PERFORMANCE REPORT

STATE: Alaska

GRANT NO.: F-10-33

GRANT TITLE: Sport Fish Investigations in Alaska

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

STUDY NO. AND TITLE: S-2-07   Sockeye Salmon Escapement Studies at the Russian River, Alaska

STUDY OBJECTIVES:

1. Census the spawning escapements of early-run and late-run sockeye salmon past the Russian River weir.

2. Index the escapement of late-run sockeye salmon spawning between the weir and the area downstream of the Russian River Falls extending to the Russian-Kenai River confluence, based on foot survey data collected during the peak spawning period.

3. Estimate the age, sex, and age by sex compositions of early-run and late-run sockeye salmon spawning upstream of the Russian River weir such that the estimates for each run are within 10 percentage points of the actual values 95% of the time.

Tasks:
1. Record the number of fish observed for each species passed upstream of the weir.
2. Index the number of Chinook salmon (*Oncorhynchus tshawytscha*) spawning between the weir and the Russian River Falls extending downstream of the Russian River Falls to the Russian/Kenai River confluence based on foot survey data collected during the peak spawning period.
3. Index the number of spawning rainbow trout from 100 yards above the powerline crossing on the Russian River downstream to the Russian/Kenai River confluence based on foot survey data collected during the peak spawning period.

RESULTS/DISCUSSIONS:

Objective 1: This objective was met by enumerating sockeye salmon at the Russian River weir. A total of 45,012 late-run sockeye salmon in 2017 and 44,110 early-run sockeye salmon in 2018 were counted through the weir.

Objective 2: The spawning escapement of late-run sockeye salmon between the weir and Russian River Falls and downstream of the Russian River Falls to the power lines in 2017 was indexed at 20,348 fish.

Objective 3: Sockeye salmon were sampled at the Russian River weir weekly, proportional to the return, for each run. One hundred eighty-three (183) late-run sockeye salmon were sampled in 2017. The dominant age composition was 41.0% age-2.2, 26.2% were age-2.3, and 16.9% were age-2.1. The sex composition was 52.5% male and 47.6% female. Mean length for ages-2.2, 2.3 and 2.1 were 532 mm, 575 mm and 402 mm respectively. Precision goals for estimates of age and sex satisfied the project objectives (within 10 percentage points of the actual values 95% of the time). Precision goals for the sex composition satisfied the project objectives for females and not males

(within 10 percentage points of the actual values 95% of the time).   Sample goals of early-run sockeye in 2018 were achieved. Estimates are not available at this time, as scales are normally aged in September.

Task 1: In 2017, 106 king salmon and 492 coho salmon were counted through the weir.

Task 2: In 2017, 4 king salmon were counted during a spawning survey between the weir and Russian River Falls and downstream of the Russian River Falls to the Kenai/Russian River confluence.

Task 3: In 2018, eight foot surveys were conducted on 5/15, 5/18, 5/21, 5/25, 5/29, 5/31, 6/5, and 6/8. The peak spawning count was observed on 5/31 when 135 spawning rainbow trout were observed.

All objectives and tasks were completed.

FINAL REPORT STATUS:

This performance report constitutes the final report of activities for this study during this reporting period.

Results from this project will be reported in the Fishery Management Report titled "Annual Management Report for the Recreational Fisheries of the Northern Kenai Peninsula, 2019-2020", prepared winter 2020.

Sockeye salmon ASL sampling and weir passage at the Russian River.

PREPARED BY: Jenny L. Gates   **DATE**: August 6, 2018