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PARTICIPATION IN THE COMMERCIAL SALMON FISHERIES
OF THE UPPER YUKON

A Report to the Eleventh Alaska Legislature
by the
Commercial Fisheries Entry Commission
January 24, 1980

The Eleventh Alaska Legislature through SCR 22 and HB 290 requested that the Alaska Commercial Fisheries Entry Commission (CFEC) obtain and prepare specific information concerning the Upper Yukon salmon fisheries. SCR 22 issued the following two directives to the CFEC:

1. "BE IT RESOLVED by the Alaska State Legislature that the Alaska Commercial Fisheries Entry Commission is respectfully requested to determine which interested persons with past participation in and economic reliance (including the barter and sale of fresh, smoked and dried fish products) on the commercial fishery of the Upper Yukon since 1960 through the operation of gear, regardless of whether those persons held a gear license or a fishwheel registration, have not been issued a permit; and be it"
2. "FURTHER RESOLVED that the Alaska Commercial Fisheries Entry Commission is respectfully requested to determine whether the maximum number of permits set for the Upper Yukon fishery is consistent with the objectives of AS 16.43;"

HB 290 requested that the CFEC do the following:

"The Alaska Commercial Fisheries Entry Commission shall allow each person who has participated in the operation of gear in the commercial fishery of the upper Yukon River to register his name with the commissioner, regardless of whether that person has held a gear license or a fishwheel registration. The registration allowed by this section is for the purpose of determining the extent of past participation in the fishery and the adequacy of the existing limited entry program to meet the needs of the commercial fishermen in that area. The commission shall establish the registration period and the form of registration. The commission may require a registrant to state the facts in support of his past participation in gear operation. The commission shall prepare a roll of the registrants and submit the roll and any other material related to the purpose of the registration to the legislature not later than 10 days after the convening of the Second Session of the Eleventh Legislature."

The task of implementing these directives was assigned to the research staff at CFEC. Consultations and discussions with staff of the Upper Yukon legislative subcommittee led to a consensus that the first directive of SCR 22 and the directive in HB 290 could best be carried out by means of a survey research project.

Part 1 of this report describes both the research which was undertaken and the results or products of the research which will be forthcoming shortly. Part 2 of this report is a description of the criteria used in determining Upper Yukon maximum numbers, as requested in the second directive of SCR 22.

PART 1: Method Used to Create a Roll of Upper Yukon Salmon Fishermen

To carry out the first directive of SCR 22 and the directive of HB 290 the Entry Commission and the staff of the legislative subcommittee concluded that the information gathering and registration required by the legislature could best be accomplished by developing a questionnaire and sending teams to interview fishermen along the Yukon and Tanana Rivers during the summer fishing season.

In order to develop a questionnaire certain working definitions had to be agreed upon, and decisions made about the area to be covered, the forward time limit on participation, and other matters. Consultations with the staff of the Upper Yukon Subcommittee led to the decision that the surveyors should attempt to obtain information on all Upper Yukon salmon fishermen, including helpers, engaged in fishing operations from which salmon was sold, traded or bartered between 1960 and 1975, and who were alive as of January 1, 1975.

At the behest of the legislative subcommittee the terms "register" and "registration" used in HB 290 were omitted from the title of the survey and from publicity about the survey. It was felt that those terms would cause confusion; people would tend to believe that their response to the survey constituted an application for an entry permit.

Legislative staff indicated their wish was to be able to use the survey data to estimate the numbers of people who would be included within various possible criteria for commercial fishing and to measure the levels of participation using those criteria.

It was understood that the information obtained from the survey would be placed on computer files so that useful summary data could be readily supplied to the subcommittee.

After the questionnaire had been drafted and plans made for the survey, the Commercial Fisheries Entry Commission and the staff of the legislative subcommittee met in Anchorage with representatives of the Department of Fish and Game, Tanana Chiefs Conference and Alaska Legal Services to review those plans.

To facilitate survey operations, the Tanana Chiefs Conference was contracted to provide various forms of assistance, chiefly the provision of one liaison person for each of the two survey teams. A professional surveyor was hired to train the survey teams and to oversee the initial phase of the surveying operation.

Two survey teams of three to five people each, including Commission staff, Tanana Chiefs Conference liaison people, and, at times, a professional surveyor, commenced surveying on July 10, 1979. The teams usually travelled by skiff, hiring local people to transport them from one village to the next with stops at all inhabited fish camps. In addition to the skiff pilots, other local people were sometimes paid to assist the surveyors with communication and with locating fishermen. The on-river portion of the survey effort was completed by mid August.

Publicity about the survey included radio spots, news releases, letters to village councils, notices for local billboards, and posters. In a number of villages the survey teams held public meetings to explain the purpose of the survey and answer questions.

Twenty-two villages were visited by the surveyors. Fishing history was deemed relevant if it occurred in waters of the Upper Yukon area which are currently open to commercial fishing. These waters are the Yukon River from the Canadian border down to the confluence of the Bonasila River below Anvik and the Tanana River downstream from the confluence of the Chena River near Fairbanks. The survey teams travelled to several villages situated on tributaries that are now closed to commercial fishing to locate people who had at one time fished on the Yukon. These were the villages of Chalkyitsik, Venetie, Huslia and Shageluk. In addition, at the request of the legislative subcommittee, the survey was extended to Holy Cross, the next village downstream from the boundary between the Upper and Lower Yukon fisheries.

The survey effort resulted in completed questionnaires for 933 fishermen. Of these, 654 were surveyed directly. Questionnaires were completed for another 279 fishermen utilizing information provided by second parties.

The surveyors felt that their coverage of the population living along the Yukon and Tanana Rivers was thorough. They did not depart from a village until all the fishermen known to them could be surveyed or otherwise accounted for on the logs. However, it must be assumed that some eligible people were missed. Moreover, despite the surveyors attempts to explain and elicit trade and barter information, some fishermen may have been unaware that their past activities could be described as trade and barter. A few may even have been unwilling to report sales, trades or barter out of fear of legal repercussions, although the surveyors tried to allay this concern whenever it was raised.

Several approaches were used to collect survey information about fishermen who had moved to Fairbanks, Anchorage or elsewhere. In the course of village surveying, logs were maintained which listed former fishermen who had moved away and, when possible, surveys were filled out from information supplied by relatives or other fishing partners. In an attempt to contact fishermen who were no longer residents of river communities, surveyors attended the 1979 Eskimo-Indian Olympics in Fairbanks. The Tanana Chiefs Conference in Fairbanks and the Alaska Native Foundation in Anchorage were contracted to supply assistance in locating and surveying former Yukon fishermen who now reside in or around those communities. Advertising and news releases advised fishermen to go to the downtown offices of these organizations to be interviewed. Unfortunately, few people who had left the river were found by this latter method.

Thus, despite extensive efforts by researchers to obtain information on all individuals in the target population, it is indubitable that some individuals were unavoidably missed. The true size of the target population and the completeness of the forthcoming roll are therefore matters of concern.

Prior to the survey there was no available information which could be used to estimate the size of the target population or to identify its members. Knowledgeable persons offered estimates ranging from 500 to 5,000. The survey itself and additional information recorded in the surveyors' logs provide the best information presently available to estimate the total size of the population. The two survey teams kept logs in which they recorded the people who were surveyed as well as those fishermen whom they heard about but were unable to contact for one reason or another.

The logs show five categories of persons who fit within the class described by SCR 22 and HB 290, as well as a sixth class of persons contacted by the surveyors who do not fit within the class. A definition of these six categories can be found in the appendix.

The following is a preliminary population estimate derived from the logs. Note that Holy Cross fishermen are counted separately because they fished outside the current boundaries of the Upper Yukon area.

Population Estimate Derived From Logs

	<u>Holy Cross</u>	<u>Upper Yukon</u>	<u>Total</u>
1. Surveyed directly	75	579	654
2. Surveyed indirectly	21	258	279
3. Survey forms left behind	4	151	155
4. People not contacted, but shown on logs*	3	147	150
5. People said to be fishing with others, but not surveyed and not on logs	7	143	150
	<u>110</u>	<u>1,278</u>	<u>1,388</u>

* Ideally less than 100% of category 4 would be used since one might expect that, had they been contacted, some of the people in category 4 would have proven ineligible for the survey. However, in the absence of a readily available means of estimating the ineligible in this category, 100% of its members have been included.

For reasons stated above, this population figure likely underestimates the actual number of Upper Yukon fishermen. At a later date, if the legislative subcommittee desires, CFEC staff could attempt to construct estimators of the roll's completeness based on auxiliary information in Commission files.

The original surveys are available at the Commercial Fisheries Entry Commission. The survey data has been placed on computer files.

These files are presently being edited for keypunching errors.

Entry permit and commercial licensing information (where applicable) is being added to the survey data from CFEC files. This process is scheduled to be completed shortly. The legislative subcommittee will receive a computer printed roll containing relevant data on all individuals covered through the survey process. Individuals who did not receive entry permits will be clearly identifiable from the roll.

The completed computer file should be a valuable information source. The research staff at CFEC is available to assist in the further use of this information.

PART 2: Discussion of Criteria Used in Determining Upper Yukon
Maximum Numbers

The second directive of Senate Concurrent Resolution 22 requests that the Commercial Fisheries Entry Commission determine whether the maximum number of permits set for the Upper Yukon fisheries is consistent with the objectives of AS 16.43.

The stated purpose of that statute is:

"to promote the conservation and the sustained yield management of Alaska's fishery resource and the economic health and stability of commercial fishing in Alaska by regulating and controlling entry into the commercial fisheries in the public interest and without unjust discrimination." (AS 16.43.010)

The legislature found that commercial fishing had reached levels of participation "that have impaired or threatened to impair the economic welfare of the fisheries of the State, and the sustained yield management of the fishery resource."

The Commission was empowered to regulate entry into the commercial fisheries, to set priorities and establish suitable administrative areas, and to "establish, for all types of gear, the maximum number of permits for each administrative area." The statute provided that the maximum number of entry permits for a fishery designated as "distressed", under sec. 230 of this chapter, "shall be the highest number of units of gear fished in that fishery during any one of the four years immediately preceding January 1, 1973." Distressed fisheries are those in which the optimum number of permits is readily assumed to be less than the maximum number so established. Otherwise,

"When the commission finds that a fishery not designated as distressed under sec. 230 of this chapter has reached levels of participation which require the limitation of entry in order to achieve the purposes of this chapter, the commission shall establish the maximum number of entry permits for that fishery." (AS 16.43.240)

The statute has no more to say about how the Commission shall choose maximum numbers for fisheries which are not "distressed".

Department of Fish and Game staff responsible for managing the Yukon fisheries recommended that the commercial fisheries of the Yukon be limited in 1976. The Department indicated that continued rapid growth of participation in those fisheries would be an impediment to sustained yield management.

The Commission decided to split the Yukon into two administrative areas for the purposes of entry limitation. The line separating the Y-3 and Y-4 subdistricts was chosen as the boundary between the Upper and Lower Yukon fisheries. While the lower Yukon commercial fisheries were well established by the early 1970's, the up-river areas had experienced a more recent and sporadic development of commercial markets in the 1970's. The Commission believed that it would be unreasonable and unfair to compare Upper and Lower Yukon fishermen in determining relative qualifications for a permit.

The Commission decided to extend the philosophy embodied in the statute's formula for choosing maximum numbers in distressed fisheries to the choice of maximum numbers for the Upper Yukon and other fisheries limited in 1976. In the rapidly growing Upper Yukon fishery 1975 was clearly the year of highest participation to date; the Commission's intent was to set maximum numbers equivalent to the number of units of gear operated in the commercial gill net and fishwheel fisheries in 1975.

Considerable effort was expended to obtain and verify all licensing and fish sales records available through the Department of Fish and Game. A unit of gear was counted for every fisherman who, according to the available records, held an appropriate license and sold salmon in 1975. The maximum numbers were determined to be 63* for the Upper Yukon gill net fishery and 126 for the fishwheel fishery.

Since that time additional information about 1975 fishery participation has become available to the Commission through the permit application process. By comparing the original list of persons whose 1975 participation was counted in determining the maximum number against all permit applications on which 1975 fishery participation has been verified by the Commission, we have identified 15 gill net and 34 fishwheel participants who were not considered at the time that the maximum number was established.

* A computer program which incorrectly separated Upper from Lower Yukon gill net fishermen led to the adoption of 99 as the Upper Yukon gill net maximum number. This error was discovered shortly after the regulations were adopted. In practice the Commission has used 63 as the correct maximum number for the fishery, intending to correct the regulation eventually as part of a general overhaul of regulatory maximum numbers.

APPENDIX

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Survey Log Information

The survey logs revealed six categories of persons about whom some kind of information was obtained through the survey process. These classes are as follows:

1. People who were surveyed in person or who mailed in self-administered surveys: 654 people.
2. People for whom a survey form was filled out even though the surveyors were unable to talk with them in person.

Information was obtained from someone who had fished with the person, usually a relative. This includes survey information which was obtained for people who were alive on January 1, 1975 but who had since died.

Category 2 also includes approximately 40 people for whom surveys were filled out by Commission staff from the evidence previously filed with the Commission in support of their entry permit applications. These people are clients of Alaska Legal Services Corporation, and attorneys for that organization requested that we avoid surveying in person certain of their clients who have permit applications pending or who are contesting the Commission's decisions in court. The Commission was initially informed that Alaska Legal Services would submit completed surveys for their clients. However, ALSC later refused to submit some of those surveys.

Category 2 contains 279 people.

3. People for whom a survey form and mailing envelope were left in the care of a relative or friend. Most of these people were temporarily out of the village. In some cases the Commission later received the filled out survey form through the mails; in other cases the survey form was never received. If the survey form was received, the person who filled it out was counted in category #1. The remainder, persons who did not respond, make up category 3: 155 people.
4. People whom the surveyors believed should be contacted because their names appeared on old Fish and Game subsistence fishing surveys or because of information from other village residents, but who were unavailable (usually out of the village). Had they been contacted they may or may not have fit the category of persons to be surveyed. Survey forms were not left behind specifically for them, but their names were recorded in a special category in the logs: 150 persons.
5. The survey asked "who fished with you?". An attempt was made to survey all the people who were named in response to this question. However, a later check of the responses to this question against the logs showed some people who were neither surveyed nor otherwise recorded in the logs: 150 people.
6. Finally, there were people who were contacted because their names appeared on subsistence fishing surveys or who were otherwise known to have fished, but who turned out not to

fit the category of persons to be surveyed; that is, they had never sold, traded or bartered fish, or had not fished between 1960 and 1975. The logs show 211 people in this category.

It should be noted that in the course of house-to-house and fish camp canvasses the surveyors talked to other people who did not fit the survey category. These people were not necessarily recorded in the logs.