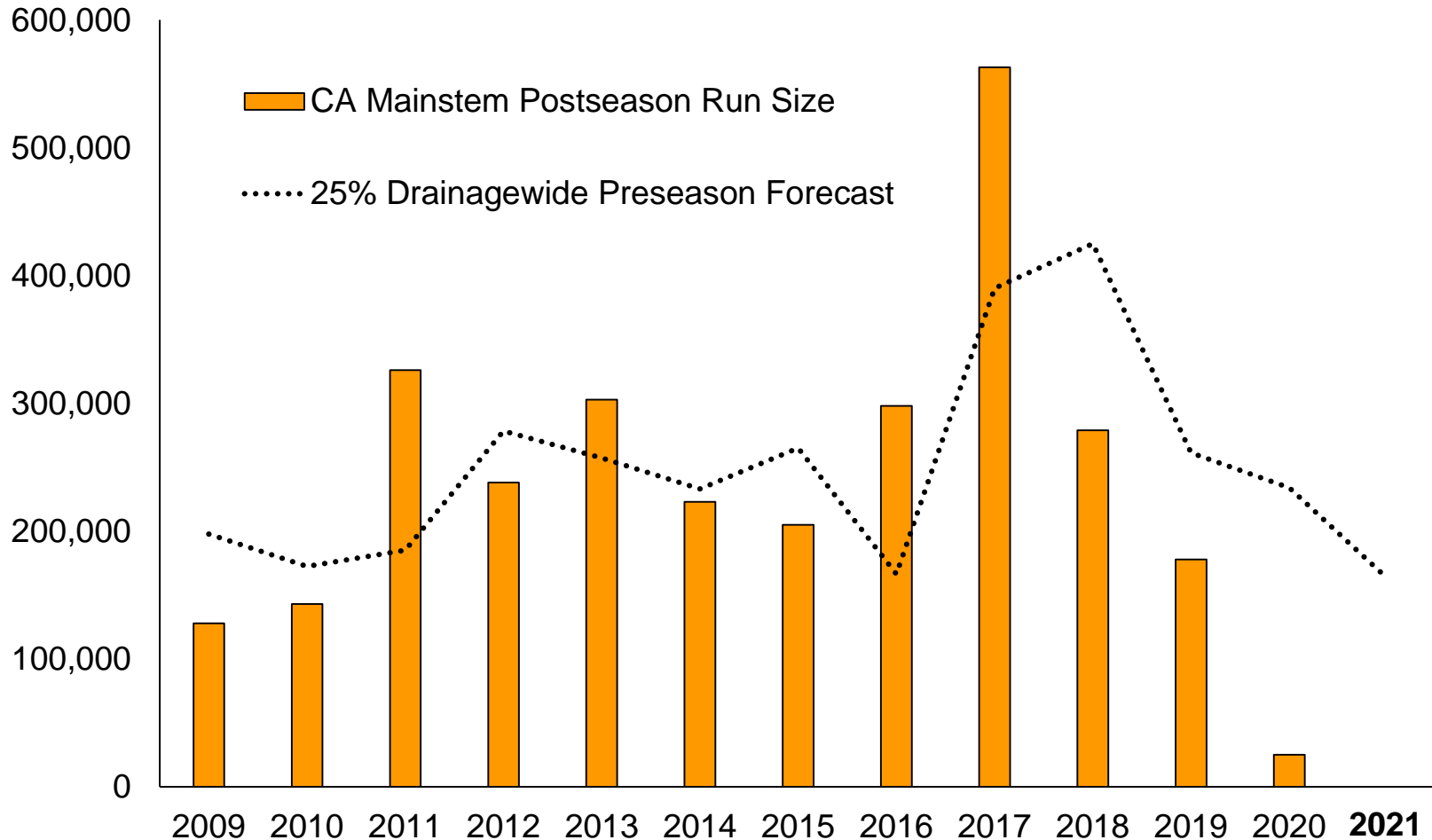
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163,000

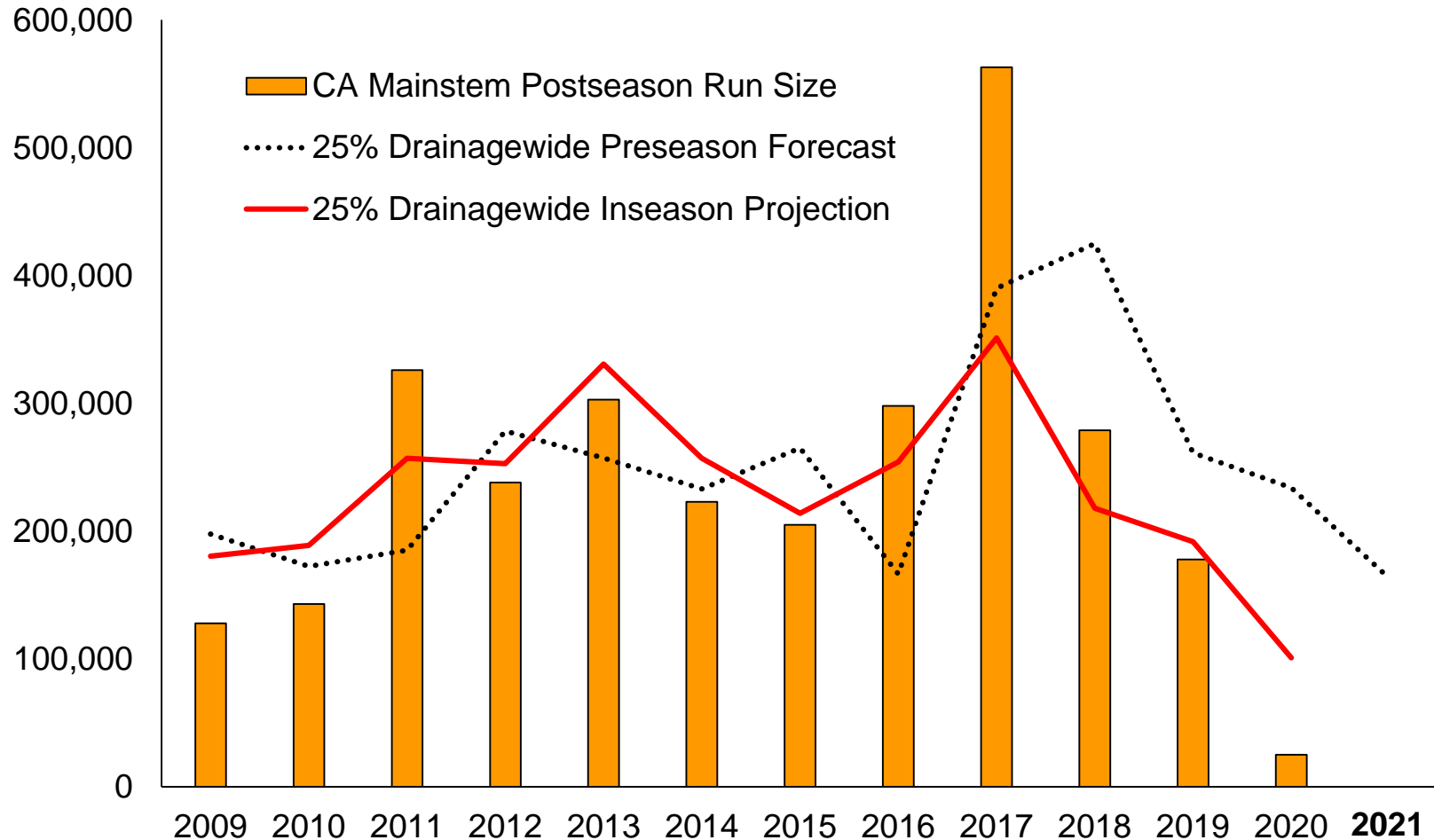
80% CI: 135,500 – 190,500



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2021 Fall Chum Salmon Forecast Summary

Escapement Component	Forecast <u>Point Estimate</u> and Range (80% CI)	Goal / IMEG
Yukon River Drainagewide	<u>652,000</u> 542,000 – 762,000	300,000 – 600,000
Canadian-origin Mainstem Yukon River	<u>163,000</u> 135,000 – 191,500	70,000 – 104,000

- Weak age-5 component.
- Estimated production for age-4 is below replacement.
- Kluane River drainage production?
- ❖ Forecasts will be revised based on the summer to fall chum salmon relationship in mid-July.



Comments or Questions?

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Photo by: ADF&G-Borba, poles for new fish wheel basket