

Project Title: Yukon River Chinook Salmon Subsistence

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Study Location: Yukon River

Abstract: The Yukon River is home to many native village communities which depend on subsistence harvest for their livelihood. This research project sampled the subsistence-harvest from the communities of Anvik, Nulato, Galena, Ruby, Tanana, mainstem Yukon River above Hess Creek, Fort Yukon and Eagle on the Yukon River; it also sampled in Huslia on the Koyukuk River. This project focused on the Chinook salmon (*Oncorhynchus tshawytscha*) for biological information, scale samples and genetic tissue. The research data collected will serve to understand the stock biology and composition of salmon that are harvested in these communities. The age-sex-length (ASL) and genetic data from this research project will help to rebuild the Canadian origin of the Chinook salmon run by determining the proportion of Canadian origin stocks. The Fisheries Biologist contacted the Tribal Councils in the respective communities and asked for their assistance with recruiting local fisherman to collect a sample size of 250-300, taken in the proportion to the actual harvest for each village. In 2011, 31 subsistence fishermen/fisherwomen were trained to collect biological samples; 2,083 samples were obtained and analyzed. Various gear types and mesh sizes were used in each community to harvest the subsistence catch (Table 2). The data in this study indicates that average girth and length measurements for all males showed a decrease as distance increased from the mouth of the Yukon River, with the exception of the mainstem above Hess Creek. The data in this study indicates that males harvested further from the mouth of the Yukon River, on average, are younger than males caught near the mouth. Girth measurements indicate that males harvested further from the mouth of the Yukon River are smaller than males caught near the mouth. This could be a byproduct of gear selectivity or a reflection of how the run changes as the distance increase away from the mouth. More in depth statistical analysis needs to be done to determine the true relationships but this was beyond the scope of this project.

Key Words: subsistence harvest sampling, Chinook salmon, Yukon River.