

PERFORMANCE REPORT

STATE: Alaska

GRANT NO.: F-10-33

GRANT TITLE: Sport Fisheries Investigation in Alaska

PERIOD COVERED: July 1, 2017 – June 30, 2018

STUDY NO. AND TITLE: S-2-5a Kenai River Chinook salmon Creel Survey and Inriver Gillnetting

OBJECTIVES:

1. Estimate catch and harvest of Chinook salmon by the sport fishery in the Kenai River downstream of the Soldotna Bridge from mid-May through June (early run), and during July (late run).
2. Provide age compositions by run partly required to estimate total return by run and brood year. Total return consists of the inriver run as estimated by the sonar at RM 13.7, plus all commercial and sport harvest by run downstream of the sonar.
3. Estimate the proportion of Chinook salmon harvested in the ESSN fishery by genetic reporting group, age, sex, and size for each temporal and geographic stratum, and for the entire season.

RESULTS AND DISCUSSION:

Objective 1:

In the 2017 Board of Fish (BOF) meeting, management policies were changed from a total-fish to size-based “large fish” escapement goals (≥ 75 cm mid eye to tail fork [METF] length) primarily because “large fish” estimates constitute the most reliable information available for inseason management (Fleischman and Reimer 2017).

During the 2017 late run (1–31 July), the estimated sport harvest and catch of large Chinook salmon downstream of Soldotna Bridge were 6,003 and 6,541 fish, respectively. During the 2018 early run (16 May through 30 June), the estimated sport harvest and catch of large Chinook salmon downstream of the Soldotna Bridge were 104 and 341 fish, respectively.

Objective 2:

During the 2017 late run, the age composition of large Chinook salmon captured in inriver nets was: 0.4% age-1.2 fish, 48.3% age-1.3 fish, 45.0% age-1.4 fish, 3.3% age-1.5 fish, 2.1% age-2.3 fish, and 0.8% 2.4-fish. During the 2018 early-run, Chinook salmon were sampled for age, sex, and length, however; age compositions will not be estimated until October 2018.

During the 2017 late run, the age composition of the inriver sport harvest downstream of the RM 13.7 sonar site was: 40.9% age-1.3 fish, 20.0% age-1.4 fish, 1.5% age-1.5 fish, and 2.9% age-2.3 fish. The age composition of the inriver sport harvest upstream of the sonar site was: 21.6% age-1.3 fish, 10.7% age-1.4 fish, 0.8% age-1.5 fish, and 1.5% age-2.3 fish. During the 2018 early run, sport harvested Chinook salmon were sampled for age, sex, and length, however; age compositions of the inriver sport harvest will not be estimated until October 2018.



Inriver creel survey and gillnetting for Chinook salmon age, sex, and length.

Objective 3:

During 2017, the age composition of the ESSN Chinook salmon harvest overall was 3.6% age-1.1 fish, 13.3% age-1.2 fish, 43.0% age-1.3 fish, 39.7% age-1.4 fish, and 0.4% age-1.5 fish. Overall sex composition in 2017 was 52% females and 48% males. The age composition of large fish was <1% (0.2%) age-1.2 fish, 50% age-1.3 fish, 49% age-1.4 fish and <1% (0.6%) age-1.5 fish. The sex composition of large fish was 63% females and 37% males.

Reported harvest in the ESSN fishery was 4,779 Chinook salmon, with an estimated composition of 3,762 (79%) *Kenai River mainstem*, 905 (19%) *Kasilof River mainstem*, 69 (1%) *Cook Inlet other*, and 43 (<1%) *Kenai River tributaries* fish. Estimated harvest of large (75 cm mid eye to tail fork length and longer) Chinook salmon was 3,801 fish composed of 2,998 (63% of total harvest) *Kenai River mainstem*, 730 (15%) *Kasilof River mainstem*, 44 (<1%) *Cook Inlet other*, and 29 *Kenai River tributaries* (<1%) fish. Large *Kenai River mainstem* fish were harvested in 2017 in each major stratum as follows: Kasilof Section “Early” 24 June–8 July, 0.468 (338 fish); Kasilof Section “Late” 10–31 July, 0.493 (672 fish); Kenai and East Foreland sections “Late” 10–31 July, 0.784 (1,636 fish); Kasilof Section “August” 3–15 August, 0.333 (76 fish); Kenai and East Foreland sections “August” 3–14 August, 0.729 (276 fish).

FINAL REPORT STATUS:

This constitutes the final performance report for these objectives for the F-10-33 grant period.

Fishery Data Series (FDS) reports titled "Chinook Salmon Creel Survey and Inriver Gillnetting Study, Lower Kenai River, Alaska, 2017" will be published in the fall of 2019 , "Chinook Salmon Creel Survey and Inriver Gillnetting Study, Lower Kenai River, Alaska, 2018" will be published in the winter of 2020, and "Eastside Set Gillnet Chinook Salmon Harvest Composition in Upper Cook Inlet, Alaska, 2017" will be published in winter of 2018.

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