

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86/2

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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. 16.42.010(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 NEC-
CESSARY 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 AWARDING 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 Andreafski, 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

IN THE SENATE

BY THE RESOURCES COMMITTEE

HOUSE CS FOR SENATE CONCURRENT RESOLUTION NO. 22

IN THE LEGISLATURE OF THE STATE OF ALASKA

ELEVENTH LEGISLATURE - FIRST SESSION

Relating to the limited entry program.

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

WHEREAS art. VIII, sec. 15 of the Alaska Constitution provides that the state may "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

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

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

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

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

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 Andreafski 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.