

ALASKA DEPARTMENT OF FISH AND GAME DIVISION OF COMMERCIAL FISHERIES



NEWS RELEASE

Sam Cotten, Commissioner
Scott Kelley, Director



Contact:
ADF&G Commercial Fisheries
Cordova Research and Management Staff
Jeremy Botz, Stormy Haught, Stacy Vega, Shane Shepherd
Phone: (907) 424-3212 Fax: (907) 424-3235

Prince William Sound Area Office
401 Railroad Avenue, PO Box 669
Cordova, AK 99574-0669
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Miles Lake Large Chinook Salmon Enumeration Project Update

In 2017, ADF&G operated an adaptive resolution imaging sonar (ARIS) unit along each bank of the Copper River to evaluate whether images from this sonar would be suitable for measuring lengths of passing fish to apportion sonar counts into large Chinook and smaller salmon. We have counted fish using older imaging sonar technology, dual-frequency identification sonar (DIDSON), for many years at this site. Adding a length component to the project required a higher resolution sonar, the ARIS. ARIS technology has been used on the Kenai River for measuring lengths to distinguish large Chinook salmon from sockeye salmon. Results from 2017 showed that the higher silt levels and strong current of the Copper River resulted in lower quality images than those from the Kenai River. To obtain the image quality needed for measurement in the challenging conditions of the Copper River, two ARIS units per bank were required, with the offshore units fitted with high-resolution lenses.

In 2018, through the generous financial support of multiple stakeholders (Copper River Prince William Sound Marketing Association, Cordova District Fishermen United, Trident Seafoods, Copper River Seafoods, Ocean Beauty, North Pacific Seafoods, and Alaska Wild Seafoods) ADF&G was able to acquire an additional ARIS unit and high-resolution lenses needed to generate measurement-quality fish images in the Copper River.

This season's operation showed promise for enumerating large Chinook salmon passage at Miles Lake. Sonar data collection ran from May 13 to July 28 and over 17,000 fish images were measured in season. Analyses of these measurements have not been fully completed, but initial estimates of the daily proportion of large Chinook salmon (>70 cm) passing along the south bank ranged from 0–20% of total daily fish passage during May and June. Measurements of the remaining 2018 sonar images are currently ongoing and are expected to be completed for both banks by November.

A full season of operations with two sonar units on each bank provided critical information for further assessment and development of sonar-based species apportionment on the Copper River. Additional project development, including ground truthing of sonar imagery measurements, improvement of sonar configuration, and refinement of counting and measurement protocols, will continue in 2019 with the goal of estimating large Chinook salmon passage in season at Miles Lake.