



U.S. Fish & Wildlife Service

Fairbanks

Fish & Wildlife Field Office

Middle Yukon River Fall Chum Salmon Tagging Project

Determining the total number of fall chum salmon, *Oncorhynchus keta*, traveling through the vast, muddy waters of the Yukon River is a difficult task. Biologists from the Fairbanks Fish and Wildlife Field Office use a method called “mark/recapture” to estimate the portion of the salmon population that migrates past the Tanana River to the upper Yukon River drainage.

A fisherman from Tanana is hired to operate two fish wheels in a narrow part of the Yukon River called the Rampart Rapids. This allow crews to tag and release from 8,500 to 18,000 fish per year.

Thirty miles upstream at the Village of Rampart, a fish wheel contracted from a native Alaskan is outfitted with state of the art video technology that examines fish for color coded tags without the need to handle them. The number of tagged and untagged fish are recorded as they pass from the fish wheel back into the river where they continue to the spawning grounds.

Analyzing the tagging data from fish examined at Rampart allows fisheries scientists to estimate the run size for each passing week. Run estimates from this project have proven to be very useful to State and Federal fisheries managers and have accurately documented salmon runs since 1996.

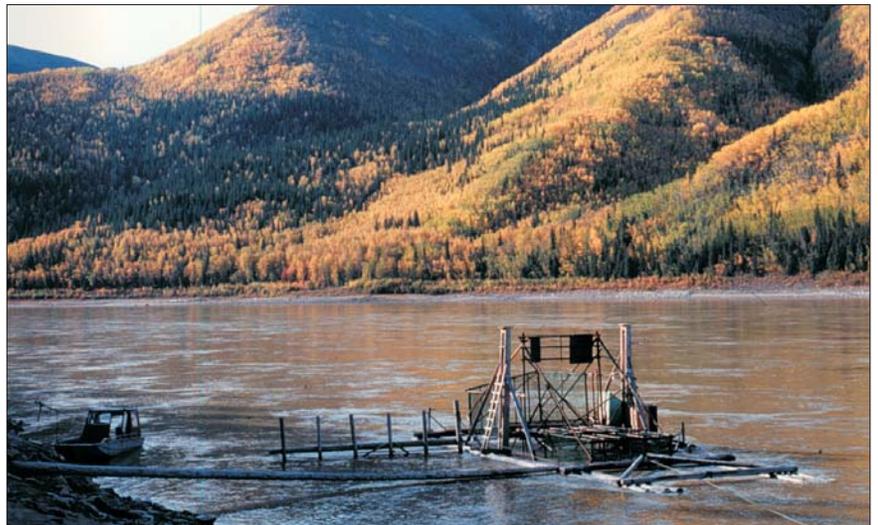
Salmon runs declined steadily from 1996 to 1998, with estimates of 650,000, 350,000 and 194,000 fish, respectively. From 1999 to 2002 estimates stabilized at levels of approximately 200,000 fish. An upturn in the 2003 estimate resulted in 485,000 fall chum salmon.

Having the abundance estimate from this project provides managers with additional opportunities to provide the proper escapement to the spawning grounds for the future.

Pacific salmon support important subsistence, commercial and personal use fisheries throughout the Yukon River drainage. Yukon River salmon stocks are of particular significance in that the fisheries are inter-jurisdictional supporting fishers in the United States(U.S.) and Canada. Complexity is added by the mosaic of native, state, and federal interests in fish stocks. The

status of these fisheries have recently been the source of controversy among user groups and between countries. Allocation issues are the root of the controversy, but the U.S.–Canada Salmon Treaty negotiators have found grounds for compromise.

The U.S.–Canada Salmon Treaty's agreement sets out a management structure and restoration goals for the Yukon River salmon stocks. Fall chum salmon support a significant portion of these fisheries. Federal interest in fall chum stocks are driven by the need of technical support of the US- Canada Salmon Treaty negotiations, federal involvement in subsistence use issues, and public trust responsibilities on two National Wildlife Refuges as set out in the Alaska National Interest Lands Conservation Act.



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