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DOUGLAS POPE
Attorney

Law Offices
912 West Sixth Avenue
Anchorage, Alaska 99501
(907) 272-6225

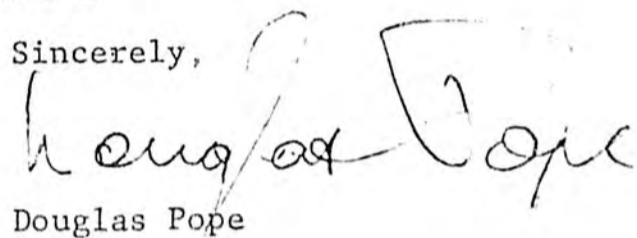
Box 27
Hope, Alaska 99605

October 22, 1979

Limited Entry Study Committee

Enclosed is an interim report with regard to the Yukon and
other fresh water salmon fisheries.

Sincerely,

A handwritten signature in cursive script that reads "Douglas Pope". The signature is written in dark ink and is positioned to the right of the typed name.

Douglas Pope

DP/emm
Encl.

INTERIM REPORT REGARDING THE
YUKON RIVER AND FRESH WATER
SALMON FISHERIES

Senate CS HB 141 contained a provision that directed the Legislative Limited Entry Study Committee to review and make findings and conclusions as to whether limiting entry into fresh water fisheries in the state has resulted in any unjust discrimination against any persons. Subsequently, this committee, with Senator Sackett as project director, contracted with me to provide data and proposed findings and conclusions to support the determination requested in the bill. This report is brief by design, but it is intended to advise the committee, and other interested persons, of progress to date, preliminary findings and other necessary material.

This project has not been undertaken in a vacuum. Our investigations have covered the entire length of the Yukon River in Alaska and a significant portion of the Kuskokwim. While the field investigations pursuant to this contract were going forward the Alaska Commercial Fisheries Entry Commission was conducting a survey of each person who has participated in the operation of gear in the commercial fishery of the upper Yukon, pursuant to sec. 3 of SCS CSHB 290 (copy attached), other contacts have been initiated with the North Pacific Fisheries Management Council, Department of Fish and Game, and the Canadian Department of Fisheries. Subsequent discussion will be directed to the conclusion that improved management capabilities with regard to the salmon fishery itself is a key factor minimizing ongoing problems resulting from a limited entry fishery. The Department of Fish and Game has displayed the best overall knowledge of the fisheries, and will continue to play a major role of consultation with regard to the management questions. The CFEC has provided key information with regard to priority, hardship and transferability problems.

The culmination of this research will be a report containing proposed necessary policy changes in bill and

resolution form. A copy of the proposed outline of that report is attached to this memorandum. Three subcontractors have reached agreement with me to assist in the preparation of this report. They are:

(1) Michael Carey, Fairbanks, is assisting me with the preparation of the historic development of the Yukon River Fishery prior to and subsequent to Statehood. The purpose for this historic development is two fold: (a) to familiarize the committee, members of the legislature, and other interested persons with the distinct differences between the fresh water and the coastal salmon fisheries; and (b) to provide a factual framework for constitutionally sound distinctions for the legislature to consider between fresh water and other salmon fisheries.

(2) Dr. George Rogers, Juneau, has been retained for the purpose of answering specific questions with regard to the economic health of the fresh water fisheries and the effects of any proposed policy changes on the economic health of those fisheries.

(3) The lawfirm of Wagstaff & Middleton, Anchorage, has been retained to provide professional legal assistance with regard to the myriad of constitutional questions surrounding limited entry. This assistance will take two distinct directions: (a) Robert H. Wagstaff, with considerable practice involving the due process, commerce, privileges and immunities clauses of the federal constitution, will assist me in determining what are the constitutional constraints with regard to modifying the terms or privileges of a limited entry permit; (b) R. Collin Middleton, with considerable experience litigating the equal

protection clause under the Alaska and Federal Constitutions, will assist me in developing a constitutionally sound basis for distinguishing between fresh water and other fisheries, a problem with major but not insurmountable equal protection problems.

SUMMARY BACKGROUND OF THE
YUKON RIVER FISHERY

The final report, in conjunction with the data gathered by the CFEC in the survey this summer, should provide the most accurate compilation of data and conclusions about the nature of the fisheries to date and the circumstances surrounding the limitation of entry into those fisheries. This summary is included here for the purposes of background for the preliminary findings. The Yukon and Kuskokwim River fisheries have been by nature, until quite recently, an extremely sporadic and unpredictable commercial fishery. Some villages and fish camps experienced no significant commercial purchases for export until as late as 1974 or 1975, and other villages and fishcamps experienced phases of where commercial markets, both locally and for export, would flourish occasionally and then completely disappear. Since the mid 1970's many villages and fish camps have experienced major growth in the commercial export market, although some villages and fish camps still suffer from the unpredictable failure of an export market during the season. (Commercial sales on the Yukon in total did not surpass subsistence harvests until the late 1960's, and, for many localities, the commercial export market did not surpass the subsistence take until the mid 1970's). All the villages and fishcamps have historically experienced, and continue to experience, a direct exchange of fresh and processed fish for groceries, hardware and other commodities necessary for survival).

Permit transfers for these areas are not yet significant and there is a high incidence of use of the

permits. In the Upper Yukon most permits have been transferred through the family via gifts or through estates. Individual fishermen on the rivers have strong feelings about, and have expressed an interest in policy changes to reflect the following:

(1) Devaluation of the permit. Most permit holders on the Upper Yukon, for example, are members of long time families in the area. The situation has apparently not yet reached a point of speculation with the individual permits, and as a result, a substantial majority of the fishermen contacted believed that devaluing the permit would tend to encourage permits to remain locally. Suggestions for devaluation of the permit took several forms

(a) Suggestions that the value of the permit be established by law consistent with desires of the individual fishermen in the region.

(b) Suggestions that the rights of transferability be limited, consistent, if possible, with the interests of the individuals in transferring their permits through an estate.

(c) Taxing windfall capital gains on permit transfers.

(2) That individual fishers, or their family members, must use the limited entry permit (by fishing according to standards imposed by law), have an extraordinary reason for not using the permit, or risk the possibility of having the permit revoked.

(3) That some persons, particularly older persons who fished during the sporadic years of

the 1960's and the early 1970's, were unjustly excluded from the right to acquire the limited entry permit because of the manner in which limited entry was effected. A correlary of this is the belief that some of the older persons, confronted with cultural and language barriers, were not aware of the meaning and importance of the original application period.

(4) That the Yukon River Fishery should be divided into subregions, and the permits should be tied to the various subregions.

(5) That escapement as a policy is generally regarded as far more important than the limitation of entry, as a result many rivers currently not open to fishing should remain closed in the eyes of many fishermen and whatever efforts can be utilized should be utilized to improve the management techniques and insure an adequate and consistent escape.

PRELIMINARY FINDINGS

Early in the preparation of this report it became abundantly clear that if any adjustments were necessary to establish equity in the limited entry system for the fresh water fisheries, that those adjustments would have profound effects upon all other aspects of the fisheries. As a result this study quickly expanded to an accounting of the entire scope of the fresh water salmon fisheries in order that any recommendation would consider reverberation effects throughout the fishery. Accordingly, some of these preliminary findings, and a significant portion of the final report, will address matters not purely relating to effects of the law with regard to the limitation of entry into the commercial fisheries of the Yukon and Kuskokwim Rivers.

The analysis as to whether there was any unjust discrimination is not yet complete. With that caveat the preliminary findings follow:

(1) The fresh water salmon fisheries of the Yukon and Kuskokwim Rivers are distinctly different fisheries in nature than the coastal fisheries of the state. The distinctly different nature involves the growth and stability of local and commercial export markets, the reliance upon the commercial and subsistence catches by the same persons and families, the type of gear and manner in which it is fished, the history of regulation and enforcement in the fisheries, cultural attitudes of the persons involved in the fisheries, the nature and extent of barter exchanges in contrast to direct commercial exchanges, the difference in management problems and techniques necessitated by the turbid waters, and, with regard to the Yukon, the international ramifications of the Yukon as a transboundary river.

(2) Several distinct classes of persons, who had actively and consistently participated in commercial and barter exchanges prior to the limitation of entry, could not successfully qualify for a permit. There are two general subclasses.

(a) Persons who would not have qualified under any circumstance under the imposed permit criteria. They are

1) Persons who actively fished at all available opportunities during the sporadic times of the 1960's and early 1970's but did not fish during the key years of 1974 and 1975.

2) Family members of 1) persons above, and other persons fishing in areas where commercial export markets were established, who operated gear and otherwise assisted in commercial and barter

exchanges but were not gear license holders or fish wheel permit registrants.

3) Persons who fished in the early 1970's in areas where commercial export markets were developing but who chose to work on the pipeline during the key years of 1974 and 1975.

4) Persons who fished in areas where exchanges were primarily through the barter process for local markets prior to and including the key years of 1974 and 1975.

(b) Persons who would have otherwise qualified for a permit but, because of cultural and language barriers, adequate and effective notice of the meaning and purpose of limited entry was not achieved until after the original application period had expired.

(3) International negotiations with regard to the high seas and transboundary river fishing are having and will continue to have a dramatic impact upon the fisheries. In the Yukon, for example, the current trend is toward larger runs due to a recent agreement with regard to interception of king salmon on the high seas, but eminent negotiations with regard to transboundary rivers has the potential of significantly reducing the allocation of the American catch.

(4) Subsistence utilization of salmon in the Kuskokwim and the Yukon drainages is and will continue to be a major factor affecting the growth and development of the commercial fisheries. Accordingly, any adjustments to the limited entry permit system in the Yukon and Kuskokwim drainages must consider the effect upon subsistence needs and harvests.

(5) Many of the problems experienced by the individual fishers, the CFEC and the Department of Fish and Game would be significantly alleviated by improved technology to assist monitoring fish patterns and escapement in the turbid waters. The Kuskokwim and Yukon salmon fisheries are a mixed stock intercept fishery. Alaska has recently been introduced to sidescan sonar technology for fish counting purposes. This technology has accuracy problems in turbid waters because of its one dimensional nature and the necessity of locating it on the river bank. The technology is currently available for one dimensional fan scan systems that can be located in the main stem of the turbid rivers and the technology is currently available for a two dimensional system which is far superior in accuracy.

(6) Aquaculture, in the form of hatcheries, has the potential to significantly increase the harvest and value of the fall chum salmon run on the Yukon River.

REMAINING WORK

The remaining work required is three dimensional. The report has to be completed and any recommendations have to be placed in bill and resolution form. This not only requires the final assimilation of the findings and conclusions but interaction with CFEC, the Department of Fish and Game, the Board of Fisheries, and other interested persons.

While that process referred to above is brought to completion it will be necessary to absolutely satisfy all constitutional questions with regard to the current limited entry system and any proposed changes. For this purpose I have undertaken the development of answers to these difficult

constitutional questions which are primarily relevant to statewide issues but must be answered as a matter of necessity in order to propose any necessary changes to fresh water fisheries systems.

PROPOSED OUTLINE OF REPORT ON LIMITED
ENTRY IN THE UPPER YUKON

- I. Historic Development of the Yukon River Fishery Prior to Statehood
- II. Yukon River Salmon Fishery: 1960 to 1978
 - A. Biologic Condition of the Fishery
 1. State of Art?
 2. State of Knowledge
 3. Growth of Total Take
 - B. Variety of Uses and User Groups
 1. Classes and Distinguishing Characteristics
 2. Concepts of Economic Dependence and Economic Reliance
 3. Commercial and Non-commercial Exchange
 - C. Changing Market Conditions Affecting the Direct Commercial Exchange of Salmon
 - D. Factors Which May Significantly Affect the Yukon Fishery in the Future
 1. Aquaculture
 2. International questions.
 - a. The Trans-boundary River Problem
 - b. Canadian Blockage
 - c. High Seas Intercept Agreements
 3. Changing Market Conditions
- III. Regulations and Limiting Entry into the Yukon
 - A. History of Regulation
 - B. The Decision to Limit Entry
 1. Bases in Law and Fact
 2. Criteria Established
- IV. Effects of Limiting Entry Into the Upper Yukon Salmon Fishery.
 - A. Statutory Process.
 - B. Constitutional Rights and Privileges of all Persons with Regard to the Harvest and Utilization of Salmon
 1. Art. VIII and Interpretative Case Law Lodge a Trust in the State
 2. Due Process and Equal Protection of the Laws
 3. Interaction of Art. VIII, Sec. 15, with the Entire Constitutional Framework
 - D. Does the Limitation of Entry into the Upper Yukon and the Manner Chosen, Satisfy Statutory and Constitutional Safeguards?
 1. Legitimacy of the Action and the Means Chosen.
 2. Was there Unjust Discrimination?
 3. Conclusion.

V. Recommendations

- A. Policy Changes
- B. The Effects of Policy Changes on the Economic Health of the Fishery.

VI. Appendix

- A. Memoranda and Reports
- B. Bibliography
- C. Proposed Legislation

Original sponsor: Resources Committee

Offered: 4/27/79
Referred: Rules

1 IN THE HOUSE

BY THE FINANCE COMMITTEE

2

SENATE CS FOR CS FOR HOUSE BILL NO. 141

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

ELEVENTH LEGISLATURE - FIRST SESSION

5

A BILL

6

For an Act entitled: "An Act establishing the Legislative Limited Entry

7

Study Committee; and providing for an effective date."

8

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9

* Section 1. (a) There is established as a special committee of the legislature the Legislative Limited Entry Study Committee. The committee is composed of the following members:

12

(1) three members of the house of representatives appointed by the speaker of the house;

13

14

(2) three members of the senate appointed by the president of the senate.

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(b) The chairman of the committee shall be appointed by the speaker of the house and the president of the senate jointly.

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(c) The purpose of the Legislative Limited Entry Study Committee is to complete a legal, social, and economic review of Alaska's experience with limited entry in common property fisheries, and to report its findings and conclusions to the legislature no later than the 10th day of the Second Session of the Eleventh Legislature.

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(d) The review, findings and conclusions of the Legislative Limited Entry Study Committee shall include a determination whether limiting entry into the fresh water fisheries in the state has resulted in any unjust discrimination against any persons.

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* Sec. 2. This Act expires June 30, 1980.

28

* Sec. 3. This Act takes effect immediately in accordance with AS 01.10.-070(c).

29

Original sponsor: Sackett

Offered: 4/27/79
Referred: Rules

1 IN THE SENATE

BY THE RESOURCES COMMITTEE

2 HOUSE CS FOR SENATE CONCURRENT RESOLUTION NO. 22

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 ELEVENTH LEGISLATURE - FIRST SESSION

5 Relating to the limited entry pro-
6 gram.

7 BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

8 WHEREAS art. VIII, sec. 15 of the Alaska Constitution provides that the
9 state may "limit entry into any fishery for purposes of resource conserva-
10 tion, to prevent economic distress among fishermen and those dependent upon
11 them for a livelihood"; and

12 WHEREAS AS 16.43 establishes the Alaska Commercial Fisheries Entry Com-
13 mission and states the legislative purpose as promoting the conservation and
14 sustained-yield management of the fisheries and the economic health and
15 stability of the commercial fisheries by regulating and controlling entry
16 into the commercial fisheries in the public interest and without unjust
17 discrimination; and

18 WHEREAS under AS 16.43.240(b) the commission is authorized to limit
19 entry into certain fisheries when it finds that a fishery has reached such
20 levels of participation that limitation of entry to that fishery is required
21 in order to achieve the purposes of AS 16.43; and

22 WHEREAS AS 16.43.240(b) does not specify a formula for the commission to
23 determine the maximum number of permits authorized when limiting entry into a
24 fishery under that section; and

25 WHEREAS in 1976, under AS 16.43.240(b), the commission decided to limit
26 commercial fishing in the area known as Upper Yukon and set the maximum
27 number of permits for the Upper Yukon as the number of units of gear fished
28 in the Upper Yukon during 1975; and

29 WHEREAS major commercial fishing markets did not develop for many areas

1 of the Upper Yukon fishery until after 1970; and

2 WHEREAS past participation in the commercial fishery of the Upper Yukon
3 that led to a high degree of economic reliance upon the commercial fishery.
4 included barter and sale of fresh, smoked and dried fish products within the
5 region and indirect sales through intermediaries to fish buyers; and

6 WHEREAS past participation in and economic reliance upon the operation
7 of gear in the commercial fishery of the Upper Yukon was not restricted to
8 persons holding a gear license or a fishwheel registration; and

9 WHEREAS it appears that some persons who have participated for many
10 years in the Upper Yukon commercial fishery and had a high degree of economic
11 reliance upon the fishery may have been excluded from receiving an entry
12 permit;

13 BE IT RESOLVED by the Alaska State Legislature that the Alaska Commer-
14 cial Fisheries Entry Commission is respectfully requested to determine which
15 interested persons with past participation in and economic reliance (includ-
16 ing the barter and sale of fresh, smoked and dried fish products) on the
17 commercial fishery of the Upper Yukon since 1960 through the operation of
18 gear, regardless of whether those persons held a gear license or a fishwheel
19 registration, have not been issued a permit; and be it

20 FURTHER RESOLVED that the Alaska Commercial Fisheries Entry Commission
21 is respectfully requested to determine whether the maximum number of permits
22 set for the Upper Yukon fishery is consistent with the objectives of AS 16.-
23 43; and be it

24 FURTHER RESOLVED that the Legislative Limited Entry Study Committee,
25 with the cooperation of the Alaska Commercial Fisheries Entry Commission, is
26 respectfully requested to determine whether controlling entry into the
27 commercial fisheries in the Upper Yukon has resulted in any unjust discrim-
28 ination and to determine what options are available to the legislature to
29 correct any unjust discrimination; and be it

1 FURTHER RESOLVED that the Alaska Commercial Fisheries Entry Commission
2 and the Legislative Limited Entry Study Committee are respectfully directed
3 to report their findings and conclusions within the first 10 days of the
4 Second Session of the Eleventh Legislature.

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1 IN THE HOUSE

BY THE RULES COMMITTEE

2 SENATE CS FOR CS FOR HOUSE BILL NO. 290 (Rules)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 ELEVENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act relating to limited entry; and providing for an
7 effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. AS 16.43.250 is amended by adding a new subsection to read:

10 (d) If an individual has applied for two or more entry permits
11 under AS 16.43.200(d) for the same specific fishery resource and the
12 same specific type of gear, but has failed to qualify for an entry
13 permit for that type of fishery resource and gear, the individual may
14 credit his cumulative qualifications to the fishery for which he is most
15 qualified. The commission shall issue an entry permit to the individual
16 for the fishery if the individual's cumulative qualifications result in
17 placing the individual in a category designated in (b) of this section.
18 The qualifications credited to a fishery under this subsection may not
19 be considered for the purpose of ranking the applicant under (a) - (c)
20 of this section for any other fishery. The commission may not revoke
21 any permit previously issued notwithstanding the issuance of permits in
22 excess of the maximum number established under AS 16.43.230 - 16.43.240
23 as a result of this subsection.

24 * Sec. 2. AS 16.43 is amended by adding new sections to read:

25 ARTICLE 5B. SPECIAL HARVEST AREA ENTRY PERMITS.

26 Sec. 16.43.335. SPECIAL HARVEST AREA ENTRY PERMITS. (a) In
27 addition to entry permits, interim-use permits, and educational permits,
28 the commission may issue special harvest area entry permits to holders
29 of private, nonprofit hatchery permits issued by the Department of Fish

1 and Game under AS 16.10.400 - 16.10.475.

2 (b) The commission may issue special harvest area entry permits
3 notwithstanding the establishment of maximum or optimum numbers under
4 AS 16.43.240 and 16.43.290.

5 Sec. 16.43.337. TERMS AND CONDITIONS OF SPECIAL HARVEST AREA ENTRY
6 PERMITS. (a) Special harvest area entry permits may be applied for on
7 an annual basis and shall be issued for a term of one year. A permit is
8 nontransferable.

9 (b) A special harvest area entry permit may only be issued for the
10 applicable area designated by the Department of Fish and Game as a
11 special harvest area.

12 (c) The annual fee for a special harvest area entry permit shall
13 be specified by commission regulation under the authority of AS 16.43.-
14 160.

15 Sec. 16.43.339. DISPOSITION OF FISH. Fish caught under the autho-
16 rity of a special harvest area entry permit are the property of the
17 permit holder. The permit holder may sell the fish if the proceeds are
18 used in the manner described in AS 16.10.450.

19 Sec. 16.43.341. AUTHORIZED GEAR. For the purposes of harvesting
20 salmon, a special harvest area entry permit holder may employ any fish-
21 ing gear designated as legal gear in the applicable special harvest area
22 by the Board of Fisheries.

23 Sec. 16.43.343. ADOPTION OF REGULATIONS. (a) Use privileges
24 granted under AS 16.43.335 - 16.43.341 are subject to the regulations of
25 the Board of Fisheries.

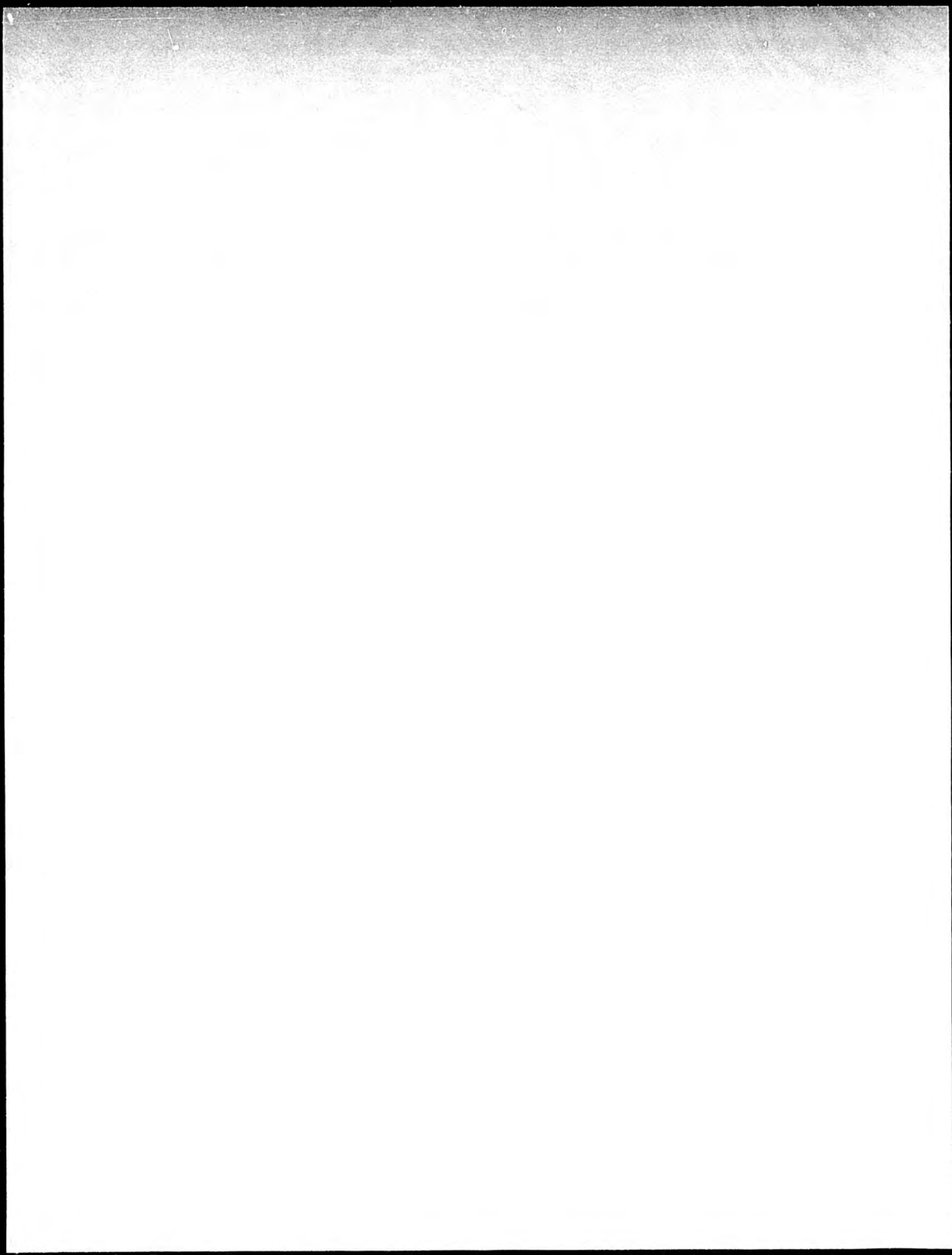
26 (b) The commission, after consultation with the Department of Fish
27 and Game, shall adopt regulations which are reasonably necessary to
28 implement AS 16.43.335 - 16.43.341.

29 * Sec. 3. The Alaska Commercial Fisheries Entry Commission shall allow

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

14 * Sec. 4. This Act takes effect immediately in accordance with AS 01.10.-
15 070(c).

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TO THE ELEVENTH ALASKA LEGISLATURE

THE UPPER YUKON AND OTHER
FRESHWATER SALMON FISHERIES:
Findings, conclusions, and recommendations

DOUGLAS POPE
912 W. 6th Ave.
Anchorage, Alaska
99501

ACKNOWLEDGEMENTS

John Sackett

For introducing me to the
people of the Yukon.

Katherine Brown

Cover photo: "Koyukon eating
fish."

Other photographs, assistance
and support.

Michael Carey

A Social History of the Yukon
Fisheries

Robert Wagstaff
Beth Kerttula

Excellent legal assistance.

James Huntington
Sidney Huntington

A wealth of knowledge.

Chet Clark
Ron Biggers

Safe passage and good comments.

Henry Mitchell

Consistently able assistance.

Edna Maynard
Minnie Card

Secretaries always there.

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Kevin Biggers, Harold Sparks
Ella Anagick, Dave Gray
Ron Regnart, Rodger Painter
Tom Lonner, Duke Earl and
many others

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AND LIMITED ENTRY PERMITS
- E. 1979 YUKON AREA SALMON MANAGEMENT
PLAN

INTRODUCTION

This report is a direct result of expressions of legislative concern that matured in 1979 regarding the social and economic effects of the limitation of entry into the commercial fisheries of certain regions of the state that have only recently developed export commercial markets. These expressions coincided with the Legislature's interest in seeking a complete legal, social and economic review of Alaska's experience of limited entry in common property fisheries. Chapter 51, SLA 1979, established the Legislative Limited Entry Study Committee and declared:

The purpose of the Legislative Limited Entry Study Committee is to complete a legal, social, and economic review of Alaska's experience with limited entry and common property fisheries, and to report its findings and conclusions to the legislature no later than the 10th day of the second session of the 11th Legislature. Sec. 1, paragraph (c).

That Act also included a charge that the "review, findings and conclusions of the . . . (committee) shall include a determination whether limiting entry into the fresh water fisheries in the state has resulted in any unjust discrimination against any persons." Section 1, paragraph (d). In conjunction, Legislative Resolve No. 26 addressed specific concerns that have been raised with regard to the effects of the limitation of entry into the commercial salmon fisheries in the area known as the Upper Yukon. That resolve is included in the appendix of this report in its entirety, but for the purposes of this introduction one part is noteworthy:

Further resolved that the Legislative Limited Entry Study Committee, with the cooperation of the Alaska Commercial Fisheries Entry Commission, is respectfully requested to determine whether controlling entry into the commercial fisheries in the Upper Yukon has resulted in any unjust discrimination and to determine what options are available to the legislature to correct any unjust discrimination.

To provide assistance in this endeavor the Alaska Commercial Fisheries Entry Commission was directed to survey

[e]ach person who has participated in the operation of gear in the commercial fishery of the Upper Yukon. . . regardless of whether that person has held a gear license or a fishwheel registration. Chapter 64, SLA 1979, § 3.

The survey to be conducted by the CFEC was 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 the area." Id.

Subsequently the Legislative Affairs Agency contracted for my professional services for the purposes of assisting the Legislative Limited Entry Study Committee in meeting the directives expressed by the Legislature. Clause I, (A), STATEMENT OF WORK, in that contract directed that

The contractor shall investigate and research the Upper Yukon and other fresh water fisheries of the state for the purpose of determining whether controlling entry into those fisheries has resulted in any unjust discrimination against any persons and to determine what options are available to the legislature to correct any unjust discrimination.

In order to comply with this statement of work it was necessary to develop a total understanding of all

elements of the Upper Yukon and other fresh water fisheries of the state. It was equally necessary to develop an accurate understanding of the social and economic history of the peoples and cultures involved in the harvesting of salmon resources in those areas. This required enlisting the support of the Alaska Department of Fish and Game, the Alaska Commercial Fisheries Entry Commission and various fishing and cultural organizations as well as actively seeking the assistance of the Canadian Department of Fisheries, the North Pacific Fisheries Council, the Board of Fisheries, the United States Fish and Wildlife Service and other elements of the state and federal government. In addition, it was necessary to retain a law clerk, several staff assistants, an historian, several pilots and airtaxi services, a respected constitutional attorney, (specializing in the areas of the privileges and immunities and the commerce clauses of the federal constitution), as well as the able assistance of staff persons to the Legislative Limited Entry Study Committee and other committees and members of the Legislature. Finally, assistance was received from numerous persons within the private sector. Without the support of all these organizations and individuals the findings, conclusions and recommendations contained in this report could not have been accomplished with the degree of thoroughness that has been achieved.

I have devoted considerable thought to the precise

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and appropriate scope of my role in the preparation and development of this report. It is my firm belief that all too many reports prepared for the purpose of addressing the development of policies in the public and private sectors more accurately reflect the political and philosophical bends of the policy makers rather than legitimate inductive conclusions. In this instance, I believe it appropriate that any findings and logic leading to conclusions that actions initiated by the state have led to "unjust discrimination" is a role to be taken as seriously as that of a hearing officer or a judge. Of course, in this situation I have not only weighed the evidence, I have also gathered it, and in that respect I have attempted to give a full and adequate analysis of all relevant facts regardless of whether those facts satisfied the interests of individuals immediately concerned with the areas in question.

The statement of work also requires the determination and development of options to be presented to the legislature to correct any items of unjust discrimination. With regard to this work requirement I perceive a different role. The Legislature, representing the collective philosophies and judgments of their people, requires the development of options consistent with its role in developing a concensus for addressing the social and economic policy of our state. Here I view my role as one I am more comfortable with through experience, that of an advocate folding in the

direction of legislative prerogatives consistent with the parameters of legislative and constitutional power.

Accordingly, this report is developed in two distinct parts. The first addresses the Yukon River and other fresh water fisheries in a manner that considers all relevant data accumulated, balances that data against the rights and privileges of all persons with regard to the harvest and utilization of salmon, and makes specific findings with regard to the "unjust discrimination" directive. Part two of the report addresses the larger view of factors significantly affecting the Yukon River fishery at the present and in the foreseeable future, how those factors limit the scope of the options available to the legislature, and finally the policy changes recommended.

I. HISTORY AND DEVELOPMENT OF THE YUKON RIVER FISHERIES

The Yukon is an immense watershed. It drains approximately 35% of the State of Alaska and is the fifth largest drainage in North America. The river originates in British Columbia within thirty miles of the Gulf of Alaska and flows over 2,300 miles to its mouth on the Bering Sea, draining an area of approximately three hundred and thirty thousand square miles. Included within the watershed is the vast network of the Porcupine River which drains much of the central and northern Yukon Territory.

The salmon is by far the most important fish in the history of the Yukon River fisheries. Native people who live near the river have used the salmon as a major food source for unrecorded generations. Prior to the influence of the white man, salmon fishing was done by a variety of methods, including dip nets, spears, seines, fish traps, and gill nets. 1/ The Native people who harvested salmon for centuries on the Yukon River are of two great cultures, the Athabascan Indians and the Yup'ik Eskimos. The present dividing line between the two cultures is at the remnants of the village of Paimute about twenty miles downstream from

1/ Michael Carey, Social History of the Yukon River Fisheries Prior to Statehood, p. 1. The Social History was prepared specifically for background information for the findings and conclusions of this report and is contained in its entirety in the appendix.

6(a)



An early vessel owner and gear operator near Anvik (late 1920s). Photo courtesy of University of Alaska.

the current Indian village of Holy Cross. The distribution of Athabascan Indians in the Yukon River drainages upstream from Paimute includes the distinct subcultures of the Ingalik, the Koyukon, the Tanana and the Kutchin.

The subsistence activities of all northern Athabascans reflect the changing economic relationship to their environment in the course of the year. At one time the Athabascan were exclusively hunters and gatherers, yet specific groups differed considerably in the emphasis and the use of the natural resources available to them. Most of these differences involved stressing either hunting or fishing. The Chandalar Kutchin, for example, were typically big game hunters of the high country. In contrast the Yukon Flats Kutchin primarily fished from early June until early September. When the fishing season was over, the Yukon flats people hunted moose and caribou until the river was frozen. In winter game was scarce and the people were forced to scatter in family groups. With these Kutchin, as well as with other Athabascans far down river beyond the great bend in the Yukon, a certain stability was present that was unknown to people almost completely dependent upon hunting. These people hunted caribou, moose, bear and most other subarctic animals, but it was fishing that gave stability to their way of life. Even so, periods of starvation were widely known to all Athabascans, from the big game hunters of the high country to the fishers of the flats and the river basins. Between the boundaries of influence of

the Kutchin and the Ingalik live the Koyukon. The Koyukon hunted and fished in the vast area of central Alaska, covering both the bounty of the middle Yukon to the deprivation of the upper Koyukuk. The Tanana peoples subsist in the Tanana drainage, itself a territory nearly as vast as the upper Yukon.

This western subarctic area was penetrated from two directions by representatives of the European nations. From the east came the English fur traders. Having secured their position in eastern Canada, they followed the continental rivers and lakes to the interior of the Canadian northwest and into the McKenzie and Porcupine River drainages that finally led them to interior Alaska. From the west came the Russians, who, after 1741, explored the coast and ascended the major rivers into the interior. Two major phases of contact followed: the period of early contact by the fur traders, and a later period when the fur trade was fully established and the influence of christian missionaries became a factor in the changing conditions of life for the northern Athabascans. 2/

Prior to these periods of contact the Athabascans were very mobile; small bands of people might cover hundreds

2/ James W. Vanstone, Athapaskan Adaptations, Hunters and Fishermen of the Subarctic Forests. HM Publishing, (1974).

of miles within a season. ^{3/} The two key ecological factors in this pattern were that the resources necessary for survival were highly scattered and localized and were subject to marked cyclic or noncyclic variations.

Snowshoe hares may die off everywhere or salmon might not appear in good numbers creating a universal shortage; but the localized shortage is more common such as failure of the whitefish run in a particular creek or movement of the moose out of a certain area.

Nelson, Hunters of the Northern Forest, Chicago Press (1973), p. 275.

More permanent settlements began to appear after contact with the white fur traders. These settlements were often associated with private traplines.

By the early twentieth century this system was well established; traplines were being bought and sold and permanent settlements of one to three families had been established where traplines adjoined navigable rivers.

Id., p. 276.

The beginning of village life as it is today can be traced to several developments. Above the confluence of the Yukon and the Tanana trading outposts such as Fort Yukon and Old Rampart assumed greater importance during the summer months in the latter part of the last century. Missions established downriver had similar influences. Several villages were originally boom towns for mining activity. When the booms died and the white men left the Indian peoples

^{3/} Koyukon from the upper Koyukuk still travelled overland as far as Rampart and Fort Yukon each year when Judge Wickersham first appeared on the Yukon. Wickersham, Old Yukon, Washington Law Book Co. (1938).

gradually took over the towns. The location of schools had immediate impacts on old settlement patterns.

At first the tie between the people and the school was fairly loose, but as the children became established in schools the families found it increasingly impractical to remain away on the trapline.

Id., p. 280.

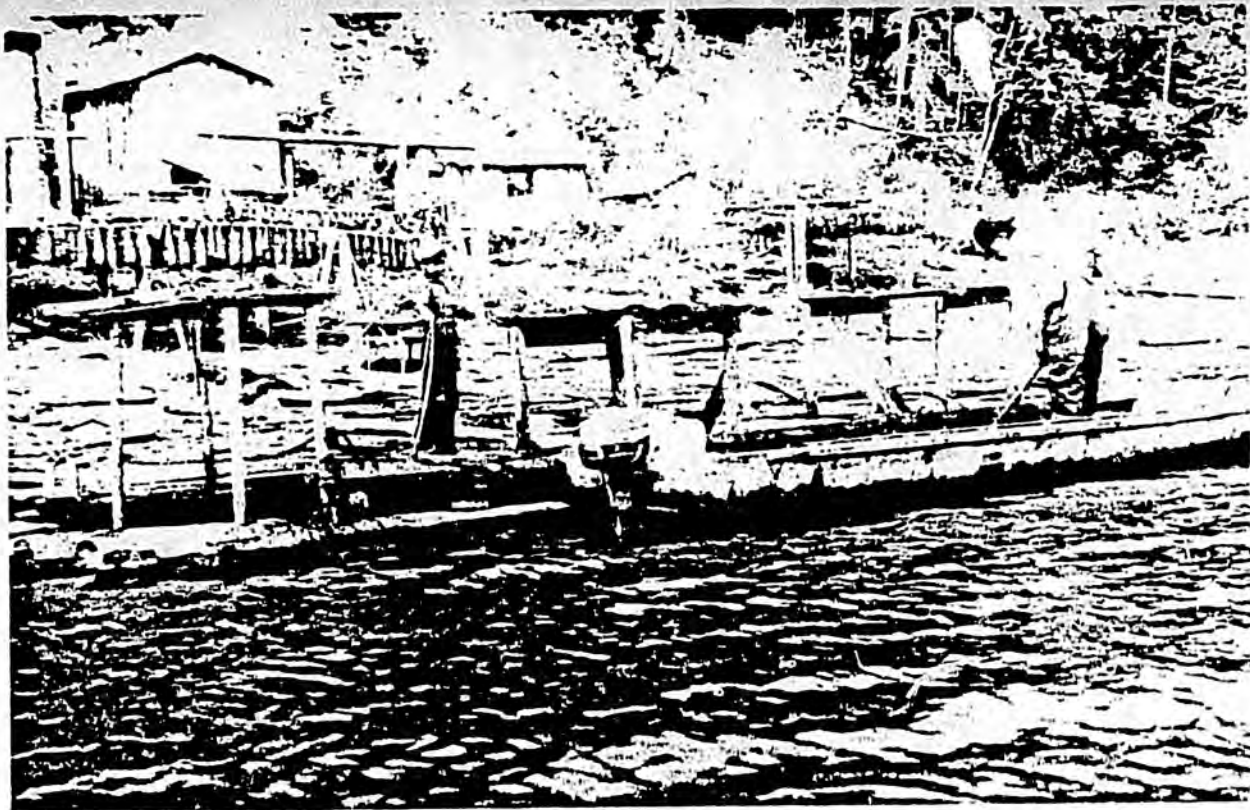
Village life brought changes, but it affected the subcultures somewhat differently. Cf., Id., pp. 284-321. In general, however, the people were tied to villages but were free on the land. Mobility had been curtailed, but the most aggressive hunters and gatherers still brought the most food to their families. The wealth of the land was still available for all who would make the effort.

The importance of the fisheries to the local peoples has been documented since the 1840's, but has perhaps been most poetically captured by Archdeacon Hudson Stuck, an elegant voice on behalf of the Native peoples.

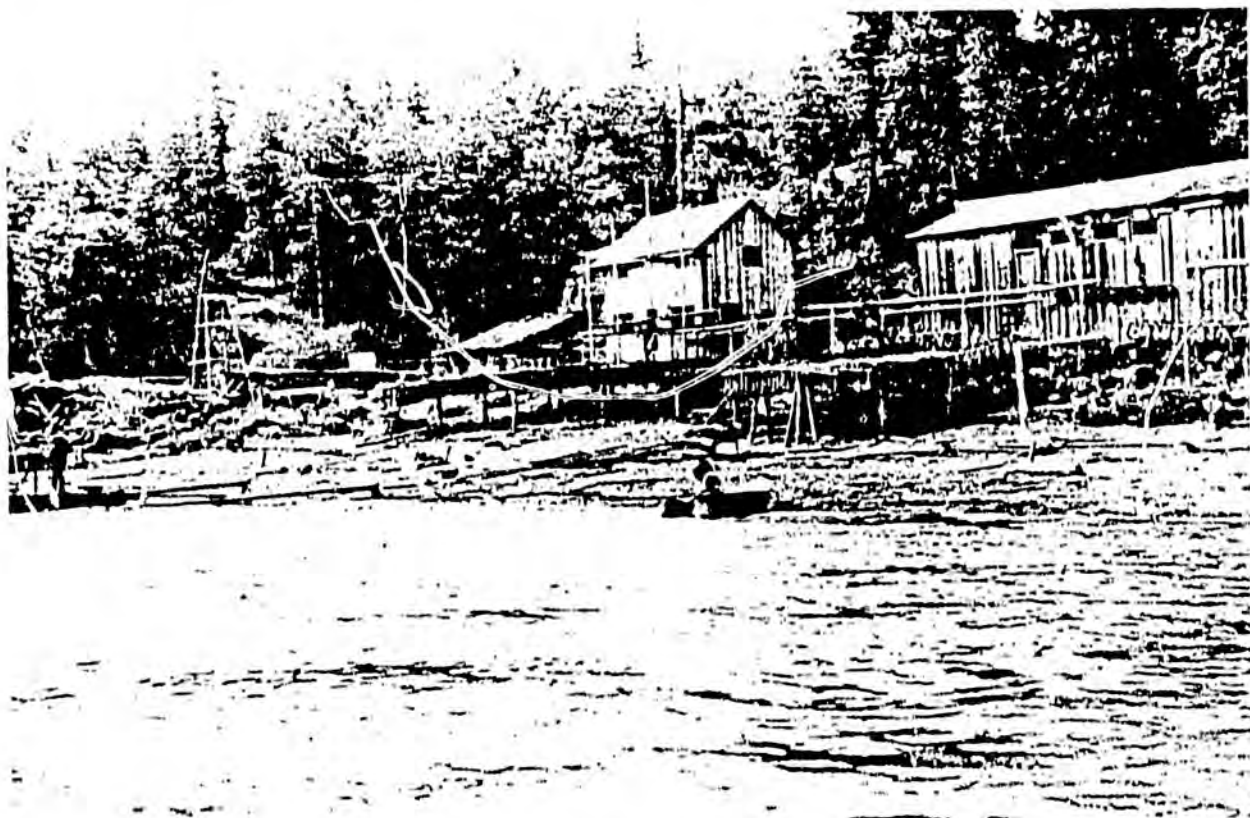
To a degree that is not understood by most people the whole economy of the Yukon country is built upon dried salmon. The Nile is no more basic to the economy of Egypt. . . than the Yukon is to the interior of Alaska, flowing through the midst of it and bringing this noble fish.

Carey, Social History of the Yukon River Fisheries, p. 4.

Apparently the first actual commercial operations in the Yukon can be traced to the Klondike gold rush. Significant commerce in fresh fish was established locally in the Yukon Territory. By the early 1900's the fish wheel had been introduced to the river by miners and had proved so



Unloading fish at the cutting tables, probably in the 1930s.
Photo courtesy of the University of Alaska.



"There is no commoner site along the Yukon." Photo courtesy of
the University of Alaska.

efficient that it surpassed all other fish catching devices in importance. Fish camps along the river were common then and are still common today.

There is no commoner site along the Yukon than the cluster of white tents in some picturesque nook among the hills of the right bank, and with one or more high, barn like smokehouses, which emit a faint blue vapor. There will be a fish wheel turning along the rocky shore and a number of open air racks, more or less protected from the weather, in which the salmon are hung for a time until partially dried and ready to be smoked. The picture is, of course, not complete without the native men, women, and children of the summer camp, nor without the invariable row of dogs tethered to stakes driven near the waters edge.

Id., p. 6, n. 7.

In 1914, Bureau of Fisheries Agent H. O. Smith made a trip from St. Michael to Whitehorse and submitted what appears to be the first formal report on the Yukon River fisheries. At that time Smith estimated that Nulato was the fishing center of the Yukon, that from Nulato to Ruby fishing was carried on more systematically than further downstream and that catches were heavier in that region of the river.

SLED DOG ECONOMY

For many years the markets for fish were either local, intrastate or international (into the Yukon Territory). The demands of those markets were primarily for dried fish as dog food. The dogs provided a mainstay for travel in the north.

The winter is the only time for travel except along the waterways of Alaska, and winter travel is impossible without the dog team. Dogs are

equally indispensable as draft animals and pack animals. Transportation of the winter mails over thousands of miles of the interior of Alaska must be accomplished by dog team. . . Fort Gibbon alone needs forty tons of dried salmon each year to feed the dogs they find indispensable in their work. Prospectors need them to carry their supplies into the hills. Woodchoppers require them to haul in their wood. Indians must have them in their long hunting and trapping expeditions, and without them can neither secure meat for their families nor fur to exchange for the other necessities of life.

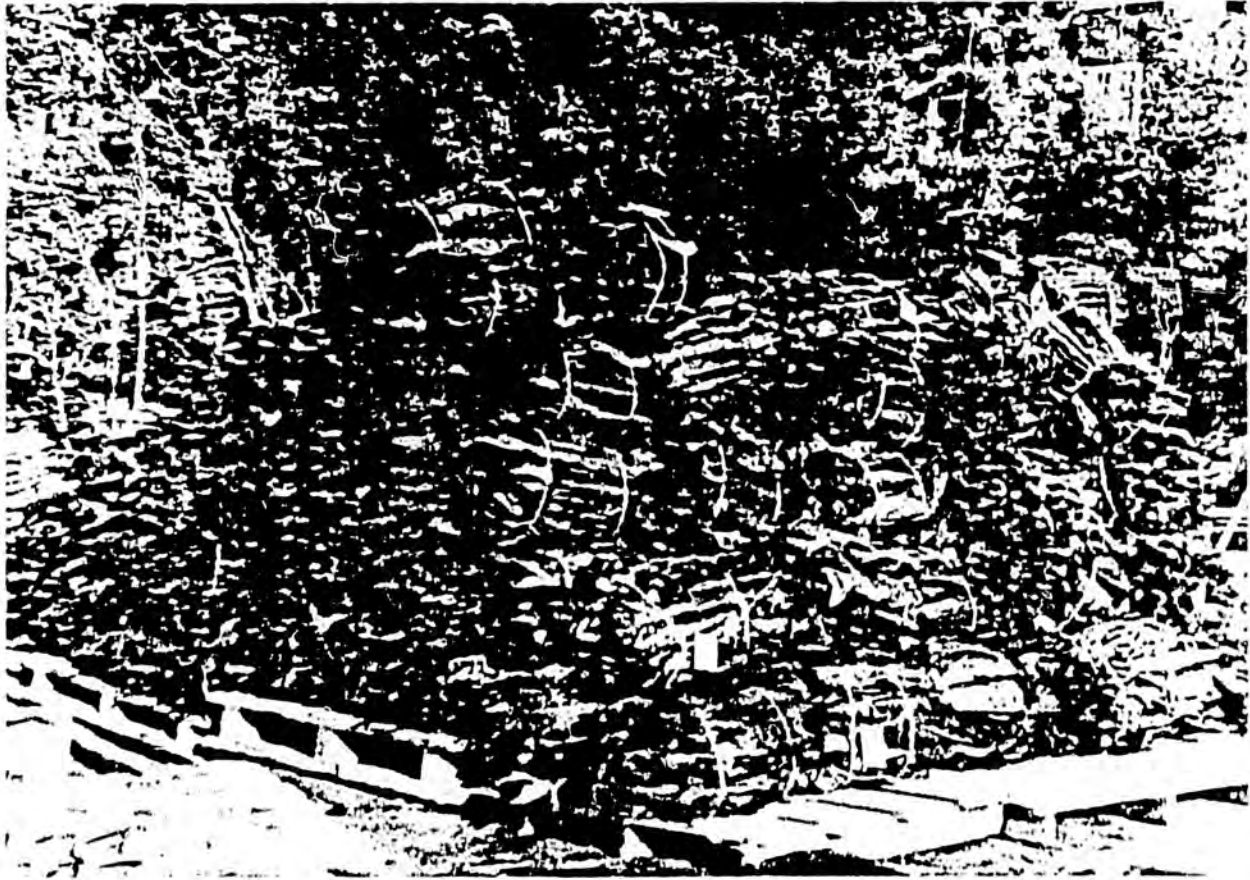
Id., p. 18, citing from a 1920 report.

The king salmon was important and prized for human consumption, but unquestionably, however, the chum furnishes by far the larger share of dried salmon. Along some stretches of the river almost complete dependence is placed on this species, locally known as the dog salmon and 'silvers', which form the staple dog food throughout the Yukon country. All the traders handle them and may deal in from 5 to 50 tons in a year.

Id., p. 19.

The necessity of dry salmon as the equivalent of hay and grain for work animals was the first of a number of factors that introduced the Yukon River people to a pattern of sporadic and usually unpredictable fluctuations in the market demand for fish. 1928 reflected the first example of a trend that continues to this day, the fluctuating, but also the general decline, in the importance of the sled dog in the Yukon economy.

Nearly all of the Traders carried over most of their dog salmon from last fall. There is very little dog team travel along the Yukon and Tanana last winter. In former years every one (sic) coming from Nome used dog teams, but this winter there is a regular airplane service to Fairbanks and Nome and all travel was that way. There was also another line of planes between Fairbanks and Iditarod, McGrath, and Takotna. This line also did away with a lot of dog teams. None of the traders would contract for any fish this fall.



Bales of dried fish awaiting a steamboat or barge - perhaps Dominic Vernettis's, a Koyukuk trader who bartered goods for dried salmon. See, Social History, Appendix A. Photo courtesy of John Deacon. Date unknown.

Id., p. 29, citing from a 1928 report.

By 1931 the emergence of air travel had led to a significant slump in the demand for dried fish in the upper Yukon region. Other influences contributed to increases and decreases in market demands. For example, when fur prices were high there was a greater demand for dried salmon to fuel the dog teams that were necessary to run the trap lines. Consequently, the local people supplemented their subsistence economy with the commercial harvest and sale of fish or fish products as markets appeared.

If there is a market for dried fish, they [Natives] will prepare for more, for instance, where a local trader will buy it, or take it in payment for debts.

Id., p. 30.

WAGES

If other opportunities were available that were more stable means for supplementing the subsistence base, the fishing effort often declined for a period of time. For example, in 1939, very few persons could be found fishing in the lower Yukon River village of Marshall.

Most of the Natives were working on the [CCC] projects not bothering to fish. Most of the camps between Marshall and Holy Cross were deserted, but the people at these places all had plenty of fish that were caught during July when the chums were running heavily. Most of the Natives at Holy Cross were working on the CCC projects also.

Id., p. 39, n. 64.

Again, in 1941, the run was exceptionally good and the fish were in excellent condition, but many fishermen

were busy working for wages.

The people who fished reported good catches, but many people from Kaltag, Nulato, Koyukuk, Galena, Ruby and Kokrines were attracted to construction work at Galena and Tanana air bases. 'Those men were all receiving work at \$7.50 per day for brush cutting so consequently could not be bothered to fish.'

Id., p. 35, citing a 1941 report.

The factors of fluctuating demand and alternative opportunities combined to set the patterns that existed until 1975 in some parts on the river, and still exist in other parts today. That pattern is one of people periodically fishing commercially when there is a market available and there is an absence of a more stable means to supplement the subsistence economy. As a result, the investigation of the upper Yukon fisheries reveals very little factual data which might infer that any "professional fishermen" participated in the commercial harvest and exchange of salmon in that region. 4/

4/ A number of persons reside in the region who are permitted to fish commercially in other regions of the state. All gear types are represented in this group and many of the permits were preceded by gear licenses. C.f., Langdon, Transfer Patterns in Alaskan Limited Entry Fisheries, January 17, 1980.

Much attention is addressed to the term "professional fisherman" in literature discussing limited entry and common property fisheries. The terminology appears to have successfully evaded a precise definition. I interpret the term to mean a person who efficiently harvests fish in a fishery that provides the opportunities for adequate capital retention to maintain vessels and gear, reinvest in more efficient vessels and gear, and pursue research and development of new vessels, gear and techniques. See, A.S. 16.43.380(2).

SUBSISTENCE

Subsistence fishing still occupies the position of a most important source of food for the people of the Yukon. It is clear that subsistence requirements and dependency have remained consistently important. 5/

Dependency on salmon as a source of food appears to be at a very high level throughout the main stem of the Yukon. . .

Carey, p. 49, citing a 1958 annual report.

5/ "The Legislature further determines that it is in the public interest to clearly establish subsistence use as a priority use of Alaska's fish and game resources and to recognize the needs, customs and traditions of Alaskan residents." Sec. 1, Chapter 151 SLA 1978.

It is occasionally suggested that this language is in conflict with the constitutional reservation of fish, wildlife and waters in their natural state "to the people for common use." Art. VIII, Sec. 3, Alaska Constitution. That section must be read in conjunction with the directive that "[L]aws and regulations governing the use or disposition of natural resources shall apply equally to all persons similarly situated with reference to the subject matter and purpose to be served by the law or regulation." Art. VIII, Sec. 17, Alaska Constitution, (emphasis supplied).

Section 17 clearly authorizes the legislative branch to classify beneficial uses of natural resources as long as the classified uses "apply equally to all persons similarly situated." Should sec. 3 on common use be interpreted as more restrictive, it should be noted that the classification of subsistence as a primary beneficial use is constitutionally indistinguishable from an act appropriating public funds to construct a dam on the Susitna River. The waters of the Susitna, occurring in their natural state, are reserved to the people for common use. Clearly, the legislature may, by the act of funding hydroelectric development on the Susitna, declare that use of those waters as the most beneficial.

This high level of dependency had continued even though it was clear to observers that there had been an increase in opportunities to supplement the subsistence economy in the 1950's, such as "fire fighting or road construction or work with the CAA and Air Force, as well as an increase in welfare and other forms of relief payments." Carey, p. 49. Fish was still the principle item of food in every outlying village in the 1950's, as it had been before World War II. However, the increased employment opportunities did affect the commercial exchanges of fish products.

It is interesting to compare the amount of gear used now in the personal use and dog food fisheries with years ago. The number and location of fish wheels were plotted several times this summer on the Yukon and Tanana Rivers. A total of 111 fish wheels were found between Fairbanks and the Kwiguk Slough. . . The average number found by C.F. Townsend for the years 1929 to 1941 was 212 for the same area. . . The average number of small salmon--those other than kings--dried annually in this area was 511,000 for the period 1929 to 1941. My estimate for 1953, based upon personal observations and estimates made by individuals in most every area is 380,000.

Carey, p. 45, citing a 1953 annual report. Increased air travel was resulting in a decrease in the need for a large number of dogs, and a concomitant decrease in the need for dried fish products. Other elements, such as the decline in fur prices during the 1950's had an impact on the number of dogs kept. 6/

6/ Carey, p. 46. It is also interesting to note that a certain local economy developed wherever prisoners were housed in the territorial days. Before statehood many prisoners restrained in available institutions in certain areas were fed with fresh and dried fish products. As a result, local fishermen had opportunities to supplement their subsistence income through the sales of fish to representatives of the federal government.

USE CONFLICTS

The continuing importance of the subsistence fisheries despite commercial market demands and fluctuations has led to controversy on the Yukon since early territorial days. In the spring of 1918, the Carlisle Packing Company of Seattle expanded its operations into the lower Yukon. Carlisle's floating cannery had a profound psychological impact on the resident fishermen. Its existence led to events which forged political positions regarding the regulation of the fishery that exist to this very day. Perhaps because the middle river peoples had developed such a significant reliance upon the fishery for their livelihood, some upper Yukon residents and supporters reacted immediately in 1918 when it became known that the salmon cannery industry was moving into the lower river. The major voices advocating for the native peoples were the Episcopal and Catholic missionaries. Several hearings followed and a quota on commercially harvested salmon was the result. Carlisle Packing Company subsequently circumvented the spirit and intent, if not the letter, of the quota and a disastrous fishing season followed upriver. The Commissioner of Fisheries sent two investigators (Gilbert and O'Malley) to spend the season on the Yukon. The investigators recommended that all commercial fishing for export cease for the Yukon and its tributaries. That recommendation was followed by the Secretary of Commerce in December, 1920, and commercial fishing was prohibited indefinitely in all suggested areas

after September 1, 1921. The primary interest behind those advocating closure of the Yukon to commercial fishing was protection of the subsistence livelihood.

The principle should be adopted with regard to the interior rivers of Alaska that no commercial interests should be permitted to exploit them until it should be demonstrated that a portion of the salmon run could be spared without detriment to the run itself and without encroaching on the supply needed by the populations that inhabit the valleys of the rivers. If there is any question whether the salmon in a given stream is adequate to supply the demands of commercial operations as well as needs of the local inhabitants, the doubt should be at once resolved in favor of the people.

Carey, p. 22, citing a 1920 report of Gilbert and O'Malley. The concepts and tools developed during the Carlisle controversy, with slight deviations, remain in effect today: allocations, quotas, alternating periods, and subsistence preference over commercial interests.

STATEHOOD

Since statehood the fisheries have expanded considerably in all areas of the Yukon, including that portion of the Yukon in Canada. Since 1961 the fisheries have developed differently for different stocks. For example, commercial fishing effort for king salmon has increased dramatically since 1961, even though the king salmon is still coveted by the people along the river as an eating fish. In contrast, prior to the mid-1960's, summer chums were used primarily for subsistence and dog food purposes (including the sale of dried dog salmon). In the mid-1960's the demand for dog food again declined, this time attributable

to the advent of the snowmachine replacing the dog sled as a primary means of transportation. 7/ As a result of the declining need for dog food, 1967 witnesses the beginning of a gradual liberalization of commercial fishing regulations regarding summer chums. For fall chums, the greatest expansion has occurred since 1968. Fall chums were not sought by commercial effort in the lower Yukon area until recently. They were harvested upriver because of their good quality, bright, silvery appearance, large size, robust body shape and high oil content (which is related to their upriver spawning destinations). Today fall chums are in great demand and are harvested in all fishing subdistricts. 8/ With the decline of the market for dried salmon, the history of commercial fishing in the upper river between the mid-1960's and the mid-1970's focuses on cash buyers who purchased from specific sites and villages in certain years. Several villages from Holy Cross to Galena, for example, were totally without a market for the sale of their fish at times during the late 1960's and early 1970's. Other areas, such as Tanana and Rampart, are closer to urban centers and

7/ Although it appears that dog sled use is increasing again for purposes of work and recreation, it is not contemplated that the use will ever again regain its position of importance in rural Alaska.

8/ It is reported that summer chums spawn primarily in run off streams, while fall chums spawn primarily in spring fed streams. Major spawning tributaries of summer chums include the Andreafski and Anvik Rivers and several others within the Koyukuk River drainage. Spawning streams for the fall chums are the Tanana River, Toklat River, Delta River and the Porcupine, including the Sheenjek and Fishing Branch Rivers.

enjoyed a more consistent influx of cash buyers, even though major commercial demands for export were still wanting. The late 1960's and early 1970's were years of major forest fires in interior Alaska, and the early to mid-1970's reflected mobilization and construction of the Alaska Pipeline and its attendant local hire policy that recruited many persons out of the villages. Consequently, the late 1960's and early 1970's reflected another turn in the old pattern: persons drifting away from fishing as a means to supplement the subsistence base because of more stable opportunities elsewhere. 9/

MARKET STIMULATION

The commercial catches by subdistricts and species for the years 1960 through 1975 reveal elements of market stimulation. In the upper Yukon area the catch of commercially harvested king salmon was fairly stable from 1960 to 1973. The years 1974 and 1975 evidenced a significant increase in the commercial harvest of king salmon. The increase evidenced in those years has since remained fairly stable. See, Tables. In contrast, the commercial harvest

9/ This generalization about the unavailability of market purchasers is not consistent on the river. For example, in Galena, Sidney Huntington is generally considered to be responsible for developing that commercial fishery in the mid to late 1960's. Sidney began selling his fish to purchasers in Anchorage. In the early stages of his fish buying and selling activities it was necessary for him to pay the freight to Anchorage. He recalls as a significant breakthrough the day when fish were purchased FOB Galena rather than Anchorage. Today Sidney is still the main fish buyer in that region, and, characteristically, is one of the most outspoken critics of the effects of limited entry on the river.

20(a)



Cleaning fish and stripping roe at the cutting table (1979 photo). The table and the camp where it was located bear a striking resemblance to camps forty years in the past. See, p. 11(a). Photo by Katherine Brown.

TABLE NO. 1

Year	Upper Yukon Area				Lower Yukon Area				Totals
	33-40	33-50	33-60	Subtotals	33-40	33-50	33-60	Subtotals	
1960	2	17	86	105	44	17	86	147	46
1961	1	17	86	104	44	17	86	147	46
1962	1	17	86	104	44	17	86	147	46
1963	1	17	86	104	44	17	86	147	46
1964	1	17	86	104	44	17	86	147	46
1965	1	17	86	104	44	17	86	147	46
1966	1	17	86	104	44	17	86	147	46
1967	1	17	86	104	44	17	86	147	46
1968	1	17	86	104	44	17	86	147	46
1969	1	17	86	104	44	17	86	147	46
1970	1	17	86	104	44	17	86	147	46
1971	1	17	86	104	44	17	86	147	46
1972	1	17	86	104	44	17	86	147	46
1973	1	17	86	104	44	17	86	147	46
1974	1	17	86	104	44	17	86	147	46
1975	1	17	86	104	44	17	86	147	46
1976	1	17	86	104	44	17	86	147	46
1977	1	17	86	104	44	17	86	147	46

Year	Upper Yukon Area				Lower Yukon Area				Totals
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1974	1	17	86	104	44	17	86	147	46
1975	1	17	86	104	44	17	86	147	46
1976	1	17	86	104	44	17	86	147	46
1977	1	17	86	104	44	17	86	147	46

Yukon district commercial, vessel and gill net licenses issued and numbers of fishboats operated by subdistrict, 1960-1978.

TABLE NO. 2

Actual number of commercial salmon fishing vessels by subdistrict, Yukon district, 1971-1978 1/

KING SALMON SEASON									
Year	Lower Yukon Area				Upper Yukon Area				Total
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1971	405	154	33	592	---	---	---	---	---
1972	426	153	35	614	---	---	---	---	---
1973	438	167	38	643	---	---	---	---	---
1974	396	154	42	592	27	31	20	78	670
1975	441	149	37	627	93	52	36	181	808
1976	453	189	42	684	80	46	29	155	839
1977	392	188	46	626	87	41	18	146	772
1978	429	204	22	655	80	45	35	160	815
FALL SEASON									
Year	Lower Yukon Area				Upper Yukon Area				Total
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1971	352	---	---	352	---	---	---	---	---
1972	353	75	3	431	---	---	---	---	---
1973	445	183	---	628	---	---	---	---	---
1974	322	121	6	449	17	23	22	62	511
1975	428	185	12	625	41	33	33	110	735
1976	422	194	28	644	18	36	44	98	742
1977	337	172	37	546	28	34	32	94	640
1978	429	204	28	661	24	43	30	127	788
COMBINED SEASONS									
Year	Lower Yukon Area				Upper Yukon Area				Total
	334-10	334-20	334-30	Subtotals	334-40	334-50	334-60	Subtotals	
1971	473	154	33	660	---	---	---	27	687
1972	476	153	35	664	---	---	---	2/	664
1973	529	205	38	772	---	---	---	47	819
1974	485	190	42	717	28	43	27	98	815
1975	491	197	39	727	95	57	46	198	925
1976	482	220	44	746	96	62	56	214	960
1977	402	208	54	664	96	53	39	188	852
1978	472	221	29	722	82	53	38	173	895

1/ Actual number of fishing vessels refer to those boats which made at least one delivery. Data presented shows the number of vessels that operated in each subdistrict. Some individual fishing vessels in the lower Yukon area may have operated in more than one subdistrict during the year.

TABLE NO. 3

Estimated mean prices paid to fishermen, Yukon
district, 1961-1978 1/

Price Per Fish

<u>Year</u>	<u>King</u>	<u>Coho</u>	<u>Chum</u>
1961	\$3.50	\$	\$
1962	3.50		
1963	3.50		
1964	3.75	.50	.25
1965	4.50		.35
1966	4.50	.50	.35
1967	4.50	.50	.35
1968	4.64	.50	.50
1969	4.60	.55	.50
1970	5.00	.84	.61
1971	5.34	.82	.64
1972	5.90	.92	.75
1973	7.45	1.27	1.18
1974	9.00	1.75	1.40
1975	9.24	1.50	1.36
1976	11.28	1.63	1.50
1977	20.00	3.76	2.67
1978	20.71	3.05	2.56

Price Per Pound

<u>Year</u>	<u>King</u>	<u>Coho</u>	<u>Chum</u>
1964	.17		.03
1965	.20		.05
1966	.20		.05
1967	.19	.07	.05
1968	.18		.06
1969	.19	.08	.08
1970	.22	.12	.09
1971	.24	.12	.10
1972	.24	.13	.11
1973	.30	.18	.16
1974	.38	.25	.21
1975	.42	.21	.20
1976	.52	.24	.22
1977	.86	.49	.38
1978	.87	.43	.36

1/ Information not available for some species.

of chum salmon increased dramatically from 1,200 fish harvested in 1972, to 13,000 harvested in 1973, to 107,000 harvested in 1974, to 252,000 harvested in 1975. Commercial licenses, gill net licenses and the numbers of fish wheels registered and operating in the upper Yukon reflected similar increases, although gear licenses and fish wheel registrations began to rise in the early 1970's prior to the dramatic increase in the harvest and sale of commercially caught fish in 1974 and 1975. See, tables. The value of fish paid to fishermen in the Yukon districts during the years 1961 to 1978 reflected a gradual increase in prices through 1972. In 1973 the fisheries experienced a jump in price ranging from a 50% increase in chum salmon to a 25% increase in king salmon. In 1974 similar increases from 25% to 33% were experienced. In 1975 the prices for chums and cohos actually dropped from that of previous years while the prices for kings increased slightly.

None of the information regarding the increase in gear licenses, fish wheels, and fish prices adequately explains the remarkable increase in fish commercially harvested in 1974 and 1975. Clearly there was market stimulation beyond the increase in the price of fish. The market stimulation led to a significantly increased presence of fish buyers on the Yukon River and a significant increase in the availability of fish. These buyers were purchasing fish primarily destined for international markets, and their

presence can most certainly be linked to two previous actions by the state. Those actions, a combination of executive and legislative decisions were the legalization of the sale of roe from subsistence caught salmon for the years 1974 through 1977, and the increased quotas for commercially harvested salmon, beginning in 1974. 10/

Sale of subsistence caught salmon roe was first authorized in 1974 through emergency regulation by the Commissioner of Fish and Game. In 1975, the Legislature adopted an Act that legalized subsistence salmon roe sales in the A-Y-K region. The regulation and the Act were clearly balanced between the desired purpose of providing supplemental income to subsistence fishers and the legitimate interests of the state in preventing the waste of salmon, but a predictable result was the substantial increase in fish product purchasers. The subsistence catch of chum salmon that had declined throughout a majority of the A-Y-K region during 1966 to 1973 (due to a decreased effort resulting from fewer sled dogs) reversed itself and increased substantially during the period 1974 to 1977. Those years coincide with the remarkable increase in the commercial harvest of salmon in the same regions.

The liberalized quota that coincided with the

10/ Another significant regulatory change occurred in 1973, but it had no visible impact on the market. Prior to 1973 a person could operate more than one fishwheel under fishwheel registration numbers issued to them by the Department of Fish and Game. In 1973 this regulation was changed to require that only one wheel could be operated under any registration number.

subsistence roe sales provided a substantial boost in the market availability of salmon in the round, as well as salmon stripped of roe. Buyers purchased salmon and roe from commercial harvesters and roe from subsistence harvesters. The resultant effort increase was predictable, but the effort increase was not restricted to commercial harvest. Persons who harvested and exchanged fish commercially before to supplement their subsistence life were not obliged to register or secure a license as a commercial fisherman. It is apparent that many persons were satisfied with the additional income from the sale of subsistence roe.

THE DECISION TO LIMIT ENTRY

In March of 1976 a manual of instructions for completing entry permit applications in the Arctic, Yukon and Kuskokwim salmon fisheries was distributed. The cover letter from the acting Chair of the Alaska Commercial Fisheries Entry Commission, dated February 23, 1976, opened with the following paragraph:

The commercial salmon fisheries of Kotzebue, Norton Sound, the Yukon River and the Kuskokwim River are now under limited entry. All gear operators in these fisheries who intend to commercially fish for salmon in 1976 or at any future time must apply now for a permanent entry permit. These instructions will explain who may apply and how to complete the application form.

Further explanation noted that fishermen "must submit an application by May 10, 1976, if you intend to fish commercially as a gear operator at any future time." Regarding the question of eligibility the instructions emphasized that

To be able to apply for an entry permit a fisherman must have fished commercially with a gear license at least one year from 1960 to 1975. In the upper Yukon River fishwheel fishery, where gear licenses have not been required, the person who was issued the registration number for his fishwheel and operated the fishwheel commercially may apply. THIS COMMISSION WILL NOT ACCEPT YOUR APPLICATION IF YOU DO NOT MEET THE ELIGIBILITY REQUIREMENTS. (emphasis in text).

With regard to the allocation of points for past participation in the fishery the pamphlet emphasized:

IMPORTANT: You may claim points from any year from 1970 through 1975 only if you held a gear license and took salmon in that year.

With regard to the allocation of points for income dependence it was similarly emphasized:

IF YOU FISHED WITH A GEAR LICENSE DURING 1974 AND/OR 1975 you may claim income dependence points.

The instruction booklet did not discuss the maximum number of permits to be issued--that decision had already been made. The criteria for determining permit issuance had also been established. The instruction booklet was attempting to give notice that applications had to be filed, which applications would be accepted and how permit points would be calculated. Notice on the critical issues of maximum number of permits and permit issuance criteria was attempted through a variety of methods prior to the decision to limit entry.

The decision to limit entry into the Arctic, Yukon and Kuskokwim salmon fisheries was accomplished by the Commercial Fisheries Entry Commission through the adoption

of regulations. In order to understand the effects of the decision to limited entry into these fisheries, and the adequacy of the instruction pamphlet quoted from above, it is necessary to review briefly A.S. 16.43 and the system it spawned. In early 1973 then Governor Egan submitted his limited entry program for Alaska's fisheries to the legislature. That proposal, expressed in Senate Bill No. 39, presented the concept of an entry commission as a regulatory and quasi-judicial agency of the state nearly identical to the system we now have. However, the process and standards of application stressed in SB 39 were significantly altered prior to passage by the legislature. In the original bill the commission would have been empowered to determine "the maximum number of units of gear for each type of gear and for each administrative area." That determination of the maximum number required the balancing of several general standards, primarily considering the level of income as opposed to biologic manageability. The bill envisioned that the commission would then adopt regulations setting forth the qualifications for entry permits for each administrative area and unit of gear and then would have the power to revise the maximum number of units of gear after it was established that there had been longterm changes in biological and/or market conditions.

The law that finally passed, chapter 79, SLA 1973, is somewhat different. It distinguishes between "distressed

fisheries" and fisheries which have "reached levels of participation which require the limitation of entry in order to achieve the purposes of this chapter." A.S. 16.43.230-240. It also distinguishes between "maximum number of entry permits" and "optimum number of entry permits." The formula for determining the optimum number of entry permits was quite similar to the formula originally conceived in Senate Bill 39 for the maximum number of units of gear. For "distressed fisheries" the maximum number of entry permits was designated in law as "the highest number of units of gear fished in that fishery during any one of four years immediately preceeding January 1, 1973." A.S. 16.43.240(a). No standards were placed on the Commission for determining the maximum number of entry permits for a fishery that had "reached levels of participation which require the limitation of entry in order to achieve the purposes of this chapter." See, A.S. 16.43.240(b).

The Act does not provide the flexibility that the original bill would have granted to the commission for the purpose of revising the maximum number of permits or units of gear in a given area. The Act envisions that the optimum number of entry permits will be significantly less than the maximum number of entry permits in distressed fisheries, but anticipates that in fisheries that have "reached levels of participation which require the limitation of entry in order to achieve the purposes of this chapter" the optimum and

maximum number of permits would not be that dissimilar. In any event, the only procedure in the Act providing for reduction of the number of permits must, of necessity, follow a determination of the optimum number that could then be reduced through the administration of a buy-back program. See, A.S. 16.43.290-320. The result of these changes effectively restricts any increase in the maximum number of permits after the initial determination and most certainly relieves the Commission of any power to increase the number of permits subsequent to an initial determination, if that initial determination was accurate.

The limitation of entry into the commercial fisheries of the A-Y-K was accomplished by the Commercial Fisheries Entry Commission pursuant to the broad range of authority in A.S. 16.43.240(b)

When the commission finds that a fishery not designated as a distressed fishery 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 a maximum number of entry permits for that fishery.

Although the Commission could have established its own formula for determining the maximum number of entry permits for those fisheries, it chose to closely follow the legislative intent reflected in A.S. 16.43.240(a), and set the maximum number of entry permits as approximately equivalent to the maximum number of units of gear fished in those fisheries during the year 1975. The decisions establishing

and computing the formula for the maximum number of permits, as well as the establishment of the criteria for issuance of permits, imposed a commercial fishery concept upon the upper Yukon that was not a good fit with regard to the history of the fisheries and the people who depended upon them for a living. The poor fit can be traced to the information (and lack of information) that formed the basis for the Commission's decision.

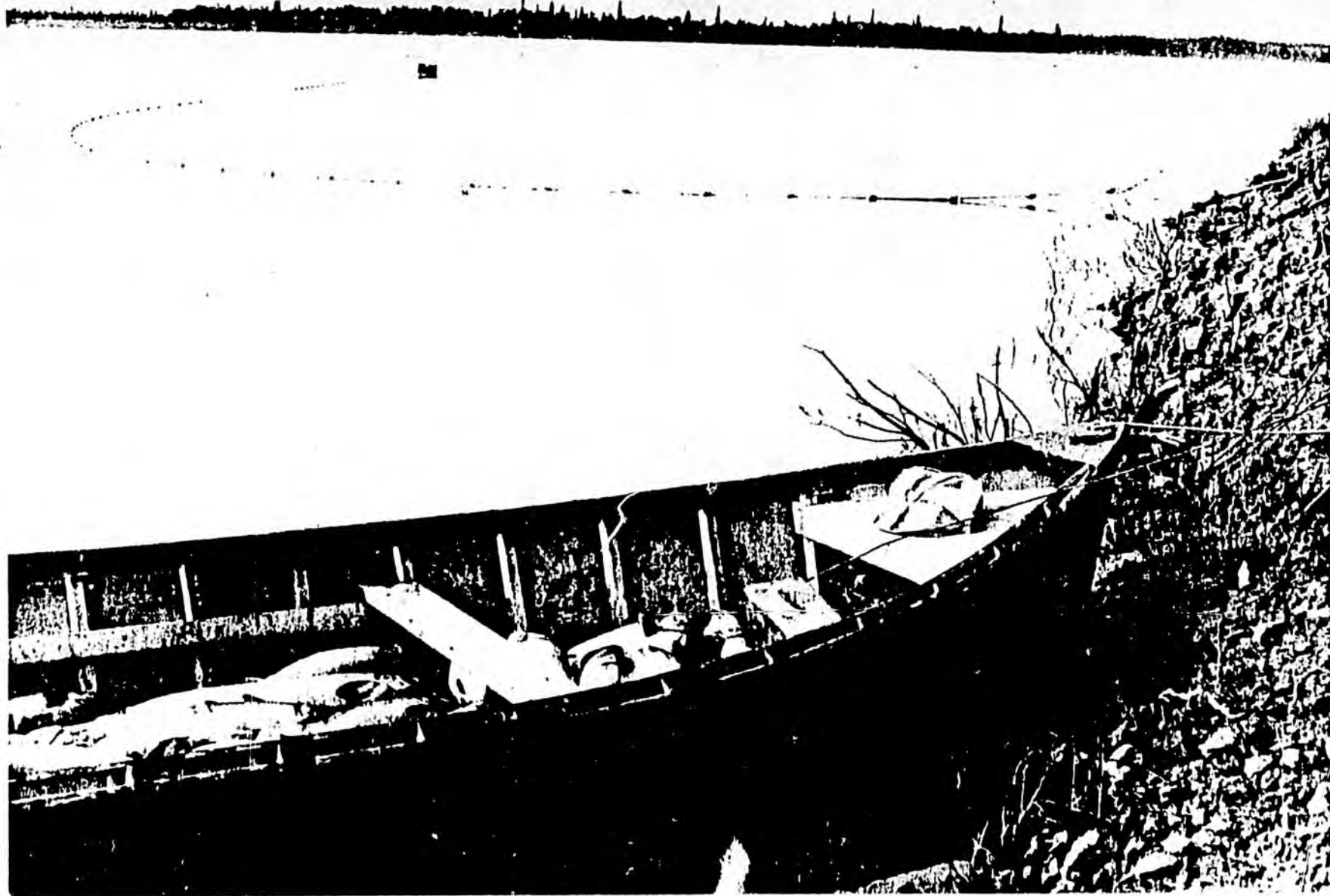
BACKGROUND AVAILABLE TO THE CFEC PRIOR TO ITS DECISIONS

A. BRIEFING MATERIAL

In March, 1974, the Commission was presented with a packet of briefing material on the A-Y-K. That briefing material consisted primarily of information derived from several other sources, including management reports of the Department of Fish and Game, and a number of memoranda and reports that had been published for other governmental units. Some material contained in the briefing was a result of research initiated by and prepared for the Commission. The vast majority of the information contained in the briefing material was more relevant to managing the biological health of the fishery rather than to the economic health of the fishery.

Some information apparently had little effect upon either the decision to limit entry, the formula for establishing the maximum number of permits or the criteria for the issuance of entry permits. Other information considered

29(a)



Vessel and gear at a set net site, used for both subsistence and commercial harvest (1979 photo). Note that the vessel is quite similar to that shown on p. 11(a). Over forty years separate the scenes. Photo by Katherine Brown.

is demonstrably misleading.

Although bits and pieces of the information pointed to the sporadic nature of the A-Y-K fisheries, and a person who was personally acquainted with Yukon might have been able to conclude that commercial harvest there developed primarily to supplement a subsistence economy, only one small paragraph in the briefing material made a clear reference to this factor.

The fisherman participation tables show that turnover is high in A-Y-K fisheries. This is equally true in the rest of Alaska though the cause may be different. Most of the fishermen actually fish every year, but some years they fish only for subsistence, and other years they buy a commercial license to sell some fish. Id., p. 117.

At one other point in the briefing material the interaction between the subsistence and commercial fisheries was referenced.

Although subsistence hunting and fishing are old patterns of life, they are accomplished with modern tools. Cash income is largely invested in the equipment used for subsistence activities. Commercial and subsistence fishing are complementary activities since the sale of fish pays for the boat and gear that the family needs for subsistence fishing and for general transportation. From another point of view, one could allocate part of the cost of boat and gear to commercial fishing and part to subsistence fishing and/or transportation. Id., p. 125.

The two related paragraphs are the only reference to what is perhaps the most important element of the fisheries that should have been considered by the Commission prior to its decisions to limit entry, establish the maximum number of permits and establish the criteria for permit issuance.

The Commission can hardly be faulted for its failure to understand from these two paragraphs that the fisheries it was seeking to regulate necessitated entirely different criteria and standards to accomodate their particular nature, but the Commission can certainly be faulted for its failure to adequately develop data.

One important example of misleading information can be found early in the briefing material.

An individual usually works his gear alone, so that the number of actively fishing fishermen is almost always equal to the number of fishing vessels operated. The few exceptions are technical violations of the regulations, that is, a family member will deliver fish on another member of the family's license. Id., p. 3.

While it might be true that drift netters often work their gear alone, the statement made certainly does not apply to the operation of set nets and fishwheels. Since the upper Yukon is exclusively a set net and fishwheel fishery that statement is seriously misleading to that fishery. In fact there are and were a number of persons often participating in the operation of individual units of gear in the form of set nets and fish wheels for the purpose of commercial harvest in the upper Yukon region.

B. PUBLIC HEARINGS

The Commission held public hearings on the Yukon in 1975. Discussion at those hearings reveals concern on behalf of the local fisherman regarding various aspects of the limitation of entry. The concerns expressed pinpointed

subsequent problems with amazing accuracy. The Commission's responses to the concerns expressed reveal a superficial understanding of the fishery at that time. For example, persons operating commercial fish wheels were never required to have a gear license. Fishwheel registration was a recent requirement and it was not until 1973 that a fish wheel registration number was restricted to one wheel. In spite of this crucial factual distinction from other fisheries, the acting chairman of the Commercial Fishery's Entry Commission, conducting the hearing at Galena on July 14, 1975, was unaware that a fish wheel could be operated commercially without a gear license. See, CFEC Transcripts, Galena Hearing, July 14, 1975, p. 10. Other discussions revealed concerns that apparently were not seriously considered by the Commission.

1. The Sporadic Nature of the Fishery

At Galena there was a great deal of discussion about the very recent boom in the fishery. However, there was very little reference to the fact that markets for fish had sustained a small commercial harvest for some time.

STOVALL (Acting Chairman): What I am saying is this: You have all these people down there who have fished for a long time. (Lower Yukon) You have this group of people up here who have not fished for very long. I want to split the river because that guy down there that has fished for ten years has a lot more experience and time than the guy up here that has fished two.

Galena Hearing, pp. 26-27.

Clearly, the acting chair did not reveal an

understanding about the particular historic development of the fishery in that region. Other discussions at other hearings reveal similar misinformation. Participants appear to have been literate fishermen who understood the law somewhat and could discuss the difference between gear licenses, commercial licenses and fish wheel registrations. There was, however, very little dialogue with regard to the fact that the markets had come and gone before. Finally, the upriver meetings held by the Commission were at Galena and at Tanana, two of the major centers for fisheries commerce on the river. Experiences of the fishermen in Galena and Tanana do not reflect the experiences in many other parts of the upper Yukon. As discussed previously, many smaller villages had, and still have, markets that suddenly disappear for an entire season. One person, however, stated it very well at Tanana:

I probably can shed some light on the reasons, local people didn't fish commercially in the past because there was not that much market for it. You could catch dog fish and sell it to the stores but then in later years year could not . . . it began to be a lot of work. It was much better to work for wages if you can't make a living on fishing. But, in recent years the caucasians begin to come in and start buying fish and deliver to the fishery. This is why more and more people are beginning to see that it is profitable to fish commercially. This is why you begin to see more and more people apply for fishing license that never applied in the past.

Tanana Hearing, November 18, 1975, p. 32.

2. The Effects of a Limited Entry Fishery.

Although many people attending the hearing

apparently understood, after discussion, the nature of a limited entry fishery, some people expressed concerns about whether other persons who did not understand what was transpiring would be unjustly excluded from the fishery. Salient examples follow:

There's people sitting here in this room that have fished every year, they fished commercial, subsistence, mostly subsistence. They fished all their life . . . no commercial license. You have to find some way of getting issued to them. There's a man here fish for seventy years and never owned a commercial license until last year. The only reason he got one, he had a lot of fish and wanted to sell some so he got a commercial license.

Galena Hearing, July 14, 1975, p. 6

* * *

Some people just got a license, a commercial license is not a gear license. Not realizing that a gear license is the most important thing to have.

Galena Hearing, p. 9.

* * *

QUESTION: It seems to me that the subsistence fisherman is usually the guy that really needs the money.

STOVALL: If this is true then why has he not been a commercial fisherman previously?

QUESTION: Because it hasn't been known what the commercial fishery is.

RICKEY: You mean he hasn't had the opportunity to get rid of his fish as a commercial product?

QUESTION: The way we operated prior to the last two years we've -- we've never told anybody how we did it or anything.

Tanana Hearing, p. 18. The transcripts reveal that these

comments were commonly responded to by directing questions to "the people who commercial fish . . . how many fishermen can they stand in the fishery commercially?" Id.

The transcripts of the hearings also reflect that the Commission did not clearly identify the maximum number range to be set:

QUESTION; The area here, has it reached the upper limit?

STOVALL: We don't know yet, we are still looking at figures and Jim has to do some economic work. Actually to lay it right on the line the Fish and Game comes along and says we can manage this thing with two hundred to three hundred units of gear and we use those figures. Jim uses them for the economics of the thing. You crank this all out. The combination of the two may come out to where instead of three hundred we might go to three fifty because this is the only way the economy can stay alive. People have to live. We don't know. We haven't quite reached that point. I suspect that probably it will be fairly close to the figure that we are looking at right now, but we don't know. Maybe we can just look at everybody that has a gear license as of this date will get a permit. But, we don't know yet. We should know within two or three months.

Galena Hearing, July 14, 1975, p. 32.

It seems clear that the people attending the hearing were articulating the concerns they had reflecting the particular nature of the Yukon River fishery, but that the commissioners and staff of CFEC were not adequately absorbing the message.

CORRESPONDENCE AND OTHER INPUT

Considerable comment to the Commission regarding the proposed regulations establishing the maximum number of

permits and the criteria for issuance of permits was provided by the Alaska Department of Fish and Game. Criticism or concurrences by the Department occasionally followed a particular philosophical line, but more often were addressed to separate questions regarding each fishery on an ad hoc basis. Several memoranda from the Department emphasized that:

The staff feels that there should be a separate point system for each fishery that would reflect on the history of development in each fishery.

* * *

We recommend that the CFEC reevaluate their proposed regulations for the 1976 A-Y-K salmon fisheries. The entire program should be redrafted to take into account the variable nature of the different fisheries in the A-Y-K region rather than presenting a generalized program that is too all inclusive.

See, October 23, 1975, memorandum to the CFEC.

The Department was also critical of the point system for permit issuance proposed by the Commission (and substantially similar to the regulations adopted) which they believed to be too liberal in its scope and not necessarily applicable to each separate fishery. With regard to the maximum number of permits recommended, the Department memoranda reveal the vacuum in relevant information about the upper Yukon fishery. For example, the Commission originally proposed to set the maximum number of gill net permits for the upper Yukon at 45. To this the Department responded:

Upper Yukon Gill Net - 45. A total of 45 gill net permits for the recently developed upper Yukon fishery appears to be too low. (139 gill net licenses were issued in 1975). Although we don't have any reliable data on how many gill nets were actually fished in 1975 a more reasonable level of gill net permits would be approximately 80.

Id.

Other correspondence makes it clear that the maximum number of permits established by the Commission was arrived at by discounting the number of gear licenses and registration numbers in 1975 by a calculated percentage difference between gear registered and gear actually fished. Reexamination in 1979 of their initial determination has led the Commission to conclude that a miscalculation occurred in the original approximation. See, COMMISSION DECISIONS, Infra.

THE COMMISSION'S DECISIONS

The Commission established the maximum number of entry permits for the upper Yukon gill net fishery at 99 and the maximum for the fishwheel fishery at 126. The Commission has since taken the position that the adoption of 99 in the published regulations for the gill net fishery was based upon a computer program error, and has been working on the corrected computer number which has lowered that number to 63. 11/ The point system for issuance of the permits is

11/ Recently the CFEC has checked the information used in 1976 to establish the maximum number of permits against the information that has become available through the application process. The Commission took a list of all people credited in 1975 with participation from a computer file used in 1976 to tabulate units of gear

n. 11 continued.

fished and compared that list with people who, on their permit applications, showed 1975 participation claims which were verified by the Commission. The Commission discovered 42 additional verified claims of 1975 participation: 30 among fishwheel applicants and 12 among gill net applicants.

Most of the people with new 1975 credit had no fish tickets, but based their claims of past participation on licensing plus affidavits from people who bought fish from the applicants. Sometimes income tax returns also gave evidence of commercial fishing. Other people had sold salmon roe and appeared on Fish and Game lists of salmon roe sellers. Their points were verified under a Commission policy that persons who held appropriate commercial licenses and sold roe received points. Still others actually received points printed on their applications on the basis of late changes to the Commission's computer file which were not in time for the maximum numbers determination.

Currently a number of applicants, who have not been issued permits, claim points for 1975 participation. Their claims have not yet been verified by the Commission as of January 31, 1980. 12 of those persons have applied for upper Yukon gill net permits and 28 have applied for upper Yukon fish wheel permits. If these unverified claims of participation are subsequently verified, then those numbers should be added to the current number of 42, by which the maximum number established in 1976 must be adjusted.

identical to the other fisheries in A-Y-K, except Kotzebue, and breaks down as follows:

PAST PARTICIPATION

<u>YEAR FISHED AS A GEAR LICENSE HOLDER</u>	<u>POINTS AWARDED</u>
1975	4
1974	3
1973	3
1972	3
1971	2
1970	1
	<u>16</u>

INCOME DEPENDENCE

<u>CRITERIA</u>	<u>1975 POINTS</u>	<u>1974 POINTS</u>
Income Dependence Percentage In Excess of 60% or Non-Fishing Occupational Income Less Than \$3,000.00	4	2
Income Dependence Percentage in Excess of 30% or Non-Fishing Occupational Income Less Than \$6,000.00	2	1

Points were also awarded for economic dependence, and for investments in vessels, gear or fishwheels: 1 point each. A minimum of 10 points is necessary in order to be awarded a permit. At a glance it is possible to determine that the person who had a nonfishing occupational income of less than \$3,000.00, who fished as a gear license holder in 1975, and who owned either a gill net or a fishwheel, was automatically

eligible for a permit. 12/

When the Commission established criteria for income dependence they focused on the key years of 1974 and 1975. Annual catch value, a factor in determining income dependence percentage, is defined as "the gross amount actually received for the calendar year from harvesting the fishery resource commercially while participating as a gear license holder." 20 AAC 05.660. The combined effect of the formula and the definition, in conjunction with the practice of many commercial gear license holders to fish subsistence during periods closed for commercial harvest, made it impossible for the Commission to segregate those amounts accrued from the sale of subsistence salmon roe from other amounts contributing to the annual catch value. Persons who held gear licenses in 1974 and 1975, or had fish wheel registration numbers during those years, had the revenues counted from the sale of subsistence caught salmon roe toward their income dependence percentage because it was impossible to calculate otherwise.

EFFECTS OF LIMITING ENTRY INTO THE FISHERY

A. EFFECTS ON YUKON RIVER PEOPLE

The limitation of entry into the Yukon River salmon fisheries has the potential to be one of the most

12/ It is important to note that "nonfishing occupational income" does not include any sum derived from sources other than a job or profession. For example, an urban person from Fairbanks with a large income derived from property rentals and from no other source could have built a wheel or purchased a gill net, secured a gear license, sold one fish in 1975, and would have been eligible for a permit.

devisive elements introduced into the villages in the last half of this century. The potential devisiveness resides in the very nature of the current limited entry framework as a special privilege of fishery. Many Athabascans in the villages, and other people who have migrated there, are hard working individuals who have maximized the utilization of the resources available to them to feed and house themselves and their families and to improve their standing in the economy in which they have participated. Others of less physical or mental ability or motivation were not as successful at providing for themselves or their families. Yet that is the way it has always been for the Yukon River peoples. In the boreal forest the key to success in hunting, trapping and fishing is the knowledge of the terrain. Knowing where to find the trails, lakes, hills, valleys, forests, and meadows and the most stable concentrations of edible plants, game and fish provided the thin margin between survival and the periods of starvation that plagued the land. Even during the fur trade era the ownership of traplines was based upon uninterrupted use and was therefore not permanent. The only barriers were the ability and motivation of the individuals and the availability of areas to utilize.

It is true that some families fared better than others but none were arbitrarily denied the opportunity to provide. Commercial fishing itself presents a potentially

devisive element because of the use conflicts, however, a strong respect for subsistence utilization is in evidence as well as a strong desire by all peoples in the villages to protect the biologic productivity of the salmon. The devisive element of limited entry is seen in the clear distinction between the haves and the have nots that is developing in the important fishing villages. The families that are faring better today often have been permitted to enter into the commercial fisheries, a significant departure from the cultural tradition that provided opportunities for survival but not guarantees for prosperity.

This element of devisiveness is further amplified by the present system of permit transfers through free market sales. Currently, the price of the gill net permit in the upper Yukon averages around \$5,000.00 and the price for a fish wheel permit averages around \$12,500.00. That amount of capital is a substantial barrier to participation for many people in the upper Yukon region. The current report by Dr. Steve Langdon, TRANSFER PATTERNS IN ALASKAN LIMITED ENTRY FISHERIES, January 17, 1980, reveals the following information:

	<u>TOTAL NO. OF PERMITS</u>	<u>NO. OF PERMIT TRANSFERS</u>	<u>NO. OF FAMILIAL TRANSFERS</u>	<u>FAMILIAL TRANSFERS AS % OF PERMANENT TRANSFERS</u>
Gill Net	49	11	6	54.5%
Fishwheel	113	21	6	28.6%

Id., p. 15. Even though there is a high percentage of

familial transfers in the upper Yukon area, Dr. Langdon's study definitely detects a gross loss of permits by rural Alaskans in the A-Y-K fisheries, including the upper Yukon. Dr. Langdon feels that this trend will continue.

To a great extent, demand for A-Y-K permits by urban, non-local, and non-resident persons has been limited due to the distance from these areas to the A-Y-K fisheries, lack of profitability, and lack of knowledge about those fisheries. As a result, little attrition in permit holdings by rural residents has occurred to date. To the extent that these conditions change in terms of easier access, higher profitability, and greater dissemination of information about these fisheries, then the probability of outflow of permits will increase.

Id., p. 72. Dr. Langdon believes that the attrition is a threat to the rural economic base.

If it were the case that the rural population had declined in the recent past, if it were the case that an expanding rural population was migrating to urban centers. . . at a higher rate than the rate of natural increase, if it were the case that employment opportunities in the local regions and on a statewide basis were expanding more rapidly for rural persons than the rate of loss of permits, then one might be able to argue that the decline merely represents natural attrition due to a greater integration of the rural population into the Alaska economy. Since most of these ameliorating conditions do not appear to be taking place, the outflow of permits that has occurred and that eventually can occur must be regarded as a significant threat to the rural Alaskan economic base and the wellbeing of rural Alaskans.

Id., pp. 72-73. Dr. Langdon is persuasive when concluding that marginal fishermen, substantially below average in net earnings, are likely to transfer their permits for a price equivalent to the average potential earnings from the fishery.

Id., pp. 65-68. If this trend continues, then the only

opportunity for local peoples who have had income dependence but do not have the adequate number of points for issuance of a permit, is to seek permits on the increasingly competitive free market. That burden amplifies the developing distinction between the haves and the have nots in the villages. It has the effect of preventing ready, willing and able persons, who do not have adequate financial resources to compete on the free market for the permits, and who may in fact have an income dependence on the fishery, from providing a livelihood for them and the persons who are dependent upon them or for supplementing their subsistence base. Finally, it encourages rather than discourages public assistance, a tradeoff that some people apparently feel is acceptable.

The staff feels that economic dependence was superficially analyzed or simplified to such a great degree that it makes it too easy to qualify for points and ultimately a permit. Many individuals are not truly dependent upon the fishery as a source of income because of welfare, food stamps, etc.

October, 23, 1975, memo from the Alaska Department of Fish and Game to the CFEC, p. 2.

B. EFFECT ON ALL PERSONS WISHING TO COMMERCIALY HARVEST SALMON

All persons wishing to commercially harvest salmon, from urban and rural area alike, who have not developed an economic dependence upon the fishery prior to the date of the limitation of entry, have no choice but to purchase permits on the open market. There is no incentive to

participate in the fishery other than as a limited entry permit holder. While those persons are apparently least affected by the decision to limit entry, and the manner in which it was accomplished, it is also true that this class of persons will suffer greater hardship as time progresses.

II. THE RIGHTS AND PRIVILEGES OF ALL PERSONS WITH RESPECT TO THE HARVEST AND UTILIZATION OF SALMON IN THE FRESHWATER FISHERIES

It is against this factual background that the rights and privileges of all persons who have previously harvested and who wish to harvest salmon commercially in the Yukon drainages must be considered. The appropriate point of departure for this discussion is Alaska's Constitutional Convention.

A. THE DEVELOPMENT OF NATURAL RESOURCE POLICY IN THE STATE OF ALASKA.

Beginning with the opening keynote address to the Alaska Constitutional Convention by E. L. Bartlett, 13/ Alaska's public policy development has struggled with the promises from and the challenges created by our natural resource wealth. The Convention focused frequently on Alaska's mineral wealth, but heeded the call of Bartlett to forge an aggressive policy toward the fisheries:

"The question of resources policy is not to be confined, of course, solely to the issue of mineral policy. Upon statehood, Alaska becomes the master of her own destiny on controlling the fisheries resources within her waters. Slavish

13/ Bartlett was Alaska's Territorial delegate in Congress.

adherence to old concepts, concepts which have brought only depletion and portents of ruin, will result only in the complete destruction of a once mighty industry. While the major future wealth of Alaska may be underground, the fisheries and marine resources of this area are matters of high importance and deserve the most careful consideration by this Convention and by future state legislatures."

Alaska Constitutional Convention Proceedings, Appendix II, p. 6. 14/

At the time of the Convention "almost absolute control over the salmon resources had been concentrated in the hands of a few large nonresident canning concerns, and the fishery was managed strictly for their benefit." 15/ The delegates struggled with many issues regarding the fisheries and natural resources in general, and finally produced a well-balanced article mandating aggressive

14/ Bartlett challenged the delegates to be bold in this area while drafting the natural resources article:

"In the drafting of resources policy the Convention should not fear to consider and adopt a bold course of action. No other state entering the Federal Union has ever been so dependent upon its water and mineral resources. Never has the issue of resources policy been so vital. Devising basic policy suitable to the demand of this and future times may well require that older conceptions of resources policy be drastically revised or even discarded.

We write on a clean slate in the field of resources policy. Only a minute fraction of the land area is owned by private persons or corporations. Never before in the history of the United States has there been so great an opportunity to establish resources policy geared to the growth of a magnificent economy and the welfare of a people." supra, p. 7.

15/ Fischer, Alaska's Constitutional Convention, University of Alaska Press, 1975 p. 132. See also, Ernest Gruening, The State of Alaska, New York: Random House, 1954, and George W. Rogers, The Future of Alaska, Baltimore: The Johns Hopkins Press, 1962.

functions for the State in providing for the utilization, development and conservation of Alaska's natural resources while, at the same time, obligating the State with protecting those resources. The approach taken is familiar to jurists and scholars as the public trust concept.

THE PUBLIC TRUST CONCEPT

The Public Trust concept of managing resources is not new. Its roots are in Roman jurisprudence, developed in a society with heavy commerce, with important urban concentrations, and with a legal heritage from the sea-dependent Greeks. It was considered basic natural law that the air, water, and living resources of the rivers and the sea were held in trust for common use. ^{16/} One of the main thrusts of Magna Carta was the assertion of public rights in land and resources previously held by the King as private and alienable. ^{17/}

In this country, attempts have occasionally been made to discredit the concept. Recently, in Hicklin v. Orbeck, 437 U.S. 518, 57 L.Ed. 2d 397 (1979) and Baldwin v.

^{16/} Cf. Note, The Public Trust in Tidal Areas: A Sometimes Submerged Traditional Doctrine, 79 Yale Law Journal, 762, 763 (1970). Sax, The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention, 1970 Michigan Law Review 471.

^{17/} Cohen, The Constitution, The Public Trust Doctrine, and the Environment, 1970 Utah Law Review 338, 389. Indeed serfdom embodied the concept that the feudal lords "owned" the land and resources. Magna Carta, part of a great struggle to break the shackles of serfdom, tried to reassert the principle that the resources were held by the crown in its sovereign capacity as a trustee, and not as a private landlord.

Fish and Game Commission of Montana, 436 U.S. 371, 56 L.Ed. 2d 354 (1978), appellants attacked application of state law, based in part on the public trust doctrine, as having no remaining vitality. In Baldwin, supra, Justice Blackmun answered this attack:

"Many of the early cases embrace the concept that the States had complete ownership over wildlife within their boundaries, and, as well, the power to preserve this bounty for their citizens alone. It was enough to say 'that in regulating the use of the common property of the citizens of [a] state, the legislature is [not] bound to extend to the citizens of all the other states the same advantages as are secured to their own citizens.' Corfield v. Coryell, 6 F.Cas. 546, 552 (No. 3230) (CCEDPa. 1925). It appears to have been generally accepted that although the States were obligated to treat all those within their territory equally in most respects, they were not obliged to share those things they held in trust for their own people. In Corfield, a case the Court has described as 'the first, and long the leading, explanation of the [Privileges and Immunities] Clause,' see Austin v. New Hampshire, 420 U.S., at 661, Mr. Justice Washington, sitting as Circuit Justice, although recognizing that the States may not interfere with the 'right of a citizen of one state to pass through, or to reside in any other state, for purposes of trade, agriculture, professional pursuits, or otherwise; to claim the benefit of the writ of habeas corpus; to institute and maintain actions of any kind in the courts of the state; to take, hold and dispose of property, either real or personal,' 6 F.Cas., at 552, nonetheless concluded that access to oyster beds determined to be owned by New Jersey could be limited to New Jersey residents. This holding and the conception of state sovereignty upon which it relied, formed the basis for similar decisions during later years of the 19th century. E.G., McCready v. Virginia, 94 U.S. 391 (1876); Geer v. Connecticut, 161 U.S. 519 (1896). See Rosenfeld v. Jakways, 67 Mont. 558, 216 P. 776 (1923). In Geer, a case dealing with Connecticut's authority to limit the disposition of game birds taken within its boundaries, the Court roundly rejected the contention 'that a State cannot allow its own

people the enjoyment of the benefits of the property belonging to them in common, without at the same time permitting the citizens of other States to participate in that which they do not own.' 161 U.S., at 530.

"In more recent years, however, the Court has recognized that the States' interest in regulating and controlling those things they claim to 'own,' including wildlife, is by no means absolute. States may not compel the confinement of the benefits of their resources, even their wildlife, to their own people whenever such hoarding and confinement impedes interstate commerce. *Foster-Fountain Packing Co. v. Haydel*, 278 U.S. 1 (1928); *Pennsylvania v. West Virginia*, 262 U.S. 553 (1923); *Oklahoma v. Kansas Natural Gas Co.*, 221 U.S. 229 (1911). Nor does a State's control over its resources preclude the proper exercise of federal power. *Douglas v. Seacoast Products, Inc.* 431 U.S. 265 (1977); *Kleppe v. New Mexico*, 426 U.S. 529 (1976); *Missouri v. Holland*, 252 U.S. 416 (1920). And a State's interest in its wildlife and other resources must yield when, without reason, it interferes with a nonresident's right to pursue a livelihood in a State other than his own, a right that is protected by the Privileges and Immunities Clause. *Toomer v. Witsell*, 334 U.S. 385 (1948). See *Takahashi v. Fish & Game Comm'n*, 334 U.S. 410 (1948).

Appellants contend that the doctrine on which *Corfield*, *McCready*, and *Geer* all relied has no remaining vitality. We do not agree. Only last Term, in referring to the 'ownership' or title language of those cases and characterizing it 'as no more than a 19th-century legal fiction,' the Court pointed out that that language nevertheless expressed "the importance to its people that a State have power to preserve and regulate the exploitation of an important resource." *Douglas v. Seacoast Products, Inc.*, 431 U.S., at 284, citing *Toomer v. Witsell*, 334 U.S., at 402. The fact that the State's control over wildlife is not exclusive and absolute in the face of federal regulations and certain federally protected interests does not compel the conclusions that it is meaningless in their absence." *Baldwin*, *supra*, 56 L.Ed. 2d, pp. 360-361.

The focus of the Public Trust Doctrine in the past has primarily involved the protection of and access to trust

resources. 18/ This focus can be explained to a great extent by history: protecting the rights of the citizens from imperial use and grants of public resources.

The concept in Alaska has not been so narrowly focused. Protections have been promised by specific constitutional obligations, as well as lodging in the legislative branch the power and obligations to apply the concept as our society evolves. (See discussions infra.) The concept has evolved in the executive, judicial and legislative branches with a similarly broad focus.

In the Alaska Constitution.

At the time of the Convention the delegates were aware of several policy considerations which were not always in concert. Wise use and development of all natural resources was considered necessary and healthy, but the delegates were also well aware of the problems addressed by Bartlett. 19/

18/ For example, In Illinois Central R.R. Co. v. State of Illinois, 146 U.S. 387 (1892), the Illinois legislature made extensive grants of submerged land, in fee simple, to the Illinois Central Railroad. Four years later, a new legislature repealed the grant. The Supreme Court held that the express conveyance of trust lands was beyond the power of the state legislature. Supra, p. 452.

19/ The natural resource article was the subject of much attention from the staff:

"Recognizing that the issue of Alaska's land and resources was the most important issue facing the convention delegates, the Public Administration Service made a special effort to provide a working base in its staff paper on 'The Alaskan Constitution and the State Patrimony.' After detailing land grants, resources, and responsibilities that would pass on to Alaska with statehood, the PAS paper

Consequently, the Committee on Resources submitted several drafts of a proposed article to the Convention. It is important to review the evolution of those proposals in detail.

Article VIII of the Alaska Constitution provides in relevant sections:

Sec. 1 Statement of Policy. It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest.

Sec. 2 General Authority. The legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State, including land and waters, for the maximum benefit of its people.

Sec. 3 Common Use. Whenever occurring in their natural state, fish, wildlife and waters are reserved to the people for common use.

Sec. 4 Sustained Yield. Fish, forests, wildlife, grasslands, and all other replenishable resources belonging to the State shall be utilized, developed, and maintained on the sustained yield principle, subject to preferences among beneficial uses.

Sec. 6. State Public Domain. Lands and interests therein, including submerged and tidal lands, possessed or acquired by the State, and not used or intended exclusively for governmental purposes, constitute the state public domain. The legislature shall provide for the selection of lands granted to the State by the United States, and for
n. 19 continued.

attempted to set out a basis for delegate discussions by departing from its own established policy in developing a suggested land and resources article. In these suggestions, accompanied by explanatory discussions, PAS tried to compensate for lack of useful precedents and to provide a starting point for delegates. However, since the consultant proposals did not coincide with committee members' ideas, there was little resemblance between the PAS draft and the resources article as finally adopted." Fischer, supra, fn. p. 132.

the administration of the state public domain.

Sec. 10. Public Notice. No disposals of state lands, or interests therein, shall be made without prior public notice and other safeguards of the public interest as may be prescribed by law.

Sec. 17. Uniform Application. Laws and regulations governing the use or disposal of natural resources shall apply equally to all persons similarly situated with reference to the subject matter and purpose to be served by the law or regulation. (Emphasis supplied).

Committee Proposal No. 8, Sec. 7, entitled State Public Domain, was the first committee proposal and was far more specific than the adopted section:

"Lands and interest therein possessed or acquired by the state, including submerged and tidal lands, and not used or intended exclusively for governmental purposes or for reserved sites and areas constitute the state public domain. Such lands and interests therein are to be held in trust for the people of the state. These lands and interests may be disposed of only in accordance with provisions of applicable acts of Congress, including the Act admitting Alaska to the Union, this constitution and the laws of the state.

The legislature shall make provision for the selection, classification and administration of lands in the state public domain, and the several uses thereof, in such a manner as will give maximum use and public benefit." The Alaska Constitutional Convention Record, Vol. 6, pp. 77-78. (Emphasis supplied.)

The quoted language from the first proposal is similar to constitutional language in several western states placing all or part of the domain of lands granted from the Federal Government in trust. 20/

20/ See Washington Const., Article 16, Sec. 1; Utah Const., Article 20, Sec. 1; New Mexico Const., Art. 13, Sec. 1. Some states implemented this language through a recognition that the resources should be held in trust, in others the statehood enabling acts contained directives to that effect. See Ervien v. U.S., 251 U.S. 41 (1919).

By the final adoption of Article VIII, the emphasized language from Sec. 7 of the first proposal (land in trust) had been deleted. There is no specific explanation for the deletion. Yet, prior to the exclusion of the emphasized language from Section 7, the section on Uniform Application did not contain any language that laws and regulations governing the disposal of natural resources should apply equally. *Id.*, Vol. 6, p. 77. That language was added at the same time the specific reference to a public trust was deleted. *Id.*, Vol. 6, pp. 92-97. The amendment to the section of Uniform Application broadened the scope of protection to include the public interest in disposal of the resources as well as their utilization, thereby obligating that disposal of trust resources must bear equally upon all persons similarly situated.

In the first proposal which contained the public trust language, then Sec. 1 provided:

"The State of Alaska has the power to provide for the utilization, conservation and balanced development of all the natural resources, including aesthetic features, of the land and waters belonging to the state for the maximum benefit of its people." Alaska Constitutional Convention, Vol. 6, p. 76. (Emphasis supplied).

When the specific reference to the public trust was deleted, the above section had been amended to command that "[T]he State of Alaska shall provide for the utilization, conservation and development of all the natural resources." *Supra*, p. 92. (Emphasis supplied). Subsequent amendments

specifically obligated the legislature to provide for "the utilization, development, and conservation of all natural resources . . . for the maximum benefit of its people."

Article VIII, Sec. 2. 21/

It is clear that the delegates, rather than generally obligate the State to utilize, develop and conserve land and mineral resources pursuant to trust obligations, chose to direct future legislatures to carefully pick and

21/ The committee realized

"that policies which promoted maximum use and development could be inconsistent with maximum benefit to the people or with the general public interest, as defined by Bartlett and others concerned about exploitation and destruction of resources and the environment." Fischer, supra, fn. 26, p. 133.

Again, this position had been forcefully urged by Bartlett:

"Many states have included in their constitutions statements that the natural resources of the state should be 'developed for the benefit of the people' of the state. Such pious generalities, without further concrete policy statements, have proved wholly inadequate as effective barriers against dissipation of resources, fraud, and corruption. Alaskans will not want, and above all else do not need, a resources policy which will prevent orderly development of the great treasures which will be theirs. But they will want, and demand, effective safeguards against the exploitation of the heritage by persons and corporations whose only aim is to skim the gravy and get out, leaving nothing that is permanent to the new state except, perhaps, a few scars in the earth which can never be healed. . . a failure to write into fundamental law basic barriers to minimize fraud, corruption, nondevelopment, and exploitation may well be viewed fifty years from now as this Convention's greatest omission." Alaska Constitutional Convention Proceedings, Appendix II, p. 7.

choose the management and protection process. 22/

A necessary fundamental distinction between lands and resources held by a state in trust and all other lands and resources held by a state is that in holding the former the state acts "not as proprietors, but in their sovereign capacity as the representatives and for the benefit of all their people in common." Organized Village of Kake v. Egan, 174 F.Supp. 500, 504 (D.C. Alaska, 1959). The necessity for such a distinction was recognized in Winston Bros. Co. v. State Tax Commission, 62 P.2d 7 (Or. 1936). In language distinguishing those lands to which the state had title in a proprietary capacity from trust lands beneath navigable waters, the court made clear:

"Until disposed of by the state, the state held title to these lands in its proprietary capacity and, after they had been disposed of by the state, their grantees took them free from any right therein (citations). As to the other class, . . . although the title passed to the state by virtue of its sovereignty, its rights were merely those of a trustee for the public. In

22/ The delegates were well aware of numerous cases struggling with this policy concept in regard to the public domain and resources contained therein. Cf. The Alaska Constitution and the State Patrimony: The Constitution and Natural Resources, Public Administration Service, 1955.

Submerged lands within the territorial sea of Alaska are held in trust for certain purposes. See Brief of Amicus Curiae, Moore v. State, file no. 2551, Alaska Supreme Court.

The legislature has chosen to place fiduciary obligations on the management of school lands; to dedicate certain royalties to a mental health trust; to present a permanent trust fund amendment to the voters.

its ownership thereof, the state represents the people, and the ownership is that of the people in their united sovereignty . . . Being subject to this trust, they are public juris, in other words they are held for the use of the people at large . . . [t]herefore, the state can make no sale or disposal of the soil underlying its navigable waters so as to prevent the use by the public of such waters for the purposes of navigation and fishing, but must hold them in trust for the public." Winston Bros., supra, p. 9.

By retreating from the specific trust language in Sec. 7, while adding additional safeguards, the framers surely left the task of defining any trust obligations regarding land and mineral resources with the legislature. However, with regard to fish, wildlife and waters, the delegates held fast to their original decision to reserve these resources for common use. 23/ Cf. Alaska Public

23/ In Geer v. Connecticut, 161 U.S. 519 (1896), while struggling with the question of the sovereignty over the wildlife resources of the State of Connecticut, Justice White concluded:

"The power lodged in the state, resulting from the common ownership, is to be exercised like all other powers of the state, as a trust for the benefit of the people and not as a prerogative for the advantage of the government as distinguished from the public good." Supra, p. 529.

The Geer court cited a view that had been recognized earlier by the Supreme Court of Minnesota:

"We take it to be correct doctrine in this country that the ownership of wild animals, so far as they are capable of ownership, is in the state, not as proprietor, but in its sovereign capacity, as the representative and for the benefit of all its people in common." State v. Rodman, 59 N.W. 1098, 1099 (Minn. 1894). (Emphasis supplied).

Such a view has been maintained throughout the land to this day. Organized Village of Kake v. Egan, 174 F. Supp. 500 (D.C. Alaska 1959).

Easement Defense Fund v. Andrus, 435 F.Supp. 664, 677 (D.C. Alaska, 1977).

During the time of the Alaska Constitutional Convention, public opposition to fish traps had built tremendously. 24/ It had become obvious that the fishery resources were being depleted. Indeed, this public opposition had generated a lot of sentiment for Statehood. Part of the work product of the Convention was an ordinance providing for the abolition of the traps. 25/

The effect of that ordinance on the Metlakatlan Indians was challenged in Metlakatla Indian Community, Annette Island Reserve v. Egan, 362 P.2d 901 (Alaska 1961). The confrontation of policies was between that of the new State's obligation to protect and preserve the natural resources and the rights of the Indians to fish with traps on the reserve granted them by the federal authority. The court recognized the role of the executive and legislative

24/ Fish traps were unquestionably the most productive method of catching salmon ever used.

25/ Ordinance No. 3:

"As a matter of immediate public necessity, to relieve economic distress among individual fishermen and those dependent upon them for a livelihood, to conserve the rapidly dwindling supply of salmon in Alaska, to insure fair competition among those engaged in commercial fishing, and to make manifest the will of the people of Alaska, the use of fish traps for the taking of salmon for commercial purposes is hereby prohibited in all the coastal waters of the State." (Emphasis supplied).

branches in the State with regard to the resource:

"These migrating schools of fish, while in inland waters, are the property of the state, held in trust for the benefit of all the people of the state, and the obligation and authority to equitably and wisely regulate the harvest is that of the state." Metlakatla Indian Community, supra, p. 915. (Emphasis supplied). ^{26/}

The reflection by the court that the State was not only empowered, but entrusted to protect the fishery is noteworthy. It appropriately identifies the nature of the relationship between the citizens, the State, and the resource held in trust.

B. EQUAL PROTECTION AND DUE PROCESS OF THE LAWS

The general standard for review of equal protection questions arising under the state constitution has been the subject of extensive discussion in several recent cases. In State v. Erickson, 574 P.2d 1 (Alaska 1978), the court abandoned a traditional two tier approach to equal protection analysis which had been followed in prior cases and adopted a new single test for evaluating equal protection claims under the Alaska Constitution.

Such a test will be flexible and dependent upon the importance of the rights involved. Based on the nature of the right, a greater or lesser burden will be placed on the state to show that the classification has a fair and substantial relationship to a legitimate governmental objective. Where fundamental rights or suspect categories are involved, results of this test will be essentially the same as requiring a 'compelling state interest'; but, by avoiding outright categorization of fundamental and nonfundamental

^{26/} See also, Kake v. Egan, 174 F.Supp. 500 (D.C. Alaska 1959); Aleut Community of St. Paul v. U.S., 117 F.Supp. 427 (Ct. Claims 1954).

rights, a more flexible, less result-oriented analysis may be made. *Id.*, p. 12.

An initial three step analysis is necessary when applying the equal protection test.

First, we must ascertain what the purposes of the challenged legislation are and whether they are within the legitimate police power of the state;

Second, we must examine the means used to accomplish the legislative objectives and establish whether the means substantially further the legislative goals;

Third, we must balance the importance of the state's interest in the means actually chosen to accomplish the legislative purpose against the nature of the constitutional right which has been infringed. Thomas v. Bailey, 595 P. 1, 14 (Alaska 1979).

These analyses begin by considering the purposes of the challenged legislation as a whole as well as the circumstances which surrounded its enactment. 27/

27/ The first look must be at the purpose of the challenged legislation. In Isakson v. Rickey, 500 P.2d 359, 363 (Alaska 1976), the court looked "to the statement of purposes of both the [entire act] itself upon the assumption that the provision [in question] was enacted to further that express purpose." *Id.* Where such a preamble of purpose does not exist, or is inadequate, resort may be had to the "legislative history." *Id.* Legislative history has been defined to include reports of conference committees, Alaska Public Employees Association v. State, 525 P.2d 12, 15 (Alaska 1970); statements by a "bills sponsor in the course of legislative deliberations;" *Id.*, at 16; and hearings held by the legislative body, Weinberger v. Wiesenfeld, 95 S.Ct. 1225, 1234 (1975). The Alaska Supreme Court has also recently recognized the importance of letters of intent. Cf. North Slope Borough v. Sohio Petroleum Corp., et al., 585 P.2d 534, (Alaska 1978).

Scrutiny of the closeness between the means chosen and the permissible state objective, and the degree of scrutiny of the particular means selected as opposed to other means less restrictive of constitutional rights, vary in intensity under the Erickson test. Where fundamental rights or suspect categories are involved strict scrutiny is applied requiring a "compelling state interest" in the means chosen. Where fundamental rights or suspect categories are not involved the intensity of scrutiny applied is governed by the "rational basis" test articulated in Isakson v. Rickey, 550 P.2d 359 (Alaska 1976).

Under the rational basis test, in order for a classification to survive judicial scrutiny, the classification must be "reasonable, not arbitrary, and must rest upon some ground of difference having a fair and substantial relation to the object of the legislation, so that all persons similarly circumstanced shall be treated alike." Id., p. 362. (emphasis supplied). 28/

The general equal protection guaranty contained in Art. I, sec. 1, of the Alaska Constitution has a partner embodied in Art. 8 of the state constitution relating to natural resources.

Laws and regulations governing the use or disposal of natural resources shall apply equally to all persons similarly situated with reference to the subject matter and purpose to be served by the law or regulation. Alaska Constitution, Art. 8, § 17.

28/ Isakson also concluded that "we will no longer hypothesize facts which would sustain otherwise questionable legislation as was the case under the traditional rational basis standard." Id. p. 362.

This section was recently addressed by the Supreme Court for the first time in Thomas v. Bailey, supra, (the homestead initiative case).

Inclusion in the state constitution of this separate equal protection guaranty relating specifically to the disposal of natural resources evidences the constitutional framers' particular concern that the benefits from development of Alaska's large store of natural resources be shared by all persons similarly situated with respect to those resources and the purposes to be served by their disposal. This express indication of the importance attached to the interests of the people in the state's resources is thus an independent reason for rigorous scrutiny under Erickson of classifications differentiating between groups of residents when distribution of natural resources is at stake. Id. p. 17, fn. 25, Justice Rabinowitz concurring. (emphasis supplied).

In testing legislative or executive actions for the equal protection of the laws, the legitimacy to act at all in the field is a necessary function of the analysis because the two clauses, equal protection and due process, necessarily overlap, just as they appear together in the Fourteenth Amendment.

[T]he equal protection clause is associated in the amendment with the Due Process Clause and it is customary to consider them together. It may be that they overlap, that a violation of one may involve at times a violation of the other, but the spheres of the protection they offer are not coterminous. Truax v. Corrigan, 257 U.S. 312, 331 (1921).

Indeed, it is under the Fifth Amendment due process clause that violations of equal protection are struck in federal legislation.

While the Fifth Amendment contains no equal protection clause, it does forbid discrimination that is "so unjustifiable as to be violative of due process." . . . (citations) . . . this court's

approach to Fifth Amendment equal protection claims has always been precisely the same as to equal protection claims under the Fourteenth Amendment. Weinberger v. Wiesenfeld, supra, 95 S.Ct. 1228, n. 2 (1975).

The Alaska Supreme Court has had several recent opportunities to interpret various portions of the Limited Entry Act pursuant to equal protection scrutiny. In Yunker v. Alaska Commercial Fisheries Entry Commission, 598 P.2d 917, (Alaska, 1979), appellant raised an equal protection challenge to the point classification system on two bases: that it unjustly discriminated against applicants who were not gear license holders in the years preceding the Act, and that it unfairly discriminated against those fishermen who expected to work during the offseason. The court dismissed the first claim because Yunker did not have a personal stake in the outcome; he did not lose points because he lacked a gear license, but rather because he did not participate or depend upon the fishery. With regard to the second claim the court ruled that the regulations complained of were "not facially unconstitutional." (emphasis supplied). Id., p. 922.

The income percentage bears a fair and substantial relation to the object of the act. It would seem axiomatic that an applicant with a higher income dependence percentage has a greater degree of dependence upon the fishery for income, and would therefore tend to suffer greater hardship by exclusion than would an applicant with a lower income dependence percentage, who has a greater reliance on alternative occupations and is less dependent upon the fishery. . . . It cannot reasonably be argued that the percentage of income derived from the fishery is substantially unrelated to the hardship that an applicant would suffer by exclusion from the fishery.

Id. 29/

A more recent case is Commercial Fisheries Entry Commission, et al, v. Apokedak, ___ P.2d ___, Opinion No. 2011, February 5, 1980. At issue were equal protection challenges to the legislative requirement that only persons who had harvested fishery resources commercially as gear licensees were eligible to apply for entry permits, and to the Commission's regulation requiring a gear license for income dependence points. As in the Yunker case, the court declined to address the constitutional validity of the gear license requirement for obtaining income dependence points, but the court squarely addressed the issue of the constitutionality of the gear license requirement and ruled that it did not violate the equal protection clauses of the federal or state constitutions. The court carved out an exception to the equal protection standards for what it denominated "economic legislation."

There no longer can be any question that when economic legislation is challenged, the court will defer to the judgement of the legislature concerning the desirability of particular statutory classifications.

Id., pp. 17-18. Thus the court declined to apply compelling state interest standards to economic legislation and instead

29/ The court emphasized that it did not "intimate any view as to the constitutionality of the gear license requirement of the income dependence regulation." Id., p. 922, n. 14.

applied the modified rational basis test.

In determining whether the gear license requirement bears a fair and substantial relationship to the purpose of preventing unjust discrimination in allocating entry permits, we also note that those who had gear licenses had either to own or lease gear, and, as a result, often would be owners of vessels as well. The license requirement therefore is a rough way of designating a group having most to lose by being excluded from the fishery. In this regard, the gear license requirement furthers the legislative purpose of preventing unjust discrimination because it seeks to protect those having the most to lose by exclusion from the fishery.

Id., p. 32.

C. OTHER RIGHTS, PRIVILEGES AND CONSTRAINTS

Closely aligned with the beneficial rights flowing from resources held in trust, and the rights to equal protection and due process of the laws, are the privileges and rights advanced by that section of the Alaska Constitution specifically addressing the limitation of entry into any fishery. That section states as follows:

No exclusive right or special privilege of fishery shall be created or authorized in the natural waters of the state. This section does not restrict the power of the state to limit entry into any fishery for purposes of resource conservation, to prevent economic distress among fishermen and those dependent upon them for a livelihood and to promote the efficient development of aquaculture in the state.

Art. VIII, sec. 15, Alaska Constitution. The second sentence was added by amendment in 1972. If any single element of this section is clear it is that the state shall not create or authorize any "exclusive right or special privilege of fishery." The present concepts of property rights

that pervade A.S. 16.43. et seq. cannot be easily reconciled with this prohibition. Current law allows free transfer of a permit, at any price set by the buyer and seller, to any person with the present ability to actively participate in the fishery. There is no requirement that a person utilize the permit. An authorization to enter a common property fishery, that is freely transferable and may be used for speculative purposes, suggests a special privilege of fishery.

The property-like status of a permit leads to constitutional concern from other directions.

This situation has the effect of creating another classification: on the one hand, a person with abundant financial resources; and on the other, a person of considerably more modest means. It seems to me that the act is having the ultimate effect of favoring the well to do over the poor. In my opinion, this discrimination is basically unfair or unjust, and does not conform to the principle in Art. I, § 1, of our constitution which requires equality of treatment of persons in the state.

CFEC, et al., v. Apokedak, supra, Justices Dimond, Burke, concurring, p. 35. I do not believe that the present system of transferability is incurable of its constitutional problems. However, it's current effect as applied to the facts appertaining to the upper Yukon River fisheries, does not meet the constitutional constraints of Art. VIII, § 15 (no exclusive right of fishery), and the equal protection and due process clauses of the state and federal constitutions. While the Apokedak case provides substantial support for this conclusion, it also provides optimism for well considered

reform.

Legislatures may implement their programs step by step, in such economic areas, adopting regulations that only partially ameliorate a perceived evil and deferring complete elimination of the evil to future regulations.

Id., pp. 20-21. 30/

30/ During the preparation of this report the assistance of Robert H. Wagstaff, Esq., Anchorage, Alaska, was solicited for the purpose of developing the conclusions. Mr. Wagstaff has extensive experience at the trial and appellate level with the federal issues regarding the commerce clause, the privileges and immunities clause, and the equal protection and due process clauses of the state and federal constitutions. The memorandum prepared by Mr. Wagstaff is set out in its entirety in the appendix of this report. I do not entirely agree with Mr. Wagstaff's conclusions, although I do agree with a number of them. Some of my conclusions were addressed to the Legislative Limited Entry Study Committee on December 12, 1979, in Anchorage, Alaska.

Other than the concerns with regard to free transferability, I believe that there are several other aspects of the limited entry act which merit substantial concern.

OPTIMUM NUMBER OF PERMITS A.S. 16.43.290-300 directs the Commission to establish the optimum number of entry permits for each fishery based upon a reasonable balance of several general standards. The reasoning behind the interest in development of an optimum number of permits is the belief that many of the common property fisheries have long suffered from over capitalization, a situation (it is argued) in which the sum of individual efforts to achieve efficiency leads to inefficiency of the total fleet. In an overcapitalized fishery, profits are marginal, the probability of business failure is high and the fishing strategies which lead to overcapitalization tend to defeat the intended conservation effect of gear restrictions, quotas, minimum size, and other regulations. In these fisheries, "optimum number" envisions that it may be appropriate to consider the optimum effort allowable to maximize the net economic yield. This line of theory is stated forcefully in Crutchfield and Pontecorvo, The Pacific Salmon Fishery: The Study of Irrational Conservation, John Hopkins Press (1969). The theory, at its most extreme, visualizes concentrations of wealth

n. 30 continued.

in a very few, apparently justifiable by the overall efficiency of the effort. To the extent this theory, and A.S. 16.43.290-300, are relying upon the grant of authority in Art. VIII, sec. 15, they are leaning on a very slender reed. It falls within the legitimate interest of the state to set a ceiling on the number of permits in a given area in order to accomplish the dual purposes of resource conservation and preventing economic distress among fishermen. It is not a legitimate power of the state to determine that a select few shall derive great wealth from a common property fishery. While a precise line cannot be drawn, serious application of the optimum number of permit standards at some point almost certainly will fall before a meaningful constitutional challenge.

MAXIMUM NUMBER OF PERMITS. The chief area of concern with regard to the establishment of the maximum number of entry permits (A.S. 16.43.240) is the rigidity of the formula. As discussed previously these sections effectively restrict any increase in the maximum number of permits after an initial determination and most certainly relieve the Commission of any power to increase the number of permits subsequent to an initial determination, if that initial determination was accurate.

A statute based upon a legislative declaration of facts is subject to constitutional attack on the ground that the facts no longer exist. . .

Leary v. United States, 395, U. S. 6 (1969). See, also, Apokedak, supra, pp. 37-38, Justices Dimond, Burke, concurring.

ISSUES FUNDAMENTAL TO THE ACT. While the optimum number of permit sections are not clearly fundamental to the purposes of the limited entry Act, most certainly the concepts of free transferability and the maximum number of permits are. Should these sections ever be subject to a successful constitutional challenge the entire act is in danger. Appellate courts, when sustaining a challenge to one section of an act, commonly consider whether the section that does not withstand constitutional muster is fundamental to the purposes of the entire act. If it is clear that the

n. 30 continued.

challenged section is fundamental to the purposes of the act, and it is also that clear the court cannot cure the defect, then appellate courts often rule that the entire act must fall. If it is the legislature's desire to maintain a limited entry system in the common property fisheries, then it must review A.S. 16.43 to ensure the commission has adequate emergency powers to regulate transferability and that the Commission has enough flexibility and discretion to authorize a more flexible formula for establishing the maximum number of permits if necessary.

Since the limited entry permit cannot constitutionally grant an exclusive right or special privilege of fishery, then it follows that the permit is not property right which, if taken, entitles the owner to any right of compensation. It is in essence exactly what A.S. 16.43.150(e) states that it is, to wit: "an entry permit constitutes a use privilege that can be modified or revoked by the legislature without compensation." See, Memorandum, Robert H. Wagstaff, Appendix.

D. COMMENTS ON UNJUST DISCRIMINATION

The findings and conclusions in this report have been directed to determine whether limiting entry into the Yukon and the other fresh water fisheries of the state has resulted in any unjust discrimination against any persons. Discrimination means to show preference for or prejudice against a person or class of persons. For the purposes of the findings and conclusions in this report I perceive there to be three classes of discrimination that are unjust. First, discrimination that is not conformable to law is most certainly unjust. This would include legislative and executive action not in conformance with the constitutional rights and privileges of all persons as well as executive acts that do not conform to the direct letter or intent of the law or exceed the authority delegated by law. Second, discrimination predicated upon inaccurate data is unjust. This would include legislative and executive actions not

necessarily rising to the level of a specific constitutional or statutory violation but which precipitate situations or events that evidence fundamental unfairness as a result of the inaccuracies. Third, discrimination which is clearly not reasonable is unjust. Examples in this category will likely overlap into the other categories, but certainly include arbitrary and capricious acts by the executive.

Recently the state supreme court has had an opportunity to discuss the concept of "unjust discrimination" when reviewing sections of the limited entry act and regulations promulgated pursuant to the Act. A.S. 16.43.010(a) sets forth the purpose of the limited entry act:

It is the purpose of this chapter to promote the conservation and the sustained yield management of Alaska's fisheries resources 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.

In State, et al. v. Templeton, 598 P.2d 77, (Alaska 1979), the court was called upon to construe whether 20 AAC 630(b)(2), SPECIAL CIRCUMSTANCES, was consistent with the purposes articulated above in A.S. 16.43.010(a). That noted regulation provides that

(2) If special circumstances exist such that an applicant's income dependence is not realistically reflected by his income dependence percentage for the years 1971 and 1972, the commission may award an applicant up to a maximum of 10 points based upon a special showing of income dependence.

The commission construed sec. 630(b)(2) to be applicable only to those persons who had gear licenses in the specified

years. The court ruled that "[W]hile a gear license may be a good general indicator of ownership and operation of gear for the purpose of weighing relative hardship, to foreclose automatically consideration of special circumstances . . . in the absence of a gear license would result, in many cases, such as the one at bar, in unjust discrimination." *Id.*, p. 81.

In Apokedak, supra, the concurring justices addressed the issue of free transferability of permits. They concluded that the present system of free transferability of limited entry permits is no longer consistent with A.S. 16.43.010(a).

The means established by the legislature for distributing entry permits was certainly commendable when the act first became operative. But with the passage of time, and the presence of A.S. 16.43.170 permitting the transfer of permits (for large sums of money), the original legislative purpose to regulate and control the entry into the commercial fishery of Alaska without unjust discrimination has become considerably weakened.

Id., pp. 37-38. The determination whether any particular factual circumstance leads to unjust discrimination must be resolved on an ad hoc basis. Accordingly, general findings follow that are relevant to all persons affected by the limitation of entry into the Yukon River fisheries. Those general findings precede specific findings and conclusions.

III. FINDINGS AND CONCLUSIONS

GENERAL FINDINGS

The Yukon and Kuskokwim River drainages include the major fresh water salmon fisheries in the state. Currently, and in the past, those fisheries have reflected major allocations between subsistence use and commercial export harvest. The Yukon drainage, most specifically that portion of the Yukon above the village of Paimute has been studied most extensively. A number of general findings applicable to that portion of the Yukon River upstream from the village of Paimute, to all persons utilizing and harvesting salmon in that area of the drainage and to all persons wishing to harvest salmon, are now apparent and follow. 31/

Salmon was and is a major food item for the Athabascan peoples in the upper Yukon drainage. Subsistence utilization has maintained a substantial level of harvest since records were initiated, with the major declines in the

31/ Enough information was gathered and enough investigation done to conclude that the upper Kuskokwim River drainage may be similar enough to the upper Yukon in market fluctuations, history of regulation and market stimulation to require remedial action in the future. However, it is also my conclusion that the upper Kuskokwim fisheries are different enough in substance from the upper Yukon fisheries to require a complete investigation in a similar manner as was done with the upper Yukon. The upper Kuskokwim fisheries are gill net fisheries exclusively. It appears that they suffer major allocation problems between subsistence and commercial export uses and between down river and upriver locations. It became clear early in the investigation that it was simply not possible to cover the entire Yukon River and the entire Kuskokwim River within the allocated budget. For these reasons it is recommended that the legislature take an informative look at the entire Kuskokwim River drainage and the fisheries it supports.

subsistence harvests attributable to the decline in the importance of dogs as beasts of labor in the area. Since as early as 1920 it has been the policy of federal and state authorities obligated with regulating and controlling the fisheries in the Yukon drainages that subsistence harvest and utilization of salmon be granted a priority position over all other uses. This policy, which has passed from generation to generation, and from federal to state authority, is still effective.

Until 1974 the commercial fishery of the upper Yukon drainages was primarily a sporadic and unstable fishery that supplemented the subsistence economy; the markets available were primarily local and intrastate. Prior to the early 1950's these markets were almost exclusively for the purchase and sale of dried and smoked fish products, which relied to a significant degree upon the demands for dog food. Beginning in the early to mid 1950's this market for dried and smoked fish products was supplemented by the demand for fresh fish by cash buyers from local populations centers, most notably Fairbanks. In the late 1960's a small cash purchase market of fresh fish for export began to develop in the middle part of the river, most notably at Galena.

During the period from the late 1930' to the mid 1970's there were few additional opportunities to supplement the subsistence economy. Before World War II there were the

CCC camps, and during World War II there was the building of the Galena and Tanana air bases. During the 1960's and into the early 1970's there were certain periods of high forest fire activity in Alaska which had the effect of employing many persons from the villages. The Alaska Pipeline project, and its attendant local hire policy, solicited many workers from the villages. These occasional opportunities for wages, in conjunction with the sporadic and unstable markets for fish products, precipitated a pattern wherein persons would harvest and sell salmon commercially when markets were available unless more stable opportunities to supplement the subsistence base were presented. The pattern resulted in several cycles of waning and waxing interest in the commercial harvest and sale of salmon.

As late as 1974 regulation of commercial harvests was relatively unchanged in the upper Yukon drainages. Quotas for commercial harvest were small. Gear licenses were not required for fish wheels and an unlimited number of wheels could be registered under one fish wheel registration number. There was very little monitoring of commercial activity. By 1974 three separate changes in regulation had occurred which demonstrably impacted the fisheries. First, regulations were changed to limit fishwheel registrations to one vessel only. Second, the quota for commercial harvest was substantially liberalized. Third, the sale of roe from subsistence captured salmon was legalized.

Commercial and subsistence harvest of salmon increased dramatically in 1974 and 1975. Buyers flooded the area to purchase roe. It is apparent that many persons who had previously harvested salmon commercially for sale in order to supplement their subsistence life were not obliged to do so because they could sell the roe from subsistence caught salmon. It is also apparent that a significant number of people had little or no understanding of the distinction between a gear license and a commercial license.

The decision to limit entry as a result of the rapid growth in the upper Yukon commercial fisheries was sound but its implementation was based upon significant misunderstandings of the nature of the fisheries that were being limited. Those misunderstandings affected the standards of eligibility, the formula for setting the maximum number of permits, and the criteria applied for permit issuance. The notice given for application was deficient in several respects, which will be set out more specifically in the findings below.

The social effects of the limitation of entry into the upper Yukon fisheries are just beginning to emerge. Many villages are experiencing a significant degree of divisiveness that can be attributed to some families faring better who have been permitted to enter the commercial fisheries, a situation that is a significant departure from the cultural tradition that provided opportunities for

survival but not guarantees for prosperity. Magnifying this division are the early signs of a pattern of permit transfers leading to a net loss to local peoples as a result of the transferability options available in A.S. 16.43. All other persons who wish to enter the upper Yukon commercial fishery must compete for permits on the open market, a situation that is leading to discrimination between certain classes and groups of people, and are set out more specifically in the findings below.

SPECIFIC FINDINGS AND CONCLUSIONS OF THE EFFECTS
OF LIMITING ENTRY INTO THE UPPER YUKON SALMON
FISHERIES

A. NOTICE

Certainly all persons having a beneficial interest in common property resources should have adequate notice when the state is entertaining decisions that will affect the utilization and disposal of those resources. The constitutional reservation of fisheries for common use (Art. VIII, sec. 3), and the guaranty of equal application (Art. VIII., sec. 17), burdens the State with the obligation of effective notice if State action could interrupt or terminate continuing utilization by any person. With regard to the decision to limit entry into the commercial salmon fisheries of the upper Yukon, and the manner in which it was accomplished it is important to distinguish the notice regarding the critical issues involved in the limitation of entry from the notice that applications for permits had to be filed within a time certain.

It seems apparent that the attempts at giving notice in the upper Yukon drainages were not sufficiently adequate to inform a significant number of persons of the nature of a limited entry fishery. The notice was also inadequate for the purpose of informing potentially affected individuals of the formula for the maximum number of permits, eligibility requirements and permit issuance criteria in a manner so that they would have effective opportunity to

respond. The major meetings on the river were at Tanana and Galena, the most significant areas of fisheries commerce in the upper Yukon, and these areas do not accurately reflect the history of the fisheries in the more remote villages. To the extent that the decision to sweep the upper Yukon into the all inclusive point system for the A-Y-K region was reached pursuant to the testimony received at Tanana and Galena, that data was incomplete with respect to the nature of the fisheries elsewhere. For example, Grayling and Anvik have occasionally experienced entire seasons without export fish buyers available, and other parts of the river have similar experiences to this day.

The major failure of notice prior to the decision to limit entry, however, regards the eligibility requirements. Many people at fish camps and other remote areas along the river simply had no idea what a gear license was. To some a gear license and a commercial license were merely a duplication of paperwork:

Some people just got a license, a commercial license not a gear license. Not realizing that a gear license is the most important thing to have.

* * *

There's a man here fished for seventy years and never owned a commercial license until last year. The only reason he got one, he had a lot of fish and wanted to sell some so he got a commercial license.

Supra, p. 33. In 1974 the market was there again, only this time people wishing to sell fish products had the opportunities to sell subsistence caught salmon roe, commercially

harvested salmon, or both. It is apparent that some persons who had consistently fished when commercial markets were available in the past did not find it necessary to supplement their subsistence base by selling commercially harvested salmon because they could do so with subsistence roe sales. Those persons were not aware that subsistence roe sales would be eliminated as a means to supplement their subsistence base. Had they been aware of this potential for exclusion they most certainly would have sought every means available, within their knowledge, to guarantee they would not be precluded from exercising opportunities in the future that they had exercised in the past. It is clear that the CFEC made the decision to limit entry in 1976 based upon the concern that more persons from areas other than the Yukon would migrate to that region in a gear rush. To avoid this possibility the Commission made the decision to limit entry in a manner that would preclude persons from entering the fishery as gear operators after the 1975 season. By doing so the previous notice was inadequate to effectively inform a number of persons who had consistently harvested salmon commercially in the fisheries of the nature and constraints of the limited entry system that their fisheries was being fitted into.

1. THE NOTICE PROVIDED PRIOR TO THE LIMITATION OF ENTRY INTO THE UPPER YUKON REGARDING THE NATURE OF THE LIMITED ENTRY FISHERY, AND THE ELIGIBILITY REQUIREMENTS TO ENTER THAT FISHERY, UNJUSTLY DISCRIMINATED AGAINST A LIMITED NUMBER OF PERSONS WHO, IN FACT, COULD SHOW A CONSISTENCY OF PARTICIPATION IN THE COMMERCIAL HARVEST AND SALE OF SALMON.

A.S. 16.43.260(a) requires that only persons who have harvested fishery resources commercially while participating in the fisheries as holders of gear licenses were eligible to apply for entry permits. The bill introduced in 1972 by Governor Egan (SB No. 39) did not contain such a requirement and it is clear in the history of the limited entry legislation that the gear license requirement was asserted to prevent a gear rush before final passage as well as simplify the commission's screening process. Gear licenses had been a part of the life of commercial fishermen in most coastal areas for as long as they had participated. Vessels and gear utilized by commercial fishermen in most coastal areas are strictly for the purpose of commercial harvest. In contrast, gear licenses had never been an important part of the upper Yukon fisheries. Boats and gear are usually operated continually during the time the fish are running. The same gear and the same boats are often used to harvest fish during the subsistence periods and again during the commercial periods. It is clear that the gear license requirements is predicated upon facts that may accurately capture the nature of commercial fishery in most coastal areas, but certainly it was not predicated upon facts that accurately captured the nature of the upper Yukon fisheries at the time entry was limited. Accordingly, inadequate notice prior to the decision to limit entry resulted in a preference in favor of persons who were more knowledgeable

about the type of fisheries that the Limited Entry Act was designed for and a prejudice against those persons who had no accurate concept of the manner in which a limited entry fishery would fundamentally change the opportunities that had existed for generations.

2. THE NOTICE TO PERSONS THAT APPLICATIONS FOR A LIMITED ENTRY PERMIT HAD TO BE FILED WITHIN A TIME CERTAIN UNJUSTLY DISCRIMINATED AGAINST PERSONS WHO, IN FACT, CONSISTENTLY HARVESTED SALMON COMMERCIALY.

Subsequent argument will be directed to the conclusion that the gear license requirement unjustly discriminates against a limited number of persons in the upper Yukon region who had, in fact, consistently harvested salmon commercially. The notice must conform to the proper standards for eligibility.

B. ELIGIBILITY: DISCRIMINATED AGAINST SOME

The discussion in the previous section (NOTICE) regarding those persons who had in fact consistently fished commercially and were unaware of the necessity for holding a gear license is germane here. The Commission has applied A.S. 16.43-260 (gear license requirement) in such a manner that it did not accept applications from persons who did not hold a gear license in at least one year from 1960 through 1975 in the upper Yukon River. In the fishwheel fishery, where gear licenses were not required, the person who was issued the registration number for his fishwheel was allowed

to apply, but no other applications were accepted. In CFEC v. Apokedak, supra, the court upheld the gear license requirement on equal protection grounds. In doing so the court emphasized the importance of gear and vessels:

In determining whether the gear license requirement bears a fair and substantial relationship to the purpose of preventing unjust discrimination in allocating entry permits, we also note that those who had gear licenses had to own or lease gear, and, as a result, often would be owners of vessels as well. The license requirement therefore is a rough way of designating a group having most to lose by being excluded from the fishery. In this regard, the gear license requirement furthers the legislative purpose of preventing unjust discrimination because it seeks to protect those having the most to lose by exclusion from the fishery.

Id. p. 32. The court was most certainly addressing itself to the nature of the majority of coastal fisheries. In the fresh water fisheries of the upper Yukon the vast majority of commercial fishermen are also subsistence fishermen, the vessels are not only used in commercial and subsistence harvests but are also the prime source of transportation on the waterways. The gear used for subsistence harvest is the same gear used for commercial harvest. Most frequently it is used in the exact same location. 32/

32/ Buoys are placed at the end of set nets on the river, and regulations require a different color buoy for commercial gear than for subsistence gear. It is common practice on the river, in the eddy fished commercially and for subsistence, that the fishermen has a colored cover for the buoy during subsistence periods that is changed during commercial periods to comply with the regulations.

Although subsistence hunting and fishing are old patterns of life, they are accomplished with modern tools. Cash income is largely invested in the equipment used for subsistence activities. Commercial and subsistence fishing are complementary activities since the sale of fish pays for the boat and gear that the family needs for subsistence fishing and for general transportation. From another point of view, one could allocate part of the cost of the boat and gear to commercial fishing, part to subsistence fishing and/or transportation.

Supra, p. 29. The Apokedak ruling that the license requirement furthers the legislative purpose of preventing unjust discrimination because it seeks to protect those having most to lose (vessels and gear) by exclusion from the fishery does not hit the target with regard to the upper Yukon fisheries. While a gear license requirement may be a rough way of designating the group having the most to lose in most coastal fisheries it certainly works an injustice when applied to those interior fisheries with a different market history, a different regulatory history, and fishermen having virtually no contact with or understanding of the nature of the fisheries that limited entry was designed for.

The way we operated prior to the last two years -- we've never told anybody how we did it or anything.

Supra, p. 33.

It is not necessary to dwell on distinguishing Apokedak's ruling from the factual situation presented here. It appears beyond argument that the legislature was addressing problems perceived from apparent overcapitalization in many coastal fisheries that had long led to marginal profits,

business failures, and the inability to upgrade and improve vessels and gear when it adopted A.S. 16.43. The history of those fisheries reflect continual efforts by individuals to achieve efficiency that led to the inefficiency of the total fleet. Had the legislature been addressing the upper Yukon fisheries only during its deliberation it is fair to conclude that they would have stayed closer to the original language of the Act emphasizing commercial participation only. The legislature quite simply did not foresee the problems that would develop by applying the gear license requirement to a fisheries such as the upper Yukon.

To that end the original purpose of regulating and controlling entry into the commercial fisheries of Alaska without unjust discrimination has been weakened by the application of the gear license requirement in the upper Yukon fresh water fisheries. Persons who, in fact, consistently commercially harvested and sold fish and fish products should have been eligible to demonstrate hardship by exclusion from the fishery.

C. PERMIT ISSUANCE.

The standards for issuance of limited entry permits constitutes the very foundation for the concept of balancing the beneficial interests of all persons with regard to their rights and privileges in a common property fishery with those persons who would suffer particular hardship by being excluded from the commercial fishery.

A.S. 16.43.250 provides these standards. It directs the Commission to define priority classifications of similarly situated applicants based upon a reasonable balance of the following hardship standards:

(1) degree of economic dependence upon the fishery, including but not limited to percentage of income derived from the fishery, reliance on alternative occupations, availability of alternative occupations, investment in vessels and gear;

(2) extent of past participation in the fishery, including but not limited to the number of years participation in the fishery, and the consistency of participation during each year.

Section .250 also directs that the Commission shall designate in regulations those priority classifications of applicants who would suffer significant economic hardship and those priority classifications of applicants who would suffer only minor economic hardship by exclusion from the fishery. When adopting the point system for the A-Y-K fisheries the Commission primarily concentrated on participation as a gear license holder between 1970 and 1975 and on income dependence percentage for the years 1974 and 1975. The Commission did not develop regulations which granted points for participation as a crew person and did not adopt a schedule of points for consistency of participation in the fishery. In contrast, points were awarded in the more established coastal fisheries (such as southeast Alaska, Prince William Sound, Cook Inlet, Kodiak, Chignik and Bristol Bay) for participation as a crew person and for consistent participation.

For the A-Y-K fisheries the Commission provided that

If unavoidable circumstances exists such that an applicant was unable to participate in the fishery during 1974 or during 1975, the commission will in its discretion award the applicant up to a maximum of seven points on a special showing of past participation.

20 AAC 05.656(a)(2). The Commission provided the same relief valve for economic dependence.

If unavoidable circumstances exists such that an applicant's income dependence upon the fishery is not realistically reflected by his income dependence in 1974 and 1975, the commission will in its discretion award an applicant up to a maximum of six points based on a special showing of income dependence.

20 AAC 05.056(b)(2).

The Commission provided for a different circumstantial relief valve to the vast majority of the coastal fisheries. With regard to past participation the regulations provide that:

if unavoidable circumstances exist such that an applicant's past participation in the fishery is not realistically reflected by points awarded for past participation for the years 1960 through 1972, the commission may award an applicant up to a maximum of 16 points upon a special showing of past participation during the years 1960 through 1972.

20 AAC 05.630(a)(5). Consequently, past participation points were awarded for participation in the traditional coastal fisheries for the years 1960 through 1972, and an escape valve was provided if unavoidable circumstances could be shown so that a person could claim and be awarded points

for past participation in the same time span. In contrast, the Commission awarded past participation points for A-Y-K fisheries for the years 1970 through 1975, yet unavoidable circumstances could only be asserted to gain points during the key years of 1974 and 1975.

An even more significant divergence was established by the Commission between the fisheries with regard to economic dependence. In the traditional coastal fisheries

if special circumstances exist such that an applicant's income dependence is not realistically reflected by his income dependence percentage for the years 1971 and 1972, the commission may award an applicant up to a maximum of 10 points based on a special showing of income dependence. (emphasis supplied).

20 AAC 05.630(b)(2). Contrasting, participants in the A-Y-K fisheries are obliged to show unavoidable circumstances before the applicant may be awarded points based on a special showing of income dependence, while the burden placed upon applicants the more traditional fisheries to gain the same special showing of income dependence is that of "special circumstances." The two terms are certainly not the same and they are not applied in the same manner. The Commission applies a three part test to determine whether the unavoidable circumstances burden is met. First, the applicant must have had a specific intent to fish during the period income dependence is claimed. Second, the applicant must have been prevented from fishing by circumstances beyond his control. Third, the applicant must have made

every reasonable effort available to overcome the unavoidable circumstances and was, in fact, unable to overcome them. The term "special circumstances" is not amenable to such precise an application. It certainly means distinct and different but also means uncommon or extraordinary. In fact, the Commission judges each claim of special circumstances on a case by case basis. ^{33/} It cannot be disputed that "unavoidable circumstances" is a more difficult standard for applicants to meet than "special circumstances".

Finally, points were awarded in the A-Y-K fisheries for participation in the years 1970 through 1975. It is clear that there was commercial harvesting and sale of salmon and salmon products for at least 50 years before 1970. Markets declined in the mid to late 1960's but it is indisputable that a number of persons continued to harvest and sell salmon for commercial purposes. In contrast, points were awarded for participation in the traditional coastal fisheries for the years 1960 through 1972, although points for participation for the years 1960 through 1964 could only be awarded if the applicant participated during at least one year from 1965 through 1972. No such consideration was advanced to the upper Yukon applicants, or for

^{33/} For example the Commission applies what is termed as the "clean break rule." An example given is that if a person has turned all his attention to commercial fishing at a definite point within the year, and therefore made a clean break from his prior occupation or profession, then the "special circumstances" test is considered to be met and it is concluded that the applicant's income dependence is not realistically reflected.

that matter any other applicants in the A-Y-K fisheries.

1. THE ABSENCE OF A REGULATION AWARDED POINTS FOR CONSISTENCY OF PARTICIPATION IN THE UPPER YUKON FISHERIES UNJUSTLY DISCRIMINATED AGAINST THOSE PERSONS WHO HAD CONSISTENTLY PARTICIPATED DURING EACH YEAR COMMERCIAL MARKETS WERE AVAILABLE.

As stated previously A.S. 16.43.250(a)(2) directs that the qualifications for ranking applicants should include "the consistency of participation during each year." A number of persons consistently participated as commercial operators during each year that markets were available in the upper Yukon fisheries. The only reasonable interpretation of A.S. 16.43.250(a)(2), as applied to the upper Yukon fisheries, is that consistency means consistency during the years commercial markets were available. Yet, the Commission did not authorize the award of points for such consistent participation. The result is a preference for persons who recently entered the fishery over those persons who consistently participated when commercial markets were available during the sporadic years.

It seems apparent that the Commission was laboring under the impression that the years 1974 and 1975 were the first years in which commercial fisheries existed on the upper Yukon River. If that indeed was the basis then it was based upon incomplete data. It also does not conform to a reasonable interpretation of the Act and certainly is contrary to the express intent of the Act. To bring equity to the regulations, and conform with the intent of the Act,

applicants in the upper Yukon River fisheries should have had the same opportunity to seek points for consistency of participation as those persons in the more traditional coastal fisheries.

2. THE ABSENCE OF A REGULATION PROVIDING FOR AN AWARD OF POINTS TO APPLICANTS IN THE UPPER YUKON FISHERIES FOR PARTICIPATION DURING THE YEARS 1960 THROUGH 1969 UNJUSTLY DISCRIMINATES AGAINST A NUMBER OF PERSONS

Points were awarded for participation in the traditional coastal fisheries for the twelve years preceding the limitation of entry. Upon a showing of unavoidable circumstances (in the coastal fisheries) that an applicant's past participation was not realistically reflected then points could be awarded for any of the years from 1960 through 1972. Points were awarded in the upper Yukon fisheries for the participation during the years 1970 through 1975 and unavoidable circumstances allowed an award of points during the years 1974 and 1975 only.

The inconsistency between these two point systems describes a class of persons in some fisheries who achieve greater standing through consistent past participation than the same level of participation would award applicants in another fishery. That distinction resulted in strong preference for new entrants in the commercial fisheries of the upper Yukon to the exclusion of some persons who had participated for many years. The distinctions referred to do not bear a fair and substantial relationship to the

purposes sought to be advanced in the Act by avoiding unjust discrimination in the awarding of entry permits. The regulation automatically forecloses the opportunity to award points and could likely lead to a loss of status previously acquired during the time prior to the boom in the fisheries.

3. THE ABSENCE OF A REGULATION FOR AWARDING POINTS FOR PARTICIPATION AS A CREWPERSON IN THE UPPER YUKON FISHERIES UNJUSTLY DISCRIMINATES AGAINST A NUMBER OF PERSONS.

The Apokedak case sustained the statutory gear license requirement.

Nongear licensees who fished as commercial fishermen are still entitled to participate in the same capacity as before the enactment. They are free to seek employment in the fishery, and there is no restriction on their securing commercial fishing licenses.

Id., p. 28. In the coastal fisheries, crewpersons are awarded points for "actual participation as crewmen from 1965 through 1972." In those fisheries a crewperson could never establish significant hardship but could accrue more points than a minor economic hardship designation. No such privileges are advanced crewpersons in the upper Yukon and other A-Y-K fisheries.

This distinction created an additional preference in the upper Yukon River fisheries for the new entrant. At the very least it is clearly not reasonable to advance points to applicants in one fishery for participation as a crewperson and not to advance points to applicants in another for the same effort. To the extent the distinction is based

on a mistaken belief that persons in the A-Y-K fisheries usually work their gear alone (see p. 30, supra), the distinction is clearly predicated upon inaccurate data. If the limitation, by the Commission, of income dependence points to gear license holders violates the equal protection clauses of the state and federal constitutions then the preference shown for crew in one fishery and not in another amplifies the constitutional infirmity.

4. THE ACTION OF THE COMMISSION PLACING A HEAVIER BURDEN UPON UPPER YUKON APPLICANTS TO SHOW THAT INCOME DEPENDENCE IS NOT REALISTICALLY REFLECTED UNJUSTLY DISCRIMINATES AGAINST ALL PERSONS PETITIONING FOR A SPECIAL SHOWING OF INCOME DEPENDENCE.

It is inconceivable that a rational basis exists for the different standard applied to upper Yukon applicants seeking to establish a special showing of income dependence. The distinction that applicants in one fishery must show special circumstances to be awarded additional points, and those in another unavoidable circumstances, cannot bear a fair and substantial relationship to the purpose sought to be advanced by the Act in avoiding unjust discrimination in the awarding of entry permits. The different standard, and the attendant burden it puts upon all applicants in the upper Yukon fisheries seeking an award of additional points, violates the equal protection clauses of both the state and federal constitutions and is contrary to the express intent of A.S. 16.43.

5. THE REQUIREMENT THAT AN APPLICANT HOLD A GEAR LICENSE IN ORDER TO RECEIVE INCOME DEPENDENCE POINTS UNJUSTLY DISCRIMINATES AGAINST THOSE PERSONS WHO IN FACT CONSISTENTLY PARTICIPATED AS COMMERCIAL HARVESTERS OF SALMON IN THE UPPER YUKON.

The Supreme Court has expressly avoided this issue so far. It is noteworthy, however, that this requirement is accomplished by regulation and is not itself part of the Act. See, 20 AAC 05.656(b)(1). Notwithstanding its arguable constitutional validity in other fisheries, the Commission is certainly not required by law to apply that requirement to fisheries with a history of development that lends a strong potential for persons being unjustly discriminated by its application. In the upper Yukon River fisheries persons who were in fact consistent commercial harvesters of salmon, and did not have a gear license, are unjustly discriminated against by the application of that requirement.

The heavier burden of "unavoidable circumstances" rather than "special circumstances" for additional income dependence points assumes a greater importance with regard to this gear license requirement established by the Commission. If the standard in the upper Yukon fisheries were "special circumstances," then persons who were in fact consistent commercial fishermen during the year markets were available would have an avenue for petitioning for points based on a special showing of income dependence. The Commission could analyze the claims on an ad hoc basis. Certainly the three part test applied in the "unavoidable

circumstances" application is inappropriate for this factual situation.

D. PERMIT TRANSFERS

The constitutional concerns created by the current system of transferability in A.S. 16.43, et seq., are adequately discussed in this text, supra, at pp. 62-65, in the concurring opinions in Apokedak, and in Appendix D.

THE CURRENT SYSTEM OF TRANSFERABILITY IN THE LIMITED ENTRY ACT UNJUSTLY DISCRIMINATES AGAINST THOSE PERSONS IN THE UPPER YUKON FISHERIES WHO CAN ESTABLISH GREATER THAN A MINOR ECONOMIC HARDSHIP BY EXCLUSION FROM THE FISHERY.

If a person accumulates a priority classification of 10 points in the upper Yukon fisheries then he is designated as in the classification of applicants who would suffer significant economic hardship by exclusion from the fishery. Those persons who would suffer only minor economic hardship are designated in the priority classification calculated from zero to two points. Although it is presently likely that some persons will receive a permit with less than 9 points, it is still clear that all persons designated above the minor hardship category shall be distributed permits "in order of descending priority classification." A.S. 16.43.270(a). It is obvious that one point of separation between applicants, or even the luck of a draw if points are tied, have and will separate persons into two classes: (1) those who are issued permits and (2) those who must purchase them on the market.

There is no requirement that a person fish a permit, and, in fact, it is apparent that a significant number of permits are not fished in any given year. The effect of the transferability provision in the Act, and the absence of control to ensure that the privilege advanced is being utilized, results in preferences for persons with abundant financial resources, who may suffer no economic hardship by exclusion from the fishery, as contrasted with other persons of considerably more modest means yet who may demonstrate a degree of economic hardship that cannot be classified as minor. See, Apokedak, supra, Justices Dimond, Burke, concurring, pp. 34-38.

Absent a means for redistributing permits revoked or reclaimed for lack of activity to those persons showing greater than a minor economic hardship and absent a means for persons showing greater than a minor economic hardship to overcome the financial barriers present in the free market system, it will be very difficult for a court to see the fit of a fair and substantial relationship between the current transferability system and the purpose sought to be advanced by the Act in avoiding unjust discrimination in the awarding of entry permits.

IV. RECOMMENDATIONS

During the course of study for and preparation of this report it was necessary to acquire as total an understanding possible of all aspects of the upper Yukon and other freshwater fisheries, and the people involved in those fisheries. The many factors involved include a cultural history of the people involved in the fresh water fisheries, geographic and biological aspects of the regions, the history of the development of the fisheries, subsistence and income needs of the people in the regions, international developments in law affecting and which might affect the regions, management problems and promises for the Alaska Department of Fish and Game, fisheries enhancement possibilities and problems, appropriate technology to assist rational management and development of the fisheries, as well as the specific effects of the limitation of entry into the upper Yukon and other fresh water fisheries. Accordingly, part II of this report is divided into two subjects. First, recommendations regarding to the effect of the limitation of commercial entry. Second, recommendations with regard to all elements of the upper Yukon and other fresh water fisheries, the development of those fisheries and improvements in the management of those fisheries. These recommendations are intended to be brief in content.

A. RECOMMENDATIONS TO THE LEGISLATURE AND THE COMMERCIAL FISHERIES ENTRY COMMISSION NECESSARY TO HELP RELIEVE THE UNDESIRABLE EFFECTS OF LIMITING ENTRY INTO THE UPPER YUKON AND OTHER FRESH WATER FISHERIES.

It is my firm belief that no single institution or event can be regarded as responsible for the effects now apparent from the limitation of entry into the upper Yukon salmon fisheries. The institutions singled out in these recommendations are targeted because they are the most appropriate or the most efficient institutions for accomplishing the recommended action.

It is also my firm belief that each fishery must be separately and extensively analyzed in order to determine whether limitation of entry affected individual participants in such a manner that unjust discrimination resulted. Although the Yukon River is currently divided into two administrative areas in reality it is number of different fisheries. The fishery at Eagle is virtually non-existent, and when it does exist the market is primarily local. The fishery at Tanana and Rampart is a major effort. It is supported by small cash buyers from Fairbanks as well as by several buyers purchasing for local and export markets and by a recently developed cold storage facility at Tanana. The fisheries at Ruby, Galena and Nulato are separate and distinct from the Tanana and Rampart fishery. A major avenue for export from these villages is by Galena to Anchorage. The fisheries at Anvik, Grayling, Kaltag and Nulato

often find their only export market through a cash buyer from Unalakleet. Holy Cross fishermen often move far down river to fish as drift netters in the Mountain Village area, while Shageluk (Innoko River) and Paimute fishermen often sell fish to cash buyers from the lower Kuskokwim region. As much as possible was learned about these separate fisheries in order to ensure that the findings and conclusions were applicable to persons of different experiences. Conclusions based on factual backgrounds of the particular fisheries studied cannot be reliably transferred to other fisheries not adequately studied.

1. THE LEGISLATURE SHOULD AUTHORIZE THE COMMISSION TO ACCEPT APPLICATIONS FROM, AND AWARD PRIORITY CLASSIFICATIONS FOR PARTICIPATION AND INCOME DEPENDENCE FOR, THOSE APPLICANTS FROM THE UPPER YUKON WHO CAN, IN FACT, SHOW A CONSISTENCY OF PARTICIPATION IN THE COMMERCIAL HARVEST AND SALE OF SALMON, REGARDLESS OF WHETHER THAT PERSON POSSESSED A GEAR LICENSE OR A FISHWHEEL REGISTRATION NUMBER.

In order to accomplish this it will be necessary for the legislature to establish standards which the Commission could apply in order to determine whether the applicant had, in fact, consistently participated in the commercial harvest and sale of salmon as a gear operator prior to the limitation of entry.

2. THE COMMISSION SHOULD ADOPT REGULATIONS AWARDED POINTS FOR THE CONSISTENCY OF PARTICIPATION IN THE UPPER YUKON FISHERIES.

A reasonable interpretation of A.S. 16.43.250(a)(2), directing that the qualifications for ranking applicants

should include "the consistency of participation during each year," means consistency during the years commercial markets were available. Applicants have been awarded for consistency in other fisheries and it should not be difficult to adopt a standard. See, 20 AAC 5.630.

3. THE COMMISSION SHOULD ADOPT REGULATIONS PROVIDING FOR AN AWARD OF POINTS TO APPLICANTS IN THE UPPER YUKON FISHERIES FOR PARTICIPATION DURING THE YEARS 1960 THROUGH 1969
4. THE COMMISSION SHOULD ADOPT REGULATIONS AWARDED POINTS FOR PARTICIPATION AS A CREW PERSON IN THE UPPER YUKON FISHERIES.
5. THE COMMISSION SHOULD AMEND 20 AAC 05.656(b)(2) TO REPLACE THE UNAVOIDABLE CIRCUMSTANCES TEST WITH A SPECIAL CIRCUMSTANCES TEST FOR A SPECIAL SHOWING OF INCOME DEPENDENCE.
6. THE COMMISSION SHOULD AMEND THE REGULATIONS TO DEFINE SPECIAL CIRCUMSTANCES FOR A SPECIAL SHOWING OF INCOME DEPENDENCE TO INCLUDE CONSISTENT PARTICIPATION, IN FACT, IN THE COMMERCIAL HARVEST AND SALE OF SALMON DESPITE THE ABSENCE OF A GEAR LICENSE.

The language of a definition of "special circumstances," to include income dependence while consistently participating in the commercial harvest and sale of salmon, despite the fact that the person did not hold a gear license, can be defined narrowly to prevent any concerns of fraud or lack of ability to confirm the claim. If a person consistently operated his or her own set of gear, commercially harvested and sold salmon whenever markets were available, and secured a commercial license whenever markets were available for the sale of salmon or salmon products, is that any less a showing that a person had income dependence upon

the fishery than the possession of a gear license? If the person did not have a commercial license, but did, in fact, install, work and maintain his or her own gear and harvest and sell salmon and salmon products commercially whenever markets were available, is that any less a manifestation of income dependence than possession of a gear license? The importance is the commercial harvest and exchange on a consistently participating basis whenever commercial markets were available.

7. THE LEGISLATURE SHOULD TAKE STEPS TO MAINTAIN THE CURRENT LEVEL OF EFFICIENCY IN THE UPPER YUKON FISHERIES.

Currently, the upper Yukon fisheries reveal low average returns to the individual fishermen and fishing families. Some fishermen fare better than others but the total value of the harvest is spread fairly well among the families and individuals permitted to enter. Steps taken to improve the efficiency of any individual fishery, or group of fisheries in the upper Yukon drainages, will lead to more exaggerated divisions of wealth in the villages that the events of 1974 through 1977 precipitated. Two events could dramatically magnify this division and should be prohibited by law.

(a) THE LEGISLATURE SHOULD LIMIT COMMERCIAL FISHING ABOVE HOLY CROSS TO SET GILL NETS AND FISHWHEELS ONLY.

Drift gill nets are far more efficient units of gear than set gill nets and fishwheels. The current regulations do not authorize drift net fishing in the upper

Yukon, but the pressures of more profit oriented persons to authorize drift net fishing are brought to bear yearly on the Alaska Department of Fish and Game and the Board of Fisheries. Drift net commercial harvest would dramatically effect limited entry, management efficiency and recognized subsistence needs. By a statutory prohibition the legislature would be insuring that any liberalization of gear regulations providing for more efficiency within those fisheries, which would most certainly affect social, economic and cultural interests, would be addressed in the legislative forum.

- (b) THE LEGISLATURE SHOULD RELIEVE THE COMMISSION OF THE POWER TO ESTABLISH THE OPTIMUM NUMBER OF ENTRY PERMITS FOR THE UPPER YUKON FISHERIES

While A.S. 16.43.290-320 (optimum number of entry permits and buy-back program) may have an appropriate place in more traditional coastal fisheries, the policy is entirely inconsistent with the current social and economic needs of the vast majority of persons who fish in that region.

8. THE LEGISLATURE SHOULD TAKE STEPS TO ALLEVIATE THE DISCRIMINATORY EFFECTS OF THE CURRENT SYSTEM OF FREE PERMIT TRANSFERS.

The Supreme Court, in Apokedak, signalled that it would give the legislature time to ameliorate the perceived evils of the free transferability system.

Legislatures may implement their programs step by step, in such economic areas, adopting regulations that only partially ameliorate the perceived evil and deferring complete elimination of the evil to future regulations.

Supra, pp. 21-22. With regard to the upper Yukon, and other fresh water fisheries that subsequently evidence the same factors of discrimination, several options are possible.

- (a) THE LEGISLATURE SHOULD PROVIDE FOR A SYSTEM OF PERIODIC RE-EXAMINATION OF THE CONSISTENCY OF PARTICIPATION AND ECONOMIC DEPENDENCE OF PERMIT HOLDERS.

The proposal advanced in Sponser Substitute for Senate Bill No. 187, "An Act relating to the harvesting and utilization of salmon in certain fisheries," pp. 8-9, would provide for a system of reexamination of priority classifications of permit holders in a time period roughly equivalent to the fish cycles on the Yukon River. This reexamination would ensure that persons issued the permits were still using them and experiencing a continual economic dependence upon the commercial fisheries. In conjunction with other provisions in the bill, the reexamination would also provide that permits reclaimed because the permittee no longer participated or had economic dependence upon a fishery, would be made available to those persons who could demonstrate greater than a minor hardship by exclusion from the fisheries.

Since the reexamination would be based upon a time period tied to the fish cycle those persons who fish in the peak years and choose not to do so in the low cycle years could continue that practice without being in danger of losing their permit. Persons who purchased permits would still have to demonstrate hardship at the periodic reexaminations and could not transfer hardship qualifications from

the transferee.

If priority classifications for participating as a crewperson in the fishery are granted then it would be possible for a crewperson to move into the class of persons who could demonstrate more than a minor economic hardship by exclusion and would thus have an opportunity to secure a permit that was revoked or reclaimed. The result of this system would be that all persons would have two options for entering the fishery, (1) purchasing a permit or (2) participating as a crew person and waiting for revoked and reclaimed permits to be redistributed. I believe that these provisions contained in SSSB No. 187 achieve the closest mix the legislature will ever be able to attain of maintaining free transferability, providing for a means for people to work their way into the fishery, and preventing a closed class from being created.

(b) THE LEGISLATURE SHOULD PROVIDE AN EFFECTIVE MEANS FOR ALL PERSONS TO OVERCOME FINANCIAL BARRIERS TO THE FREE MARKET SYSTEM.

Two classes of persons have to be considered when addressing the problems of overcoming the financial barriers to purchasing a permit on the free market. One class are those persons who can demonstrate more than a minor hardship but less than a significant hardship by exclusion from the fishery. The second class is all other persons who wish to participate in the fishery. The following changes in the current law should equitably address the interests of both classes.

- (1) THE LEGISLATURE SHOULD PROVIDE FOR AN EFFECTIVE TARGETED LOAN PROGRAM THAT WILL ENABLE ALL PERSONS TO OVERCOME THE FINANCIAL BARRIERS TO PARTICIPATING IN THE FREE MARKET SYSTEM.

Recent studies have shown that very few people not already participating have entered the commercial fisheries through the state loan programs. A targeted loan program for all persons wishing to enter the fishery is necessary to overcome these financial barriers. As long as there is a value on permits it seems that state participation would remain secure.

- (2) THE LEGISLATURE SHOULD PROVIDE THAT ALL PERSONS WHO CAN DEMONSTRATE A GREATER THAN MINOR HARDSHIP BY EXCLUSION FROM THE FISHERY HAVE AN OPTION TO PURCHASE AVAILABLE PERMITS IN THE DESCENDING PRIORITY OF THEIR CLASSIFICATION

The combination of a targeted loan program for all persons wishing to enter the fisheries, a statutory option to purchase permits in the descending order of priority for persons demonstrating hardship, points for participation as a crew person and periodic reevaluation of participation and income dependence would truly make the limited entry system in general, and in the upper Yukon fisheries in particular, a far more democratic and sensitive system that considers the beneficial interests and rights of all persons with regard to the common property fisheries.

9. THE OTHER FRESH WATER FISHERIES IN THE STATE SHOULD BE STUDIED FURTHER IN ORDER TO DETERMINE WHETHER THE LIMITATION OF ENTRY AFFECTED PARTICIPANTS IN A SAME OR SIMILAR MANNER AS PARTICIPANTS IN THE UPPER YUKON FISHERIES

10. HOLY CROSS: A SPECIAL CASE

The village of Holy Cross is currently in the lower Yukon management district but has far more in common with the upper Yukon villages. Many of the Holy Cross fishermen are driftnetters, a gear usage that is incompatible with the upper Yukon. Regulatory changes and shifting management lines have greatly complicated the task of unravelling concerns expressed by some Holy Cross residents. For some time prior to 1974 the Yukon was divided into 4 management subdistricts. Subdistrict 3 covered that portion of the Yukon from Marshall to Koyukuk (which included the current upper Yukon villages of Koyukuk, Nulato, Kaltag, Grayling and Anvik). In 1974 the current management areas were established with the lower boundary for the upper Yukon set at the Bonasila River, between Holy Cross and Anvik.

Prior to the management district changes drift gillnets were permitted to operate commercially throughout the Yukon. Cf., 5 AAC 330 (1973). Commercial fishwheels were permitted to operate commercially in the lower part of the river until 1976. Cf., 5 AAC 03.330 (1974, 1975). Prior to 1975, individuals could move between districts with some restrictions. Cf., 5 AAC 03.370 (1973), but in 1974 free movement between the upper and lower Yukon was prohibited.

Caught in the middle of these shifts were the Holy Cross fishermen. Some apparently fished above the Bonasila River as driftnetters and fishwheel operators, others operated fishwheels locally. Many fished as driftnetters down

river. When driftnetting was prohibited above the Bonasila River in 1974, it is certain that those Holy Cross fishermen participating above that point as drifters moved downriver. Some setnetters and persons operating wheels may have moved during the time when free mobility was in effect.

Without looking at individual files it is impossible to tell whether this period of changing regulations operated in such a manner as to result in unjust discrimination when commercial entry was limited.

THE LEGISLATURE SHOULD REQUEST THE COMMISSION TO DETERMINE WHETHER ANY PERSONS FISHING IN THE HOLY CROSS AREA IN THE YEARS 1970-1975 COULD RECEIVE PRIORITY CLASSIFICATION FOR EFFORT UP RIVER FROM THE CONFLUENCE OF THE BONASILA AND THE YUKON.

If the answer is in the affirmative and those persons can not otherwise qualify for a permit without accumulating points from other gear or other fisheries, then A.S. 16.43.250(d), providing for point accumulation, should be amended to allow equity.

B. RECOMMENDATIONS WITH REGARD TO IMPROVED DEVELOPMENT, ENHANCEMENT, MANAGEMENT AND UTILIZATION IN THE YUKON RIVER DRAINAGE

The many fisheries, both subsistence and commercial, in the Yukon River drainages, despite remedial adjustments to alleviate unjust discrimination in the limited entry program, will continue to display conflict and instability unless overall management and understanding of the fisheries is vastly improved. It is absolutely critical that steps be taken to initiate improved monitoring of long term changes in the biological conditions of the fishery and

long term changes in the market conditions of the fisheries. A number of potentially dramatic changes exist that could significantly effect the economic health of the region and the biologic productivity of the salmon resources. Major concerns to address will be discussed in more detail in the recommendations that follow.

1. THE LEGISLATURE SHOULD AUTHORIZE THE DEVELOPMENT, AND AMENDMENT, AS NECESSARY, OF A COMPREHENSIVE SALMON DEVELOPMENT AND UTILIZATION PLAN FOR THE ENTIRE YUKON DRAINAGE.

Conflicts over allocation between regional harvests, subsistence and commercial harvest, gear type and development plans affecting the health of the fisheries are inevitable in a fishery that is over 1,500 miles long with nearly all fish harvested or intercepted on a path of travel that concludes far from the point of interception. For the first time this year advisory groups from the upper and lower river have met to discuss conflicts. A comprehensive salmon utilization and development plan for the entire Yukon drainage will certainly take several years to accomplish, but the positive results will be a much better understanding of the needs of all parties and institutions concerned and will be an adequate blueprint for the survival of the species.

A similar planning effort is already in effect in the coastal regions of the state, utilizing planning teams composed of department personnel and representatives of appropriate qualified regional aquaculture associations. See, A.S. 16.10.275. A similar planning process for the Yukon could include local advisory committees, regional

councils, the Department of Fish and Game, the Commercial Fisheries Entry Commission as well as persons representing the interests of the legislative branch. The plan would require a substantially coordinated activity.

2. THE LEGISLATURE, IN COOPERATION WITH THE EXECUTIVE BRANCH, SHOULD UNDERTAKE A PROGRAM FOR THE INSTALLATION AND DEVELOPMENT OF SONAR FISH COUNTING SYSTEMS THROUGHOUT THE YUKON AND KUSKOKWIM DRAINAGES.

Sonar development and installation is extremely promising as a means to vastly improve fisheries management throughout the state. The Yukon and other turbid watersheds in Alaska are especially critical areas that would benefit from an aggressive installation and development plan. It is demonstrably possible, utilizing today's technology, to establish a sonar and information transmission system on the Yukon and other major salmon spawning drainages in the state that would give the Department of Fish and Game accurate escapement and instream status information within a matter of hours. In many fisheries that same information is not available for weeks and even months.

The installation and development of sonar systems would vastly improve the information available to a comprehensive Yukon salmon development and utilization plan. The approach must take two forms.

- (a) THE LEGISLATURE SHOULD TAKE IMMEDIATE STEPS FOR THE INSTALLATION, OF STATE OF THE ART SIDESCAN SONAR COUNTERS ON ALL MAJOR SALMON SPAWNING STREAMS IN THE YUKON DRAINAGE.

The current state of the art in technology for

sonar that is available for installation is the acoustic side Scan Counter. This counter has been used, tested and monitored with amazing accuracy. It is installed on the side of smaller streams and scans from that position.

The Department of Fish and Game personnel will readily admit that monitoring escapement in the Yukon and other turbid water drainages currently relies heavily on catch data. Installation of the side scan sonar systems would vastly improve fisheries management.

3. THE LEGISLATURE SHOULD AUTHORIZE THE ALASKA RENEWABLE RESOURCES CORPORATION TO INVEST IN IMPROVED TECHNOLOGY DEVELOPMENT OF SONAR COUNTING SYSTEMS.

The state of the art in sonar technology is changing fast. The utility of side scan sonar systems would most certainly be complimented by other systems in the demonstration stage. Three developments having the most promise are the fan scan sonar system (capable of being placed in the main stem of large rivers), two dimensional sonar systems, and a dopler shift sonar system. The two latter systems can be developed to readily provide accurate data for the Department that would include not only the number of fish passing the counter but also the species.

4. THE LEGISLATURE SHOULD AUTHORIZE THE COMMISSION AND THE DEPARTMENT TO PREPARE FOR A SYSTEM DIRECTING THE LIMITING OF ENTRY ACCORDING TO BIOLOGICAL UNITS IN SOME FISHERIES

As more information is developed about the various runs of salmon into the Yukon River drainages the Department is continually identifying patterns of major biological units within the various species. For example, it is now

believed that the fall chums that continue up the mainstem of the Yukon past the confluence with the Tanana swim closely to the northern bank of the Yukon throughout their passage, while those fall chums that spawn in the major drainages of the Tanana swim closely to the south bank of the Yukon. Other examples of biological units are summer chums bound for major spawning rivers such as the Anvik, Nulato and Porcupine and king salmon bound for the Andreefski, Salcha and Forty Mile. It may be more biologically and economically sound to limit entry into the fisheries on a mixed biological unit-administrative area basis rather than the strict area management basis that exists now. Steps taken now to determine the efficacy of such a management system could provide one more tool for maintaining the biologic productivity of the salmon.

5. THE LEGISLATURE, AND THE DEPARTMENT OF FISH AND GAME, SHOULD PROVIDE ADEQUATE PROTECTION FROM INTERNATIONAL EVENTS THAT MAY DESTABILIZE THE FISHERY ON THE YUKON RIVER.

Included in the appendix to this report is a memorandum discussing the transboundary river status of the Yukon. The partners in that status are the INPFC Treaty attempting to provide protection for western Alaska salmon stocks and North Pacific Management Fisheries Council decisions affecting salmon stocks intercepted before they have an opportunity to move into the mainstem of the Yukon.

- (a) A MORE ACCURATE FACTUAL BACKGROUND SHOULD BE DEVELOPED TO PROTECT ALASKA'S POSITION DURING ANY FUTURE TRANSBOUNDARY RIVER AGREEMENT NEGOTIATIONS.
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The most striking element of the current negotiating positions with regard to the transboundary rivers is the incomplete data supporting the American (and Alaskan) negotiating positions. The American bargaining position does not utilize all the facts that are in the best interests of Alaska. See, Memo, The Transboundary River Question, p. 5, n. 2.

- (b) DEPARTMENT PERSONNEL FAMILIAR WITH WESTERN ALASKA SUBSISTENCE AND COMMERCIAL FISHERIES AND BIOLOGICAL STOCKS SHOULD BE MADE AVAILABLE FOR DIRECT TECHNICAL ASSISTANCE TO THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL.
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The North Pacific Fishery Management Council makes decisions regarding high seas interceptions and incidental catches that directly impact the A-Y-K fisheries. Valid concerns have been expressed that these decisions should only follow technical assistance that includes direct input from biologists familiar with the A-Y-K fisheries and stocks. Currently the Department provides technical expertise, but direct technical input from Department biologists familiar with the A-Y-K fisheries and stocks is apparently not provided.

LEGISLATIVE RESOLVE #26

Appendix A

Original sponsor: Sackett

Offered: 4/27/79
Referred: Rules

1 IN THE SENATE

BY THE RESOURCES COMMITTEE

2 HOUSE CS FOR SENATE CONCURRENT RESOLUTION NO. 22

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 ELEVENTH LEGISLATURE - FIRST SESSION

5 Relating to the limited entry pro-
6 gram.

7 BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

8 WHEREAS art. VIII, sec. 15 of the Alaska Constitution provides that the
9 state may "limit entry into any fishery for purposes of resource conserva-
10 tion, to prevent economic distress among fishermen and those dependent upon
11 them for a livelihood"; and

12 WHEREAS AS 16.43 establishes the Alaska Commercial Fisheries Entry Com-
13 mission and states the legislative purpose as promoting the conservation and
14 sustained-yield management of the fisheries and the economic health and
15 stability of the commercial fisheries by regulating and controlling entry
16 into the commercial fisheries in the public interest and without unjust
17 discrimination; and

18 WHEREAS under AS 16.43.240(b) the commission is authorized to limit
19 entry into certain fisheries when it finds that a fishery has reached such
20 levels of participation that limitation of entry to that fishery is required
21 in order to achieve the purposes of AS 16.43; and

22 WHEREAS AS 16.43.240(b) does not specify a formula for the commission to
23 determine the maximum number of permits authorized when limiting entry into a
24 fishery under that section; and

25 WHEREAS in 1976, under AS 16.43.240(b), the commission decided to limit
26 commercial fishing in the area known as Upper Yukon and set the maximum
27 number of permits for the Upper Yukon as the number of units of gear fished
28 in the Upper Yukon during 1975; and

29 WHEREAS major commercial fishing markets did not develop for many areas

1 of the Upper Yukon fishery until after 1970; and

2 WHEREAS past participation in the commercial fishery of the Upper Yukon
3 that led to a high degree of economic reliance upon the commercial fishery
4 included barter and sale of fresh, smoked and dried fish products within the
5 region and indirect sales through intermediaries to fish buyers; and

6 WHEREAS past participation in and economic reliance upon the operation
7 of gear in the commercial fishery of the Upper Yukon was not restricted to
8 persons holding a gear license or a fishwheel registration; and

9 WHEREAS it appears that some persons who have participated for many
10 years in the Upper Yukon commercial fishery and had a high degree of economic
11 reliance upon the fishery may have been excluded from receiving an entry
12 permit;

13 BE IT RESOLVED by the Alaska State Legislature that the Alaska Commer-
14 cial Fisheries Entry Commission is respectfully requested to determine which
15 interested persons with past participation in and economic reliance (includ-
16 ing the barter and sale of fresh, smoked and dried fish products) on the
17 commercial fishery of the Upper Yukon since 1960 through the operation of
18 gear, regardless of whether those persons held a gear license or a fishwheel
19 registration, have not been issued a permit; and be it

20 FURTHER RESOLVED that the Alaska Commercial Fisheries Entry Commission
21 is respectfully requested to determine whether the maximum number of permits
22 set for the Upper Yukon fishery is consistent with the objectives of AS 16.-
23 43; and be it

24 FURTHER RESOLVED that the Legislative Limited Entry Study Committee,
25 with the cooperation of the Alaska Commercial Fisheries Entry Commission, is
26 respectfully requested to determine whether controlling entry into the
27 commercial fisheries in the Upper Yukon has resulted in any unjust discrim-
28 ination and to determine what options are available to the legislature to
29 correct any unjust discrimination; and be it

1 FURTHER RESOLVED that the Alaska Commercial Fisheries Entry Commission
2 and the Legislative Limited Entry Study Committee are respectfully directed
3 to report their findings and conclusions within the first 10 days of the
4 Second Session of the Eleventh Legislature.

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A SOCIAL HISTORY OF THE YUKON RIVER
FISHERIES PRIOR TO STATEHOOD

By: Michael Carey

Appendix B

A SOCIAL HISTORY OF THE YUKON RIVER
FISHERIES PRIOR TO STATEHOOD

By Michael Carey

The salmon is by far the most important fish in the history of the Yukon River fishery. Natives who live near the 1,900 mile long river have used the salmon as a major food source for unrecorded generations. In the century and a half that Whites have been on the river, numerous explorers, travelers, and missionaries have written about the salmon's importance to the local Natives and the methods employed to catch them. Some have noted rather casually that Natives caught salmon or that fish traps and fish wheels were seen along the banks of the river; others, particularly those charged with recording basic social, economic, and environmental information about the little known people and resources of the Yukon, have commented in detail on Native salmon fishing practices.

Lieutenant L.A. Zagoskin, who explored the lower Yukon for the Russian American Company from 1842-1844, reported salmon fishing was done by a variety of methods, including dipnets, spears, seines, fish traps, and gill nets. The catch was dried and stored. ^{1/} Father Julius Jette, a scholarly Catholic missionary who studied Native

^{1/} There is no mention that salmon was smoked. Lieut. L.A. Zagoskin, Account of Pedestrian Journeys in America by Lieutenant L.A. Zagoskin in 1842, 1843, and 1844 Years, Part I St. Petersburg, 1847, passim.

customs, myths, and language during his decades of service on the Yukon in the late nineteenth and early twentieth centuries, said the nets were made of "rabbit sinew tied to the shore by one end and anchored to a stone out in the river by the other end." 2/ The nets were checked twice a day. Fish traps were used in conjunction with a fish fence. Drawing freely on Jette's accounts, Dr. William Loyens described the trap or weir as

a grating of small slats split from a spruce tree of very straight grain tied together with split willow. The fence or weir extended from the shore to slightly beyond the trap's entrance to guide fish into the traps. The vertical sticks of this grating projected above the water surface . . . The conical net or basket of the trap was also made of small wicker-work . . . The larger end of the basket was closed by a funnel shaped piece which allowed easy entrance, but difficult egress, and any fish that entered this funnel were trapped, especially since the strong current would push the fish toward the pointed end of the basket. This end was closed by a circular piece of wicker-work, tied on with willow roots, which allowed the removal of the catch. 3/

Dip nets of willow bark (oblong nets about three feet long with a handle about six feet long) were used for catching king and chum salmon. Barbed spears of bone were also

2/ Dr. William Loyens, "Changing Culture of the Nulato Koyukon Indians," (Madison, 1966), p. 37-38.

3/ Id, pp. 38-39.

utilized in some areas. 4/

Edward W. Nelson carefully identified all the Alaskan species of salmon during an 1877-1881 expedition. Nelson also made generally accurate observations about the dates of the runs and noted that the Natives on the Yukon fished with nets and wicker traps. Of the chum salmon, he wrote, "Upon its abundance during the summer depends in great measure whether the following winter shall be one plenty or of famine and scarcity."

American military explorer Frederick Schwatka encountered numerous Native fishermen during his trip down the Yukon in 1883. In the vicinity of Tanana, he saw wicker traps at work, and elsewhere along the river he observed summer fish camps from which the Natives conducted their fishing activities. Henry T. Allen, who led a military expedition to the Copper, Tanana, and Koyukuk Rivers in 1885, saw fishing at Nuklukyet, near the present town of Tanana, and relied on salmon for nourishment while awaiting a steamboat. "The run of king salmon was almost ended," wrote Allen. "After them came the dog, then the silver, then the humpback salmon 5/ It must not be inferred from

4/ Richard A. Caulifield, Subsistence Uses in and Around the Proposed Yukon-Charley National Rivers, (Fairbanks, 1978), p. 17.

5/ Allen is possibly wrong about the run of humpback salmon. Twentieth century records indicate they are unimportant on the Yukon fishery. According to veteran fishery Inspector C. F. Townsend, many Natives had never seen a humpback salmon until the 1920's.

this that all of the kinds of salmon could not be taken on the same day, but that the advance guard of each arrived in the order named." The census takers discussed the salmon fishing they observed in their reports on the "inhabitants of the Yukon River Country," commenting particularly on the relative importance of salmon to the Natives at different points on the river. J.C. Cantwell, Commander of the U.S. Revenue Steamer Nunivak on the Yukon from 1898-1901, said that summer fishing was an integral part of Native life, contributing to make them "fairly prosperous and by no means unhappy." Perhaps Archdeacon Hudson Stuck, an eloquent voice on behalf of the Native people, summed up the significance of the Yukon River salmon best when he said, "To a degree that is not understood by most people the whole economy of the Yukon country is built upon dried salmon. The Nile is no more basic to the economy of Egypt . . . than the Yukon is to the interior of Alaska, flowing through the midst of it and bringing this noble fish." 6/

Early Fishery History:

In 1914, Bureau of Fisheries Agent H. O. Smith made a trip from St. Michael to Whitehorse and submitted

6/ Edward W. Nelson, Report Upon Natural History Collections Made in Alaska Between the Years 1877 and 1881, (Washington, 1887), pp. 317-320. Frederick Schwatka, Along Alaska's Great River, (Chicago, 1898), p. 306. Henry T. Allen, Report of an Expedition to the Copper, Tanana, and Koyukuk Rivers, (Washington, 1887), p. 89. Department of the Interior, Census Office, Report on Population and Resources of Alaska, 1890 (Washington, 1895), pp. 118-123. J.C. Cantwell, Report on the Operations of the U.S. Revenue Steamer Nunivak 1898-1901, (Washington, 1902), p. 224. Testimony of Hudson Stuck, Hearings before the Subcommittee on the Merchant Marine & Fisheries, U.S. House, May 4, 1920, p. 28.

what appears to be the first formal report on the Yukon River as a fishery. By Smith's time, the fish wheel, introduced by miners during the gold rush, had proved so efficient that it had surpassed all other fish catching devices in importance. "The wheels," Smith wrote, "are often located in specific places to catch different species, as it has been found that the cohos are taken more plentifully along the sandy beaches, while the chums favor the rocky and rough banks." Smith observed little fishing on the lower part of the river. Nulato was the fishing center of the Yukon in his estimation. From Nulato to Ruby, fishing was carried on more systematically than further down stream and the catches were heavier. Smoking fish had become common. At Ruby, Smith observed cohos were more popular than chums -- the latter were clearly in an inferior condition. Smith found that a sufficient quantity of fish was put up along the central part of the Yukon to meet the demands of local residents and those living in the interior. "From Holy Cross to Ruby large quantities of salmon are dried and smoked for use, in the more remote regions where the supply is scarce, as in the lower Yukon country, at Nome, and other mining communities. The Iditarod region produces only a small quantity of fish, and it is said that this season

about 60 tons would be shipped there from the upper Yukon." 7/

The first actual commercial operations on the Yukon can be traced to the Klondike gold rush. Kings and chums (primarily) were taken and sold fresh in the Yukon Territory camps, according to John N. Cobb of the Bureau of Fisheries. Cobb listed the quantity of fish and their value as: 8/

7/ Department of Commerce, Bureau of Fisheries, Alaska Fisheries and Fur Industries in 1914 (Washington, 1915), pp. 47-49. Some of the flavor of fish camp life on the Yukon at the time of Smith's visit is revealed in the memoirs of Fort Yukon trapper and trader James Carroll: "In those days [1911] the Natives never lived in town during the summer months, they preferred to live in tents up and down the Yukon River or on smaller streams like Birch Creek. They all fished for salmon with fish wheels, which would catch up to four hundred king salmon each day. There would be two or more families camped at each fish wheel to help with the cutting of the fish." James Carroll, The First Ten Years in Alaska: Memoirs of a Fort Yukon Trapper, 1911-1922 (New York, 1957), p. 13.

Other observations reflected camp life not too different from that of today. "There is no commoner sight along the Yukon than the cluster of white tents in some picturesque nook among the hills of the right bank, and with one or more high, barnlike smokehouses, which emit a faint blue vapor. There will be a fish wheel turning along the rocky shore and a number of open-air racks, more or less protected from the weather, on which the salmon hung for a time until partially dried and ready to be smoked. The picture is, of course, not complete without the native men, women, and children of the summer camp, nor without the invariable row of dogs tethered to stakes driven near the water's edge." Charles H. Gilbert and Henry O'Malley, "Investigation of the Salmon Fisheries of the Yukon River," in Alaska Fishery and Fur-Seal Industries in 1920 (Washington, 1921), p. 144.

8/ John Cobb, Pacific Salmon Fisheries, Appendix to the Report of the Commission of Fisheries, Third Edition, 1921. (Washington, 1922), p. 184.

<u>Year</u>	<u>Pounds</u>	<u>Value</u>
1903	70,000	\$ 5,600
1909	138,574	17,566
1910	169,900	18,689
1911	229,000	22,900
1912	224,100	22,410
1913	182,000	18,200
1914	188,600	18,860
1915	157,000	15,700
1916	143,500	14,350

Agent Smith, however, did not believe that it would be "profitable or advisable" to develop a commercial fishery on the American side for the export trade. The lack of transportation and high operating costs would severely hinder any such venture, he argued. Moreover, he concluded commercial development of the Yukon fishery would be in direct opposition to the interests of the residents along the river:

. . . the wisdom of such an enterprise, at least along any extensive line is very doubtful, as the Yukon plays a peculiar role in maintaining and supplying a very necessary article of food for natives and whites, as well as dogs . . . A fish diet forms not only the cheapest food for dogs, but it is the best food for keeping them in condition for winter service. There is strong prejudice against the establishment of canneries on the lower Yukon, if such an undertaking should ever be considered feasible, as it would mean cutting off or greatly reducing the supply of

salmon up the river, the result of which would be great privation and hardship to the people of that district. Therefore, under present conditions, the Yukon should remain undisturbed commercially in its production of salmon save for local needs. 9/

The wisdom of these conclusions and recommendations are most important in light of decisions to the contrary that were made later in Washington.

The Carlisle Cannery Controversy: A Landmark for the Yukon Fishery.

In the spring of 1918, the Carlisle Packing Company of Seattle expanded its Alaskan operations into the Yukon River. Fishing was conducted from the mouth of the Yukon to a point above the junction of Clear River, mostly in that part of the Yukon delta known as Kwikliak Pass. 124 gill nets of 9,869 fathoms and 6 wheels were used; employment was given to 169 men. The total catch for 1918 was 115,531 fish. Carlisle's floating cannery at Andreefski had a profound psychological impact on resident river fishermen during 1918; and it had a profound political impact on the regulation of the fishery, the reverberations of which were felt for years after. 10/

9/ Alaska Fisheries and Fur Seal Industries in 1914, p. 49.

10/ Department of Commerce, Bureau of Fisheries, Alaska Fisheries and Fur Seal Industries in 1918 (Washington, 1919), pp. 28-30.

When it became known in Alaska that a salmon cannery would operate on the Yukon during the 1918 season, objections were immediately raised by local residents and their supporters. Chief Paul of Koyukuk, for example, "thought the cannery down below was to catch every fish that comes up the Yukon." The Bureau of Fisheries responded to these objections by holding an informal public hearing in Seattle on May 7, 1918. Representatives of the cannery were present as well as their opponents, including Episcopal Bishop P. T. Rowe and others "prominently identified with the general welfare of Alaska and particularly in respect to the Natives." Supporters of the cannery contended, as the Bureau summarized, that a "mighty stream like the Yukon ought to support a number of such establishments without detriment to the inhabitants or without injuring the future of the fishery." Moreover, they argued, the local residents employed primitive methods and made only indifferent efforts to secure salmon. This, they alleged, had direct bearing upon the light catch of 1917, which forced river residents to kill quite a number of dogs because of a shortage of salmon for dog feed. The cannery opponents stated that the local people, both Native and White, were dependent on the salmon and expressed concern for the economic welfare of the entire Yukon drainage. They feared this cannery would be only the first of many. 11/

11/ Chief Paul to Commissioner of Fisheries H. M. Smith, July 31, 1918. Record Group 22, Entry 91 Item 12, Record of U. S. Fish and Wildlife Service, Bureau of Fisheries, Division of Alaska Fisheries, National Archives. Alaska Fisheries and Fur Seal Industries in 1918, pp. 28-29.

This hearing demonstrated not only that there was a wide difference of opinion about the future of the Yukon River fishery but also that little was known about the run of fish. Both sides presented strongly held convictions, emotional and philosophical arguments for their positions, but neither had many facts. "Prior to the season of 1918 the size of the run in the Yukon was an almost unknown quantity," concluded the Bureau of Fisheries. 12/

The Bureau of Fisheries took no action on regulations after the May hearing, but as a result of the confusion swirling around the actual conditions of the fishery, Wardens C. F. Townsend and C. L. Larson were dispatched to conduct a special inquiry along the river. The two wardens made their own observations and their own reports, but they also distributed detailed questionnaires to teachers, marshalls, postmasters, traders, and missionaries. The questionnaires asked about the runs of salmon over the years, the number of species of salmon taken, fishing methods, and the uses of the catches. The respondents also were asked their opinions about the effects of the cannery--and possible future canneries--on the fishery. 13/ These questionnaires did not provide

12/ Alaska Fisheries and Fur Seal Industries in 1918, p. 30.

13/ These questionnaires are probably the best source of information about the conditions on the river prior to 1918. Many of the people who filled them out had a great deal of experience. The questionnaires also contain valuable information about human and dog populations of villages, general living conditions, and Native habits and customs.

any easy answers to the dimensions of the run or the condition of the fishery. Nor did the wardens' reports. Conflicting testimony again appeared, suggesting probably the diversity of conditions along this huge river and the impressionistic, incomplete knowledge of the residents. 14/ But Father Jette of Tanana gave a balanced, intelligent reply to the questionnaire that has the ring of truth.

Of course, one cannery will not make a perceptible difference in one season. It may in the long run. But a multiplication of canneries will. There is actually a surplus of salmon above what is needed or consumed for food, but a part of this surplus is needed for reproduction. In the Fall, when the white people see the banks of the small tributaries lined with dead salmon, they jump to the conclusion that these are waste; and still they are not wasted because they have spawned. . . . I think that the results should be watched for at least five years, before passing judgment on the matter. I think the erection of a second or [third] would be distinctly prejudicial. 15/

In November, 1918, a second hearing was held in Seattle to discuss limiting or prohibiting commercial salmon fishing on the Yukon and tributaries. At this hearing, Bishop Rowe and his supporters again pressed their case for protection of the resident fishermen. The Bureau of Fisheries, acting on evidence that showed there could be serious

14/ Alaska Fisheries and Fur Seal Industries in 1918, p. 29. Record Group 22 Entry 91 Item 12, Record of U. S. Fish and Wildlife Services, Bureau of Fisheries, Division of Alaska Fisheries, National Archives.

15/ Father Jette's questionnaires, July 19, 1918. Record Group 22, Entry 91 Item 12, U. S. Fish and Wildlife Service, Bureau of Fisheries, Alaska Division, National Archives.

problems if "reasonable protective regulations were not made effective," put further restrictions that prohibited taking salmon from the Yukon and its tributaries above the confluence of Clear River and the Yukon, limited commercial fishing in the delta to Kwiluak Pass (the south mouth or channel), prohibited fish traps and pound nets in the Yukon and its delta, limited the length of nets to 700 feet, and limited the case pack and the number of barrels and tierces 16/ that could be pickled or mild-cured. The pack of canned salmon was restricted to 30,000 cases; pickled salmon 1,000 barrels; and mild-cured salmon, 200 tierces. 17/

The Carlisle Packing Company resumed its operations under the new regulations in 1919. That year the total number of salmon taken for export was 469,949, and the pack consisted of 57,085 cases, 214 barrels, and 47 tierces. About 62% of these fish were taken outside the mouth of the river--beyond the scope of the regulations established to protect the fishery. This accounts for the discrepancy between the quota established in the winter of 1918 and the actual catch in 1919. As government investigators later explained, the Carlisle Packing Company realized the deficiencies in the law and "put up approximately the maximum

16/ A tierce is a cask of approximately 42 gallon capacity.

17/ Department of Commerce, Bureau of Fisheries, Alaska Fisheries and Fur Seal Industries in 1919 (Washington, 1920), pp. 29-30.

pack inside the river and then proceeded to double this with salmon equally bound for the Yukon which they captured outside the mouth of the river. In doing this they were wholly within their legal rights, but they evinced thereby an indifference to the obvious purport of the order . . ." 18/

1919 produced a small run of salmon on the Yukon, as it did elsewhere in Alaska, and during the fall and winter of 1919, opponents of commercial fishing made themselves heard--or as the Bureau of Fisheries put it after feeling Hudson Stuck's wrath, "concerted action of ecclesiastical inception was undertaken to end commercial fishing for salmon . . ." Stuck charged, in what the Bureau labeled "propaganda," that the cannery was operating under a permit granted by the Bureau 19/ and traced the shortage of salmon to the cannery. 20/

The Department of Commerce (of which the Bureau of Fisheries was a part) responded to Stuck's accusations with wounded pride. In the annual report on Alaska's fisheries, the Bureau admitted there had been a light run but argued that there were historical precedents for bad years back to

18/ Gilbert and O'Malley, p. 153.

19/ Stuck later admitted he was wrong about the permit and retracted his statements about it.

20/ Alaska Fishery and Fur Seal Industries in 1919, pp. 30-32.

1879 21/ when Yukon River Natives reportedly were forced to travel to Norton Sound to obtain food. The Department pointed out further that there was high water on the river and a great deal of driftwood, which interfered with Native fishing operations. "Over and above all," suggested the Department, "consideration must undoubtedly be given to the psychological effects of the establishment of the cannery on the Natives; they heard the cannery was in operation, hence at once assumed that there would be no salmon passing to upper waters" (just as Chief Paul had said in his letter to the Commissioner of Fisheries). On the spot reports from Inspector C. F. Townsend were ambiguous, however; there were shortages of fish in some villages, but at other villages enough fish were caught for local demand. 22/

The conclusion that the Department of Commerce reached about the treatment of the Yukon River fishery was a rebuke to Hudson Stuck and a re-statement of the Department's policy:

21/ Information about runs prior to 1918 is scattered and inconclusive. The Deputy U. S. Marshal at Eagle reported in the 1918 survey that salmon runs had been shrinking steadily since 1904. Record Group 22 Entry 91, Item 12, U. S. Fish and Wildlife, National Archives. Trader Harry Norton of Fort Yukon said in a letter to A. F. Zipf of the Carlisle Company that "In 1899, 1903, and again in 1917 there were practically no runs of salmon. . . ." Hearings before the Subcommittee on the Merchant Marine and Fisheries, U. S. House, May 4, 1920, pp. 82-83.

22/ Alaska Fishery and Fur Seal Industries in 1919, pp. 31-32.

It is not the province of the Department of Commerce in its legal relation to the fisheries of Alaska to consider as paramount the interests of any particular packing company or any branch of the fishery industry, or any class of people, but under the law it is charged primarily with the protection of the salmon fisheries. 23/

The Department went on to say that it would give unbiased consideration to all information that came before it, but it was not required to accept less than a fair, unprejudiced presentation of the facts. The major question before the Department was whether or not the fishery was suffering depletion, not the merits of commercial versus non-commercial fishing. Competent investigators would be sent to the Yukon in 1920 to determine what the Yukon could tolerate as a fishery and the actual conditions of the Natives. But, the Department warned, while the rights of humanity must be considered in drawing up the final regulations ". . . it seems now that the Yukon can support at least a reasonable commercial fishery for salmon and at the same time insure an ample supply for local food in perpetuity." 24/

In May, 1920, before the competent investigators began their work in Alaska, a third hearing was held on the fate of the Yukon River fishery--this time in Washington by the House Subcommittee on the Merchant Marine and Fisheries. Hudson Stuck once more repeated his charges that the Carlisle

23/ Id., pp. 31-32.

24/ Id., p. 32.

cannery was depleting the fishery. Many letters explaining the difficult winter the Natives had faced because of the shortage of salmon were entered into the record. Father Jette wrote, "It is true that the natives often exaggerate their destitute condition, but this time the wolf really is at the door. . . Here they all suffer even now, and several of them are want to die for want of proper nourishment." Judge Harry Covington of Seattle presented the cannery's case, giving full expression to the Company's steadfast position that a major river like the Yukon should be able to sustain a tremendous number of fish and without evidence to the contrary, the cannery should continue its operation. (Covington, in other words, cleverly placed the burden of proof on the river residents and their allies, who knew little or nothing about the biological condition of the fishery.) The Carlisle Company also submitted a host of statements from traders along the river--the results of their own inquiry--that purported to demonstrate the cannery had no impact on the condition of the fishery. Finally, Judge Covington made a strong case for the rights of private property in a free society and the sacredness of honest investments made in good faith, using all the rhetorical flourishes common to oratory in the Harding era. 25/

25/ Hearings before the Subcommittee on the Merchant Marine and Fisheries, U. S. House, May 4, 1920, pp. 26-44, 54-102.

The Commissioner of Fisheries, Dr. Hugh Smith, was caught in the middle, as was often the case in Alaska, but he generally agreed with Judge Covington and was skeptical that the cannery could injure the fishery. But the Commissioner allowed that he would await the report of the competent investigators who would spend the season on the Yukon before further action was taken. 26/

Charles H. Gilbert and Henry O'Malley were the competent investigators. Gilbert, Professor of Zoology at Stanford, was the author of many papers on the Alaskan fisheries; O'Malley, a Field Assistant in the Bureau of Fisheries, would become Commissioner of Fisheries in 1922. 27/ The Gilbert-O'Malley report was in two parts. The first part dealt with the different species of salmon on the Yukon and their biological history; the second part discussed the problems raised by the cannery, the conditions of the local residents, and the manner in which both should be addressed by the Bureau. In their discussion of the conditions of

26/ Hearings before the Subcommittee on the Merchant Marine and Fisheries, U. S. House, May 4, 1920, pp. 104-105.

27/ Richard A. Cooley, Politics and Conservation: The Decline of the Alaska Salmon, (New York, 1963), p. 104.

Smith's authority was undercut by the packers who alleged that he had failed to carry out conservation measures-- which they themselves desperately opposed until after World War I, when they realized the Alaskan salmon fisheries needed some protection and they needed a scapegoat. Cooley says that Smith resigned under a "cloud of suspicion."

the local residents, Gilbert and O'Malley pointed out in particular the importance of the dog in the Yukon economy and the dependence of the local residents on salmon for dog feed.

The winter is the only time for travel except along the waterways of Alaska, and winter travel is impossible without the dog team. Dogs are equally indispensable as draft animals and pack animals. Transportation of the winter mails over thousands of miles of the interior of Alaska must be accomplished by dog team. . . Fort Gibbon alone needs 40 tons of dried salmon each year to feed the dogs they indispensable in their work. Prospectors need them to carry their supplies into the hills. Wood choppers require them to haul in their wood. Indians must have them in their long hunting and trapping expeditions, and without them can neither secure meat for their families nor furs to exchange for the other necessities of life. 28/

The dog was to the Yukon what the horse had been at other places and times in American history, and dry salmon took the place of hay and grain. Any shortage of fish would have an immediate impact on the dog population--as it did in 1919 when many were shot for lack of food- and thus upon the economy and people of the Yukon, especially the Natives. 29/

Of the different species of salmon, Gilbert and O'Malley wrote, the king is important and prized for human consumption, but

28/ Gilbert and O'Malley, p. 152.

29/ Id., pp. 148, 152.

Unquestionably, however, the chum furnishes by far the larger share of dried salmon. Along some stretches of the river almost complete dependence is placed on this species, locally known as the dog salmon and 'silvers.' The higher grade of chums, known as 'silvers', form the staple dog food throughout the Yukon country. All the traders handle them and may deal in from 5 to 50 tons in a year. But they refuse to purchase dog salmon except as a last resort. 30/

After travelling the length of the river, Gilbert and O'Malley concluded that it was impossible to doubt that the 1919 run was "phenomenally deficient" and very serious conditions would arise if this should happen again.

No basis is available for a well-founded estimated of the amount of dried salmon put up in 1919, but we believe that 150 or 200 tons would be an outside estimate of the entire river. The price rose to 25, 30, and 35 cents per pound, with no stocks available even at those prices. Men compelled to travel during the winter experienced the utmost difficulty in securing substitute dog feed. 31/

Gilbert and O'Malley recommended that all commercial fishing for export cease on the Yukon and its tributaries, including the delta waters and an area 500 hundred yards outside the mouth of each channel in the delta. This recommendation was followed by the Secretary of Commerce in December, 1920: commercial fishing was prohibited indefinitely in all the suggested areas after September 1, 1921. The Secretary's order was re-affirmed after a final Seattle hearing on November 17, 1921, and in December, 1924, the

30/ Id., pp. 143-144.

31/ Id., pp. 147-148.

indefinite prohibition was made a final ban upon commercial fishing for export. 32/

The direct influence of the Carlisle Packing Company in influencing the run of 1919, "one of the worst [runs] ever known on the Yukon," is difficult to evaluate, as State Department of Fish and Game researchers later discovered when they studied the evidence in 1965. There were several indications that the run was heavily fished upriver. "Nearly all small kings were taken upriver; large kings were net marked; late chum runs were scarce upriver. . . ." It seems that the more than 350,000 chums taken by the cannery would have improved the catch upriver if they had been allowed to escape into the mainstem of the river, but it cannot be known how many fish actually would have been caught, especially given the fishing methods that prevailed in 1919. Nonetheless, in the words of the State researchers, "though 1919 was probably a low cycle year, it appears as though the cannery compounded the problem." 33/

In 1919, when the Department of Commerce answered Hudson Stuck's charges that the Yukon fishery was handled

32/ Id., p. 154., see also, Alaska Fishery and Fur Seal Industries in 1920, p. 11. Alaska Fishery and Fur Seal Industries in 1924, p. 81.

33/ Gilbert and O'Malley, p. 147. Steven Pennoyer, Kenneth Middleton, and Melvin Morris, "Arctic-Yukon-Kuskokwim Area Salmon Fishing History," Informational Leaflet #70, Department of Fish and Game (Juneau, 1965) pp. 6-16. This was the first attempt to gather the history of the Yukon fishery and hence a valuable work.

improperly, it reaffirmed the doctrine that it was charged with the protection of the salmon fisheries, not with the welfare of people. (Or, to paraphrase Richard Cooley, the Department's obligation was to the biology of salmon, not the politics of who catches them.) But this lofty statement of scientific policy, however loudly trumpeted, was an ideal to which the Department (and the Bureau of Fisheries within it) only aspired, and it did not at all reflect the compromises that officials were forced to make. The Commissioner of Fisheries was constantly under pressure from the cannery interests to make allowances and exceptions to the regulations--and he did so. In fact, the policies of the canners were often the policies of the Bureau of Fisheries, and the Bureau often had trouble distinguishing between the promotion of salmon--and the industry--and the regulation of the Alaska fishery. 34/

But the Bureau of Fisheries did not simply knuckle under to the power of industry in the Carlisle controversy. The Carlisle Packing Company was small; Hudson Stuck and his ecclesiastical allies around the country kept pressure on the Bureau; and after World War I a new, if temporary and rather shallow, spirit of conservation made itself felt as government officials, packers, and fishermen reached the conclusion that something had to be done to protect the Alaska fisheries. From the first Carlisle inquiries to the Bureau

34/ Cooley, pp. 83-115.

about the possibility of putting a cannery on the Yukon, the Bureau let it be known that the local residents would have to be considered--despite what the Department said later about the protection of salmon not people. As Commissioner Smith said in a 1918 letter to Carlisle, "The Bureau is not in favor of the establishment of canneries on the lower Yukon which would interfere with the run of salmon in the upper waters where the natives and others are largely dependent upon the fish for their supply of food." 35/

Gilbert and O'Malley, while noting in passing that the run itself must be protected, devoted most of their 1920 report to the protection of the Yukon residents, not the salmon.

The principle should be adopted with regard to the interior rivers of Alaska that no commercial interests should be permitted to exploit them until it should be demonstrated that a portion of the salmon run could be spared without detriment to the run itself and without encroaching on the supply needed by the populations that inhabit the valleys of the rivers. And if there is any question whether the salmon in a given stream is adequate to supply the demands of commercial operations as well as the needs of the local inhabitants, the doubt should be at once resolved in favor of the people. 36/

35/ Commissioner Hugh M. Smith to the Carlisle Packing Company, Feb. 26, 1918, Record Group 22, Entry 91, Item 12, Record of the U.S. Fish and Wildlife Service, Bureau of Fisheries, Division of Alaska fisheries. National Archives.

36/ Gilbert and O'Malley, p. 153.

The closure of the Yukon River to commercial fishing came at an unusual moment in Alaskan history. Virtually everyone engaged in commercial salmon fishing was publicly committed to some kind of Alaskan salmon conservation measure. The Congress in particular was anxious to get out a bill. In 1923, as Richard Cooley points out, Alaska had more close personal attention from federal officials than it ever had in the past. The Secretary of Commerce, Dr. Gilbert, and Commissioner O'Malley were all in Alaska to study the fisheries and determine how they could be administered in the future. During July, 1923, President Harding and a retinue of notables arrived to tour the territory. The President himself conducted hearings on the condition of the fisheries in several communities, including Nenana. In a Seattle speech shortly before he died, President Harding stated his commitment to the people of Alaska and his conviction that the salmon must be protected. He warned, ". . . If, for example, we should go on decimating the fisheries year by year till they have been ruined, . . . then we shall never have a community of stabilized society and home tied people." 37/

This is the atmosphere in which the decision to close the Yukon commercial export fishery was reached. 38/

37/ Cooley, pp. 106-116.

38/ The putative negative impact of the Carlisle Cannery seems to have become something of a legend. In 1957, trapper & trader James Carroll of Fort Yukon said, "Today they [Natives] can't get enough king salmon to eat due to too much commercial activity. Years ago at the mouth . . . fishing was so heavy that it resulted in the present shortage of king salmon," The First Ten Years in Alaska: Memoirs of a Fort Yukon Trapper, 1911-1922. (New York, 1957), p. 25.

The Subsistence Fishery, 1918-1941:

Inquiry into the subsistence fishery was concomitant with inquiry into the effects of the Carlisle cannery. In their 1918 survey of the cannery, Townsend and Larson counted 393 fish wheels and approximately 650 to 700 tons of dried fish for the Yukon and Tanana Rivers. They calculated the catch at about 1,400,000 small salmon, not counting kings. (Their figures do not cover the Yukon Territory and probably does not include the Koyukuk.) 39/

Inspector C. F. "Cal" Townsend is an important figure for understanding the history of the Yukon fishery. Townsend was a Bureau of Fisheries employee in the interior as early as 1915, and in 1919, he became inspector in charge of the Yukon, a position he held through the 1941 season. Every spring, he brought his boat out of storage in Nenana and traveled up and down the Yukon from late May until late September, investigating the fishery. 40/ He hired an assistant, a stream guard, to check the Kuskokwim fishery, and for several years, he hired a mechanic and pilot to travel with him during the nearly 5,000 mile voyage. (Leo Keough of North Pole, Alaska--the mechanic and pilot in 1939-41--was interviewed in preparation for this report).

39/ Alaska Fisheries and Fur Seal Industries in 1918, p. 29.

40/ There is occasional mention of Rampart and the Rampart Rapids in his reports, but his most detailed information is about the communities from Tanana downriver. Townsend's reports, in addition to their information about the fishery, are an excellent source for information about the population, health, welfare, and economic conditions along the Yukon.

Townsend spoke to many people as part of his research into the Carlisle question in 1919, but no exact catch figures are given in the Bureau of Fisheries report based on his work. 41/

In 1920, Gilbert and O'Malley saw 56 wheels that took about 82 tons of salmon on the Tanana below Fairbanks. Together, 301 fish wheels operated on the Yukon and Tanana, taking 622 tons of fish. (8% were king salmon and 92% were chums.) "If an allowance of 100 tons is made for the tributaries not visited, and for the later runs on the Yukon which were not seen," wrote Gilbert and O'Malley, "and this allowance is almost certainly inadequate--there would be a total provision of dried salmon for the Yukon and its tributaries in 1920 amounting to 722 tons." 42/

No figures are available for the 1921 catch.

In 1922, Townsend reported that the catch along the river was "probably the smallest in history," most likely because of very high water that lasted all summer. Good catches at some places suggest there was a normal run, however, and "It was reported also that the natives fished less diligently than usual, as in many places they were supplied with money from their large catch of fur the previous

41/ Alaska Fisheries and Fur Seal Industries in 1919, p. 31. Gilbert and O'Malley estimate that 150 or 200 tons were taken on the Yukon in 1919, p. 147.

42/ Gilbert and O'Malley, pp. 146-147.

winter." It was estimated that 15,000 kings and 215 tons of dried dog salmon were caught. 43/

The catch in 1923 apparently was better than usual, with the run of kings and chums exceptionally good in the lower river. Local fishermen took about 17,500 kings and 79,000 chums in addition to 231 tons of dried chum salmon for dog feed. 44/

Fishing along the Yukon and Tanana Rivers was successful in 1924, but there was a heavy loss of fish because of steady rain from July 3 to August 10. Townsend estimated that there were 258 wheels and 600 fathoms of net in operation from Kwiguk to the Rampart Rapids and about 685 tons of dried dog salmon were available at the end of the season. (He further noted that about 50 tons of dried dog salmon were put up on the Tanana.) 45/

1925 was the first year for fishing after commercial export operations were banned. Townsend saw a normal run of kings but an apparent shortage of chums. The breakup of the Yukon and Tanana Rivers was very hard on fishing equipment and caused more damage than in the past. "Most of the summer camps were swept away," wrote Townsend. "The fish racks and smoke houses were a big loss to native and white

43/ Alaska Fishery and Fur Seal Industries in 1922, p. 58.

44/ Alaska Fishery and Fur Seal Industries in 1923, p. 15.

45/ Alaska Fishery and Fur Seal Industries in 1924, p. 113.

fishermen. A great many wheels that were put up where they had been safe in former years were taken out with the ice. The damage was especially bad near the mouth of the river, where practically all the dried wood was washed away."

336,545 pounds of chums were dried. 46/

The following year, 1926, presents a sharp contrast to 1925 and suggests the unstable nature of the fishery. The season was unusually favorable, and the run of kings was very heavy. "I found nearly all of the racks full of fish and the best kind of weather for drying and curing . . .". Townsend told Washington. "In all places the grade of smoked fish put up was the best I have ever seen on the river." 47/ There was very little rain at the mouth, which helped to make the grade of dog feed put up "down on the Tundra" the "best ever." The first king was caught May 29, whereas in previous years June 7-10 was the date of the first catch. "There was quite a run of humpbacks", he reported: in some places these were the first humpbacks the Natives had ever seen. "There is no doubt," concluded the

46/ C. F. Townsend Report for 1925. Record Group 22, Entry 92, Box 48, U. S. Fish and Wildlife Service Records, Bureau of Fisheries, Division of Alaska Fisheries, National Archives. Alaska Fishery and Fur Seal Industries in 1925, p. 100.

47/ The reader should beware of such phrases as "the best I have ever seen" or "the worst I have ever seen" for they are repeated many times in Townsend's 25 years on the river.

Inspector, "but what the king run this year was the heaviest in years." 48/ 723,000 pounds of chums were dried. 49/

1927 was another good year. There was a large run of king and chum salmon that lasted three weeks. All the fish entered by Kwikluak and Apoon mouths, not Kwiguk slough as previously. It was the first large run ever noted on the Apoon mouth by Townsend. During his trip upriver in July, the inspector saw that the racks in the fish camps were full of fish. Several wind storms wrecked a number of fish wheels, but Townsend concluded, "The Natives along the Yukon and Tanana Rivers are the best fixed financially I have ever seen them. A good part of them have motor boats and all have good dog teams." 679,000 pounds of chums were dried. 50/

The run of chum salmon began early in June and continued through July and August with slight abatement in 1923. A greater number of pink salmon were caught than in any recent year. Once more, summer storms wrecked many fish wheels, but the accompanying rains did not spoil many fish on the drying racks as there was usually a breeze. Townsend saw better smoke houses and covered drying racks, and "Taking the river as a whole the catch was way above the average. There will be a good many tons of dried fish carried over

48/ State Fish and Game researchers discovered that there is no correlation between Townsend's statement that the king run was heavy and the small number of kings reported for local use. The researchers are right when they are skeptical about the king catches for 1926-1930. See fn. 33.

49/ C. F. Townsend Report for 1926 Record Group 22, Entry 92 Box 48, National Archives, Alaska Fishery and Fur Seal Industries in 1926, p. 265.

50/ C. F. Townsend Report for 1927, Record Group 22 Entry 92 Box 48 U. S. Fish and Wildlife Records, National Archives. Alaska Fishery and Fur Seal Industries for 1927, p. 100.

from this season's catch. On the lower river, especially the Tundra, the Natives went hungry last winter, as the fur catch was very light. This year they filled their store houses full of fish. . . ." 51/ Townsend also made note of the beginning of an important historical trend: the decline in importance of the dog in the Yukon economy.

Nearly all of the Traders carried over most of their dog salmon from last fall. There was very little dog team travel along the Yukon and Tanana last winter. In former years every one (sic) coming from Nome used dog teams, but this winter there was a regular airplane service between Fairbanks and Nome and all travel was that way. There was also another line of planes between Fairbanks and Iditarod, McGrath, and Tacotna. This line also did away with a lot of dog teams. None of the traders would contract for any fish this fall. 52/

That year 872,000 pounds of chums were dried. 53/

Very little information is available about 1929, except that belugas--of which there were apparently many--wrecked a great deal of fishing equipment. The catch for dried chums is given as 699,000 pounds. 54/

The breakup on the Yukon was very unusual in 1930 as ice jammed the river from Ruby to Russian Mission, causing damage to smokehouses and fish wheels. Several schools

51/ C. F. Townsend Report for 1928 Record Group 22, Entry 92, Box 48, National Archives. Alaska Fishery and Fur Seal Industries for 1928, p. 252.

52/ Townsend, 1928 Report.

53/ Alaska Fishery and Fur Seal Industries for 1928, p. 252.

54/ Alaska Fishery and Fur Seal Industries for 1929, p. 263.

of beluga whales were seen on the river, a few of them as far north as Holy Cross. The weather was bad and the water was high for most of the season. At the mouth, most of the fishermen had their fish dried when the bad weather hit, but from Mountain Village to Russian Mission most of the fish rotted. On the Tanana, the catch of cohos was the proverbial "best in years." That year 116 tons of cohos and 295 1/2 tons of chums were dried. 55/

Spring was late in 1931, but on the lower river, there was no rain in June, July, and part of August, allowing most of the dog feed to sun cure without the aid of smoke. From Anvik to the confluence of the Yukon and the Tanana, it rained most of the summer and both the rivers were at flood stage. There was virtually no September run in any part of the river, but 367 tons of chums were reported dried. Townsend made several more comments about the fact of the dog team. "A big bunch of mail dog team dogs were killed off this spring owing to the star mail routes being let to the Airline Company's (sic). . ." Townsend could not see "whether there will be a market for half of the fish caught this summer." 56/

Once again, the chum run for 1932 was called "without exception the best ever known on the Yukon. The catches were double last season. Traders were buying very

55/ Townsend, 1930 Report, National Archives. Alaska Fishery and Fur Seal Industries for 1930, p. 23.
56/ Townsend, 1931 Report, National Archives. Alaska Fishery and Fur Seal Industries for 1931, p. 33.

few dried fish on account of their being no market for them." Great storms on the lower Yukon the winter before had left the Natives there in the worst condition in Townsend's experience. 710 tons of chums were dried. 57/

The salmon runs for 1933 were unusually late in arriving because of the late break-up. The first king salmon were caught on June 14. The chum run started June 20. Catches were heavy in the lower river, but they were "the lightest in years" above Mountain Village, probably due to the low water in June and July. The September run was called fair. The large number of fish that were carried over from the previous winter also contributed to the small catch in 1933. 392 tons of chums were dried. 58/

Chum salmon began to arrive with the kings in 1934, but very few chums were fished until the downriver salteries, four of which were preparing fish for the Outside market that year in accordance with the new regulations, had closed. A second run of chums, which entered the river July 29, was exceptionally heavy at the mouth and as far upstream as Pilot Station. The Pilot Station to Tanana catch was the "lightest in years," except for a few camps. (This was attributed to the high water and driftwood that clogged the wheels.) Townsend saw a remarkable number of fish on the

57/ Alaska Fishery and Fur Seal Industries for 1932, p. 21.

58/ C. F. Townsend, 1933 Report. Record Group 22, Entry 269, Box 6-45250, U. S. Fish and Wildlife Records, National Archives. Alaska Fishery and Fur Seal Industries for 1933, p. 259.

racks from the mouth of the Tanana to the Kantishna, but few were caught between the Kantishna and Nenana. He speculated that the body of the run went up the Kantishna. 308 tons of chums were dried. 59/

"A good catch in most places" was made up the river from the mouth in 1935, although there was a scarcity at the mouth itself. The chum run started about June 18 and continued good through July 20. 349 tons of chums were dried. 60/

The first kings were caught at the mouth on May 30, 1936. It was a very light run and at no time from the peak of the run (June 16) until July 14 "were there any catches like former years during the same period." The chum and coho catches "were unusually large especially on the upper Yukon and Tanana Rivers." 40 tons of cohos were dried, but Townsend's assertion that the run of chums was large seems inaccurate given that only 324 tons of chums were dried--less than the year before. 61/

During 1937, water reached the highest stage ever

59/ Alaska Fishery and Fur Seal Industries in Alaska for 1934, p. 18.

C. F. Townsend, 1934 Report, National Archives. Townsend estimated that one-third of the wheels were out of commission, and he complained of those operating, "It is a well known fact that a native will not change his fish wheel site. . . whether it catches fish or not."

60/ Alaska Fisheries and Fur Seal Industries in Alaska for 1935, p. 13.

61/ C. F. Townsend, 1936 Report, National Archives. Alaska Fisheries and Fur Seal Industries in Ak. for 1936, pp. 290-291.

known at break-up to that time. Nearly every fish camp on the Yukon and Tanana Rivers for two hundred miles was washed away or broken up. The high water--the product of unusually heavy snow during the winter--continued through June and July and was a major cause of poor salmon catches at fish camps. Pilot Station, Bishop Mountain, and Ruby reported normal catches, however, possibly because the river was confined to one channel at these points. Kings and chums entered the river at the same time (June 11), but the catches for both were light (225 tons of dried chums), and Townsend predicted a shortage of fish for men and dogs in many places. 62/

The first kings were caught at the mouth on June 1 in 1938. The main run began June 5 and continued good through July 15. Chum salmon came at the same time as the kings. ". . . The runs of both species were unusually heavy. The heavy run and the good drying weather provided Natives on the lower river with plenty of fish for winter." On the upper Yukon, the catches "were not uniformly good. In some places the catches were above average and in others very poor." Very few fish were taken on the Tanana because of high water. A low figure of 213 tons of chums were dried in all. Townsend suggested that the fish took the main channel in some places and hence were not caught. 63/

62/ Alaska Fisheries and Fur Seal Industries in Alaska for 1937, pp. 89-98.

63/ Alaska Fishery and Fur Seal Industries in 1938, p. 103.

King salmon entered the river later in 1939 because the ice at the mouth did not go out until June 10. The first catch was made June 16, ten days later than in previous years. Chum salmon entered the river at the same time as the kings, with the run reaching its peak on July 9. No chums were caught after July 29. Silver salmon began to run August 10, but they did not appear in large numbers. ("This species often comes late in September, after most of the Natives have quit fishing," said the Bureau of Fisheries in their annual report). The catch along the Yukon was generally light; the catch on the Tanana was even poorer than in the previous year. 126 tons of chums were dried. They were described as lacking in oil, shriveling to less than a pound when dried. 64/

1940 was a good year. Most families had a good supply of dried fish on hand for the winter. The fish were smaller than in some years before, but the chum run from June 5 to July 10 was believed to be the heaviest in history. A large catch was made along the whole river. A second chum

64/ Alaska Fishery and Fur Seal Industries in 1939, p. 112.

In his report to the Commissioner of Fisheries for August, 1939, Townsend gives a good example of the impact of the wage economy on Native fishing. "Very few fish have been caught at Marshall. Most of the Natives were working on the [CCC] projects and not bothering to fish. Most of the camps between Marshall and Holy Cross were deserted, but the people at these places all had plenty of fish that were caught during July when the chums were running heavily. Most of the Natives at Holy Cross were working on the CCC projects also." Record Group 22, Entry 269, Box 6-45250, U.S. Fish and Wildlife Classified File, Semi-Monthly Report, Yukon 553.22, National Archives.

run came in mid-July and continued through the month.

"These fish were unusually large and fat." Cohos of average size and excellent quality started to run in mid-August, but there was fishing of them except for daily needs. Pink salmon were seen in the Apoon mouth. 682 tons of chums were dried. 65/

In 1941, "The run of kings," wrote Townsend, "was exceptionally good this season and the fish were in excellent condition, above average in size. The chum and silver runs were good but not as good as last season. The people who fished reported good catches, but many people from Kaltag, Nulato, Koyukuk, Galena, Ruby and Kokrines were attracted to construction work at Galena and Tanana air bases. "Those men are all receiving \$7.50 per day for brush cutting so consequently could not be bothered to fish," said Townsend. It was his opinion that the failure to fish would leave these people with a shortage of salmon in the winter. Traders were buying fish from Anvik, Holy Cross, and other lower river towns in case the shortage materialized. 256 tons of chums were dried. 66/

Calvin F. Townsend died during the winter of 1941-42. The vacant Inspector's position was not filled and

65/ Alaska Fishery and Fur Seal Industries in 1940, pp. 11-12.

66/ C. F. Townsend, Report for 1941. Record Group 22, Entry 269, Box 6-4525 U. S. Fish and Wildlife Service Records, National Archives. Alaska Fishery and Fur Seal Industries in 1941, pp. 10-11.

detailed annual reports on the condition of the Yukon River fishery were discontinued for the remainder of the Territorial period.

Commercial Fishing Activities, 1921-1932.

1921 was the Carlisle Packing Company's last year on the Yukon. At the end of that season, the cannery was towed to Bristol Bay. During that same season, a number of small operators who exported salmon operated at the mouth of the river. W. F. O'Conner pickled salmon and N. L. Holmgren and Jacobsgaard & Jorgenson made small salted packs.

Waechter Brothers had a mild curing and freezing operation. 67/

During the 1922 season, Waechter Brothers, located on Leslie Island outside the mouth and hence beyond the protective zone established after the 1921 season, carried on its operations as the year before, fishing in the shallow waters of the Bering Sea. Their season lasted a month, from June 10 to July 11. The catch was 16,825 kings (mild-cured or frozen to be sold in Seattle) and 2,787 chums (which were turned over to the local Natives.) Local people were provided gear so they could fish for the company. W. F. O'Conner of Andreasfky and Charles Homeier of Mountain Village put up 443 and 43 cases respectively for local use. 68/

67/ Alaska Fishery and Fur Seal Industries in 1921, p. 26.

68/ Alaska Fishery and Fur Seal Industries in 1922, pp. 57-58.

Two mild-cured outfits were at work on Leslie Island in 1923, Waechter and Kern and Colussi of Seattle. The two companies shipped out 287 tierces of mild-cured kings and 10 barrels of pickled chums. 900 chums and 478 kings were frozen for shipment to the states. 69/

Three firms--Waechter, Kern, and O'Connor & Sheppard--were located on Leslie Island in 1924. Their total pack was 565 tierces of mild-cured kings and 10 tierces and 125 barrels pickled. Some chums were also sent to the states. 70/

All commercial fishing for export was prohibited on the Yukon after December, 1924, and not resumed until 1932. Nonetheless, small commercial operations were carried on to supply local requirements and meet the demands from the interior and the Yukon Territory. Enough fish were put up at the mouth during the 1925 season, for example, to flood the Nome market. (Inspector Townsend became very agitated when he learned that it was likely this fish was shipped to Nome only so that it could be reshipped to Seattle.) In 1926, H. L. Holmgren of Old Hamilton, near the mouth, sold a few barrels of salt fish to the Northern Commercial Company, which in turn shipped them to Dawson and Mayo in the Yukon Territory. And, in that same year, Frank Kern, brought a pack to Fairbanks, where it was sold on the

69/ Alaska Fishery and Fur Seal Industries in 1923, p. 10:

70/ Alaska Fishery and Fur Seal Industries in 1924, pp. 112-113.

local market. 71/

The sale and trade of dried fish along the Yukon was an important part of the river economy that did not decline until the appearance of the airplane in the late twenties and early thirties. In 1918, Reverend Chapman estimated for the Bureau of Fisheries survey that 5,000 cohos and 80,000 chums were sold by the Anvik natives. Father Jette told the same kind of story at Tanana. "If there is a market for dried fish, they [Natives] will prepare more, for instance, where a local trader will buy it, or take it in payment for debts." According to Leo Keough, fish were routinely used for cash or credit with traders during the summers, but Inspector Townsend complained that too often the Natives caught a sufficient number of fish to meet their needs during the upcoming winter but sold them before the end of summer--leaving them to buy back the same fish on credit during the cold weather. Keough, who carried mail from Nenana to the Kuskokwim, estimates that it would take 12 or 14 tons--or maybe more--to feed the 100 dogs that Bill Burke used to carry mail. Keough also reports that he once freighted eight or nine tons of dried salmon to the Kuskokwim for sale. The "Dago Kid" (a Greek named Alexander Brown) boarded 200 dogs at Ruby during the summer in the

71/ C. F. Townsend, 1925 Report, Record Group 22, Entry 92, Box 48 U.S. Fish and Wildlife Records, National Archives, C. F. Townsend, 1926 Report.

late twenties and thirties, according to Keough, and put up a couple of tons of dry fish for his own dogs with several wheels. 72/

Correspondence between merchants in the late 1920's and 1930's indicates a lively trade in salmon for dog feed between Rampart, Tanana, Fort Yukon, and Fort Selkirk, Y.T. Traders, A. S. Crane and Julius Rahmstorf shipped tons of dried fish upriver as well as small amounts of salmon strips for human consumption. James Carroll of Fort Yukon and the firm of Schofield and Zimerlee of Fort Selkirk seem to have been regular buyers. 73/

Commercial Fishing, 1932-1941.

Regulations issued in December, 1931, effective the following season, permitted limited commercial fishing off the mouth of the Yukon. The Bureau of Fisheries reasoned that with the decline in the demand for dog food, the fishery could tolerate some commercial use, and the season was open for fifteen days. Frank Kern and Chris Lauredson put up about 80 tierces of mild-cured salmon for the stateside

72/ Yukon River Survey, Record Group 22, Entry 91, Item 12, Record of U. S. Fish and Wildlife Service, National Archives. Interview with Leo Keough, North Pole, Alaska, January 25, 1980.

73/ Correspondence in author's possession. Schofield to Crane, October 10, 1929; Carroll to Rahmstorf, July 30, 1927; Carroll to Crane, September 1, 1931. One of the most striking features of this correspondence is the complaints of the buyer, who were unhappy about the fish they received.

market. Kern employed "quite a few" Natives in his operation, said Townsend. 74/

Two unnamed operators (presumably Kern & Lauredson) were in business at the mouth in 1933. Their product for the Outside market was only 132 tierces of mild-cured kings and 72 barrels of pickled kings. 75/

In 1934, four outfits engaged in commercial fishing at the mouth, preparing 447 tierces of mild-cured and 134 barrels of pickled king salmon. A waterfront strike in Seattle prevented the delivery of tierces and salt, inhibiting the operation. During February, 1934, the U. S. House of Representatives held hearings on a bill by Delegate Anthony Dimond to allow Native fishermen and bona fide permanent resident Whites to take king salmon from the Yukon and Kuskokwim for commercial purposes. Testifying on behalf of the measure, Bureau of Fisheries Alaska Agent Ward T. Bower said, "Both these rivers are large enough to support at least a limited commercial fishery under regulations of the Secretary of Commerce and thus aid local inhabitants to improve their opportunities to earn a livelihood. Their opportunities at present are very limited along this line. It would not interfere with conservation needs, as at least some of the fish now not utilized might be disposed of

74/ Alaska Fishery and Fur Seal Industries in 1932, p. 21.

75/ Alaska Fishery and Fur Seal Industries in 1933, p. 259.

outside of the territory." Commercial fishing was legalized in the Yukon River as well as the Kuskokwim and the Kuskokwim Bay by the Congress after the Hearings and approved by the President on April 16, 1934. The Yukon quota was 100,000 king salmon, of which not more than 50,000 could be taken beyond the mouth. The provisions for Native and bona fide White residents were also included, but the changes seem to have had no immediate impact on fishing activity. 76/

Frank Kern and the Northern Commercial Company fished at the mouth in 1935 and the Akularak Mission fished about 30 miles upriver from the head of Sunshine Bay. Light catches were made and the production for export was only 131 tierces of mild-cured and 48 barrels of pickled king salmon. 77/

In 1936, the quota was halved for kings. The new quota--50,000 total, of which 25,000 must be from outside the river--remained in effect until 1953. Frank Kern, the Northern Commercial Company, and Chris Lauredson were near the mouth, and the St. Mary's Mission was at Sunshine Bay. Together, these outfits put up 242 tierces of mild-cured kings for Outside. Kern sold all of his equipment to the Northern Commercial Company at the end of the season. 78/

76/ Alaska Fishery and Fur Seal Industries in 1934, p. 18. Hearings before the Committee on Merchant Marine, Radio, and Fisheries, House of Representatives, February 21, 1934.

77/ Alaska Fishery and Fur Seal Industries in 1935, p. 13.

78/ Alaska Fishery and Fur Seal Industries in 1936, p. 290.

Only the Northern Commercial Company and St. Mary's Mission salted salmon for the Outside market in 1937. The N. C. fish came from gill nets outside the river, the Mission catch from wheels inside the river. 126 tierces of mild-cured kings and some cases of canned salmon were produced. 79/

Chris Lauredson entered the fishery with the other two operators from the previous year in 1938. 198 tierces of mild-cured kings were the output. 80/

The same three outfits were in business near the mouth in 1939. Their total output was 166 tierces of mild-cured kings. The U. S. Bureau of Fisheries noted in its annual report, "Only natives are employed in this district and the industry, although on a very small scale, means a great deal to them, as it gives them an opportunity to earn a little money with which to buy necessities which they would not otherwise have." During the first part of the fishing season, a boat came in and from Nome and purchased 200 fresh kings at fifty cents each for sale in that city. 81/

Commercial fishing was conducted on what the Bureau Report called "a very small scale" in 1940, although

79/ Alaska Fishery and Fur Seal Industries in 1937, p. 88.
80/ Alaska Fishery and Fur Seal Industries in 1938, p. 102.
81/ Alaska Fishery and Fur Seal Industries in 1939, p. 112.

the output was a little bigger than the year before. The N. C. Company, St. Mary's Mission, and Lauredson prepared 229 tierces of mild-cured kings for export. The Bering Sea Trading Company operated a hand cannery aboard a barge, and a small number of pickled salmon were shipped to Seattle by a trader at Kwiguk. 82/

In 1941, commercial fishing remained on the same scale as in the past. The N. C. Company and Chris Lauredson operated outside the mouth. The N. C. also operated inside the mouth, with the Bering Sea Trading Co. and the St. Mary's Mission. The total commercial pack was 3,094 cases of kings in one pound cans, 229 tierces of mild-cured, 4,350 pounds of pickled king salmon bellies, and 6,000 pounds of dry-salted king salmon sides. Lauredson said that while fishing was his only source of income he could make a good living. Inspector Townsend said, "Everyone connected with the fishing industry reported a good season this year," and at the end of his report, Townsend made his recommendations for the following year--his final recommendations as he did not return in 1942. They are important because they illustrate what a man of more than twenty years of experience on the Yukon saw as the nature of the fishery, the needs of the people, and the best policy for the future.

82/ Alaska Fishery and Fur Seal Industries in 1940, p. 11.

The information for 1944-1952 is negligible. A brief serial survey of the Yukon was made in 1948, revealing the run of kings was "light." In 1950, another serial survey was made. Local residents reported that the run of kings was normal and cohos were in abundance during August. 86/

George Warner was assigned to a permanent management position for the Arctic-Yukon-Kuskokwim area (which lasted only two years) in 1953 and provided the first comprehensive report of the fishery since 1941. Warner said that the people in the villages throughout the Yukon region were living in a primitive economy. Fish was still the principal item of food in every outlying village, as it had been before the war. But Warner observed some important changes in the fishery.

It is interesting to compare the amount of gear used now in the personal use and dog food fisheries with years ago. The number and location of fish wheels were plotted several times this summer on the Yukon and Tanana Rivers. A total of 111 fish wheels were found between Fairbanks and the Kwiguk slough. . . The average number found by C.F. Townsend for the years 1929 to 1941 was 212 for the same area. . . . The average number of small salmon . . . those other than kings . . . dried annually in this area was 511,000 fish for the period 1929-1941. My estimate for 1953, based on personal observations and estimates made by individuals in most every area is 380,000 fish. 87/

Warner, like others before him, noted that air travel had

86/ Alaska Fishery and Fur-Seal Industries for 1948, p. 27. Alaska Fishery and Fur Seal Industries for 1950, p. 21.

87/ George Warner, 1953 Annual Report Kotzebue-Yukon-Kuskokwim, p. 18.

reduced the need for a large number of dogs, but he also pointed out that trapping had declined because of lower fur prices--which had an impact on the number of dogs kept too. 88/

In 1954, Warner found that subsistence fishing had increased somewhat over what he had seen in 1953. Thirty more wheels were in operation. "Natives of the Yukon had a very good fishing season and plenty of salmon was dried or smoked for winter use. . .". Warner wrote. 89/

In 1955, coverage of the Yukon was limited and the reports are contradictory. Lawrence Knapp, writing in 1958, said the subsistence catches were about average for the year; the State researchers, writing in 1965, said the runs and subsistence catches were good. The Branch of River Basins, U. S. Fish and Wildlife Service, made a survey of the Upper Yukon River Basin above Carmacks, Y.T. "The residents of that area said the run was poor and late in arriving. No extensive count was made." 90/

The Branch of River Basins made a similar survey of the upper river, from Eagle to Carmacks, in 1956. Fishing was at a low level, with only 144 people and 120 dogs

88/ Warner, p. 18.

89/ George Warner, 1954 Annual Report Kotzebue-Yukon-Kuskokwim, p. 3.

90/ Lawrence Knapp, History of Regulations and Pack on Yukon: Personal Use and Rundown of Salmon Runs (1958), p. 18. Pennoyer-Middleton-Morris, p. 31.

dependent or partially dependent on salmon. There were nine fish wheels and 25 gill nets in the area, with a catch of roughly 11,500 king and chum salmon. A Fish and Wildlife partial survey of subsistence fishing on the rest of the river confirmed Warner's observations about changes in subsistence fishing activities since Townsend's time but noted that the amount of gill nets in the Lower District (below the mouth of the Anuk River) showed an increase over previous years. Gordon Watson, Fish and Wildlife Administrator from Anchorage, also was on the Yukon in 1956 and issued a brief report on the fishery's condition. Watson learned from various people along the river that 1956 was a good year. At Kwiguk, for example, a smoke house with a capacity of 20,000 chums had been built and by July 29, 14,000 fish had been taken. 91/

Watson returned to the river in 1957. Most of his report is confined to the commercial fishery, but he did make the "tentative conclusion" that the salmon fisheries in the Yukon-Kuskokwim-Kotzebue district had been and were in decline, although the Yukon was probably declining at a lower rate than the other rivers. River Basin personnel back on the river surveyed the subsistence fishery from

91/ U. S. Fish and Wildlife Service, Progress Report No. III, 1956 Field Investigations, Fishery Resources of the Upper Yukon Basin between Eagle, Alaska and Carmacks, Yukon Territory, U. S. Fish and Wildlife Service, Progress Report No. II, General Information Relative to the Fish and Wildlife Resources of the Yukon River Basin. Gordon Watson, "Annual Report--Yukon District, 1956."

Anvik to Marshall. They observed that the location of wheels has an influence on the number of fish caught and Natives would not change the location of their wheels--just as Townsend had complained many years before.

Although annual fluctuations in the number of chums taken for personal use is dependent in part upon the numbers of fish in the river, many other factors influence the catch. One of the more important seems to be the Natives' reluctance to relocate their wheels from year to year. They fish the same site even though the current patterns and water levels vary. Although such water currents and levels certainly influence the travel routes of the salmon within the river, the 'ancestral' location is fished. It is common to see a fish wheel making excellent catches, yet wheels 300 feet above or below the successful fish wheel may be taking only a few fish. 92/

It was further noted that employment patterns have an impact on fishing. "In many years, no summer employment is available and the fishing effort is intensive. In 1957, a large number of men worked on forest fire suppression throughout most of the summer; and, as a result, several wheels were not installed." 93/

In 1958, Lawrence Knapp of the Bureau of Commercial Fisheries, U.S. Fish and Wildlife Service, made a study of the fishery and outlined its history as well. Knapp said there were 161 families living in fish camps along the main

92/ Gordon Watson, "Annual Report--Yukon District, 1957," p. 3. U.S. Fish and Wildlife Service, Progress Report No. V. Fish and Wildlife Resources of the Yukon River Basin (Anvik to Marshall), p. 39.

93/ Progress Report No. V, p. 39.

stem of the river. In July and August, they operated 82 wheels and 73 gill nets, taking 179,654 chums, 8,856 kings, 3,235 cohos and a negligible amount of the other two species. It was the consensus of those along the river that there had been a gradual decline in the chum catches (as Warner said in 1953). The greater part of the fishermen believed that the 1958 catch was between poor and average. Knapp estimated that the catch would not equal half the need. 94/

It was clear to Knapp that there had been an increase in job opportunities, such as fire fighting and road construction or work with the C.A.A. and Air Force, as well as an increase in welfare and other forms of relief payments, yet

Dependency on salmon as a source of food appears to be at a very high level throughout the main stem of the Yukon . . . and especially so at the mouth of the river where the Eskimos retain most of their old customs. All the non-fishing natives who were interviewed stated that they would much prefer to live on salmon than on white man's food. They all said they still eat a great deal of salmon and other fish during the winter months. 95/

Knapp returned to the river in 1959. Residents near the mouth said that the king run was one of the largest in history. "Good catches of king salmon were realized in all camps along the Yukon where concerted effort was usually put forth to capture them." Complaints about a poor run

94/ Lawrence Knapp, "Annual Report, Arctic Area, 1958."

95/ Lawrence Knapp, History of Regulations and Pack on Yukon: Personal Use and Rundown on Salmon Runs.

only came from those camps where little fishing effort was made. The chum run was good too, and the subsistence catch was estimated at twice that of 1958. 96/

Commercial Fishing, 1942-1959:

Five small plants were in operation during 1942, as in 1941. The pack consisted of 3,691 cases of kings, plus 184 tierces (151,000 pounds of mild-cured kings and small amounts of pickled and dry-salted king salmon. 97/

Three small scale operators were in business in 1943, taking mostly king salmon. The Bering Trading Company at Alakanuk and the Northern Commercial Company at Kwiguk had small canneries, and the N.C. did a very limited amount of mild-curing. The Weisner Trading Company of Rampart prepared fresh king salmon for local use: this is the first year Weisner is mentioned in the records. The total pack was 5,640 cases of kings and 158,190 pounds of mild-cured kings. 98/

No records are available for 1944-1946.

In 1947, four small companies produced 9,704 cases of kings. 99/

Only two operators were in business in 1948, taking kings to render 5,852 cases. A little over one hundred tierces of mild-cured kings were put up. 100/

96/ Pennoyer-Middleton-Morris.

97/ Alaska Fishery and Fur-Seal Industries for 1942, p. 9.

98/ Lawrence Knapp, History of Regulations and Pack on Yukon: Personal Use and Rundown on Salmon Runs.

99/ Knapp.

100/ Knapp.

In 1949, two operators put up 8,849 cases of kings and the Northern Commercial Company packed 104 tierces of kings. 101/

In 1950, 9,865 cases of kings and several hundred tierces of mild-cured were packed. Additionally, Weisner cured 2,152 pounds of salmon. 102/

The Bering Trading Company and the N.C. Company put up 10,367 cases in 1951. Weisner experimented with canned kings, packing 109 cases. About 270 tierces of kings were mild-cured. 103/

The same three packers put up 8,072 cases in 1952, of which Weisner had only 43. About 85,000 pounds of kings were mild-cured. Bertel Johnson, Fishery Management Agent for the Bristol Bay District, noted in his annual report that increasing interest was being shown in the further development of the commercial fishery. 104/

St. Mary's Mission joined the other canners in 1953. The four produced 12,458 cases of kings, of which St. Mary's had only 205 cases and Weisner 86. 61,907 kings were mild-cured. Dominic Vernetti, a trader at Koyukuk since 1924, had a small wholesale business that smoked 800 pounds of kings and obtained 55,000 chums for dog feed. The N. C. Company froze 1,778 kings and 8,966 chums at Fort Yukon and

101/ Knapp.

102/ Knapp.

103/ Knapp.

104/ Knapp. Bertel Johnson, "Annual Report Bristol Bay District, 1952."

Frontier Airways purchased 3,000 pounds of dressed king salmon and sold them in Fairbanks. 105/

Regulations establishing sub-districts for commercial fishing were set in 1954 to better regulate the Yukon fishery. 50,000 kings could be taken below the mouth of the Anuk River, 10,000 between the mouths of the Anuk and Anvik Rivers, and 5,000 above the mouth of the Anvik River. 37,678 kings or 10,779 cases were packed that year. 20,028 kings were mild-cured. St. Mary's Mission put up 235 cases and Weisner put up 130. Verneti purchase 23 tons of fish from the Holy Cross area. 106/

In 1955, 42,934 kings were canned and 15,750 were salted. 107/

Gordon Watson's 1956 Yukon report provides much better information about commercial fishing in the 1950's than other sources available for the decade. Watson reported that in the lower sub-district, with a 50,000 king quota, four operators packed 10,674 cases, 111 half tierces, and 145 1/2 full tierces. A total of 52,129 fish (a bit over the limit) were taken in all. The middle sub-district (10,000 fish quota) processed 10,479 fish into 2,159 cases and 118 half tierces. Two operators on the upper subdistrict (5,000 fish quota) took 17,061 pounds of kings. About 9,500 pounds of fish were sold fresh and 110 cases were processed. Watson said that law enforcement activities were relatively

105/ Knapp. Warner, 1953.

106/ Knapp, Warner, 1954.

107/ Knapp.

easy on the Yukon, and he expressed that the Yukon (as well as other rivers in the Yukon-Kuskokwim-Kotzebue District) should remain closed to the taking of all salmon, except kings, for the protection of the residents.

This recommendation is made for two reasons. First, the dependency of the Eskimos and Indians upon the dogs, cohos, and pinks and reds as their staple food supply and basis of economy, and second, we have no firm biological knowledge of fish usage within the Yukon District which would indicate any reason why these fish should or should not be taken commercially. Until such knowledge is obtained, I feel our responsibilities should be extended toward the residents and their personal use requirements. 108/

In 1957, the daily catch was more stable and consistent, Watson reported, though extremely high waters and large amounts of driftwood made for erratic catches in some areas. 63,623 king salmon were taken in all. On the upper river, Ira Weisner of Rampart had six wheels fishing for him and caught about 1,030 fish, of which about 300 were sold fresh in Fairbanks and the rest packed into 167 cases. The N. C. Company at Fort Yukon purchased about 7,500 fish for freezing and sale, with ten to twelve fish wheels fishing for them. Unlike 1956, this year Watson was worried about illegal activities.

During recent investigations by the Branch of River Basin Studies it has become apparent that illegalities of the commercial fishing laws are taking place all along the Yukon River over nearly its entire length in Alaska. We know that in many

108/ Gordon Watson, "Annual Report--Yukon District, 1956."

villages a commercial operation is being carried on for king~~s~~ completely outside the seasonal quota and registration requirements of the regulations. These operations are in the form of smoked, salted and frozen fish and in the aggregate would probably constitute a considerable number of king salmon which should be included in the quota. These practices have been going on for many years and in many cases provide the base economy for many individuals. It is extremely difficult to drop into a village and inform the 'operators' that they must register and adhere to the seasonal quota due to the nature of the districts and of the Yukon. . . Some consideration should be given to the establishment of sub-districts or additional districts in the Yukon to either legalize or curtail what is currently taking place and prevent excessive additional effort or at least determine what the total commercial take is along the Yukon River. 109/

In 1958, Knapp reported 5 small canneries and 6 small salteries in operation. Together, they took 63,259 fish (12,452 cases and 203 tierces). Approximately 550 king salmon were purchased in Rampart and sold fresh in Fairbanks. Dominic Verneti of Koyukuk purchase 31,732 chums (a little over 19 tons). Knapp commented, "Mr. Vernetie (sic) sells these salmon back to the fishermen at a period later in the winter when their stocks are running low. The bartering process helps to keep the natives in clothing, white man food, and luxuries, such as pop, alcoholic beverages and candy. Vernetie (sic) also has a market in Fairbanks and other smaller towns for these particular salmon." Terrence Wharton, an Anvik trader, purchased seven tons of dried chums from local Natives, some to be sold later locally but

109/ Gordon Watson, "Annual Report--Yukon District, 1957."

the greater part "destined to be sold in Fairbanks for sled dog feed." 110/

A Brief Note on Regulations 111/

State researchers Pennoyer, Middleton, and Morris are correct when they say, "The history of regulation on the Yukon and Kuskokwim has been one of trying to protect the large Eskimo and Indian subsistence fisheries in these rivers." This has usually been done through the restriction of commercial fishing. Nothing we know as modern management was done before 1953 when a U.S. Fish and Wildlife biologist was assigned to the Yukon part-time, but the history of regulation dates to the Carlisle controversy and is as follows:

1919: The pack of canned salmon was limited to 30,000 cases a year in the Yukon river, including the waters of the delta to and including the area 500 yards outside each mouth or slough of the delta at mean high tide. The pack was further limited to 1,000 barrels of pickled and 200 tierces of mild-cured. Commercial fishing was prohibited above the mouth of Clear River, 114 miles above the mouth of the Yukon.

1921: Fishing inside the Yukon for export was

110/ Lawrence Knapp, "1958 Annual Report, Arctic Area."
111/ Based on Steven Pennoyer, Kenneth Middleton & Melvan Morris, "Arctic-Yukon-Kuskokwim Area Salmon Fishery History," Informational Leaflet #70, Alaska Department of Fish and Game (Juneau, 1965).

prohibited. (The phrase "for export" is tricky as salmon continued to be sold in Canada without any apparent interference by authorities.)

1924: All commercial fishing was prohibited at all times in the Yukon area (all territorial, coastal and tributary waters of Alaska from 61 degrees N. Latitude to 64 degrees No. Latitude.)

1931: Limited commercial fishing off the Yukon mouth was approved. Yukon District fishing was allowed from June 15 through June 30. No more than 50,000 king salmon could be taken from the Yukon.

1934: Commercial fishing was legalized on the Yukon. The Yukon quota was boosted to 100,000 king salmon, of which not more than 50,000 kings could be taken outside the mouth. Fish wheels were made legal commercial gear for Natives and permanent White residents.

1936: The quota was reduced to 50,000 king salmon. Not more than 25,000 could be taken inside the mouth. The season was extended to permit fishing from 6a.m. June 1 through 6p.m. July 31.

1940: Control of the fishery passed from the Department of Commerce, Bureau of Fisheries to the Department of Interior, Fish and Wildlife Service.

1954: A weekend closure was imposed on subsistence fishing in the Yukon District from 6p.m. Saturday to 6a.m. Monday (except after 48 hours following the closure of

commercial fishing in any sub-district.) Three sub-districts were created, with quotas, as follows: Anuk River to the mouth, 50,000 king salmon: Anvik River to the mouth of the Anuk River, 10,000 king salmon: above the mouth of the Anvik River 5,000 king salmon.

THE TRANSBOUNDARY RIVER QUESTION

By: Beth Kerttula
Douglas Pope

Appendix C

THE TRANSBOUNDARY RIVER QUESTION

By Beth Kerttula - Douglas Pope

The fact that the Yukon is an international river creates a potential for significant impact on the fishery when and if negotiations are concluded that contain agreements respecting allocation of salmon stocks between the nations of Canada and the United States. 1/ Research in

1/ This memorandum primarily focuses on potential effects of the status of the Yukon as a transboundary international river. Its focus is based on the premise that an international allocation agreement regarding salmon stocks of the Yukon River between Canada and the United States is potentially the most significant event that could effect the long range economic and biological status of the river fishery in Alaska. It is not the intent of this memorandum to disregard other significant international questions regarding the stocks that are subject to commercial harvest in the Yukon River.

In recent years the decline of the Yukon River king salmon is believed to be partially attributed to the Japanese high seas fishery. The high seas king salmon catches have averaged 284,000 fish annually during the period 1966 to 1976. A record 554,000 kings were taken in this fishery in 1969. In some years the Japanese catch has exceeded the total Western Alaska catch (subsistence and commercial). Based on tagging and analysis studies by the Department of Fish and Game it is estimated that in excess of 80% of the Alaskan king salmon catches are bound for the Yukon, Kuskokwim and Bristol Bay drainages. The I.N.P.F.C. Treaty has been recently negotiated to afford increased protection for western Alaska salmon stocks. Improved Yukon River king salmon returns beginning in 1980 can be expected as a result of the reduced high seas interceptions. The single remaining issue with regard to high seas catches of Chinook salmon bound for the Yukon River involves an incidental trawl catch. That catch appears to be increasing, while the estimated interceptions and Japanese catch itself are declining. Further policy decisions increasing the protection over the incidental trawl catch and maintaining the current rate of decline of the harvest and other interceptions will likely result in significant increases in chinook salmon moving into the Yukon River in the future.

this area has revealed a lack of knowledge about this international situation at most levels of state government other than Department of Fish and Game. For example, it appears that Yukon River king salmon migrate beyond the 200 mile economic zone established by the Fishery Conservation and Management Act of 1966 (16 U.S.C. §1801 seq.). The FCMA extends sovereignty over anadromous species beyond the economic zone, subject to certain limitations. However, when staff to the North Pacific Management Council was contacted regarding the issues and/or negotiations with regard to the Yukon River as an international river we encountered a general lack of knowledge. In contrast, the Department of Commercial Fisheries who has closely monitored developments with regard to international rivers.

This discussion of transboundary-international river questions which may affect the Yukon fishery in the future will include the international perspective of the river as well as a discussion of international policy which is applicable to the Yukon. All persons with a knowledge of the international issues agree that the changes in government in Canada will likely result in the deferral of any negotiations to date and could quite possibly result in a change in the negotiation posture of the Canadians. For this reason predictable effects of any allocation agreements on the Yukon River fishery must be based upon the positions of the Canadian government prior to the recent changes in administration, and should be reviewed with that

disclaimer in mind.

INTERNATIONAL PERSPECTIVE OF THE YUKON RIVER

It seems appropriate to include the current international perspective of the Yukon rather than to rely upon our understanding and knowledge. For this reason the summary of the "Report of the U.S./Canada Ad Hoc Technical Committee on Rivers of Joint Concern" is included:

The Yukon River originates in British Columbia within 30 miles of the Gulf of Alaska and flows 2,300 miles through Yukon Territory and Alaska before emptying into the Bering Sea, draining an area of approximately 330,000 square miles. All five species of Pacific salmon spawn in the Yukon, but Pink and Cohoe Salmon are uncommon and Sockeye Salmon are extremely rare. Only Chum and Chinook are abundant in Canada with Cohoe spawning in very small numbers. Chum salmon, the most abundant salmon species, occur in distinct summer and fall stocks. Only the fall stock penetrates into Canada in significant numbers.

Commercial and subsistence fisheries operate along the Yukon River in both Alaska and the Yukon Territory. In both areas the fisheries are carried out by means of gill nets and fish wheels. The bulk of the commercial catch in Alaska is taken in the lower 300 miles of the Yukon River although the fishery takes place along 1,400 miles of river. The commercial fishery in Alaska is restricted by law to outlets and the mainstem of the Yukon River and to one of its tributaries, the Tanana River. Fishing effort in the Alaskan commercial fishery has increased sharply since 1961. The number of fishing vessels has doubled since 1965. Fishing effort in the Alaskan subsistence fishery declined during the 1960's as the need for Chum salmon as dog food declined following replacement of dog teams by snowmobiles. After 1972, fishing effort increased again when subsistence fishermen were permitted to sell salmon roe but it is expected to decline following a ban on sale of salmon roe from the subsistence fishery in 1978. In the Yukon Territory the fisheries take place mainly along the mainstem of the Yukon River and the Porcupine River in the

vicinity of Old Crow. Annually in the Territory about 35 licenses are issued to commercial fishermen, about 35 licenses are issued to non-Indians to take salmon for domestic use, and permits are issued to Indian bands for their members to take salmon for their personal use.

Chum:

As indicated earlier, two distinct runs of Chum salmon, the summer and fall runs, occur in the Yukon River. The summer chum salmon run enters the river in June and early July while the fall run enters from mid-July through September. The commercial catch of summer chum in Alaska has increased from 11,000 in 1967 to 720,000 in 1975 and 600,000 in 1976. Recent estimates of the total return of summer chum have ranged from 1.6 million in 1971 to more than 5 million in 1975. The commercial catch of fall chum in Alaska also has increased dramatically from an average of 40,000 fish in the early 1960's to more than 200,000 in the present decade. Fall chums make up the most of the chum catch in the Alaska subsistence catch along the Yukon River. The catches of chums in this fishery have declined from 330,000 annually in the 1960's to a low of 130,000 in 1972 but have increased since to about 200,000 annually. During the period of 1967 to 1976 the chum catch in the Yukon Territory, which consist almost entirely of fall chums, average about 2,200 fish in the domestic and Indian food fishery. The total returns of fall chums have fluctuated sharply. For example, escapements of fall chums to the Fishing Branch River, a Canadian tributary to the Porcupine River, have varied from about 500,000 in 1974 to 13,000 in 1976. Major spawning areas for fall chum on the U.S. side are in the Tanana and Chandalar Rivers with some spawning in other Yukon River tributaries. Recent estimates of the total returns of fall chums to the Yukon River have ranged from a high of 970,000 in 1975 to a low 230,000 in 1976.

Chinook:

Commercial fisheries for Yukon River chinook date back to 1918 in the United States and to 1898 in Canada. The United States catch has increased from an average of less than 30,000 fish for 1955 to about 65,000 in the late 1950's to about 100,000

in the 1960's with a peak of 130,000 in 1967. In 1976 the commercial catch in Alaska was 89,000 chinook, close to the average catch since 1970. Subsistence catches of Yukon River chinooks in Alaska have fluctuated between 11,000 and 25,000 since 1961. During the period 1967 to 1976 the Canadian catch of Yukon River chinook have averaged 2,400 fish in the commercial fishery and 2,400 in the domestic and Indian food fisheries.

Marked recovery studies carried out by United States scientists indicated an average return of about 200,000 Yukon River chinooks annually in the years 1969 to 1971. Id. pp. 9-11. 2/

INTERNATIONAL FISHERIES POLICY APPLICABLE TO THE
INTERNATIONAL STATUS OF THE YUKON

A. BACKGROUND.

The primary concepts that have affected and guided the development of international fisheries policy are "abstention", "economic zones" and a blending of the two.

1. Abstention. With respect to anadromous

2/ The distinguishing feature of this summary is the lack of relevant data that should be included. For example, representatives of the Alaska Department of Fish and Game have undertaken the responsibility of monitoring escapement in several drainages within the Yukon Territory, most notably the Fishing Branch tributary of the Forcupine River. That information is most definitely relevant to the American position that abstention as a concept with regard to this transboundary river is not appropriate. The application of policy of abstention to guide any negotiations presupposes that Canada is taking sole responsibility for the biologic management of the anadromous fish which spawn within its jurisdiction. The presupposition is clearly negated, in part, by the presence of the representatives of the Alaska Department of Fish and Game in Canada to monitor adequate escapement.

species, the bases for abstention developed from concern of the state of origin which had virtual sole responsibility for the continued existence of the anadromous stocks. 3/ The most concise statement of the principle of abstention is that the nation which provided the research and regulation necessary to maintain a high level of productivity in coastal or anadromous fisheries should be entitled to the full utilization of those resources. Other nations are therefore entitled to participate in fisheries only when the coastal states managing the stock are unable to utilize it to its maximum sustained use. 4/

3/ This sole responsibility, of course, is manifested in the form of regulation restricting the catch by citizens of the state of origin, enhancement policies, and other major efforts to ensure continuation of the runs.

4/ In 1958, Canada and the United States proposed the following to the Geneva Law of the Sea Conference:

"Where the nationals of a coastal state, alone or with the nationals of one or more other states, are (a) fishing a stock of fish in an area of the high seas adjacent to the territorial sea of the coastal state of such intensity that an increase in fishing effort will not result in a substantial increase in the yield which can be maintained year after year, and (b) where the maintenance of the current yield, or when possible, the further development of it is dependent upon a conservation program carried out by those states, involving research and limitations upon the size and quantity of the fish which may be caught, then (c) states whose nationals are not fishing the stock regularly which have not theretofore done so within a reasonable period of time, shall abstain from fishing such stock, provided however that this shall not apply to any coastal state with respect to fishing any stock in water adjacent to its territorial sea."

The exemption for coastal states fishing stocks in "waters adjacent to its territorial sea" is not a pure abstention concept, but developed more from the concepts of economic zones. The convention did not accept the proposal forwarded by Canada and the United States.

The opponents to the principle of abstention have primarily been Japan and Denmark, whom advanced the principle of free trade in contrast. The Japanese opposition has focused against the United States in the North Pacific, while the Denmark opposition has been primarily focused against Canada in the North Atlantic. For the purposes of this discussion the only significance of the Japanese position lies in that country's objections to the International North Pacific Fisheries Convention signed by Japan, Canada and United States in 1953. Much of the control theory of that treaty is based upon the principle of abstention, and it set the now historic abstention line at 175° West longitude. Despite being a signatory to the treaty that was developed from the 1953 convention the Japanese have consistently opposed the position of abstention, and bases its opposition as much upon what they perceive to be a weakened negotiating position at the time of the convention as much as their advocacy of a basic doctrine of freedom of the seas. See, Parker, International Fisheries Regimes of the North Pacific, Alaska Sea Grant Report No. 73-13, p. 27. It is clear that the abstention line did not protect King Salmon stocks spawning in Alaska from overharvest on the high seas. The economic zones of the Fisheries Conservation and Management Act of 1976 do not adequately protect the Yukon king salmon but more recent agreements have relieved much of the pressure. see. n. 1. Although the FCMA claims sovereignty over an

anadromous species throughout the migratory range of each such species beyond the economic zone, it is apparent that the Japanese will resist the application of abstention to King salmon on the high seas in any further treaty negotiations.

Canada's experience in urging sovereignty not only over the maintenance and productivity of anadromous fish but also to the economic benefit of the harvest are discussed in detail in Fairley, Fisheries Jurisdiction and the Atlantic Salmon: Fact and Law from a Canadian Point of View, 3 Dalhousie Law Journal, 69 (1976) and Johnston, Legal and Diplomatic Developments In the Northwest Atlantic Fisheries, 5 Dalhousie Law Journal 37 (1978). This experience was dramatic after the high seas concentrations of the Atlantic salmon were pinpointed in the early 1960's. Denmark initiated heavy fishing in those concentrations which resulted in virtual annihilation of the species within 10 years. During this time Canada forcefully pursued an agreement regarding the Atlantic salmon based upon the principle of abstention in the International Commission for the North West Atlantic Fisheries. Canadian experience in the ICNAF revealed consistent frustration in their efforts to protect the Atlantic salmon. The frustration generated a growing militancy within Canada to impose economic sanctions upon the Danes, and, in fact, the Danes did not retreat to more reasonable positions until economic sanctions were imposed

by Congress.

2. Economic Zone. With regard to fisheries, economic zones are exclusive fisheries areas claimed by states asserting a primary economic interest and defined by standards which may either be arbitrary or related to historic concepts. Economic zones are primarily contiguous to geographic and territorial boundaries. 5/ Although through the Fishery Conservation and Management Act of 1976 the United States was the first major power to declare unilaterally a 200 miles exclusive fisheries zone, economic zones have been a part of world history for centuries. Recent examples are the Bartlett Act (16 U.C.S. §§ 1081-86, repealed by FCMA), the Contiguous Fisheries Zone Act (16 U.C.S. §§ 1091-94, repealed by FCMA) and the Truman Proclamation. The Proclamation established a policy of economic zones contiguous to the United States:

5/ For example, at the 1958 Geneva Convention on the Territorial Sea in the Contiguous Zone, to which the United States and Japan are signatories, Art. 24 provides in relevant part:

1. In a zone of the high seas contiguous to its territorial sea, the coastal state may exercise the control necessary to:

- (a) Prevent infringement of its customs, fiscal, immigrations, or sanitary regulation within its territorial or territorial sea.

In view of the pressing need for conservation and protection of fisheries resources, the government of the United States regards as proper to establish conservation zones in those areas of the high seas contiguous to the coast of the United States wherein fishing activities have been or in the future may be developed and maintained on a substantial scale. For such activities have been or shall hereafter be developed and maintained by its nationals alone, the United States regards it as proper to establish explicitly bounded conservation zones in which fishing activities shall be subject to the regulation and control of the United States. Such activities then or shall hereafter be legitimately developed and maintained jointly by nationals of the United States and such other states; and all fishing activities in such zones shall be subject to regulation and control as provided in such agreement. The right of any state to establish conservation zones of its shores in accordance with the above principles is conceded, provided that corresponding recognition is given to any fishing interests the nationals of the United States which may exist in such areas.

3. Blending of the Concepts. Nations are apparently finding it advantageous to blend the concepts of economic zones with the concept of abstention. The Fishery Conservation and Management Act of 1976 stated the primary purpose of the Act:

To take immediate action to conserve and manage the fishery resources found off the coast of the United States, and the anadromous species and Continental shelf fishery resources of the United States, by establishing (a) a fishery conservation zone within which the United States will assume exclusive fishing management, authority over all fish, except highly migratory species, and (b) exclusive fishery management authority beyond such zone over such anadromous species and continental shelf fishery resources. Act, §(b)(1).

In 1937 the agreement produced by the Frazier River Convention for the protection of sockeye salmon was ratified. The agreement established the International

Northern Pacific Salmon Fisheries Commission with regulatory powers and a budget shared equally by both countries. The salmon run had been depleted drastically due to overfishing and also due to a rock slide in 1915 blocking upstream migration. The commission sponsored the construction of the world's largest fish ladder at Hell's Gate and this, together with the regulation of fishing methods and population management, has substantially restored the run. The agreement which is still operative provided for an equal division of the total catch between Canada and the United States. This is a division which the Canadians apparently feel is no longer equitable.

The Frazier River is an exclusively Canadian river. It empties into the Canadian territorial sea. The agreement is an example of reciprocal fishing privileges agreements, which are playing a larger diplomatic role with regard to fisheries policy between Canada and the United States. The essence of these agreements are recognitions of both nations that the state owning or controlling the spawning rivers system has a primary right to anadromous fish stocks from those rivers. Historic fishing rights suffer a considerable loss of statute in these agreements, but the very presence of an allocation of the catch reflects a continuing recognition of historic fishing interests of one state in the economic zone of another state.

B. THE YUKON AS A TRANSBOUNDARY RIVER.

In 1871 the United States and Great Britain ratified the Treaty of Washington which included a certain article pertinent to the Yukon.

The navigation of the rivers Yukon, Porcupine, and Stikine, ascending and descending, from, to, and into the sea, shall forever remain free and open for the purposes of commerce to the subject of her Britanic Majesty, and to the citizens of the United States, subject to any laws, and regulations of either country within its own territory, not inconsistent with such privilege of free navigation.

The language "purposes of commerce" are arguably disputable, however, the treaty modifies the term commerce by the referral to "such privilege of free navigation." This article of the treaty is still effective, and notwithstanding the problem of interpretation of the article, it does reflect an early recognition of the importance of commerce and navigation of the international rivers beginning in Canada and flowing through Alaska.

With regard to those three rivers, the positions of both countries to date reflect an understanding that negotiations will result in allocation formulas for the fisheries of each country. An early draft of a United States Commission statement on transboundary salmon stocks focuses on establishing principals for the allocation of the various stocks to each country.

Using these principals, as the acquisition of appropriate knowledge permits, application formulas for the fisheries of each country will be jointly developed for the designation of stocks. Draft U.S. position statement on transboundary salmon stocks, September 3, 1976.

Currently negotiations have progressed to the point of delineating the points of view for a U.S. - Canada salmon interception treaty. The relevant portions of the proposed language of each country are discussed herein.

The treaty envisions the creation of a commission, perhaps similar in form to the Frazier River Commission. The basic position of the United States is hinged upon their interest in establishing allocation agreements through an ad hoc process and giving the proposed commission advisory powers only. Additionally, the United States is urging that each party recognize the other state's right "to maintain long standing traditional fisheries."

The Canadian position is more specific.

If Canada initiates or extends a fishery in its own portion of a transboundary river in order to harvest either existing salmon production in that portion of the river or salmon production generated by future development projects undertaken by Canada, the United States shall adjust its fisheries to the extent necessary to allow Canada to harvest such production without affecting escapement levels set pursuant to this agreement.

With regard to the United States actions, the Canadians take a position that "if the United States develops or enhances a stock originating in its portion of a transboundary river, and the harvesting of the increased production results in increased interception of salmon originating in the Canadian portion of the river" then the Canadians assert that Canada has the right to "compensatory entitlements equivalent to increased interceptions" and that "if Canada decides to

increase the production of the intercepted stock, it shall be granted access to the United States water to harvest an amount equivalent to that increased production."

Canada is advancing a more extreme claim of sovereignty over the fish than is reflected in the principal of abstention. The abstention principal with regard to the high seas distinguishes between species which were being fully utilized by the coastal state under the management principal of maximum sustained yield and those fisheries which were not being fully utilized. The Canadian position advanced in the current draft treaty reflects a fundamental private property concept, and assumes a remedy of compensation in several forms, regardless of whether the fishery is being fully utilized.

The United States' position, based upon its interests in maintaining longstanding, traditional fisheries is also divergent from the principal advanced against the Japanese on the high seas. The basic agreement however does envision that the end products will eventually be specific allocation formulas of different stocks.

PREDICTABLE EFFECTS ON THE YUKON RIVER FISHERY
RESULTING FROM A U.S. - CANADA SALMON INTERCEPTION
TREATY ALLOCATION TRANSBOUNDARY SALMON STOCKS.

Transboundary rivers are apparently not at the top of the priority list with regard to reciprocal fishing agreement and negotiations between Canada and the United States. It is obvious, however, that several events could

possibly trigger a strong interest in pursue and complete a reciprocal agreement that could affect the Yukon River fishery. If a reciprocal agreement or treaty is adopted pursuant to the direction of the Fishery Conservation and Management Act of 1976, then the attendant momentum could also result in an interception agreement regarding trans-boundary salmon stocks. 6/ If either country seriously initiates a plan to construct a dam on the Yukon, then a reciprocal agreement seems inevitable.

The most relevant situation with the potential for triggering a push from the Canadian side for a reciprocal agreement are reduced escapement levels. The current Canadian position with regard to the transboundary rivers focuses on the Canadian right to expand the development of "a fishery" (with an attendant reduction in the United States catch), and a Canadian interest in compensation if the United States develops or enhances "a stock." The focus on United States actions is directed toward the biologic species rather than the entire picture of a fishery. Should the escapement levels of Yukon King or Chum Salmon diminish due to the increased take by fishermen in Alaska, then it

6/ 16 U.S.C. §1812 asserts jurisdiction over "all anadromous species throughout the migratory range of each such species beyond the fishery conservation zone." See, n. ____ 16 U.S.C. §1822(b) directs the Secretary of State to promptly initiate the renegotiation of any treaty which pertains to the fishing of anadromous species.

can be expected that Canada will move to protect its expanding commercial fishery on the Upper Yukon and its tributaries. It is also apparent that as long as escapement levels are satisfactory or that the American catch does not dramatically increase, then the Canadian interests in the species should not be triggered.

MEMORANDUM

TO: DOUGLAS POPE
FROM: ROBERT H. WAGSTAFF
RE: PROPERTY INTERESTS AND
LIMITED ENTRY PERMITS

Appendix D

MEMORANDUM

To: Douglas Pope

From: Robert H. Wagstaff

Re: Property Interests and Limited Entry Permits

In your letter of September 27, 1979, you asked me to prepare a memorandum addressed to the threshold question:

A.S. 16.43.150(e) provides that "an entry permit constitutes a use privilege which can be modified or revoked by the legislature without compensation."

What is the effect of this section with regard to the use and value of a limited entry permit?

I would first like to give you some background orientation. In the course of preparation of this memorandum I have reviewed both state and federal constitutional law as is reflected in the decisions of the appropriate courts. I have consulted with you as well as others involved in Limited Entry including John Havelock, Attorney General at the time the present limited entry plan was adopted in 1973. I have no conscious economic bias with regard to limited entry permits. I do not own a permit myself, do not desire to fish commercially, nor do I represent anyone who is involved in any litigation concerning limited entry permits.

In order to answer your question as to whether the holding of a limited entry permit constitutes the possession of a property interest calling for compensation in the event of termination or modification I have necessarily examined the entire concept of what limited entry is and what it is

not. I must initially report that it is my conclusion based upon my research, experience and judgment that the present scheme of limited entry squarely violates both the state and the federal constitutions. I hope that you are able to convince the appropriate legislative committee of the gravity of the situation and of the inevitability of a meaningful legal challenge. There are, however, probably ways of making the present system less repugnant from a constitutional view. I will comment on these matters as it relates directly towards the existence or nonexistence of any property interests in limited entry permits.

The present scheme of limited entry gives exclusive rights to fish commercially in certain areas to individuals and their families in perpetuity. It is clear that other Alaskans may not participate in commercial salmon fishing. The primary problem with the existing scheme of limited entry is that it creates a special privilege and exclusive right to fish among a limited and fortuitous class of persons.

THE ALASKA CONSTITUTION SPECIFICALLY PROHIBITS THE PRESENT METHOD OF LIMITED ENTRY.

In an effort to allow some form of limited entry the Constitution of the State of Alaska was amended in 1972 with a second sentence to read as follows:

Article VIII, § 15.

No Exclusive Right of Fishery. No exclusive right or special privilege of fishery shall be created or authorized in the natural waters of the State. This section does not restrict the power of the

State to limit entry into any fishery for purposes of resource conservation, to prevent economic distress among fishermen and those dependent upon them for a livelihood and to promote the efficient development of aquaculture in the State.

Retained within Section 15 was the first sentence specifically prohibiting exclusive rights and special privileges. There was no explanation on the ballot nor a voter pamphlet issued in conjunction with the ballot. By its plain language the amendment allows only a limiting of entry into any fishery for the stated purposes which, parenthetically, are in the conjunctive. Limiting entry appears to mean limiting access to in terms of numbers. The constitutional amendment does not authorize the creation of an exclusive right of special privilege of fishery as has been done by the present scheme of limited entry. This seems particularly clear as the sentence preceding the amendment in Section 15 specifically prohibits just that. Under rules of construction the second sentence is subordinate to the first. Hence any limiting of entry would have to be done on an egalitarian and democratic basis. In Metlakatla v. Egan, 362 P.2d 901 (Alaska 1961) the Alaska Supreme Court noted:

These migrating schools of fish, while in inland waters, are the property of the state, held in trust for the benefit of all the people of the state, and the obligation and authority to equitably and wisely regulate the harvest is that of the state. (emphasis supplied).

This position is buttressed by the preceding Sec. 3 of Art. VIII which provides:

Art. VIII, Section 3. Common Use. Wherever occurring in the natural state, fish, wildlife, and waters are reserved to the people for common use.

The present scheme of limited entry removes salmon from common use and gives them to an exclusive few. Moreover, Sec. 1 of Art. I provides under general egalitarian principles that:

Art. I, Section 1. Inherent Rights. This constitution is dedicated to the principles that all persons have a natural right to life, liberty, the pursuit of happiness, and the enjoyment of the rewards of their own industry; that all persons are equal and entitled to equal rights, opportunities, and protection under the law; and that all persons have corresponding obligations to the people and to the State.

But wasn't all of this hashed out when the constitutional amendment and limited entry were adopted and didn't the attorney general's office issue an opinion endorsing limited entry of the type adopted? Simply stated, the answer stated is no. The limited entry concept as used by the legislature is a term of art, whereas under popular usage as stated in the amendment only a democratic and egalitarian limitation of access would be permitted, not the creation of an exclusive right in a fishery and the granting of special privileges. According to John Havelock and my research this point was not considered.

In addition to violating specific sections of the State Constitution the existing scheme of limited entry also, in my judgment and experience, violates the equal

protection clauses of both the state and federal constitutions. Limited entry additionally, in my judgment, directly contravenes existing case law. There has been an apparent attempt to answer the glaring questions raised by these cases with the "free transferability". The governor's study group on limited entry report entitled "Limited Entry Program for Alaska Fisheries" states on page 9:

Once entry permits are issued for an area, that does not mean that only those people holding them can fish for all time. Subject to close supervision by the commission, entry permits may be transferred or sold. This will permit new entry so that the number of fishermen can be stabilized without creating a special closed class of fishermen. To create a closed class of fishermen would almost certainly be unconstitutional.

It is my opinion that allowing people to "buy in" does not create an open class and indeed a closed class of fishermen functionally exists which, in the words of the report, is "almost certainly" unconstitutional. The idea that equal protection is obtained if you are willing to pay \$100,000 is sophistic at best. It is my conclusion that very little thought was given to this provision, perhaps because it was not envisioned at that time by the legislature that the permits would become as expensive as they now are.

In the constitutional analysis as found on page 282 of the report the statement is made that limiting entry into the salmon fishery is no different in principle than the state's regulation of the permit system of private appropriation of state waters. Distinguishing is that

appropriation rights to water is not given exclusively to a fortuitous few with any newcomers being required to pay for access. Rather all persons are properly treated equally.

The statement is made in the report that "the courts will also look unfavorably upon any regulatory system which creates a completely closed class of fishermen. Some new entry must be permitted". A closed class of fishermen has in fact been created.

These ideas are more than abstract constitutional concepts. The constitutional requirements of equal protection for all people and that resources belong to the people in common is a statement and reflection of a fundamental political revolutionary belief in democracy.

Existing case law seems to preclude the form of limited entry chosen. The most relevant case is Bozanich v. Reetz, 297 F.Supp. P. 300, (1969), in which a three judge district court declared a similar entry scheme unconstitutional. The case was reversed by the United States Supreme Court on the grounds of federal abstention, not related to the merits. When the state courts did eventually consider the issue the law was ruled unconstitutional. No appeal was taken. The original case was heard by federal Circuit Judge Ely, and Alaska District Judges, Plummer and von der Heydt. This three judge panel found that the statutes which limited issuance of salmon fishing licenses to those who held licenses in the same regions since 1965 or had held commercial fishing

licenses in that region for any three years since 1960 violated the equal protection clause of the federal constitution as well as stood in violation of the Alaska State constitution. Irrespective of what the 1972 constitutional amendment to Section 15 may have done the amendment could not have any affect on the Fourteenth Amendment to the Constitution of the United States. The Bozanich panel noted that the Fourteenth Amendment to the Constitution of the United States was violated as "the only persons that can presently qualify for net gear licenses were those already vested with the local privilege". The court tellingly stated:

Although a state may enact fishing regulations in the legitimate interest of conservation and safety, it may not, to achieve those ends, employ arbitrary and irrational means which create or protect local monopolistic interest. Ibid. p. 305.

The existing scheme of limited entry has as its heart the protection of local monopolistic interests and creates a closed class of fishermen unless someone has the \$100,000 to buy in. Moreover, this closed class of fishermen does not have to sell, which leaves the control of who may enter up to private interests, another objection that the panel had in Bozanich.

The panel went on to find that Sections 3 and 15 of Article VIII of the state constitution were violated. The decision notes that the history of Sec. 15 permitting no exclusive right of fishery was based upon the White Act of

June 6, 1924, 44 Stat. 464, which, as interpreted by the United States Supreme Court in Hynes v. Grimes Packing Co., 337 U.S. 86 (1949), found that the Secretary of Interior's closure of certain Alaskan waters to all those except of the Karluk Indian Reservation violated the Act. Reservation occupants were being granted the privilege of exclusive commercial fishing rights.

The panel noted that the scheme "would tend to establish monopolistic trade guilds not thought desirable by the framers of Alaska's Constitution". It is difficult to shield the existing scheme of limited entry from the impact of this decision. Equal protection of the law is not dependent upon the status of a bank account. I see no difference between persons being denied equal opportunity for commercial access to fish which are held in common for all people and allowing a black child an equal right of education only as long as he pays a tuition of \$100,000. This simply does not satisfy the requirements of equal protection.

The Supreme Court of the State of Washington came to a similar decision in 1936 in the case of State v. Huse, 59 P.2d 1101. The court found the state owned the fish in its waters in its propriety capacity but held title as trustee for all people of the state and for the common good and, therefore, any regulations made for the use of the common property must bear equally on all persons. The

provisions of the Washington law forbidding issuance of license to take salmon by gill net except to those holding such licenses previously was held invalid as creating an arbitrary classification and conferring special privileges.

The court noted:

Respondent begins with the premise that one of the fundamental objects sought by the act was the conservation of the state's supply of food fish. This may be conceded. Respondent then advances, as a reason for the discrimination and classification, the fact that, at the time of the adoption of the initiative measure, it was recognized that there was a large number of people in the state whose sole means of livelihood was gill netting within the prohibited area, and that it would have been a grave injustice to deprive them of their livelihood; hence, by the provisions of section 4 of the act, such persons were to be permitted to follow their accustomed vocation during the remainder of their lives, while all others were to be prohibited. The argument possesses some measure of plausibility as indicating a beneficent complaisance on the part of the sovereign state toward certain of its citizens suddenly embarrassed by the quick and decisive turn of things. But the argument, we think, is not legally sound, and its weakness is, in our opinion, demonstrable.

In the first place, as already stated, the state holds title to the fish within its waters in trust for all its people and for the common good, not simply for a limited few nor for the good of a small minority. The state cannot dispose its bounty in favor of particular persons and withhold it from all others who have equal right or claim.

* * *

The regulation, if it may be so called, if founded upon mere fortuitous circumstances and makes a gratuitous selection of individuals who shall enjoy the use of common property to the exclusion of all others. (emphasis supplied).

It is difficult to distinguish the problems the

Washington Supreme Court found in 1936 and the situation in Alaska today. Because of fortuitous circumstances those who were fishing in the past are allowed to fish in the future in perpetuity. By analogy the Huse court noted:

The state owns and controls certain highways. It maintains them, however, for use by the people at large. It is directly and immediately interested in the conservation of such highways to the end that the public use thereof may be adequately protected. Suppose that in the interest of conservation of such highways, a statute were enacted, or an initiative measure adopted, specifying that trucks of a certain size or tonnage should no longer be permitted to use such highways. It is conceivable that, in the interest of conservation, such legislation would be proper. But suppose that the statute or initiative measure should provide that only such person as had held license to drive trucks of the prohibited class during either the year 1932 or 1933 should thereafter be permitted to use them upon such highways, while all other persons, including those who held licenses immediately preceding the effective date of the legislative act, were excluded. Would that be considered a fair or legal discrimination? We think not, We believe that such action would be a dedication pro tanto of the use of the roads to a special class upon a wholly arbitrary and capricious basis.

State v. Huse, supra, at 1105.

The Washington Court concluded that "the distinction giving rise to the classification must be germane to the purpose contemplated by the particular law or may not rest upon mere fortuitous characteristic or quality of persons, or upon personal designation." The Governor's Study Group readily admits that the limited entry program is aimed "primarily at eliminating 'moonlighters' and other parttime fishermen from the salmon fishery" p. 282. These

persons have a right to be treated equally.

In Takahashi v. Fish and Game Commission, 344 U.S. 410 (1948) the United States Supreme Court overturned a California statute forbidding the issuance of commercial fishing licenses to aliens ineligible for citizenship. The decision was made under the equal protection clause of the Fourteenth Amendment. While employment may not be a fundamental right under that amendment, equal access to employment in the common occupations can be said to be such a right. Ibid at 416. See also, Toomer v. Witsell, 344 U.S. 385, 403 (1948) and CDR v. Board of Education of the City of New York, 412 F.Supp. 1164 (1976) aff'd 97 S.Ct. 721 (1977).

In summary of the above, the fish of Alaska, insofar as is possible to assert sovereignty are held in common for all people of the state. Accordingly all persons, not just all fishermen, are entitled to equal access or opportunity for access both under the state constitution and equal protection clause of the federal constitution. If it is indeed necessary to limit entry to fish then such limitation of access must be done in a egalitarian and democratic manner, not by the creation of special privileges and exclusive perpetual rights. The United States Supreme Court noted in the privilege and immunities case of Toomer v. Witsell,, supra, that "[W]e cannot agree with defendants if there is any authority to avoid the effect of privilege and

immunities clause solely under the guise of avoiding economic losses to residents." Ibid 102. Similarly, the effects of the equal protection clause cannot be avoided under the guise of economic loss to local monopolistic interests.

It should be noted that the limited entry scheme that we presently have is the fourth attempted in the State of Alaska, the first three being held unconstitutional by federal courts. See, Hynes v. Grimes Packing Co., 337 U.S. 86 (1949); Brown v. Anderson, 202 F.Supp. 300 (Alaska 1969). I find it impossible to constitutionally distinguish the present scheme from the foregoing case. Nor have I found anyone who has been able to.

A LIMITED ENTRY PERMIT IS NOT A PROPERTY RIGHT WHICH, IF TAKEN, ENTITLES THE OWNER TO ANY COMPENSATION.

The foregoing general analysis of the present limited entry act relates directly to the question that you have asked me to address. Because of the constitutional provision of Sec. 15 of Art. VIII prohibiting the creation of an exclusive right or special privilege fishery the Legislature has no choice but to adopt the position that limited entry permits are not property subject to compensation for taking. To do otherwise would be an admission that there is an exclusive right or special privilege, which is in fact specifically prohibited. 1/

1/ The buy back provisions of the Act, A.S. 16.43.310 represents an internal inconsistency indicating possible legislative acknowledgement of a creation of an exclusive right or special privilege.

Moreover, under any analysis I believe that no compensation is required. It should initially be recalled that any distinction between rights and privileges was abolished by the United States Supreme Court in Graham v. Richardson, 403 U.S. 365 (1971). Rather impact as a whole is examined. The limited entry statute itself states that permits may be modified or revoked by the Legislature "without compensation". A.S. 16.43.150(e). I believe that this is constitutionally correct. However this issue is inextricably intertwined, at least in theory, with the entire constitutionality of the act.

There are many state and federal cases which deal with the issue of the taking of property and required compensation. It is doubtful that a limited entry permit constitutes property as such not only as prohibited by the constitution but "property" is almost universally defined as real property.

EMINENT DOMAIN.

In LeClair v. Swift, 76 F.Supp. 720 (Ed. Wisc. 1948), it was held, in an attack against a state regulation by a commercial fisherman, that commercial fishermen have no absolute right to fish in waters under the control of the State of Wisconsin and any property right of fish lies with the state prior to the catching of the fish. The court further held that the state has a right and duty to preserve the fish from destruction whether by improvidence or greed and as trustee for the people the state may conserve fish

and wild life by regulating or prohibiting the taking thereof. Significantly the court held that Wisconsin commercial fishing licenses were not contractual in nature and created no vested or permanent rights.

Plaintiff is licensed as a commercial fisherman by the State of Wisconsin. Without a State license he would not be permitted to engage in commercial fishing in Wisconsin streams or waters of Lake Michigan controlled by Wisconsin. Such licenses are not contracts and create no vested or permanent rights.

In Tlingit and Haida Indians of Alaska v. United States, 389 F.2d 778 (U.S.C. Cl. 1968) the Court of Claims held that no awards should be made to the Tlingit and Haida Indians of Alaska in respect to any takings of purported fishing rights. The court noted:

Since the primordial decision in Geer v. Connecticut, 161 U.S. 519, 16 S.Ct. 600, 40 L.Ed. 793 (1896), it has been uniformly held that there is no property right in any private citizen or group to wild game or to freely-swimming migratory fish in navigable waters. Fish are ferae naturae, capable of ownership only by possession and control. No citizen has any right to the fish nor to exclude any other citizen from an equal opportunity to exercise his right to possession. Shively v. Bowlby, 152 U.S. 1, 14 S.Ct. 548, 38 L.Ed. 331 (1894). This court has repeatedly adhered to that rule of law. Aleut Community of St. Paul Island v. United States, 117 F.Supp. 427, 431, 127 Ct.Cl. 328, 334 (1954). Cf. Bishop v. United States, 126 F.Supp. 449, 130 Ct.Cl. 198 (1954) cert. denied, 349 U.S. 955, 99 L.Ed. 1279, 75 S.Ct. 884 (1955); Fleming v. United States, 352 F.2d 533 173 Ct.Cl. 426 (1965). There are no exclusive rights to fish in Indians. United States v. Winans, 198 U.S. 371, 25 S.Ct. 662, 49 L.Ed. 1089 (1905).

The court went on to specifically hold that fishing rights are not property rights.

So too with Alaska. There is no property right in fish inasmuch as fish are by constitutional definition held in common by the state for the people. It is only the taking of "vested rights" which demands the guarantees of due process and just compensation. See generally, Cuyahoga Power Co. v. Northern Ohio Traction and Light Co., 252 U.S. 388 (1920). The recent case of Andrus v. Allard decided by the United States Supreme Court on November 27, 1979, 48 LW 4013 is instructive. The case concerned the Eagle Protection Act which prohibits all transactions involving protected birds with no exceptions for preact takings. The court ruled that the regulations did not constitute the taking of property of those engaged in the trade of preexisting Indian artifacts containing protected bird parts. The court stated:

Penn Central Transportation Co. v. New York City, 438 U.S. 104, 123-128 (1978), is our most recent exposition on the Takings Clause. That exposition need not be repeated at length here. Suffice it to say that government regulation--by definition--involves the adjustment of rights for the public good. Often this adjustment curtails some potential for the use or economic exploitation of private property. To require compensation in all such circumstances would effectively compel the government to regulate by purchase. 'Government hardly could not be diminished without paying for every such change in the general law.' Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 413 (1922); see Penn Central, supra, at 124.

The Takings Clause, therefore preserves governmental power to regulate, subject only to the dictates of "justice and fairness." Penn Central, supra, at 124; see Goldblatt v. Hempstead, 369 U.S. 590, 594 (1962). There is no abstract or

fixed point at which judicial intervention under the Takings Clause become appropriate. Formulas and factors have been developed in a variety of settings. See Penn Central, *supra*, 123-128. Resolution of each case, however, ultimately calls as much for the exercise of judgment as for the application of logic.

* * *

At any rate, loss of future profits unaccompanied by any physical property restriction--provides a slender reed upon which to rest a takings claim. Prediction of profitability is essentially a matter of reasoned speculation that courts are not especially competent to perform. Further, perhaps because of its very uncertainty, the interest in anticipated gains has traditionally been viewed as less compelling than other property-related interests. Cf. *e.g.*, Fuller & Perdue, *The Reliance Interest in Contract Damages* (pt. 1), 46 *Yale L.J.* 52 (1936).

Regulations that bar trade in certain goods have been upheld against claims of unconstitutional taking. For example, the Court has sustained regulations prohibiting the sale of alcoholic beverages despite the fact that individuals were left with previously acquired stocks. Everard's Breweries v. Day, 265 U.S. 545 (1924), involved a federal statute that forbade the sale of liquors manufactured before passage of the statute. The claim of a taking in violation of the Fifth Amendment was tersely rejected. 265 U.S., at 563. Similarly, in Jacob Ruppert, Inc. v. Caffey, 251 U.S. 264 (1920), a federal law that extended a domestic sales ban from intoxicating to nonintoxicating alcoholic beverages "on hand at the time of the passage of the act," *id.*, at 302, was upheld. Mr. Justice Brandeis dismissed the takings challenge, stating that "there was no appropriation of private property, but merely a lessening of value due to a permissible restriction imposed upon its due." *Id.*, at 303. See Mugler v. Kansas, 123 U.S. 623 (1887).

It seems clear that any "privilege" obtained under the Limited Entry Act can be cancelled by repeal of the law. Rights created by legislation can be extinguished by

legislation. See, Wheeling and Belmont Bridge Co. v. Wheeling Bridge Co., 138 U.S. 287. The Supreme Court of Alaska in Hersher v. State, 568 P.2d 986 (Alaska 1977) stated:

We recognize that there is a difference between the state's plenary control of the natural resources and the taking away of a formerly granted license. The state's power over natural resources is such that it can entirely eliminate the role of hunting guides and no problem over due process will arrive. Id., at 1003.

I therefore conclude that limited entry permits may be revoked or modified without having to pay the holder any compensation.

You have asked several other questions recently that I will comment on to the best of my ability based upon my research to date. You have inquired:

DO YOU BELIEVE THE STATE HAS THE POWER TO SET A CEILING ON ENTRANTS INTO A FISHERY?

My answer is generally yes. The state may limit the total number of people fishing, however the selection of those who will fish must be done on egalitarian democratic principles. My perceived problem with the existing limited entry scheme is that it does not do that. It gives arbitrary preference only to those who were fortuitous to be present in the right place at the right time. In my judgment other means of conservation would have to be impractical before the limitation of the number of people fishing can be enforced. Resources are held in common for the people of the state and before access can be restricted on any basis it

must be shown to be necessary. Because it may be easy to limit the number of fishermen there must be need to do so. "The equal protection clause was designed to protect the fragile values of the normal citizenry from the overbearing concern for efficiency and efficacy that is often characterized in the most praiseworthy legislation." Issakson v. Rickey, 550 P.2d 365 (Alaska 1976). There is a popular misconception that the Issakson case represents the endorsement of the Alaska Supreme Court to the entire scheme of limited entry. This is not true.

DO YOU BELIEVE ALLOCATION BASED ON HARDSHIP IF EXCLUDED FROM A FISHERY IS CONSTITUTIONALLY SOUND?

I am not certain of the answer to this question at this stage of my research. There are at least two possible allocations: the initial allocation of a permit and what happens from that point forward. An argument could be framed that the initial allocation is properly based upon hardship but that the future allocations will be based on strictly democratic principles. As you will recall from the Washington case as well as some of the language from Bozanich, simply being fortuitous to have already been fishing is not acceptable in terms of equal protection. If hardship is defined as simply having been there fishing first and therefore any alternative would create hardship, it will fail as a justification for giving access to a resource held in common for all. I don't like the hardship definition of the

present limited entry act inasmuch as it is predicated generally upon past participation. Again, this question must be taken in the context of the entire act which would require more research. As I mentioned once in conference, even though I feel the act is unconstitutional and undemocratic there are ways of making its impact less so and I believe that the legislature should move in that direction if it is not going to change the entire scheme.

BASED ON WHAT YOU HAVE, CAN YOU FORM AN OPINION AS TO WHETHER STATE ACTION ESTABLISHING "OPTIMAL EFFORT" (PERMITS) IN ORDER TO ACHIEVE MAXIMUM "NET ECONOMIC YIELD" FROM A FISHERY HAS ANY FEDERAL CONSTITUTIONAL PROBLEMS?

I would really have to know more before I could answer this question. In any system of permits it must be remembered that the fishery resource is held in common for all people and any restriction of access to it will raise equal protection problems to persons similarly situated as citizens of the State of Alaska. I perceive a tendency to restrict access only to similarly situated fishermen. The fish of Alaska are not held in common for fishermen, they are held in common for all people. The idea of having the lowest number of units a year that will achieve the maximum allowable harvest at the smallest expense is questionable in light of the fact that all persons similarly situated, all citizens of Alaska, should have equal access or opportunity for access to the fishery. There must be some justification for restricting people from the fishery. The idea of doing

this on an arbitrary basis of having the least amount of persons fishing seems to raise serious question unless there is bona fide justification for it. In any event, and let me emphasize this point, I believe that the allocation of such permits must be on a democratic basis--democratic in the sense of treating all citizens of Alaska fairly with equal opportunity for access to commonly held property.

1979 YUKON AREA SALMON MANAGEMENT PLAN FOR
COMMERCIAL AND SUBSISTENCE FISHERIES

ALASKA DEPARTMENT OF FISH AND GAME
Division of Commercial Fisheries
Arctic-Yukon-Kuskokwim Region

Yukon Area Biologist: Mike Geiger
333 Raspberry Road
Anchorage 99502

Upper Yukon Area Biologist: Fred Andersen
1300 College Road
Fairbanks 99701

1979 YUKON AREA SALMON MANAGEMENT PLAN

ALASKA DEPARTMENT OF FISH AND GAME DIVISION OF COMMERCIAL FISHERIES

INTRODUCTION

This management plan was developed in order to inform fishermen, processors and other interested persons about the status of the 1979 Yukon River salmon runs and Department strategies that may be used to regulate the various fisheries. Statements made concerning anticipated run magnitudes and management strategies are based on the best information presently available. Statements regarding fishing times and relative sizes of the runs should be considered as tentative and subject to change. This management plan will be updated and improved as information from ongoing and proposed Department programs becomes available.

The overall objective of the Yukon area research and management programs is to manage the various salmon runs for sustained yield. The commercial fishery is regulated on the assumption that a harvestable salmon surplus, after providing for spawning and subsistence utilization requirements, is available.

Subsistence has been designated by the Legislature (State Law 151) as the highest priority among beneficial users of the fish and game resources. Except in areas where intensive commercial fisheries occur, the subsistence fishery is subject to few restrictions in order to give preference to subsistence users. In the major commercial fishing areas the majority of the fishermen usually take salmon for both commercial and subsistence. Therefore, in order to enforce commercial fishing regulations, it is necessary to place some restrictions on the subsistence fishery. For example, subsistence fishing is allowed only during the open periods of the commercial fishing season and during the closed periods both commercial and subsistence fishing is prohibited.

Management is made difficult by the character of the salmon runs, fisheries and the river itself. Since most of the commercial fisheries have only developed or expanded in recent years, there is a lack of adequate escapement and return data on which to fully evaluate the effects of increased commercial harvests. The various fisheries scattered over 1,400 river miles harvest mixed stocks usually several weeks and hundreds of miles from their spawning grounds. Because the Yukon River commercial fishery is essentially a "cape fishery" (fishing on mixed stocks) some tributary populations may be under or overharvested in relation to their actual abundance. For example, in a mixed stock fishery, where it is impossible to manage each stock separately, small spawning populations may be reduced to very low levels or even eliminated.

Due to the turbid water conditions of the main river and the vast size of the drainage (330,000 square miles), one-third of which is in Canada, accurate inseason assessment of the escapement immediately past the intensive downriver fishery is very difficult with the present available technology and funding. Management is also hampered by the variable run timing and pattern of entry into the lower fishery. Comparisons of catch data between years is thus made difficult.

New research projects are underway and other programs are planned,

once additional funding becomes available, to obtain the biological information necessary for better management of the salmon runs. For example, a comprehensive tag-recovery program was begun in 1976 to determine the relative timing and distribution of fall chum stocks through the commercial fishery. If individual stocks can be identified from this program and concurrent scale analysis studies, then the fishery can be more effectively regulated in order to achieve the proper balance between catch and escapement. Future salmon studies include expansion of the test fishing program, sonar assessment of run strength in the main river, and upgrading escapement documentation in the tributary streams.

As a result of the difficulty in obtaining the necessary biological information, the mixed stock situation, increased effort and efficiency of the commercial fishery, and because of the need to provide for subsistence which has been designated the highest priority by the Legislature, the management of the Yukon River salmon runs must take a conservative approach. This can be achieved by establishing harvest guidelines, mesh size, reduced weekly fishing periods, fishing season closures, etc. During the fishing season if it becomes apparent that the run is substantially smaller-or-larger than needed for escapement and subsistence requirements, then the commercial harvest rates will be adjusted through the use of the emergency order, or less frequently emergency regulation authority.

Also affecting management is the interception of western Alaskan salmon (including Yukon River stocks) by the Japanese high seas fishery. King salmon catches by this fishery have averaged 284,000 fish annually since 1966 and reached a peak catch of 554,000 kings in 1969. In some years the Japanese catch has exceeded the total western Alaskan catch (commercial and subsistence). The majority of kings taken are immature (4 year olds) averaging 6 pounds each whereas most of the adults (mostly 6 year olds) taken by Alaskan fishermen averaging 20-25 pounds. Based on tagging and scale analysis studies it is estimated more than 80% of the Japanese catches of king salmon are of western Alaska origin.

Western Alaskan chum salmon are also believed to be intercepted in substantial numbers by the Japanese fishery in the Bering Sea. This fishery annually harvests 2-4 million chums; however the degree of interception is unknown because of limited tagging studies.

An International treaty (the I.N.P.F.C.) has been recently renegotiated to afford increased protection for western Alaskan salmon stocks. Improved Yukon River king salmon returns beginning in 1980 and possibly 1979 may be expected as a result of reduced high seas interceptions.

STATUS OF STOCKS AND FISHERY:

King Salmon: The Yukon River commercial king salmon fishery in Alaska dates back to 1918. Since 1961 commercial catches have ranged from 63,700 to 129,700 fish and the recent 5 year average (1974-78) is 88,700. In addition to the Alaskan catch, the commercial fishery at Dawson (Yukon Territory) harvests 2-3,000 kings annually (recent 10 year average). Throughout the Yukon River drainage approximately 15-25,000 kings are taken annually for subsistence use.

Spawning populations of king salmon are widely distributed throughout the drainage and have been documented in the Archuelinguk River located 85 miles from the mouth of the Yukon River and as far upstream as the headwaters of the drainage in the Yukon Territory of Canada, nearly 2,000 miles from the mouth. Major spawning streams in Alaska include the Andreafsky, Anvik, Nulato, Salcha and Chena rivers. In the Canadian portion of drainage, important systems include the Big Salmon and Nisutlin Rivers.

Commercial fishing effort has increased sharply since 1961. License registration for set gill nets has more than doubled while drift gill net gear has tripled in number. In excess of 150 units of fishwheel gear are also fished (upper Yukon area only). With the advent of the Limited Entry Program, fishing effort has apparently stabilized.

Yukon River king salmon runs since 1971 have generally declined in magnitude based on available comparative catch and escapement data. Countering this trend, good runs occurred in 1977 and 1978 when 96,400 and 97,600 kings were commercially harvested. Escapements into key survey streams were also strong especially in 1978 when record escapements were documented.

Restrictions placed on the commercial fishery during the 1970's have generally resulted in improved escapements compared to the 1963-69 period. However, with the exception of 1971, 1977 and 1978, escapements have not reached the levels observed during the early 1960's prior to maximum development of the commercial fishery.

Summer Chum Salmon: Prior to the mid 1960's summer chums were used primarily for subsistence purposes, mostly for sled dog food. As the snow machine replaced the dog sled, subsistence fishing for summer chums declined. Beginning in 1967 commercial fishing regulations regarding summer chums were gradually liberalized. As a result of regulation changes (e.g. mesh size specifications and earlier openings of the fishing season), increased fishing effort and processor facilities, development of Japanese markets and the occurrence of very large runs in recent years, the Yukon River summer chum salmon commercial harvest has increased sharply. Only 11,000 summer chums were taken commercially in 1967 while a record 1,053,200 fish were harvested in 1978. The recent 5 year average commercial harvest (1974-78) is 704,900 fish. The majority of the commercial harvest takes place in subdistricts 1, 2 and 4. It is estimated that 197,000 summer chums are taken annually (1974-78 average) for subsistence in the Yukon River drainage.

Summer chums exhibit similar run timing as the kings, entering the lower river during June and early July. Major spawning tributaries include the Andreafsky and Anvik Rivers and several others upstream to and including those of the Koyukuk River drainage. Department tag and recovery population estimates indicated total Yukon River runs of 3.2 and 1.6 million summer chums in 1970 and 1971, respectively. The total Yukon River summer chum salmon run in 1975 was estimated to be in excess of 5 million fish based on commercial and subsistence catch documentation and aerial survey estimates. An escapement of over one million summer chums was estimated in 1975 in the Anvik River. Overall, Yukon River summer chum escapements have been good in recent years, however escapements in that portion of the drainage upstream of the Koyukuk River mouth have been variable.

Fall Chum Salmon: The commercial fishery for fall chum salmon in the Yukon River began in the early 1960's, however the fishery has undergone recent expansion since 1968. Commercial catches have ranged from 8,300 in 1964 to 273,100 in 1974 and the recent 5 year average (1974-78) harvest is 238,800 fish. In the face of increasing fishing effort and catches, the Department established a 250,000 maximum fishing harvest limit for the entire river until future returns from current levels of harvest can be evaluated. This maximum harvest was used beginning in 1974 as a basis for establishing subdistrict quotas.

Because of their good quality (bright, silvery appearance, large size, robust body shape and high oil content) which is related to their upriver spawning destinations, fall chums are in great demand and are harvested in all fishing subdistricts. The majority (approximately 80%) of the fall chum commercial catches are presently taken in the lower three subdistricts. Fall chums are of less importance for subsistence than summer chums throughout the Yukon River drainage except upstream of the mouth of the Koyukuk River where it is estimated that fall chums comprise 60-75% of the total subsistence harvest. The annual subsistence catch of fall chums in the Yukon River drainage is approximately 89,000 fish (1974-78 average).

Fall chums enter the lower Yukon River beginning in mid-July and continue through early September. Major spawning areas are located in the Tanana River (Toklat River, Delta River and the upper Tanana River near Big Delta) and the Porcupine River (Sheenjek and Fishing Branch Rivers) drainages. Tagging studies indicate that the early run (late July-early August) of fall chums is bound for the Porcupine River system and Yukon Territory systems. The late run of fall chums (mid August-early September) is believed destined primarily for the Tanana River. Tanana River drainage escapements in general appear more stable and experience less fluctuation than the Porcupine River system. For example, recent escapements to the Fishing Branch River have ranged from 353,000 (1975) to 13,000 (1976).

In recent years, as additional information has become available (comparative catch and escapement data), it has been evident that the size of the Yukon River fall chum runs has fluctuated sharply depending on brood year run strength and environmental factors. In order to provide for more flexible management of the variable fall chum runs, the Board of Fisheries replaced the rigid quotas with guideline harvest levels (range of 147,500 to 322,500) and reduced fishing time effective for the 1979 fishing season.

Coho Salmon: This species is of minor importance in both in the commercial and subsistence fisheries. The commercial catch since 1961 have ranged from 350 to 38,000 and the recent 5 year average (1974-78) is 17,600 fish. Cohos first enter the lower Yukon River about one week later than fall chums and the run peaks during late August. Spawning occurs discontinuous throughout the drainage with the largest spawning concentrations documented in the tributaries of the upper Tanana River drainage.

The commercial harvest of cohos is dependent upon fishing effort exerted on the more numerous fall chums. Consequently, no specific management strategy has been developed for coho salmon. Future expansion of the coho fishery appears unlikely at this time.

OUTLOOK FOR 1979

King Salmon: In most years the dominant age class returning are 6 year old fish, however, 5 and 7 year old fish may also contribute substantially to the run. The 1973 brood year run (6-year olds) was below average to average in abundance as indicated by comparative catch and escapement data. Escapement of king salmon in the Salcha and Chena Rivers was especially poor in 1973 and was attributed to poor survival of the 1967 brood year as a result of the August 1967 Tanana River flood. Seven year old fish (1972 brood year) are expected to contribute substantially to the return in 1979 based on the strong return of 6 year olds (approximately 72%) in 1978. Also five year olds (1974 brood year) may contribute significantly to the return in 1979 because of average-above average brood year run strength and possible reduced high seas interceptions.

In summary, based on evaluation of brood year run size data, it is expected that the 1979 Yukon River king salmon run will be below average to average in magnitude. The expected commercial catch should range between 70-80,000, the guideline harvest level for the entire river.

Summer Chum Salmon: Normally the Yukon River summer chum (dog salmon) runs are composed of four year old fish, although in some years five year old fish are present in large numbers. The return of four year olds in 1979 will be dependent on the strength of the 1975 brood year and the survival of the resulting offspring. Based on the available catch and escapement data, the 1975 summer chum run was considered substantially above average in magnitude. Also the return of five-year-old (1974 brood year) fish may contribute significantly to the run in 1979.

In summary, the magnitude of the Yukon River summer chum run in 1979 is expected to be above average. The expected commercial harvest should total 750,000-1,500,000 fish for the entire river.

Fall Chum Salmon: Similar to the summer run, the majority of the fall chums returning each year are four year old fish. Based on comparative catch and escapement information, the 1975 brood year run (4 year olds) was generally considered substantially above average in magnitude. It is expected that the return of five year olds (1974 brood year) may also contribute significantly to the return in 1979.

In summary, the 1979 Yukon River fall chum salmon run is expected to be above average in magnitude. The expected commercial harvest should range between 250,000-325,000 fish, the upper end of the guideline harvest level for the entire river.

Coho Salmon: The coho salmon run annually is much smaller than the fall chum run, and the harvest is dependent on the duration of the fishery for fall chums. The harvest is expected to total 20-30,000 fish for the entire river.

MANAGEMENT STRATEGY, LOWER YUKON (SUBDISTRICTS 1, 2 AND 3) FISHERIES

King and Summer Chum Salmon: Sustained yield management of the king and summer (dog) chum salmon runs is complicated by the fact that both species exhibit similar run timing. However, chum salmon are more abundant than king salmon, and during some recent years additional

numbers could have been harvested. The harvest of summer chums in the lower river is dependent on the regulations and management strategies employed toward the more intensively managed king salmon fishery. Even if an exceptionally large run of summer chum salmon develops, the harvest of summer chums may not be more than average because of the overriding importance of king salmon, especially if the king run is small.

The lower Yukon River king and summer chum fisheries (set and drift gill nets only) are primarily regulated by scheduled weekly fishing periods. The fishing schedule is normally two periods a week, totaling 2-1/2 days (24 and 36 hour periods) which allow effort to be distributed throughout the run. Fishing periods may be changed by emergency order depending on the strength of the run as indicated by analysis of comparative catch statistics. The fishing season opens by regulation June 10 which affords protection to the early part of the run. Later in the season during late June-early July only six inch maximum mesh size gillnets may be operated (there is no mesh size restrictions earlier in the season) which allows the harvesting of the normally more abundant summer chums while affording protection to the late king run.

A commercial guideline harvest of 70-80,000 king salmon for the entire river in Alaska has been established. Adherence to this guideline harvest level is essential in order to provide for additional escapements because of recent declines in the run and increasing fishing effort. This guideline harvest should not be exceeded unless an exceptionally large run is indicated, as such occurred in 1977 and 1978. In subdistricts 1 and 2, the combined harvest should not exceed 63-73,000 kings. The subdistrict 3 king salmon fishery is governed by a 1,800-2,200 guideline harvest level. (The upper Yukon subdistricts are limited by a combined 4,500-5,500 king salmon guideline harvest level).

If the king salmon run is small, fishing time in subdistricts 1 and 2 will be initially reduced from 2-1/2 to 2 days a week not later than June 20-25 (for normal run timing). Additional reductions in fishing time or an early closure of the season may be necessary if indicated low abundance of kings continues in order to provide for adequate escapements and subsistence requirements.

A reduction in fishing time, because of a poor king run, is favored instead of complete early season closure in June as this would prevent any harvest of summer chums. Achievement of an optimum harvest of summer chums while providing protection of king salmon, especially during small runs, is a complex problem facing management.

An additional option other than a season closure is the regulation which allows by emergency order a changeover to 6 inch or less mesh nets during June 27-July 5. This regulation allows harvesting of the more abundant chums during this period and minimizes the catch of kings. It should be clearly stated that the Department recognizes the importance of the long established king salmon fishery. The intention of the 6 inch or less maximum mesh size regulation in the lower two subdistricts is to allow an optimum harvest of chum salmon after a normal harvest of king salmon, consistent with spawning ground and subsistence fishery requirements, has been made.

In some years because of an early breakup substantial numbers of king salmon are present in the lower river during early June. It may be desirable to allow a limited harvest on this early segment of the run in order "to spread" the catch over most of the entire run. Often during "early years" the run is essentially over by late June. If an exceptional early breakup and run occurs, test fishing and subsistence catches will be closely monitored. An early opening (before June 10) of the season in subdistricts 1 and 2 with restricted fishing time (24 hour fishing periods) may be allowed by emergency order only if large, sustained test fishing and subsistence catches are occurring.

In subdistrict 3 the changeover date to gillnets of 6 inch or smaller mesh will take place after a date between July 5-15 following the closure of the king salmon season. The reopening of the commercial fishing season will be dependent on the timing of the salmon runs in order to minimize the incidental capture of the late run of kings which are traditionally utilized for subsistence in this subdistrict. Also the reopening of the season will be dependent on the market quality of summer chums.

During years of very large summer chum salmon runs the processing capacity of some lower Yukon operators has been exceeded resulting in wastage by both processors and fishermen. This problem occurs more frequently when only 6 inch or smaller mesh gillnets are fished. Processors are encouraged to avoid wastage problems by placing their fishermen on limits for example.

If the summer chum run is judged to be considerably below average than expected in 1979 then a reduction in fishing time in late June - mid-July may be required.

Fall Chum and Coho Salmon: Effective for the 1979 fishing season the Board of Fisheries made two important regulation changes affecting the lower Yukon fall chum and coho salmon fisheries: establishing guideline harvest levels and reducing fishing time.

The 200,000 chum quota in effect after mid July for subdistricts 1, 2 and 3 combined was replaced by a flexible guideline harvest level of 120,000 to 220,000 chums. In those years when the fall chum run is of average magnitude, the harvest should approximate 170,000 fish, the midpoint of guideline harvest level range. This midpoint harvest level represents 30,000 less fish than the previous 200,000 quota as the Board of Fisheries reallocated 30,000 additional fish to the upper Yukon area. If the fall run is substantially below or above average then the harvest will likely be at the lower (120,000) or higher (220,000) range of the guideline harvest level.

The Board of Fisheries also reduced weekly fishing time in all lower Yukon subdistricts by one day. In subdistricts 1 and 2 (after July 15) allowable fishing time was reduced 3 to 2 days per week and in subdistrict 3 fishing time (after July 25) was reduced from 4 to 3 days per week. Similar reductions in fishing time were also implemented by emergency order in 1977 and 1978.

The reduction in fishing time will help minimize overharvesting of certain run segments (especially the early portion); spread out the effort over a greater portion of the season; and result in a better

allocation of the guideline harvest between subdistricts in the lower Yukon area. A reduced fishing schedule will also minimize the possibility of processors being "swamped" with huge deliveries (up to 75,000 fish taken during a single fishing period in subdistrict 1) that have occurred in the past. Furthermore, extension of the season would provide for additional harvest of the coho salmon run which peaks later (after August 15).

In subdistricts 1 and 2 the fishing schedule during the fall chum run of two 24 periods per week also affects subsistence fishing since during the closed commercial periods subsistence fishing is prohibited. An additional fishing period each week for subsistence may be allowed beginning on or about August 10 by emergency order. Continuation of these special subsistence fishing periods during the season will be based on available enforcement surveillance by Protection officers and if violations are minimal. In 1978 a special 24 hour subsistence fishing period was allowed, however some violations occurred (selling of subsistence caught fish). After August 20, if the commercial fishing season has closed, subsistence fishing will be allowed seven days a week.

MANAGEMENT STRATEGY, UPPER YUKON (SUBDISTRICTS 4, 5, AND 6) FISHERIES

King and Summer Chum Salmon: As in the lower Yukon area, the king and summer chum (dog) salmon runs in the upper Yukon area exhibit similar run timing. The upper Yukon area the commercial king salmon fishery is primarily regulated by a 4,500-5,500 fish guideline harvest level (adopted by the Board of Fisheries in December, 1978 to replace the previous quotas) apportioned to the various subdistricts. Presently there is no guideline harvest levels on the numbers of summer chums that may be taken. The management of the summer chum salmon fishery is based on in-season assessment of run strength.

Also in section 4-A of subdistrict 4, where the majority of the summer chum harvest is taken in the upper Yukon area, the weekly fishing schedule was reduced from a single 5 day period to two-2 day periods by the Board. This action was taken because of increased fishing effort and the necessity to provide for balanced harvests and escapements for the various run segments.

If either a weak run of kings or summer chums develops during 1979 in the upper Yukon area then the Department would consider various restrictions. These restrictions would probably vary in each subdistrict because of the different types of fisheries and the importance of the species harvested.

Fishermen in subdistrict 4 usually retain their kings for subsistence rather than sell them in order to allow the commercial fishing season to remain open for the more abundant and commercially valuable summer chums. However, because of a substantial increase in fishing effort due to the rapid development of the commercial fishery, the total harvest of kings (commercial plus subsistence) may exceed traditional harvest levels in these subdistricts.

If the king salmon guideline harvest level (900-1,100 fish) is taken (before July 10) in subdistrict 4, the commercial fishing season

would be closed by emergency order. The season would be reopened during the period July 10 to July 31 to fishing with gill nets of six inch or smaller mesh and fishwheels. This action would minimize additional harvest of large king salmon and still allow continued commercial fishing on the more abundant summer chums. (Subsistence fishermen who do not fish commercially would be exempt from using 6 inch or smaller mesh nets).

If the summer chum salmon run was below average in magnitude, then fishing time in subdistrict 4 would be reduced. A reduction in fishing time would lessen the harvest and allow the fishery to be "more spread out" over a greater portion of the run.

In subdistrict 5 kings are of greater importance and are mostly taken with gillnets for both commercial and subsistence purposes. Summer chums are not abundant and are mainly retained for subsistence. Once the king salmon quota was taken in this subdistrict the fishery would be closed until the fall season.

If the king run was poor, then fishing time would be reduced.

In subdistrict 6 (Tanana River drainage) fishwheels are primarily used to harvest kings and summer chums for both commercial and subsistence purposes.

It is anticipated that the 1979 return of king salmon to the Tanana River drainage will be considerably below average in abundance based on poor production of the dominant 6 yr old age class in 1967 and 1973. The 1967 escapement was adversely affected (loss of eggs; disturbance of spawning beds) by the Tanana River flood in August of that year. In 1973 king salmon escapements to the Salcha and Chena Rivers were the lowest ever recorded.

In order to bolster king salmon escapements in view of the expected poor run, the Department is considering reducing fishing time (presently 5 days a week) in subdistrict 6 by emergency order either prior to the opening of the season (June 15) or during the season. Another option under consideration would change the fishing schedule by providing for two fishing periods a week instead of the present single 5 day period. Reducing fishing time and/or providing for split periods will spread out the effort and minimize overharvest of various run segments.

If the return of king salmon was larger than expected and the king salmon guideline harvest level was taken, then the commercial fishing season would be closed. A season closure would also aid in bolstering summer chum salmon escapements since Tanana River drainage summer chum salmon runs are not large. If subsistence summer chum catches taken during the season closure appear average or above average in abundance, then a reopening of the commercial season on a reduced fishing schedule would be considered.

Fall Chum and Coho Salmon: In the upper Yukon area fall chum and coho salmon are present during the period from mid-August through September. The commercial salmon fishery during this period is primarily regulated by a 27,500-102,500 combined chum and coho salmon guideline harvest which is apportioned to three subdistricts. This guideline harvest level, adopted by the Board of Fisheries for 1979, replaced the previous 50,000 quota. Unless there are indications that the fall chum run is either very small or very large, the midpoint (65,000 fish) of the guideline harvest level will be the expected catch. As in the lower Yukon area, cohos are of minor importance and are taken incidentally to the more abundant fall chums.

Also effective for the 1979 fishing season the Board reduced fishing time for the fall chum and coho fishery (after August 15) from 5 to 4 days a week in section 4-B of subdistrict 4, section 5-A of subdistrict 5 and subdistrict 6. Also the fishing schedule was split into two-2 day periods. Reducing the weekly fishing time will provide for better balanced harvests and escapement.

If a weak run of fall chums is indicated (based on lower Yukon area catches), then a closure of the season rather than a reduction of fishing time would be implemented by emergency order. A season closure of the commercial fishery would have less impact on subsistence fishing than a further cutback in fishing time.

The lower end of the guideline harvest level may be taken in some subdistricts if a weak run occurs. On the other hand, if the runs are large, then the upper end of the guideline harvest levels will be allowed to be taken by providing for additional fishing time.

In subdistrict 6 a delay in the opening of the fall season will be implemented by emergency order to provide for a more equitable harvest. In some years, the greater majority of the catch quotas were taken in the lower portions of subdistrict 6. A delay in the opening of the season, would allow the fall chum run to distribute itself throughout the subdistrict. This in turn would provide a more equitable harvest among various fishermen groups. Also, more importantly, balanced escapements of all spawning stocks would be realized since the harvest would be "spread out" over a longer period of time. This strategy has been endorsed by the Board of Fisheries.

ENFORCEMENT

The Board of Fisheries at its December 1977 meeting adopted a public proposal to repeal regulations which administered the legislation pertaining to the sale of subsistence caught salmon roe. The 1978 Legislature did not pass a bill to allow continuation of subsistence roe sales in view of the Board's action. Therefore, sale of subsistence roe is illegal.

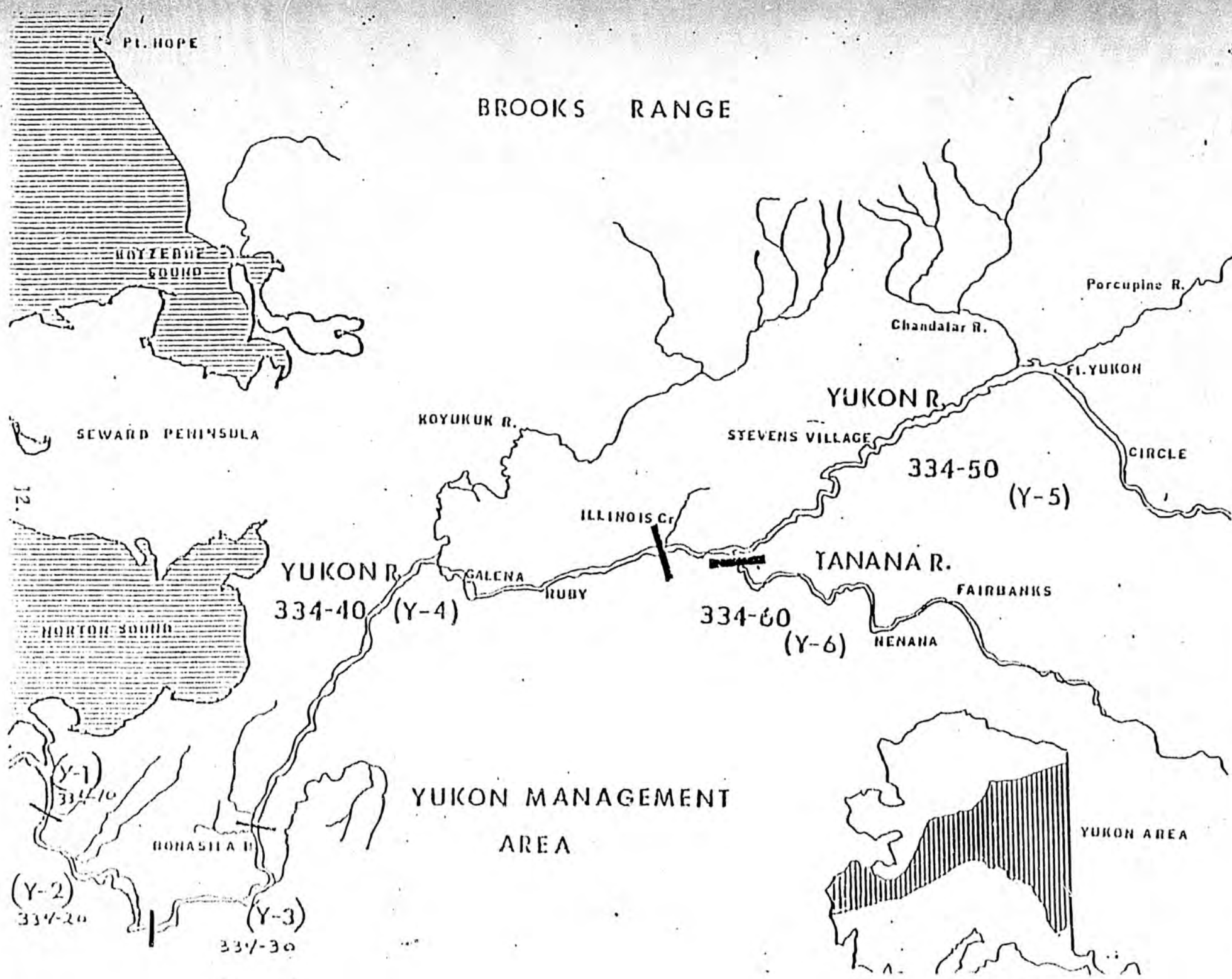
At the April 1979 meeting the Board adopted a proposal requiring the immediate removal of the dorsal fin from subsistence caught salmon in subdistrict 6. This action was necessary for enforcement purposes in order to distinguish between subsistence caught and commercially taken salmon. In recent years subsistence caught salmon have illegally entered commercial channels.

Fishermen are requested to report any instances of fishery violations to Department of Fish and Game or Division of Fish and Wildlife Protection (Dept. of Public Safety) personnel in order that follow-up action may be taken.

Questions or comments concerning the 1979 Yukon Area Salmon Management Plan should be directed to:

Mike Geiger
Yukon Area Management Biologist
Division of Commercial Fisheries
Alaska Department of Fish and Game
333 Raspberry Road
Anchorage, Alaska 99502
Phone 344-0541

Fred Andersen
Upper Yukon Area Mgmt. Biologist
Division of Commercial Fisheries
Alaska Dept. of Fish and Game
1300 College Road
Fairbanks, Alaska 99701
Phone 452-1531



PT. HOPE

BROOKS RANGE

KOTZEBUE SOUND

SEWARD PENINSULA

KOYUKUK R.

Chandalar R.

Porcupine R.

YUKON R.

FI. YUKON

STEVENS VILLAGE

334-50 (Y-5)

CIRCLE

12.

ILLINOIS Cr.

YUKON R.
334-40 (Y-4)

GALENA

RUBY

TANANA R.

334-60 (Y-6)

FAIRBANKS

NENANA

NORTON SOUND

(Y-1)
334-10

HONASHIA II

YUKON MANAGEMENT AREA

(Y-2)
334-20

(Y-3)
334-30



YUKON AREA

Commercial salmon catch and effort data Yukon area, 1973

Subdistrict	Fishing Vessels	Kings	Summer Chums	Fall Chums	Total Chums	Cohos	Total
1	429	57,890	388,492	135,065	523,557	16,262	597,709
2	204	32,335	225,440	51,646	277,086	5,835	315,256
3	<u>22</u>	<u>2,917</u>	<u>27,201</u>	<u>11,527</u>	<u>38,728</u>	<u>758</u>	<u>42,403</u>
Subtotal Lower Yukon	655	93,142	641,133	198,238	839,371	22,855	955,368
4	82	701	364,387	11,230	375,617	32	376,350
5	53	3,115	4,897	21,010	25,907	7	29,029
6	<u>38</u>	<u>644</u>	<u>34,675</u>	<u>13,259</u>	<u>47,934</u>	<u>3,066</u>	<u>51,644</u>
Subtotal Upper Yukon	173	4,460	403,959	45,499	449,458	3,105	457,023
Total	828	97,602	1,045,092	243,737	1,288,829	25,960	1,412,391