

MEMORANDUM

TO: Council, SSC, and AP Members

FROM: Jim H. Branson  
Executive Director

DATE: March 18, 1982

SUBJECT: 1982 Salmon Management

*ACTION REQUIRED*

*Final approval of management proposals.*

BACKGROUND

In January at the joint meeting with the Board of Fisheries, the Council took preliminary action on 1982 salmon management proposals. This action was preceded by an extended proposal period and lengthy public testimony at the meeting. Various agency reports indicated that local Southeast Alaskan wild chinook stocks are responding favorably to the current management regime, but non-local wild stocks have shown little or no improvement. Public testimony stressed the economic impacts of current regulations and the inability of the industry to withstand further catch reductions. Testimony from Columbia River Indian Tribes stressed treaty allocations and the need to transfer more chinooks to Tribal fishing areas.

The PDT met to discuss the various proposals received prior to the joint meeting and recommended that the Council consider a range of proposals from maintaining the current harvest level (272,000 chinooks) to total elimination of directed fishing. They felt that this range of proposals would provide the Council the latitude to balance conflicting concerns and interests. The PDT did not arrive at a consensus position on the need for harvest reduction or for any particular harvest level at that time.

The Council's preliminary position was to maintain the current chinook Optimum Yield range and direct the Regional Director of NMFS to manage for the lower end of the range (243,000 chinooks). On all other salmon proposals (gear seasons, etc.) the Council deferred to the Board's recommendations.

The salmon agenda for this meeting will begin with reports from the agencies involved in salmon management coastwide. The PDT will also present an oral report.

Included in this salmon agenda are:

- D-1(a): Chinook OY alternatives included in Draft SEIS
- D-1(b): Actions taken by the Council and Board in January
- D-1(c): Letter from Gail Stromme, Halibut Producers Coop.
- D-1(d): Letter and Proposal from Columbia River Intertribal Fish Commission
- D-1(e): Letter from Columbia River Fisheries Council Law Enforcement Committee

The chinook optimum yield (OY) alternatives proposed by the Plan Maintenance Team in January and included in the Draft Supplemental Environmental Impact Statement (DSEIS) are as follows:

Alternative 1: Status quo, harvest guideline 272,000.

Alternative 2: Status quo, harvest guideline 243,000.

Alternative 3: Total closure of the FCZ as part of a time/area approach to reducing catch and redistributing catch, or used in conjunction with other options.

Alternative 4: No directed fishery for chinook salmon in Southeast Alaska. The possibility of an incidental catch allowance while coho and pink fishing should be considered.

### Council Action on Optimum Yield

*Don Bevan moved that the Council ask the Board to match its OY range of 243,000 - 272,000 chinook salmon and that the Council grant authority to the the Regional Director to implement whatever closures may be necessary to hold the troll catch in the FCZ to the lower end of the range, subject to changes which may result from final Council action on the troll salmon proposals at the March meeting; seconded by Keith Specking.*

Gene DiDonato favored the motion, saying that the Washington Department of Fisheries would prefer not to have preferred options designated at this time, but that final decisions be made in March after all data are in and discussions with the Canadians have been completed.

Mr. Collinsworth spoke against the motion, citing the need for demonstration of reciprocity from the Canadians before taking further cuts in the Southeast Alaska troll fishery.

*Upon roll call vote, the motion passed 7 to 3, with Council members Collinsworth, Mace, and DiDonato in objection.*

*Don Bevan then moved for reconsideration of the motion after discussions with the Board; seconded by Harold Lokken. There being no objection, it was so ordered.*

### Council/Board Action

#### Optimum Yield

Vice-Chairman Lokken explained the Council's actions to the Board and asked them to consider adopting the Council's range for optimum yield and to withhold final action on the 1982 troll salmon regulations until the March Board meeting. Don Collinsworth explained the Council's decision to maintain an OY range of 243,000 - 272,000 fish and asked the Board to consider taking complementary action.

Vice-Chairman Lokken encouraged the Board to adopt the Council's OY range as visible evidence to the Court in the Confederated Tribes case that the Council and Board are working together to address the conservation problems facing upper Columbia River chinook stocks. The purpose for deferring final action until the March meeting is to allow for changes which may be substantiated by data on the coastwide troll fisheries still being compiled and to see what concessions Canada is willing to make in the government-to-government negotiations scheduled for February.

Don Bevan explained that the Council is asking the Board to set the numbers for their OY range at 243,000 - 272,000 fish, but not necessarily to also manage to the lower end of that range.

Nick Szabo said that the Board's OY range for 1981 (272,000 - 288,000 fish) afforded improvement to the stocks in accordance with the 15-year rebuilding plan established last year, and felt that rebuilding is right on or ahead of schedule.

Bob McVey countered that the benefits to Southeast Alaskan stocks were notable, but benefits to the Columbia River and other Pacific Coast stocks were far below even the minimum goals. He explained that adopting the 243,000 - 272,000 optimum yield and managing to the lower end of the range would provide an additional reduction of 9% from the 1981 catch level and place the State of Alaska in a better bargaining position with Judge Craig when he renders his preliminary decision on the Confederated Tribes case in February.

Gene DiDonato said that the majority of stocks contributing to the Southeast Alaska troll fishery originate in British Columbia and from the Columbia River south. Southeast Alaska stocks make up only a portion of the stocks contributing to the fishery, and the decline in British Columbia and southern stocks must be halted. This is a coastwide concern which must be addressed by all the participants involved, including Canada.

John Harville agreed, suggesting that the Council and Board address the issue as a coastwide problem in an attempt to pressure others with joint responsibility for the fishery to do likewise. Continuity between the Council and Board will send a signal to the Canadians that they must do their part to contribute to the solution.

#### Board Action

Jim Beaton moved that Board proposal 109 be amended to read:

"5 AAC 35.365 SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

"(b) The Board recognizes ... The department shall make inseason adjustments to limit salmon fishing seasons, periods, and areas for conservation purposes and to limit the total commercial king salmon harvest by all gear types to a range of 243,000 to 288,000 fish."

The motion was seconded by Harry Sundberg. Upon call for the question, the motion to amend proposal 109 carried by a vote of 5 to 0.

It was then moved and seconded that the Board adopt proposal 109 as amended. The motion carried by a vote of 6 to 0.

Board Chairman Szabo asked the Canadian officials present to submit their report to the Board as soon as possible on the the 1981 sport, troll, and net catches by statistical area by week; their analysis of the 1981 fishery; and a description of their plans for the 1982 fishery and the benefits they expect to derive from these measures.

## Proposal to Extend the Troll Fishery West of Cape Suckling

Board proposal 128, submitted by the Pelican and Elfin Cove Advisory Committees and Alessandro T. Hill, would open the area west of Cape Suckling to trolling. Their justification in support of the proposal was that it would reduce effort and harvest on Southeast Alaska stocks and provide economic advantages to the westward areas.

### Board Action

It was moved and seconded that the Board adopt proposal 128 to open the troll fishery to areas west of Cape Suckling. Upon call for the question, the motion failed by a vote of 0 to 7.

### Council Action

*Don Bevan moved that the Council concur with the Board's decision not to open the troll fishery west of Cape Suckling; seconded by Bob Mace. The motion was unanimously adopted.*

## Treble Hooks

Board proposal 127, submitted by the Alaska Trollers Association and the Elfin Cove, Ketchikan, and Pelican Advisory Committees, would repeal the ban on treble hooks adopted by the Board in 1981. Justification for the proposal was that existing studies on single hooks versus treble hooks show no significant difference in mortality rates.

### Board Action

It was moved and seconded that the Board adopt proposal 127 to repeal the ban on treble hooks. Upon call for the question the motion failed by a vote of 3 to 4.

Board member Chris Goll suggested that the ADF&G staff clarify the regulation to specifically state that only single hooks may be used in the troll fishery.

### Council Action

*Bob Mace moved that the Council concur with the Board to continue the ban on treble hooks; seconded by Don Collinsworth. Upon call for the question, the motion carried with Joe Demmert in objection.*

## Retention of Tagged Undersized Salmon

Board proposal 130, submitted by ADF&G staff, would allow tagged, undersized salmon and those with fully healed adipose fin clips to be retained; require that the tags and heads be submitted to the Department along with the date and location of the catch; and prohibit the sale of troll-caught chinook salmon under 28 inches in length. The Council's Troll Salmon FMP would require amendment to allow retention of these salmon.

### Board Action

It was moved and seconded that proposal 130 be amended by striking the words "fully healed". Upon call for the question, the motion to amend the proposal passed by a vote of 7 to 0.

It was then moved and seconded that the Board adopt proposal 130 as amended. The motion passed by a vote of 7 to 0.

### Council Action

*Don Bevan moved that the Council amend the fishery management plan to provide for the retention of tagged, undersized chinook salmon in the troll and sport fisheries in the FCZ; seconded by Don Collinsworth. The motion was unanimously adopted.*

### Number of Lines

Board proposal 120, submitted by Chuck Porter, would allow trollers to have more than one legal limit of gear on board. Proposal 121, submitted by David R. Carlson, would reduce the number of gurdies allowed on power troll vessels from six to four north and west of Cape Spencer. Proposal 122, submitted by the Angoon Advisory Committee, would allow the use of four lines on hand troll vessels. Proposal 125, submitted by Chuck Porter, would allow the use of down riggers by hand troll vessels.

### Board Action

It was moved and seconded that the Board adopt proposal 120. The motion failed by a vote of 0 to 7.

It was moved and seconded that the Board adopt proposal 121. The motion failed by a vote of 0 to 7.

It was moved and seconded that the Board adopt proposal 122. The motion failed by a vote of 1 to 6.

It was moved and seconded that the Board adopt proposal 125. The motion failed by a vote of 2 to 4.

### Council Action

*Bob Mace moved that the Council concur with the Board to maintain the status quo for hand and power troll gear, insofar as possible under the National Standards; seconded by Don Collinsworth. Upon call for the question, the motion carried with Don Bevan in objection.*

### Definition of the FCZ

Board proposal 133, submitted by the Ketchikan Advisory Committee, would clarify the boundaries of state and federal waters as follows:

5 AAC 33.312

"(d) State trolling regulations shall apply in those waters described in 5 AAC 33.200 and those waters of the coastal fishing zone within three miles due west and seaward of the surfline."

The Ketchikan Advisory Committee suggested that confusion resulting from the FCZ closure in August 1981 may be dispelled by maintaining traditional "inside" areas during FCZ closures.

Bob McVey told the Board that the Council must work within the federal definition of the FCZ from which there can be no deviations. NMFS hopes to avoid this problem in 1982 by stating specifically to which waters a given closure will apply.





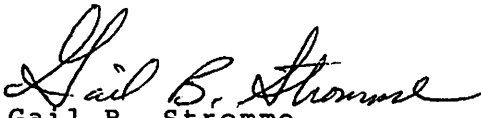
N.P.F.M.C.  
Page Two  
March 5, 1982

HPC, like other fish companies in Southeast Alaska, also operates tenders for troll salmon. These tenders operate on a charter or guaranteed poundage basis for the troll season. They are paid on either daily or monthly rates, or so many cents per pound for their services. If there is a closure and as a result our tenders are idle at the dock, we must still pay their guarantees if they fail to get the poundage agreed upon in their contracts. This can result in thousands of lost dollars, depending upon the amount and length of closures. With tenders and closures, our losses are threefold. We are out tender fees, but have no product, and receive no revenue from handling and sales.

It is not right to penalize and impose economic hardships on the Alaska troll fleet and processors only to see the Canadian troll fleet as the primary beneficiaries of troll closures. Needs for additional chinook returns to the river systems could better be achieved by eliminating the incidental catch of foreign fleets within our waters.

Sincerely,

HALIBUT PRODUCERS COOPERATIVE

  
Gail B. Stromme  
HPC Sitka Plant Manager

GBS:gn

COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

ACTION	NO	INTERNAL
EXPIRES		
		JG
8383 N.E. Sandy Blvd.		
Suite 320		
Portland, Oregon 97220		
Telephone (503)		
257-0181		

March 17, 1982

Mr. Clement V. Tillion, Chairman  
North Pacific Fishery Management Council  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Mr. Tillion:

The Columbia River Indian tribes have rights, secured by treaty, to fish in common with all other citizens of the United States. That treaty fishing right has been adjudicated, and given substance, by a long series of federal court decisions. See, e.g., Sohappy v. Smith, 302 F. Supp. 899 (D Or. 1969), subsequent order aff'd sub nom. United States v. Oregon and Washington, 529 F.2d 570 (9th Cir. 1976); United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974), aff'd, 520 F.2d 676 (9th Cir. 1975), cert. denied, 423 U.S. 1086 (1976); Washington v. Washington State Commercial Passenger Fishing Vessel Association, 99 S. Ct. 3055 (1979).

In the pending case of Yakima Indian Nation v. Baldrige, No. C80-342T (W.D. Wash. 1980), the Columbia River treaty tribes have alleged that management of ocean fisheries by the Secretary of Commerce has violated and continues to violate the plaintiffs' treaty fishing rights as well as provisions of the Magnuson Fishery Conservation and Management Act. Senior Federal District Judge Walter E. Craig has ordered the parties to seek a negotiated resolution to the issues subsumed within Yakima Indian Nation v. Baldrige.

As part of the court-ordered negotiation process, the plaintiff Indian tribes submitted the enclosed proposals, as revised, for management of 1982 ocean fisheries by the Secretary of Commerce, the state of Oregon, and the state of Washington. These proposals were designed to provide an interim regulatory regime for comprehensive, coastwide management and conservation of Columbia River chinook and coho salmon stocks that are subject to treaty allocation.

Since the Yakima Indian Nation v. Baldrige litigation is pending, the Columbia River Inter-Tribal Fish Commission is submitting the above-referenced proposals as its recommendations for management of 1982 ocean fisheries.

The Inter-Tribal Fish Commission will submit no other written comments to the North Pacific Fishery Management Council, other than to incorporate by reference its comments submitted to this council for the years 1979, 1980, and 1981.

Sincerely,

*S. Timothy Wapato*  
S. Timothy Wapato  
Executive Director

# RECOMMENDATIONS FOR S.E. ALASKA TROLL SALMON SEASON - 1982

Recommended Season: July 15 - September 20 all species

Quota: 128,000 chinook (53% reduction from 1981 optimum yield)

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- Intent:
- 1) Minimize catch of Columbia River and other non-Alaska chinook salmon in S.E. Alaska troll fishery while minimizing impact on S.E. Alaska fishery as a whole.
  - 2) Maximize coho harvest consistent with above.
  - 3) Maximize transfer of non-local (Columbia River) stocks through competing fisheries.
  - 4) Provide meaningful progress toward satisfying conservation and Columbia River treaty Indian harvest requirements.
- Background:
- 1) Most chinook stocks contributing to S.E. Alaska troll fishery are of non-Alaska origin.
  - 2) Many of those stocks are seriously and chronically under-escaped which significantly impacts the productivity of the chinook resource coastwide.
  - 3) One of the major contributors to the Southeast Alaska fishery is the upper Columbia River bright chinook stock.

- a) This stock has steadily declined since the early 1970's and was underescaped by an average of 27% during the past five years.
- b) Additionally, this stock is subject to a treaty allocation of up to 50%. Present treaty allocation is far below that level as shown in the following table (1981 allocation):

<u>Harvester</u>	<u>Thousands of Upriver Brights 1/</u>	<u>% U.S. Harvest</u>
Alaska	37.9	74.8
WA/OR	4.6	9.1
Col. R. Non-Indian	1.4	2.8
Total Non-Indian	<u>43.9</u>	86.6
Indian	6.8	13.4
Total harvest	<u>50.7</u>	

- 4) Reductions in ocean fisheries to date have clearly been inadequate to halt the decline in returning fish, or to satisfy treaty obligations.
  - a) The 1981 Alaska fishery was reduced 17% from the 1980 harvest and 23% from the 1980 upper OY range of 320,000 chinook. 2/
  - b) Reductions must be significantly greater to have a noticeable effect on escapement or allocation.

1/ Source WDF/NBS catch regulation model simulations and WDF-ODFW inriver catch estimates.  
2/ Assuming 1980 and 1981 Alaska catches were 299,900 and 247,000 respectively as specified by ADFG, November 1981.

- Rationale:
- 1) S.E. Alaska troll fishery primarily harvests chinook and coho salmon.
    - a) Chinook stocks contributing to the fishery are largely of non-Alaskan origin (Natural Resource Consultants, 1981)
    - b) Coho stocks are mainly of Alaska origin with significant numbers of British Columbia stocks contributing (NRC, 1981).
  - 2) Contributing chinook stocks, both local and non-local, are seriously depressed, whereas coho stocks are apparently experiencing adequate escapement.
  - 3) The timing of chinook catch largely occurs prior to coho catch (attached figure).
    - a) About 60% of chinook catch occurs prior to July 15.
    - b) Only 13% of coho catch occurs before this date.
  - 4) Thus closing fishery prior to July 15 affords significant protection to depressed chinook stocks while leaving the coho fishery relatively untouched. Closure at this time would also provide maximum transfer of fish to southern points.
    - a) WDF model simulations estimate maximum Alaska and Canadian transfers in July and August (WDF, 1981a).
    - b) Canada is considering at least a two week closure of the northern British Columbia fishery in the June-July time frame.

Preliminary estimate of long term benefit of proposed season to Columbia upriver bright (URB) chinook. 1/

	Base=	Base=
	320,000 <sup>2/</sup>	272,000 <sup>2/</sup>
1. Reduction in Alaska Catch	192,000	144,000
2. Estimated 1981 contribution of URB's to Alaska fishery	15.3%	15.3%
3. Reduction in URB's	29,400	22,000
4. Transfer rate of Alaska reductions to Washington (WDF, 1981 a)	63%	63%
5. Benefit to Columbia River	18,500	13,900
6. Estimated return to Col. R. without proposed regulation change (WDF, 1981 b)	62,900	62,900
7. Estimated return to Col. R. with proposed regulation change. <u>3/</u>	81,400	76,800

1/ These estimates were made using the best data available at the time of the analysis. Refinement of the estimates may be appropriate as more recent and detailed information regarding contribution and transfer rates becomes available.

2/ Estimated benefits for both the pre-1981 0Y (320,000) and 1981 0Y (272,000) are provided for the edification of those interested in such distinctions. The choice of base for comparison should have no effect in determining the actual benefit to the Columbia River, since in both cases we are dealing with the same population size and the same reduced harvest (128,000). The slight difference in the bottom line of the two estimates is caused by the inability of the MDF estimate of 1982 UR8 return without regulatory change, to distinguish between the 1981 and earlier regulatory schemes. Theoretically, the right figure in line 6 should be larger than the left figure to reflect the reduced 1981 0Y. In which case, the two numbers in line 7 would be the same.

3/ Assuming a constant population size.

3/10/82



2.

From its inception five years ago, as a monthly forum for discussing Columbia River enforcement problems, the Committee has evolved into a coordinated enforcement body. Acting under State jurisdiction, the Committee, in the fall of 1980, organized the first intensified State/Federal enforcement effort on the river. Based on the success of that first major joint operation, the Committee, in early 1981, established the Columbia River Enforcement Task Force. Led by one operational commander from each state, fisheries patrols and associated enforcement activities are now coordinated for maximum coverage and effectiveness.

The attached compilation of Columbia River enforcement data is all that is presently available for the period from 1977 through 1981 and while this summary presents a general overall picture of Columbia River enforcement activity, it is imprecise and does not provide an accurate data base from which valid yearly comparisons can, or should be drawn.

It is the consensus of our membership that the present coordinated enforcement effort on the Columbia has accomplished two things: It has decreased the number of people participating in the illegal fishery and greatly increased the amount of care and planning that goes into that same illegal fishery by those who choose to continue.

We are presently well into our joint planning process for the 1982 seasons and we have every reason to believe that our planned operations will continue to have a substantial impact on illegal activities on the Columbia River.

Sincerely,



Wayne C. Lewis  
Chairman

Attachment

JAN 22 1982

MEMORANDUM

Members of the Columbia River Law Enforcement Committee

SUBJECT: COLUMBIA RIVER STATISTICS 1977 - 1981

The following is a compilation of available data of Columbia River enforcement activities from 1977 through 1981. It is requested that any corrections be brought to the attention of the writer at the next enforcement committee meeting.

	<u>ARRESTS</u>	<u>NETS SEIZED</u>	<u>NUMBER OF PATROLS</u>	<u>HOURS OF PATROL</u>	<u>FISH SEIZED</u>
<u>1977</u>	175	253	* Unknown	* Unknown	Salmon - 90 + 26,950 lbs. Steelhead - 56 Sturgeon - 16
<u>1978</u>	171	314	786	9,348	Salmon - 1,302 + 4,452 lbs. Steelhead - 202 + 731 lbs. Sturgeon - 120 + 798 lbs
<u>1979</u>	122	204	796	7,298	Salmon - 663 Steelhead - 120 Sturgeon - 81
<u>80</u>	162	236	850	7,246	Salmon - 592 + 3,252 lbs. Steelhead - 52 + 44 lbs. Sturgeon - 74 + 1,289 lb
<u>1981</u>	110	183	607	5,799	Salmon - 833 + 1,053 lbs. Steelhead - 343 Sturgeon - 111
<u>FIVE YEAR TOTAL</u>	740	1,190	3,039	29,691	Salmon - 3,480 + 37,707 Steelhead - 773 + 775 lb Sturgeon - 282 + 2,087 1

\* No statistics available for 1977.

John C. Williams, Superintendent

By

*Robert J. Lane*  
Robert J. Lane, Lieutenant  
Game Division

RJL:ch  
Salem, Oregon  
January 21, 1982



DRAFT  
HIGH SEAS SALMON PDT REPORT  
March 21, 1982

I. INTRODUCTION

Prior to the January 4-7, 1982, joint North Pacific Fishery Management Council-Alaska Board of Fisheries meeting, the salmon PDT reviewed the status of chinook salmon stocks, coastwide, and the performance of the Southeast Alaska chinook salmon fishery under the 1981 amended salmon FMP. The PDT reviewed management of the Southeast Alaska chinook salmon fishery as it related to achieving the primary FMP objective to:

"Manage the troll fishery in conjunction with other Southeast Alaska fisheries to obtain the number and distribution of spawning fish capable of producing the optimum total harvest on a sustained basis from all wild stocks harvested in Southeast Alaska."

The PDT concluded that the 1981 regulatory regime contributed to the improvement of escapements into some Southeast Alaska rivers. Improvements to major contributing non-Alaskan stocks was less positive. Some minor producers showed improvements but major producers such as the Columbia River "brights" and the majority of British Columbia chinook stocks have continued to decline and are currently achieving escapements which are far below optimum or even minimum escapement goals. As a consequence, the PDT recommended and the Council adopted the following four alternative management regimes for 1982:

1. Status Quo OY range with harvest guideline of 272,000 chinook salmon (1981 regime).
2. Status Quo OY range with harvest guideline of 243,000 chinook salmon (lower end of OY range).
3. FCZ closure as part of a time/area approach to reducing catch.
4. No directed fishery for chinook salmon.

The Council adopted as its preferred alternative the status quo OY range with a harvest guideline of 243,000 chinook.

The PDT has again reviewed the latest status of stocks and fishery information available to date including:

1. WDF March 19, 1982 Report to NPFMC (model analysis of management options).
2. Canadian chinook salmon catch data including Ricker curve for optimum escapement of British Columbia stocks.
3. Estimated catch of Oregon chinook salmon stocks harvested in Alaska.
4. SSC draft report of salmon subcommittee.
5. Columbia River Inter-tribal Fish Commission proposal for management of the 1982 Southeast Alaska Fishery.

The PDT concluded that the status of coastwide chinook salmon stocks contributing to the Southeast Alaska fishery is unchanged from its earlier evaluation.

In conducting its current evaluation, the PDT made the following specific recommendations for developing a better information base for future fisheries management decisions:

1. Many agencies, coastwide, are involved in coded ~~wire~~ tagging (CWT) of salmon and recovery of returning adults. Most of these programs are designed to answer specific research needs and thus the data can not be expanded to estimate total numbers of specific stocks captured in various interception fisheries. Many of these studies could be designed to provide more reliable expansion for management purposes. These programs could have much broader application and would respond to critical fishery management needs. In addition, the current backlog of micro-wire tag data should be examined for its potential application to stock specific fisheries management problems. It should be remembered, however, that the majority of stocks contributing to the Southeast Alaska fishery appear to be

wild stocks and presently are not represented by micro-tag studies. Micro-wire studies will prove useful for management but it should be remembered that these data will allow delineation of the distribution only of some specific hatchery stocks which have been tagged and a limited proportion of wild stocks in the fishery.

2. The PDT appreciated the attendance and contribution by a representative of the Canadian Department of Fisheries and Oceans at the PDT meeting. The exchange of data and frank discussion of mutual fishery management problems was very informative and provided a much clearer understanding of each country's problems. The PDT recommends that the Council consider ex-officio (non-voting) membership by a Canadian Scientist on the salmon PDT.
3. The PMT recommends that a coastwide data format be developed that centralizes the summarization and annual updating of escapement, stock distribution, and fishery data necessary to review annual management regimes. Such a format should identify the most critical information needs and facilitate its collection. The PDT will initiate efforts to develop and coordinate this data collection.

## II. ANALYSIS OF REGULATORY ALTERNATIVES

WDF computer model simulation data are now available for three important chinook salmon stocks originating south of Alaska. The model data for these stocks, in a general order of magnitude sense, can be used to address the following general levels of conservation issues:

1. Conservation needs specific to the modeled stock (upper Columbia River "bright" and summer chinook).
2. Conservation needs of West Coast of Vancouver Island natural fall chinook stocks (Robertson Creek hatchery fall chinook, which is not experiencing conservation problems) is used as an indicator stock for potential conservation benefits from different regulatory options.
3. Many stocks of Southern origin in general.

The analysis presented here includes the 1981 micro-wire tag recoveries from the Washington and Southeast Alaska fisheries, but not the Canadian fishery. In addition, the distribution of upriver "brights" in the Southeast Alaska fishery was restratified from previous analysis.

Computer simulations and some possible time/area closures are presented here for the following three regulatory regimes and harvest guidelines:

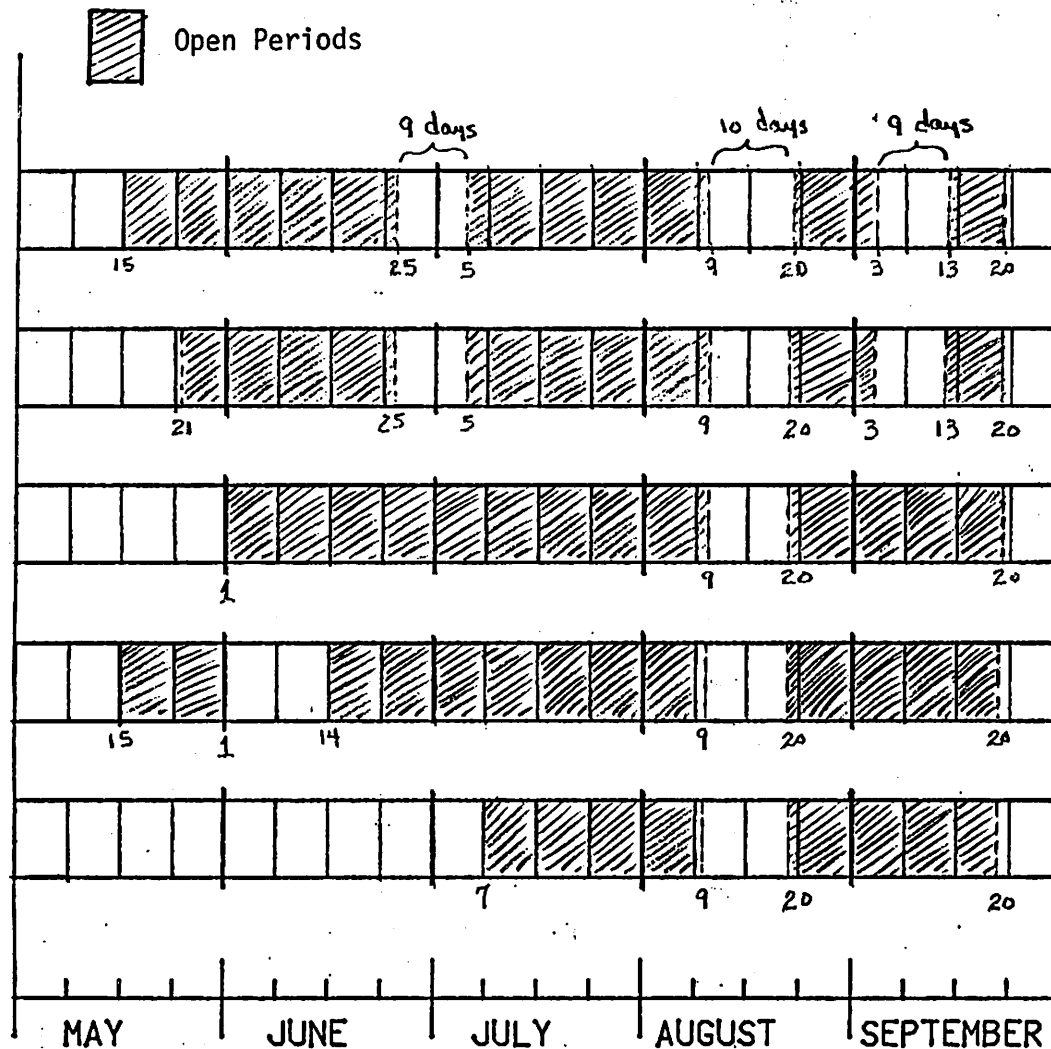
1. Status quo OY range with harvest guideline of 272,000 chinook salmon.
2. Status quo OY range with harvest guideline of 243,000 chinook salmon and a two week closure early in the season (Council's preferred alternative).
3. OY of 128,000 chinook salmon with all species season beginning July 7 (modified Inter-tribal Fish Commission proposal).

The figures presented in the analysis are best used to compare relative impacts of the alternative management regimes with one another. Despite known shortcomings with respect to its application to chinook salmon management problems, the PDT feels the WDF model is the best available tool to compare the various regulatory options.

The majority of the natural stocks contributing to the Southeast Alaska chinook fisheries are not achieving stated escapement goals. In order to return these runs to optimum levels in the minimum possible time, harvests would have to be sharply curtailed or eliminated.

Without direction from the Council regarding objectives on rebuilding rates of major depressed stocks and the relative sharing of conservation burdens with Canada and other fisheries, the team is unable to recommend a specific regulatory option. Instead the team has analyzed some of the biological ramifications of three alternative proposals.

-5-



1982 Harvest Ceiling

272,000

243,000 (option 1)

243,000 (option 2)

243,000 (option 3)

128,000

(u)

FIGURE . APPROXIMATE TROLL FISHING PERIODS FOR DIFFERENT LEVELS OF CHINOOK SALMON HARVEST CEILINGS FOR 1982 SOUTHEAST ALASKA COMMERCIAL FISHERIES

(OTHER TIME/AREA REGULATORY OPTIONS ARE ALSO UNDER CONSIDERATION BY THE MANAGEMENT AGENCIES.)

TABLE . ESTIMATED IMPACTS OF VARIOUS MANAGEMENT ACTIONS IN 1982 SOUTHEAST ALASKA AND NORTHERN BRITISH COLUMBIA FISHERIES ON CATCHES AND TRANSFERS OF COLUMBIA 'BRIGHT' FALL CHINOOK SALMON

SOUTHEAST ALASKA CATCH LIMITS  
272,000                      243,000                      128,000

I. WITH NORTHERN B.C. TWO WEEK JUNE CLOSURE

ESTIMATED CATCHES IN

SOUTHEAST ALASKA <sup>1</sup>	45,400	40,400	20,600
CANADA <sup>2</sup>	-	76,400	81,200
WASH/ORE <sup>3</sup>	-	4,300	4,400
TERMINAL, IN-RIVER RUN SIZE - #	-	69,300	80,800
% INCREASE FROM 1981 REGS.		10%	28%

II. WITHOUT NORTHERN B.C. TWO WEEK JUNE CLOSURE

ESTIMATED CATCHES IN

SOUTHEAST ALASKA <sup>1</sup>	45,400	39,400	19,900
CANADA <sup>1</sup>	78,100	80,300	85,100
WASH/ORE <sup>3</sup>	6,200	4,200	4,300
TERMINAL, IN-RIVER RUN SIZE - #	62,900	67,500	78,600
% INCREASE FROM 1981 REGS.	0	7%	25%

TABLE ESTIMATED IMPACTS OF VARIOUS MANAGEMENT ACTIONS IN 1982 SOUTHEAST ALASKA AND NORTHERN BRITISH COLUMBIA FISHERIES ON CATCHES AND TRANSFERS OF ROBERTSON CREEK FALL CHINOOK SALMON

SOUTHEAST ALASKA CATCH LIMITS  
272,000                      243,000                      128,000

I. WITH NORTHERN B.C. TWO WEEK JUNE CLOSURE

ESTIMATED CATCHES IN

SOUTHEAST ALASKA <sup>1</sup>	37,800	32,800	14,400
CANADA EXCLUDING TERMINAL HARVEST <sup>2</sup>	-	67,200	74,800
WASH / ORE <sup>3</sup>	-	-	-
TERMINAL RUN SIZE - #	-	38,700	46,600
% INCREASE FROM 1981 REGS.		9%	31%

II. WITHOUT NORTHERN B.C. TWO WEEK JUNE CLOSURE

ESTIMATED CATCHES IN

SOUTHEAST ALASKA <sup>1</sup>	37,800	32,100	19,900
CANADA EXCLUDING TERMINAL HARVEST <sup>1</sup>	66,900	69,600	77,000
WASH / ORE <sup>3</sup>	-	-	-
TERMINAL RUN SIZE - #	35,500	37,700	45,300
% INCREASE FROM 1981 REGS.	0	6%	28%

TABLE ESTIMATED IMPACTS OF VARIOUS MANAGEMENT ACTIONS IN 1982 SOUTHEAST ALASKA AND  
 NORTHERN BRITISH COLUMBIA FISHERIES ON CATCHES OF COLUMBIA SUMMER CHINOOK SALMON

SOUTHEAST ALASKA CATCH LIMITS  
272,000      243,000      128,000

I. WITH NORTHERN B.C. TWO WEEK JUNE CLOSURE

ESTIMATED CATCHES IN

SOUTHEAST ALASKA <sup>1</sup>	11,900	11,000	7,400
CANADA <sup>2</sup>	-	22,700	23,800
WASH / ORE <sup>3</sup>	-	1,900	2,000
TERMINAL, IN-RIVER RUN SIZE - #	-	24,200	26,300
% INCREASE FROM 1981 REGS		8%	17%

II. WITHOUT NORTHERN B.C. TWO WEEK JUNE CLOSURE

ESTIMATED CATCHES IN

SOUTHEAST ALASKA <sup>1</sup>	11,900	10,600	7,100
CANADA <sup>1</sup>	23,500	24,000	24,900
WASH. / ORE <sup>3</sup>	2,400	1,900	1,900
TERMINAL, IN-RIVER RUN SIZE - #	22,400	23,500	25,500
% INCREASE FROM 1981 REGS	∅	5%	14%



1/ NO EFFORT TRANSFER ASSUMPTIONS WERE MADE.

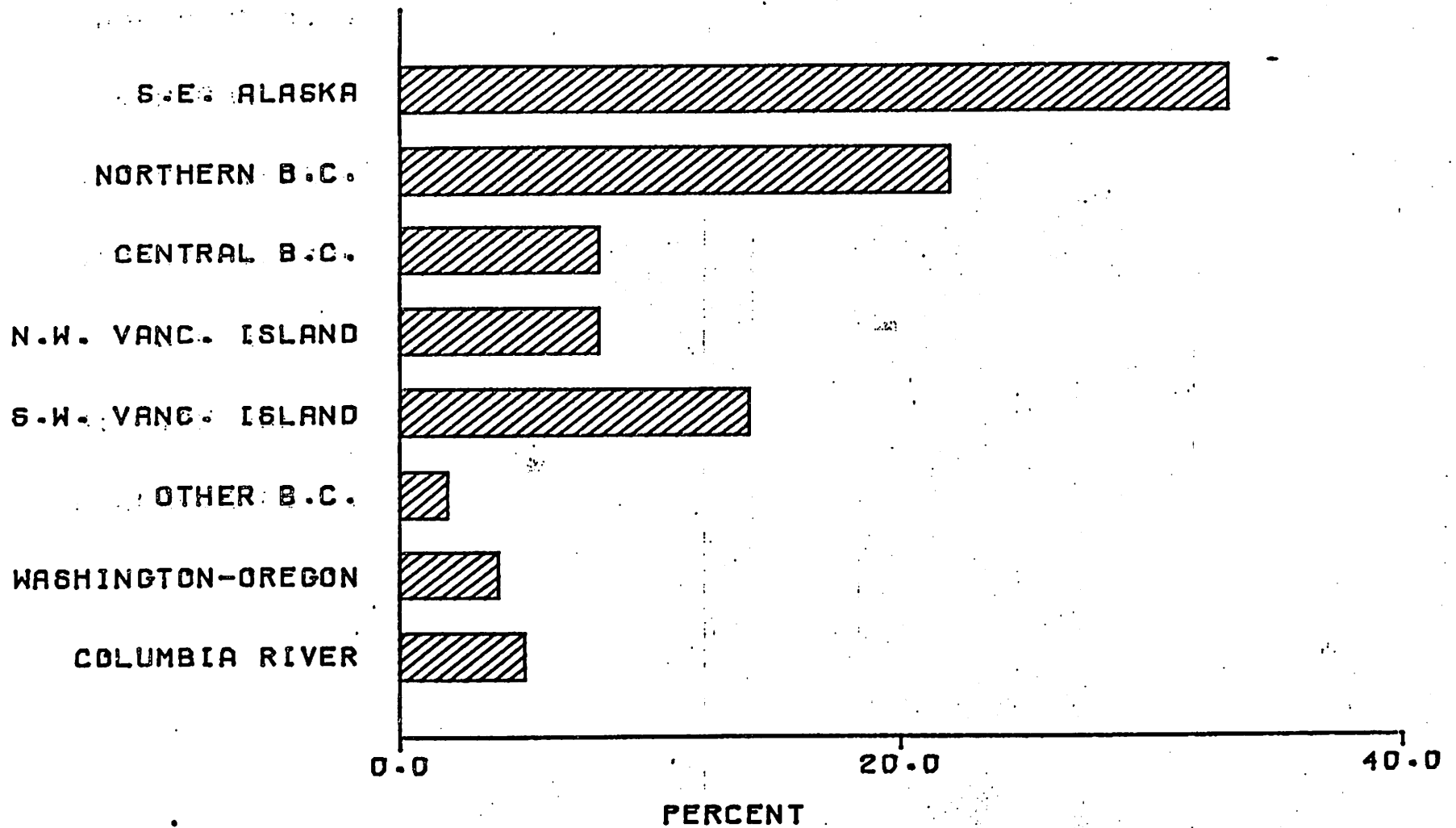
2/ EFFORT RESPONSE TO PROPOSED CLOSURE WAS ASSUMED TO BE  
A 20% TRANSFER TO SOUTHERN AREAS.

3/ ANTICIPATED 1982 PFMC REGULATIONS (AS OF 3/17/82).

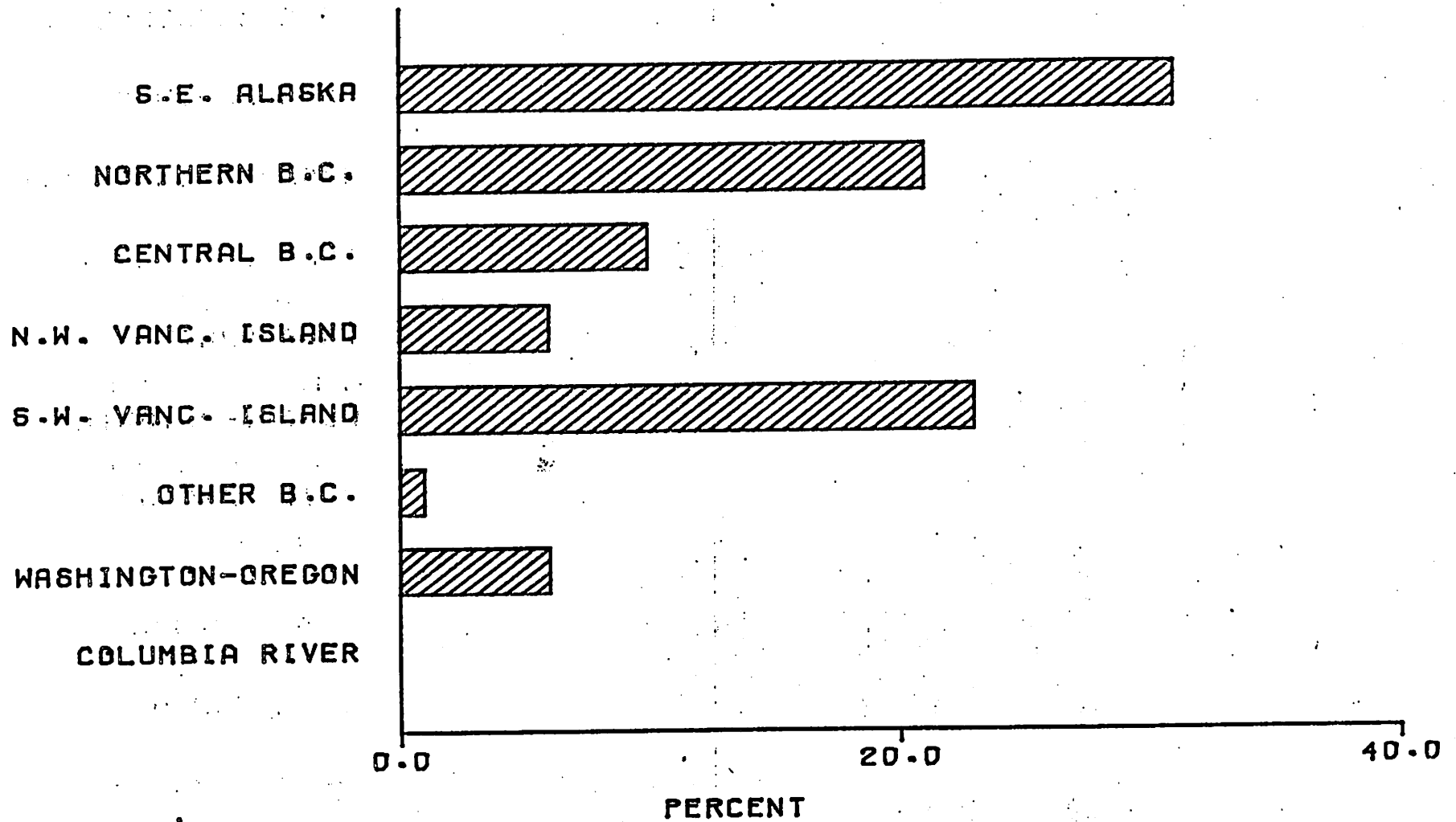
- 2 -

2/2/80

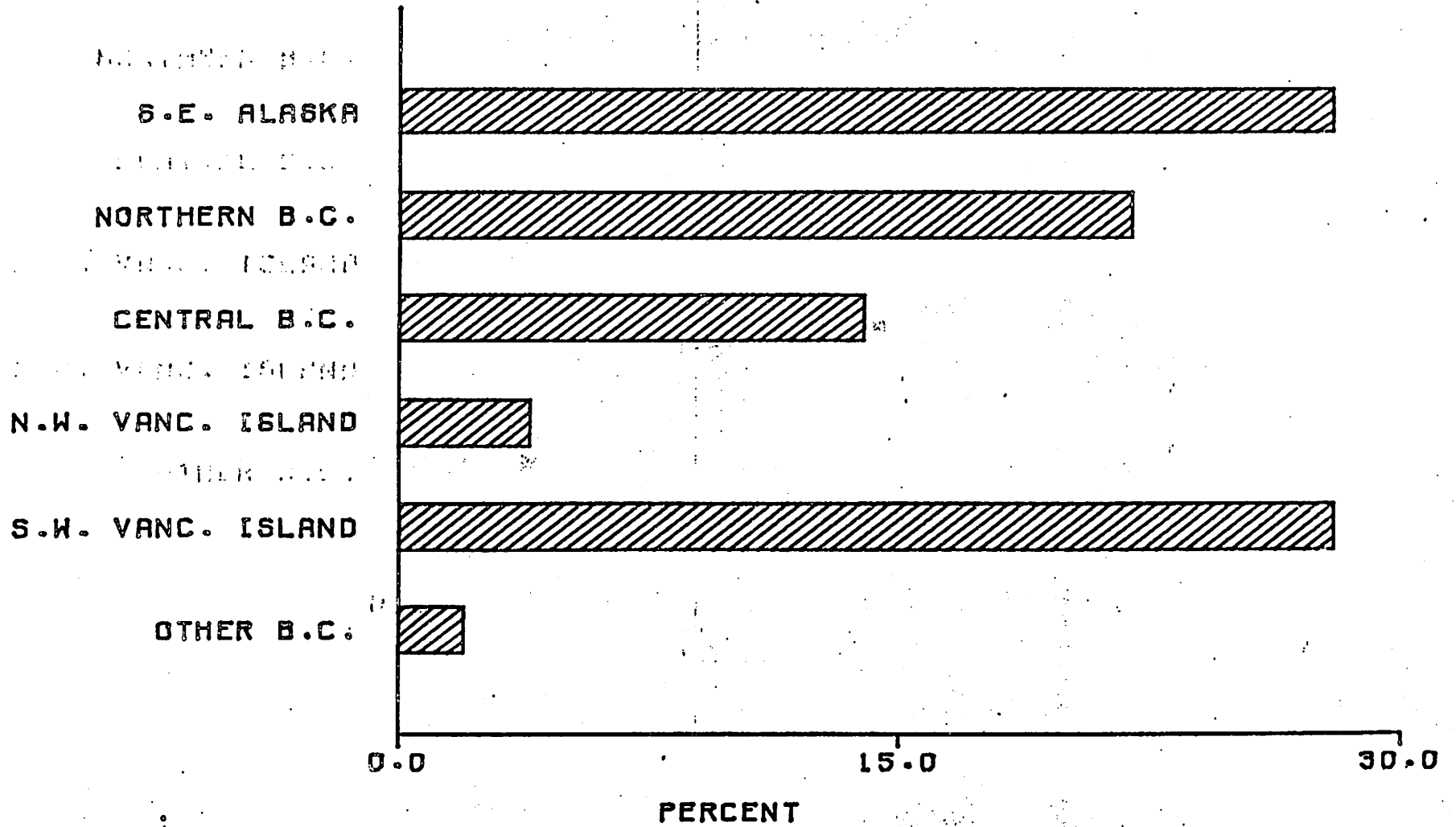
C-R. BRIGHT HARVEST



C-R. SUMMER HARVEST



ROBERTSON CREEK FALL



PDT Recommendation Concerning Inter-Dam Losses

The PDT recognizes that the quickest and most direct way to address conservation problems for the Columbia River "bright" chinook stocks is to reduce interdam losses. The PDT recommends that the sources of these losses be identified as quickly as possible and that measures be taken to reduce them to pre-1980 levels.

Estimation of Contribution of Various Oregon Stocks to  
Southeast Alaskan Chinook Salmon Fishery  
(Proposed by R.L. Garrison, ODFW 3/21/82)

The SSC directed the PDT to develop estimates of the contribution of major chinook stocks to the Southeast Alaskan chinook fishery.

Although the majority of presently available coded wire tag experiments were not designed to answer the question of contribution to ocean fisheries, they do, however, provide information concerning the area and distribution of catch. Two additional elements needed to make contribution estimates include catch to escapement values and run size estimates. Average run size estimates have been made for Oregon coastal streams. Recovery of coded wire tags from Pacific coast fisheries for limited coastal hatcheries experiments provide a level of magnitude for the percentage of catch in the Southeast Alaskan commercial fishery on Oregon coastal hatchery stocks of spring and fall chinook. Unfortunately good estimates of catch to escapement are not available. Two tag groups of 1976 - brood Salmon river fall chinook produced on average estimated catch to escapement ratio of 5.1. An estimate of the catch to escapement ratio for the 1976 - brood Rogue spring chinook was 2.3. Catch to escapement ratios for other Oregon coastal hatchery and wild stocks are not available. Optional estimates of contribution to the Southeast Alaskan chinook catch are presented assuming acceptance of C/E ratios of 1, 2, 3, 4 and 5 for the Oregon coastal chinook stocks. The following table presents the average estimates of contribution to Southeast Alaskan commercial fishery by Oregon coastal chinook stocks.

Catch/Escapement	Estimated catch in S.E. Alaska	
	<u>Number</u>	<u>% of 268,000</u>
1	25,000	9.3%
2	50,000	18.6%
3	75,000	28.0%
4	100,000	37.0%
5	125,000	47.0%

The C/E ratios vary between spring and fall chinook stocks from different river systems, depending on the area of distribution and intensity of the fishery encountered.

The actual contribution of Oregon coastal stocks of chinook to the Southeast Alaskan commercial fishery is a composite of the result of a number of different C/E ratios for which we have no estimate.

At the present time our best guess is that the actual contribution to the Southeast Alaskan catch is probably in the mid range of the above table, i.e. about 3:1.

Stock	Species	BR YR	Mark	Estimated % catch in Alaska
Trask	CHF	70	PK-YW	42.0
Trask	CHF	70	PK-RD	43.0
Trask	CHF	71	PK-BU	30.0
Trask	CHF	73	7-10-10	23.7
Trask	CHF	73	7-10-11	25.8
Trask	CHF	74	7-11-11	21.8
Trask	CHF	74	7-11-13	49.1
Trask	CHF	74	7-11-14	41.3
				<u>X 34.6</u>
Nestucca	CHF	77	7-16-41	54.3
Nestucca	CHS	77	7-16-42	29.6
Salmon	CHF	76	9-16-37	34.3
Salmon	CHF	76	9-16-38	57.6
Salmon	CHF	77	7-16-43	50.0
Salmon	CHF	77	7-16-44	24.1
Salmon	CHF	78	7-18-49	57.1
Salmon	CHF	78	7-18-50	83.9
				<u>X 51.2</u>
Yaquina	CHF	77	7-16-28	21.7
Alsea	CHF	78	7-18-55	31.6
Siustlaw				20.0
Umpqua	CHS			1.0
Coos				
EIK	CHF	73	7-10-13	3.1
EIK	CHF	73	7-10-15	8.2
EIK	CHF	74	7-11-9	22.0
EIK	CHF	74	7-12-9	14.7
EIK	CHF	77	7-16-46	9.1
				<u>X 14.1</u>
Willamette	CHS	70	PK-GN	49.0
Willamette	CHS	70	D-LP	6.0
Willamette	CHS	70	D-RP	9.0
Willamette	CHS	70	D-LV	35.0
Willamette	CHS	71	D-LV-RM	7.0
Willamette	CHS	71	D-LV	12.0
Willamette	CHS	71	D-RV	13.0
Willamette	CHS	74	9-3-11	17.7
Willamette	CHS	74	9-3-12	12.6
				<u>X 17.9</u>

R.L. Garrison,  
March 19, 1982  
ODFW



# Estimated Catch of Oregon Chinook Salmon in Alaska

Stream	Species	A Estimated Escapement	B Estimated Catch/Escapement Ratio	C Estimated % Alaska Catch	E Estimated Catch in Alaska					
					(A(X) B(X) C = E)		If B =			
					1	2	3	4	5	
<b>Oregon Coastal</b>										
Nehalem	CHF	4,000		34.6	1,384	2,768	4,152	5,536	6,920	
Tillamook Bay	CHF	20,700		34.6	7,162	14,324	21,486	28,649	35,811	
(Trask)	CHS	1,000		29.6	296	592	880	1,184	1,480	
Nestucca	CHF	5,000		54.3	2,715	5,430	8,145	10,860	13,575	
Nestucca	CHS	400		29.6	118	236	355	474	592	
Salmon	CHF	2,300	5.1 (76 Br)	51.2	1,178	2,355	3,533	4,710	5,888	
Salmon	CHS	100		29.6	30	60	90	120	150	
Siletz	CHF	8,000		51.2	4,096	8,192	12,288	16,384	20,480	
Siletz	CHS	300		29.6	89	178	266	355	444	
Yaquina	CHF	4,000		21.7	868	1,736	2,604	3,472	4,340	
Alsea	CHF	6,100		31.6	1,928	3,855	5,783	7,710	9,638	
Alsea	CHS	300		29.6	89	178	266	355	444	
Yachats	CHF	500		31.6	158	316	474	625	787	
Siuslaw	CHF	4,500		20.0	900	1,800	2,700	3,600	4,500	
Umpqua	CHF	6,800		20.0	1,360	2,720	4,080	5,440	6,800	
Umpqua	CHS	15,000		1.0	150	300	450	600	750	
Coos	CHF	1,500		14.1	211	423	634	846	1,057	
Coquille	CHF	5,000		14.1	705	1,410	2,115	2,820	3,525	
Coquille	CHS	100		1.0	1	2	3	4	5	
Floras	CHF	600		14.1	85	169	255	340	425	
Sixes	CHF	2,300		14.1	324	649	973	1,297	1,622	
Elk	CHF	11,500		14.1	1,621	3,243	4,865	6,486	8,108	
Euchre	CHF	600		14.1	8	17	25	34	42	
Rogue	CHF	40,000		1.0	400	800	1,200	1,600	2,000	
Rogue	CHS	35,000	2.3 (76 Br)	1.0	350	700	1,050	1,400	1,750	
Hunter	CHF	1,000		1.0	10	20	30	40	50	
Pistol	CHF	800		1.0	8	16	24	32	40	
Chetco	CHF	22,000		1.0	220	440	660	880	1,100	
Winchuck	CHF	1,500		1.0	15	30	45	60	75	
					<b>Total</b>	<b>25,019</b>	<b>50,038</b>	<b>75,057</b>	<b>100,076</b>	<b>125,096</b>
<b>Columbia River</b>										
Willamette	CHS	48,600		17.9	8,700	17,400	26,100	34,800	43,500	
Lower Columbia	CHF	53,000								
Upper Columbia	CHS	62,800								
Upper Columbia	CHSU	27,000	~ 1.7	30.0	8,100	16,200				
Upper Columbia	CHF	158,000	~ 2.1	33.0	52,140	104,280	156,420			

## Recommendation Concerning Retention of Adipose-Clipped Sublegal Chinooks

Concern has been raised that the removal of sublegal adipose-clipped chinook salmon from the stocks present in Southeast Alaskan waters will affect the results of numerous micro-wire tagging experiments currently being conducted on chinook stocks contributing to the Southeast Alaska fisheries.

Under this exemption from Alaska's 28" size limit, troll fishermen may retain sublegal adipose-clipped chinooks on a voluntary basis. The recovery of these tags is desired to determine general time/area distribution of immature chinook of Taku River and Stikine River origin and if these fish are available to the Southeastern troll fishery as shakers.

Any recovery of tagged sublegal fish will be recorded as select tag recoveries to distinguish from random recoveries used in analysis of experiments being conducted along the coast.

The PDT believes the small number of tags recovered expected during this program (1,200-1,500) will not adversely affect the analysis of other tagging experiments. If large numbers of tags were to be recovered, experiments that rely on the ratio of marked and unmarked fish at release could be affected in that this ratio would be changed prior to recoveries in the fisheries. Experiments that depend on marked and unmarked ratios in terminal areas and escapements would not be affected as this ratio would still be the same as the ratio of marked and unmarked fish in the commercial harvest.

This program is being conducted on a one year experimental basis and an analysis of the number of tags recovered, the contribution of tagged Taku River and Stikine River chinooks to the tags recovered and any problems identified should determine if continuation is warranted.

The PDT also recommends that the tags recovered from this program be decoded as quickly as possible during the season to determine the presence of Taku and

Stikin fish. If the fish are not being recovered then an in-season suspension of this program should be considered.

The PDT also recommends that if the rate of sublegal fish being turned in becomes excessive relative to anticipated levels stated here that appropriate in-season measures be considered to reduce this rate or to suspend the program to limit recoveries to the expected sample size (1,200-1,500 sublegal chinooks).



# Northwest Indian Fisheries Commission

March 19, 1982

Mr. Clement V. Tillion  
Chairman  
North Pacific Fishery Management Council  
P.O. Box 3136DT  
Anchorage, Alaska 99510

Dear Mr. Tillion:

We have reviewed the "Draft Supplemental Environmental Impact Statement on the 1982 Proposed Management Regime and Alternatives" for the Southeast Alaska troll fishery, and offer the following comments and recommendations. Our comments reflect management concerns for Washington chinook stocks.

We are pleased that your Draft Environmental Impact Statement for 1982 salmon management recognizes the needs of non-Alaskan stocks, and are encouraged that the Council is continuing to propose further reductions in the Alaska troll chinook harvest, with the intent of reducing the impact on these stocks. However, we believe the Council's proposal for a 9 percent reduction in the troll harvest from 1981 levels is inadequate to provide the necessary protection.

Despite the 16 percent reduction in chinook harvest achieved in 1981, many Washington chinook stocks remain in a severely depressed condition, and in some cases continue to decline. The situation is so severe on some stocks that steps are now being taken to restrict inside fisheries that have only a minor incidental impact on depressed chinook stocks. For example, recent tribal-state agreements on management measures necessary to protect Puget Sound origin spring chinook will significantly reduce the impact of Puget Sound sport fisheries on these stocks. There have been extensive terminal area closures to protect depressed chinook stocks coastwide, yet they are continuing to decline or are stabilized at very low levels. The only solution to this problem is further reductions in the overall harvest rate on these stocks. The burden of conservation has already been borne by the inside fisheries.

We support the management recommendation of the Columbia River Inter-Tribal Fish Commission and U.S. Department of Interior. The Alaska troll fishery should be managed to eliminate directed fishing on weak non-Alaskan chinook stocks. This can be substantially accomplished by delaying the opening of the troll season to July 15 and reducing the harvest ceiling to 128,000. This proposal should effectively reduce the harvest of non-Alaskan chinook stocks while minimizing the impact on coho fishing opportunities.

Mr. Clement V. Tillion  
3/19/82  
page two

We concur with the Draft Environmental Impact Statement in the need for reductions in harvest rates throughout the oceanic range of depressed chinook stocks. We are acutely aware of the need for reductions in the Canadian troll fishery, and are strongly committed to that goal. However, the failure or success in achieving reductions in Canadian fisheries should not be a primary factor in your decision to recommend the measures necessary to help protect these stocks, as required under the MFCMA.

We are continuing to analyze available data to further assess the impact of the Alaska troll fishery on Washington stocks and are undertaking additional research on severely depressed stocks, such as Puget Sound origin spring chinook. Additional information will be provided to you as it becomes available. However, in the absence of these data we again urge the Council to recommend to the Secretary a conservative management approach, consistent with the conservation needs of the resource.

We trust you will consider these comments and recommendations while finalizing your management recommendations to the Secretary of Commerce for 1982.

Sincerely,



JAMES L. HECKMAN  
Executive Director

GRG:cm

cc: All Tribes  
Commissioners/Coordinators  
Secretary of Commerce  
Secretary of Interior  
Columbia River Inter- Tribal Fish Commission  
Washington Department of Fisheries  
Pacific Fishery Management Council

*Gene DiDonato*

**BRIEFING PAPER ON COLUMBIA RIVER MANAGEMENT AND  
REGIONAL COMMITMENT TO THE RESOURCE**

**Prepared for the March 23, 1982 joint meeting of the Alaska Board of  
Fisheries and North Pacific Fisheries Management Council**

**Anchorage, Alaska**

## INTRODUCTION

At the recent January joint NPFMC and Alaska Board of Fisheries, several questions were asked that indicated a need for further understanding of Columbia River salmon management and regional commitment to Columbia River Basin fish and wildlife resources. The material assembled herein is intended to respond to numerous concerns and questions which have been relative to the management and status of Columbia River salmon resource.

Although WDF staff has coordinated the collection of the material presented herein and is responsible for the form in which it is presented, the work which these reports and articles represent was conducted and sanctioned by numerous Federal, state and tribal agencies. By referring to the authors responsible for the articles and reports assembled herein, the amount of additional information available is only limited by the individuals ability to assimilate that data.

## IN-RIVER MANAGEMENT

### Harvest Management

Columbia River commercial and recreational fisheries are managed to harvest salmon returning to the river in excess of those needed to achieve specifically defined spawning escapement goals. The secondary priority for management is to achieve specific division of the allowable catch between treaty Indian and non-treaty fishermen. This division of allowable catch for those fish originating and destined to return above Bonneville Dam is specially set forth in a February 1977 U.S. District Court Order (Civil No. 68-513), "A Plan for Managing Fisheries on Stocks Originating from the Columbia River and its Tributaries above Bonneville Dam" (attached). For fall chinook, the catch division formula is 60% for treaty Indian fishermen and 40% for non-treaty fishermen.

The Columbia River Compact sets commercial fishery seasons in those waters concurrent between Oregon and Washington. The Columbia River Compact also has the authority to set regulations necessary to implement the above referenced U.S. District Court Order with the Court retaining jurisdiction over the case (U.S. vs. Oregon, Civil No. 68-513) which caused this out-of-court settlement to be developed. The States of Oregon and Washington make up the Columbia River Compact and are represented on the Compact by the Director of the Washington Department of Fisheries and the Commission of the Oregon Department of Fish and Wildlife.

As an indication of the current status of the Columbia river fall chinook run, the 1981 minimum run (preliminary - 303,200) was the smallest enumerated since 1963. The 1971-75 average minimum run size is 452,000 fish. This run size estimation indicated the run has decreased annually since 1976. The in-river minimum run size is calculated by summation of all documented lower river catches, Bonneville Dam count, hatchery returns plus other dam counts on lower river tributary streams.

As an indication of relative annual run size, the upriver (above Bonneville) run has historically been calculated by adding lower river August commercial catch to the August-November Bonneville Dam count. Although this calculated run size does not reflect the upriver run size analysis used by Columbia River harvest managers in 1980 and 1981, it is useful for historical comparison purposes. Calculated in this manner, the upriver fall chinook run averaged 291,500 fish from 1971 through 1975. In this instance, the run has shown a decreasing trend since 1975 with the 1981 run (192,500) the second smallest run enumerated since 1938 when these calculations were first made possible with the construction of Bonneville Dam.



Since 1963, upriver origin fall chinook have been managed to achieve spawning escapement of 90,000-110,000 adult fish. It is determined that this goal has been achieved when the Bonneville Dam count minus the treaty Indian fishery catch above Bonneville Dam equalled the management goal. The upriver run consists of two major run components, "tule" stock originating from Bonneville Pool hatcheries and "bright" stock originating from natural habitat above The Dalles Dam. With the increased production of hatchery origin fish and thus an increased proportion of the Bonneville Dam count being represented by these fish, it was recognized that a management goal was necessary to assure continued escapement and production of the "bright" fall chinook run component. In 1976, this management objective was set at 40,000 adult fish counted over McNary Dam (45,700, 1964-73 average; 39,500, 1971-75 average).

Columbia River management has found it increasingly difficult to achieve the "bright" fall chinook escapement objective due to diminishing run size and unexplained inter-dam loss of adults despite very restrictive in-river regulations. The problem is further compounded by the presence of large numbers of hatchery origin fish available for harvest, the treaty/non-treaty harvest division requirement and the incidental harvest of chinook salmon which occurs during the coho harvest management period. Considerable harvest opportunity has been foregone for hatchery origin fall chinook and coho in recent years in order to improve escapements of "bright" fall chinook. In 1981, the only non-treaty commercial harvest of fall chinook occurred in select stock restricted terminal fishing areas (small tributary streams and sloughs) and incidental to targeted coho harvests. Despite no mainstem targeted fall chinook harvest by the non-treaty commercial fishery, the treaty-Indian season was one of the most restrictive ever adopted by the Columbia River Compact (4 days in traditional area, 4 days in Bonneville Pool only and 1 additional day in restricted area immediately adjacent to Spring Creek National Fish Hatchery). As a result of these restrictions, the smallest in-river commercial catch of fall chinook ever made was recorded in 1981 (84,700). Of this catch, it is estimated that only 8,200 were of the "bright" fall chinook run component. Short of total closures with resulting loss of harvest opportunity of hatchery origin fall chinook and coho, there is little which can be done by the in-river management to further reduce harvest of the "bright" fall chinook run component.

#### Unexplained Inter-Dam Loss of Fall Chinook - Problem

It has been long known that mainstem Columbia River hydroelectric dams cause a loss of salmon originating above these structures, both for juveniles and adults. In 1980, it was noted that an unusually large percent of the "bright" component of the upriver fall chinook run disappeared between Bonneville and McNary dams, i.e., first enumerated as they crossed Bonneville Dam, accumulative catch and escapement left a large number of fish missing in the accounting ledger. This phenomina had previously been noted for

the "Tule" component of the run but not the "bright" component. Of the fish counted over Bonneville Dam, 38% could not be accounted for as spawning escapement or catch.

In 1981, the phenomina was repeated with 47% of the "bright" fish entering the unexplained loss category. Unlike 1980 when the "Tule" run component showed only a 5% loss, 22% could not be accounted for in 1981. Of the total upriver fall chinook run (brights plus Tules) counted crossing Bonneville Dam, 33% entered the unexplained loss category as compared to 23% in 1980.

WDF staff has made a comprehensive review of the data base associated with unexplained loss of upriver origin fall chinook in an attempt to identify the probable cause. This review is presented in the attached report, "Unexplained Loss of Adult Fall Chinook in the Columbia River between Bonneville Dam and McNary Dams, 1977-1981". Although numerous possible causes have been identified, the probable cause is still unknown.

#### Unexplained Inter-Dam Loss of Fall Chinook - Research

By September 1981, joint Oregon-Washington Columbia River management staff realized that what was regarded as an abnormal phenomena in 1980 was being repeated in 1981. This unexplained loss of adult fish coupled with record small upriver run was threatening the future of this resource as well as causing lost harvest opportunity for more abundant stocks. Another year could not be allowed to pass without identifying the probable cause(s) of this phenomina. With this goal in mind, a committee of biologists knowledgeable about the Columbia River was formed to develop a research proposal to address the unexplained inter-dam loss problem. Included were biologists from Columbia River Inter-Tribal Fish Commission, WDF, NMFS and USF&WS. A research proposal (attached) was developed and submitted to Columbia River Fisheries Council's Technical Committee for review. This research proposal has subsequently been reviewed by CRFC's Executive Committee and sent to BPA with recommendation that this research be funded for the fall of 1982.

The research program proposes to tag 300 upriver "bright" adult fall chinook at Bonneville Dam with internal radio transmitters. These 300 individually identifiable radio tagged fish will then be tracked by air and ground crews as they migrate upriver between Bonneville and McNary dams. Tagging will begin in mid-August and continue until early October. It is probable that 25% to 50% of these fish will enter the unexplained loss category thus allowing an opportunity to identify the cause(s) of this loss. It is possible numerous probable causes will be identified thus necessitating future work to design measures for correcting problems.

### Regulation Enforcement as Possible Cause

It has been postulated that the lack of effective enforcement is THE sole cause for the unexplained loss of upriver fall chinook. That unauthorized catch occurs or contributes to the unexplained loss is recognized by all parties. For this to be the sole cause in recent years, over 800,000 lbs. of fall chinook would need to be caught and marketed during August through October. This is only 100,000 lbs. less than the documented legal catch which occurred at a time during the peak abundance period with over 450 nets fishing in the legal season.

Due to the fact that the Columbia River crosses many jurisdictional boundaries, it has long been recognized that management coordination was necessary. The regulation coordination occurs through the Columbia River Compact. Other aspects of management are coordinated through the Columbia River Fisheries Council. One of the first committees this council created was the Law Enforcement Committee. This committee includes law enforcement representatives from all Columbia River treaty tribes, Columbia River Inter-tribal Fish Commission, WDF, NMFS, USF&WS, ID of F&W, and Oregon State Police. The purpose of the committee is to improve communications between jurisdictions, identify and resolve problems of mutual concern and coordinate law enforcement activities. The committee meets monthly throughout the year. Wayne Lewis, NMFS, is this year's current chairman. A letter from the committee addressing the enforcement issue has been sent under separate cover.

### REGIONAL COMMITMENT TO RESOURCE

There are millions of dollars and hundreds of man-years being spent annually by the Federal and state governments to protect and enhance Columbia River salmon stocks. As an indication of this regional priority commitment to this important resource, numerous plans have been written and laws adopted. The following is a summary of a few of the more important reports and laws as an indication of regional commitment to Columbia River salmon.

#### Columbia River Basin Salmon and Steelhead Analysis - A Description of Problems/Recommendations for Action

Through funds obtained from the Pacific N.W. Regional Commission, a joint state-federal commission established to stimulate economic development in Idaho, Washington, and Oregon, a comprehensive review of in-river problems facing Columbia River salmon production with recommended courses of action was made. This report, "Columbia River Basin Salmon and Steelhead Analysis", was published in 1976. A copy of this report is attached. It summarizes the development of the Columbia River Basin and the impact this development has had on the Columbia River Basin salmon resource. The report includes comprehensive discussion of early commercial fisheries, habitat destruction and degradation, 1920 Federal Power Act, 1934 Mitchell Act, fish passage losses, the ocean connection, and artificial propagation as well as an overview of the future as seen by the authors.

Columbia River Basin Salmon and Steelhead  
Management Framework - A Course of Action

One of the recommendations of the Columbia River Salmon and Steelhead Analysis report was to establish a commission which would be able to, at a minimum, facilitate communications and planning and develop a unified voice for those responsible for the protection, maintenance and enhancement of Columbia River Basin salmon. From this recommendation, the Columbia River Fisheries Council (CRFC) was established. Represented on this Council are OD of F&W, WDF, WDG, ID of Fish and Game, USF&WS, NMFS and 4 Columbia River treaty tribes, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Indian Reservation of Washington and Nez Perce Tribe of Idaho. Numerous committees with federal/state/tribal representation has been established by CRFC, one of which is the Law Enforcement Committee previously discussed. Other committees include Technical Committee and Artificial Production Committee. All of these committees are manned by federal/state/tribal professional staffs.

An additional recommendation of the original 1976 report was the need to develop a comprehensive management plan. Again through funding provided by Pacific Northwest Regional Commission and supplemented by USF&WS and NMFS, the CRFC took upon itself the responsibility to develop such a management plan. This report, "Columbia River Basin Salmon and Steelhead Management Proposals Framework Plan", is attached.

The plan states that it was developed to provide the broad, flexible framework within which Columbia River Basin anadromous salmon and steelhead programs will be prioritized, designed and implemented. On January 30, 1981, ODF&W, WDF, WDG, IDF&G, NMFS and USF&WS voted to support the principles and objectives of the framework plan. Although the Columbia River treaty tribes abstained, they did vote as a group to submit the framework plan to the Pacific Northwest Regional Commission with attachments reflecting dissenting views and to continue to work cooperatively to resolve areas of disagreement.

Of major importance in the plan is the production objectives which were identified. Achievement of these objectives would approximately triple the current level of Columbia River salmon and steelhead now being produced. Included in this total is an increase of upriver fall chinook from current in-river adult total of 175,000 fish to 515,000 fish.

In concurring with the framework plan, each agency sent a letter to CRIC which is appendix to the plan. Each of these letters should be read as they are the best indication of the regional support being pledged to resolve Columbia River salmon production problems.

Pacific Northwest Electric Power Planning and Conservation Act -  
A Federal Law

When the U.S. Congress recognized the need to develop a comprehensive planning process for most effective use of Northwest generated electric power, the federal/state/tribal entities who had long recognized the impact hydro-electric projects have on the salmon resource and who were also, at that time, developing the Columbia River Management Framework Plan, also recognized that it was important that the regional fish and wildlife resources receive recognition in this federal law. With that goal in mind, the regional political entities worked with their local U.S. Congressional representatives to get suitable recognition for fish and wildlife resources included in the Northwest Power Bill. The fact that they were successful is an indication of national commitment to protection and enhancement of Columbia River salmon resource. The clear intent of this law is that no longer will fish and wildlife be given a secondary status by the Bonneville Power Administration or other Federal agencies.

There are numerous articles available which summarize Public Law No. 96-501. One such article which is readily available and which reviews the law from the resource managers perspective was published in the Anadromous Fish Law Memo, Lewis and Clark Law School, Portland, Oregon, January 1981. A copy of this article is attached.

The major section of this law which addresses the salmon resource is included in Section 4(h). The plan which has evolved from this section is commonly referenced by that notation, "4(h)". Since passage of the Act in 1980, the 8-member regional council has been established. The resource management agencies have written the "4(h)" Section and submitted it to the regional council for review. The Executive Summary of this report is attached.

PRELIMINARY RESEARCH PROPOSAL

Radio-Tracking Study of Unaccountable Losses  
Between Bonneville and McNary Dams, 1982

By

Kenneth L. Liscom  
and  
The Unaccountable Loss  
Study Committee

Coastal Zone and Estuarine Studies Division  
Northwest and Alaska Fisheries Center  
National Oceanic and Atmospheric Administration  
2725 Montlake Boulevard East  
Seattle, Washington 98112

January 1982

## INTRODUCTION

A sudden and dramatic increase in unaccountable loss of upriver bright fall chinook salmon between Bonneville Dam and McNary Dam became evident during the 1980 and 1981 seasons. For instance, the average loss during the period 1977-1979 was 4,900 adults, just 7% of the total run size as measured at Bonneville Dam. Average loss during the next 2 years, 1980 and 1981, was 28,000 adults, or 41% of the run size.

The Washington Department of Fisheries (WDF) called for meetings to discuss the situation: attending were representatives from WDF, U.S. Fish and Wildlife Service, Columbia River Inter-Tribal Fish Commission, U.S. Army Corps of Engineers, and the National Marine Fisheries Service. The Unaccountable Loss Study Committee was formed to develop an urgently needed research plan to begin in the fall of 1982.

Losses between dams have taken place since dams have been built on the Columbia River. There are five main probable causes of count discrepancies between dams; each has specific contributing factors:

### 1. Problems at Dams

#### a. Count error

b. Flow and spill related loss, including fallback

c. Delayed mortality (bio-energetics)

### 2. Bio/Environmental

a. Natural mortality

b. Thermal

c. Chemical

d. Disease

### 3. Harvest Related

a. Documented catch accounting error

b. Undocumented catch

c. Gear related mortality

#### 4. Tributary Turnoff and Mainstem Spawning

- a. Error in estimating known turnoffs
- b. Undetected turnoffs
- c. Undetected mainstream spawning

Most potential sources do not exhibit changes in recent years which would explain the order of magnitude increase in loss, e.g., no procedural changes at dams, no significant changes in temperature, flow, or spill. However, increased loss could be a result of combined interactive factors. Certain potential sources have no data base to examine, i.e., interdam mortality, undocumented catch, unknown spawning, tributary turnoffs. To examine these sources new data must be generated and the best opportunity to collect that meaningful information is with radio tracking. The NMFS, because of its experience, was selected as the lead agency to pursue the study. The proposal calls for the NMFS Radio-Tracking Unit to conduct the initial unaccountable loss study in the fall of 1982.

#### STUDY AREA

The study area encompasses four dams; Bonneville, The Dalles, John Day, and McNary, and three reservoirs and covers a distance of approximately 146 miles. Five major tributaries enter the Bonneville Pool: the Wind, Hood, Little White Salmon, White Salmon, and Klickitat Rivers.

The Deschutes River is the only major tributary within The Dalles pool. The John Day pool which makes up more than half the entire study area has two major tributaries, the John Day and Umatilla Rivers. Only the Deschutes River is expected to have a significant turnoff of upriver bright fall chinook salmon.



A major gill-net fishery occurs in the Bonneville Dam to McNary Dam area with approximately two-thirds of the total effort in the Bonneville pool. This fall fishery has been severely reduced in recent years, however, with only 5 days of fishing available to fishermen in the upper pools in 1981.

#### OBJECTIVE

The objective of this study is to identify probable causes of inter-dam "unaccountable" losses so corrective action can be taken. Initially, we plan to identify specific areas of loss so as to narrow the scope of future research aimed at corrective action. The study intends to fill the void of information regarding those possible causes that are undocumented or undetected.

#### METHODS

The radio tag to be used in the study will be the coded internal adult salmon tag made by the NMFS's fish tracking program and successfully used in other studies. The tag has a 20-day battery life. Each fish will have its own individual identifying code. It is proposed to use 300 tags remaining from a 1981 study funded by the Bonneville Power Administration. It will be necessary to replace the batteries and capsules, make minor adjustments, etc., and prepare them in time for the fall of 1982.

Tracking equipment (antennas, tracking receivers, search receivers, communication two-way radios, decoders, monitors, etc.) would be furnished by the NMFS. Supervision of the study would be done by personnel from the NMFS Radio-Tracking Unit.

Trapping and tagging would be done at the proposed fish collection facility expected to be completed by this fall near the second powerhouse

at Bonneville Dam. This facility is proposed to be operational in April, 1982. If not, a system for capturing fish would have to be engineered, constructed, and installed before August, 1982. Special engineering and planning would be necessary as installation would have to take place without de-watering the fish ladder. Releases would be above Bonneville (Cascade Locks). No external flag tags would be used. Each radio-tag capsule would carry a notice of a \$10.00 reward for return of the tag to the NMFS Seattle office. Tagging would begin about 15 August and terminate around 15 October. Exact scheduling of the numbers of fish to be tagged per day or per week for best utilization of the 300 tags has not been determined. One design under discussion is for tagging stratified to the temporal distribution of the run (figure on timing of brights at Bonneville Dam), because loss is known to occur throughout the fall season.

Surveillance of the tagged chinook salmon would be done primarily via aircraft. This is necessary because of the length of the study area and lack of roads near the shores of the John Day Reservoir. The remoteness of that area makes it impossible to totally monitor by automobile, however aircraft surveillance will be supplemented by surveillance from vehicle mobile units and boats. Automatic recording monitors will be used to monitor tagged fish passage at the four dams.

It is proposed to have two aircraft surveillance flights per day. One early in the morning, the other in late afternoon before dark. Surveillance will extend from Beacon Rock to just above McNary Dam with checks of each tributary enroute. Data obtained by aircraft will include disposition and progress of radio-tagged fish throughout the study area, lack of movement by an individual fish or of groups of fish, indications that a tag is not in the river, etc.

Vehicular mobile unit ground support will be used when a more precise tag location is necessary; such as when a tag code is missing and a search must be made, when aircraft indicate a tag is up a tributary (some streams are not accessible by automobile), if a tag remains in one area for an extended period of time, etc. The mobile units will be used to determine what is happening, especially when tags are removed from the river. One mobile unit will be used between Bonneville and The Dalles Dams and the other between The Dalles and John Day Dams. Two mobile units will monitor from John Day Dam to McNary Dam. Mobile units will spend some time monitoring communities along their routes. Tributaries will not be checked routinely by mobile units, other than where the roads cross such streams.

Surveillance by boat will be limited; frequent strong winds in the area often prevent small boats from being on the reservoirs and boats are slow. When other means of surveillance indicate a boat is needed to check on tags because the area cannot be reached by automobile or other such reasons, a boat will be used. Scuba divers would be used to investigate tag signals found to be remaining at one location for extended periods of time in the main stem area (not near dams). This could help determine gill-net dropout or possible spawning areas.

Monitoring at the dams will be done primarily with automatic recording monitors placed at each of the fishway exits. They will record tag code, location, date, and time and direction of passage. On occasion, mobile units will be called upon for specific monitoring at dams.

The study is designed to operate two 8-hour shifts daily, 0600 hours to 2000 hours. A central reporting headquarters station for data recording and electronic maintenance will be established, preferably at John Day Dam

(because of its centralized location). All data will be collected on a daily basis from all sources. The immediate use of the data will be to keep a summary chart and map of the study area up to date showing all fish positions, movements, and known disposition and locations. Mobs going out each day will use information from the previous shift to schedule their activities.

The relatively small number of tags and large number of potential contributing sources of loss limits the quantitative interpretation of study results. Previous radio-tagging studies have not provided absolute answers, but have been valuable in qualitatively describing distribution, migration, and survival of chinook salmon between dams. Given the fact that fully half the total run of bright fall chinook salmon are unaccountable, there is a good chance that a significant number of recoveries will be made from new or unaccountable sources.

#### REPORTS

Interested agencies and the contractor will be informed of the study's progress on a timely basis. A final report will be prepared by the NMFS and submitted for approval to participating agencies. Upon approval, it will be forwarded to the contracting agency and the Columbia River Fisheries Council.

#### BUDGET

The total estimated cost of the project is \$360,688 extended over two fiscal years (budget estimate attached):

FY 1982 (beginning 9 August) \$270,818

Includes \$27,000 for radio tag parts for 600 tags to be used during proposed continued unaccountable loss study in 1983. Funds are necessary for ordering parts in 1982, due to long lead times for many items.

FY 1983 (includes final field work and report writing) \$89,870.

Preliminary Budget Summary

Fiscal Year 1982

Salaries

Field Crew

Fishery Biologists and Technicians (5)	\$23,885
2 Fishery Biologists (Scuba Divers) <sup>1/</sup>	
Temporary Help (18)	36,007
Overtime, Sun. Diff., Holidays, Etc.	3,000
Preparation of Tags and Equipment	19,802
Planning	5,648

Subtotal 88,342

Per Diem and Transportation

Per Diem	11,550
Transportation	12,000
Aircraft Services	27,000

Subtotal 50,550

Operations and Supplies

Tag Capsules, Batteries, and New Parts	9,000
Monitor Modification	3,200
Electronic parts for 600 radio tags @ \$45 ea.	27,000
Estimated trap costs <sup>2/</sup>	50,000
Equipment Maintenance	2,000
Miscellaneous	2,500

Subtotal 93,000

Total Direct Costs 232,592

Overhead 38,326

TOTAL STUDY BUDGET - FY82 \$270,8

<sup>1/</sup> Employees and salaries furnished by NMFS.

<sup>2/</sup> Only if proposed facility at Bonneville Dam is not ready for use.

Preliminary Budget Summary

Fiscal Year 1983

Salaries

Field Crew

Fishery Biologist and Technicians (5)	\$12,861
2 Fishery Biologists (Scuba Divers) <sup>1/</sup>	
Temporary Help (18)	19,388
Overtime, Sun. Diff., Holidays, etc.	1,000

Data Analysis and Report

Fishery Biologists (2)	<u>8,472</u>
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Subtotal	41,721
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Per Diem and Transportation

Per Diem	5,650
Transportation	6,000
Aircraft Services	<u>18,000</u>

Subtotal	29,650
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Operation and Supplies

Reward Payments	400
Boat Fuel and Maintenance	<u>500</u>

Subtotal	<u>900</u>
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Total Operating Costs	72,271
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Overhead	<u>17,599</u>
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Total Study Budget - FY83	\$89,870
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<sup>1/</sup> Employees and salaries supplied by NMFS.

State of Washington  
DEPARTMENT OF FISHERIES

PROGRESS REPORT NO.

UNEXPLAINED LOSS OF ADULT FALL CHINOOK IN THE  
COLUMBIA RIVER BETWEEN BONNEVILLE AND McNARY DAMS, 1977-1981

Patrick Pattillo  
Don McIsaac  
Harvest Management Division

January 1982

## INTRODUCTION

Salmon populations are rarely censused completely. Commonly, terminal or inriver run size is estimated by summarizing independent estimates of catch and escapement. For salmon populations originating in the upper Columbia River (upstream of Bonneville Dam) a unique opportunity to enumerate run size is provided salmon managers by the counting of individuals at fish passage facilities at mainstem hydroelectric dams (Figure 1). In addition to an abundance estimate at a single point on the migration path, the comparison of counts at successive dams provides an estimate of loss or mortality to the population occurring between those two dams. Differences in counts should be reconciled by catch, tributary turnoffs and errors attributable to techniques of estimating those components.

Discrepancies in accounting between dams have indicated serious adult losses of spring and summer chinook salmon not associated with catch but rather attributed to poor passage conditions during periods of high river flow (Weiss, 1970; Young, 1979). Unexplained discrepancies in accounting of fall chinook between Bonneville Dam and McNary Dam are of variable magnitude, but have increased alarmingly in the most recent years, 1980 and 1981. Recent high rates of unexplained loss in combination with current fishing rates places one of the upper Columbia River fall chinook stocks, the primarily natural spawning stock known as "upriver brights", in a most precarious position biologically.



High rates of unexplained loss observed for upper Columbia River fall chinook in 1980 and 1981 have no clear explanation at this time. The objectives of this report are to identify the magnitude of unexplained loss, discuss potential estimation errors, examine possible explanations and comment on the impacts of current levels of unexplained losses on future stock productivity and management.

#### IDENTIFICATION OF THE MAGNITUDE OF UNEXPLAINED LOSS

The magnitude of unexplained loss of upper Columbia River fall chinook for the years 1977 to 1981, defined as the difference between the Bonneville Dam count and upriver accounting categories (McNary Dam count, hatchery escapement, tributary turnoffs and catch), are summarized in Table 1. The number of fall chinook counted over Bonneville Dam but not accountable in catch or escapement areas upstream has varied from about 20,000 in 1977 to about 50,000 in 1981. The number of fish not accountable in 1981 is notably greater than either catch or escapement. The magnitude of unexplained losses is even more alarming when examined on an individual stock basis. Upper Columbia River fall chinook are managed as two major distinct stocks separated on the basis of terminal destination. One of these, known locally as tules, is destined for a hatchery complex located between Bonneville and The Dalles dams. The other stock, the upriver brights, is destined primarily for the natural spawning grounds of the Hanford Reach region of the Upper Columbia River (above McNary Dam). Small subpopulations exist in the Snake River (a tributary above McNary Dam) and in the Deschutes River (a tributary between the Dalles and John Day dams).

Coded-wire tag and skin color observations in the Bonneville Pool indicate Bonneville Pool Hatchery stock fish are dark, mature fish when they pass Bonneville Dam, while the upriver bright stock is characteristically bright in skin color when passing Bonneville Dam (McIsaac, 1979). Bonneville Pool Hatchery chinook spawn primarily in late September; peak spawning of upriver bright chinook occurs in mid November.

Accounting of individual fall chinook stocks throughout the Bonneville Dam to McNary Dam area has been available since 1979. Random samples are collected to determine proportion of bright and dark skinned chinook adults passing the viewing window at the Bradford Island fishway at Bonneville Dam. These data are applied to total daily passage counts providing stock specific passage estimates. Estimates of stock specific catch and Bonneville Dam passage for the years prior to 1979 were made in 1980 utilizing relationships between catch and escapement observed in 1979.

Unaccountable loss of Bonneville Pool Hatchery stock adults for the period 1977 to 1981 averaged 17,900 or 25% of the Bonneville Dam count (Table 2). Similar high loss rates were observed for the years 1977-1979 and 1981 but loss in 1980 was minimal in terms of number and rate. Unaccountable loss of upriver bright stock adults for the same period averaged 11,600 or 17% of the Bonneville Dam count. Loss of brights increased by nearly 300% between 1979 and 1980 reaching 29,600 or 47% of the Bonneville Dam count in 1981 (Table 3).

The magnitude of unexplained loss presented in Tables 1-3 should be interpreted with careful consideration for the apparent level of accuracy associated with estimating components of the accounting ledger. For example,

the "gain" of 4,900 upriver brights in 1977 and the loss of 2,900 Bonneville Pool Hatchery fish in 1980 should not be considered significantly different from complete accountability (zero unexplained loss). However, unaccountable loss approaching 50,000 adults for both stocks combined in 1981 is certainly cause for concern and loss of nearly half the total run of upriver bright fall chinook in 1981 clearly defines the serious nature of the problem.

#### SOURCES OF ERROR IN THE CALCULATION OF THE UNEXPLAINED LOSS OF FALL CHINOOK

Prior to making inferences regarding the source of unaccountable numbers of fall chinook it is important to examine the accuracy of the accountable portion of the fall chinook run size, specifically, dam counts, catch estimates, and escapement estimates.

Dam counts are the initial focal point of error scrutiny since they make the greatest contribution to the accounting ledger. Daily counts of fall chinook at fishway viewing windows at Bonneville and John Day dams by U.S. Army Corps of Engineers' personnel are made for 50 minutes of each hour and expanded to represent the entire hourly migration. Adults and jacks are separated using a standardized segregation length of 22 inches. Fish passing downstream are subtracted from upstream tallies to obtain net passage counts. In addition to chinook salmon, counting personnel are required to record passage of steelhead trout, coho salmon adults and jacks, sockeye salmon and shad. During peak migration periods or turbid water conditions the size of the viewing chamber can be reduced to minimize the number of fish passing and thereby allow more accurate counting. Counting stations at The Dalles and McNary dams are somewhat different. Fish are counted from above the

surface of the water as fish swim across a subsurface white board at The Dalles Dam; at McNary Dam, a viewing window is used on the Oregon shore ladder and a television camera is used on the Washington shore ladder. Counting periods and expansions to represent noncounting periods at these two dams are the same as at Bonneville and John Day dams. No expansion is used at any station to represent those fish migrating after counting hours (counting does not occur 24 hours per day), but the amount is considered to be minor during the fall run, averaging less than 4 percent based on sampling at Bonneville, The Dalles, and John Day dams during 1973-74 (Calvin, 1975). Counting procedures have remained unchanged throughout the period, 1977-1981.

Fall chinook dam counts show some minor inconsistencies, despite the rigorous procedures employed. For example, the count of adults over any dam should be no smaller than the count at a dam upstream, yet in 1977 a greater number of adults was counted at McNary Dam than at John Day Dam (37,600 vs. 37,100), with no correction for losses due to fishing. Discrepancies such as this are expected in short time intervals, possibly due to variable interdam travel time resulting from physical impedence by fishing gear or changing environmental conditions such as temperature or flow. Over the entire fall counting period of three months, short term deviations are expected to balance.

Discrepancies of chinook adult counts in spring and summer periods have been attributed to fallback (fish counted passing upstream but later falling back over spillways and then counted again reascending) and high flow related passage mortality at dams. No fallback has been identified during the fall chinook counting period when flows are low and spill is virtually non-existent.

River flow in the fall is typically low and clear, a condition shown from studies on spring and summer chinook to be conducive to successful passage (Young, et al. 1979).

The inclusion of large (over 56 cm) Bonneville Pool Hatchery jack (two year old) chinook in the adult count category at Bonneville Dam, while being included as jacks in accounting categories such as commercial landings and escapement, produces somewhat inflated adult passage estimates. The error introduced by this type of misidentification is small due to the low relative frequency of these individuals.

Bonneville Dam count stock composition estimate error may contribute to the lack of stock specific accountability. Prior to utilization of the skin color technique, unexplained loss was assumed to be primarily a hatchery stock problem. However, the 1980 stock specific loss estimates showed that upriver brights contributed the largest share of the interdam loss, while Bonneville Pool hatchery stock loss amounted to a historic record low. Several observations support the use of skin color sampling data to accurately estimate stock abundance at Bonneville Dam in 1980 and for further use of the technique. First, a large increase in unexplained loss of upriver brights, similar to that observed in Bonneville Pool, occurred between The Dalles and McNary dams where no stock separation is pertinent. Second, gill net fisheries in 1980, below and above Bonneville Dam, intercepted the peak of the Bonneville Pool Hatchery stock run with exceptionally high effort, which was not the case in 1977, 1978, 1979 or 1981. Third, unexplained losses of upriver brights occurred in the Bonneville Pool when hatchery tules are no longer present (e.g., when the return to Bonneville Pool hatcheries is completed).

Finally, the shape of the daily count curve of brights at Bonneville Dam is similar to the daily count curve at The Dalles Dam when opened fishing periods are taken into consideration (Figure 2). Stock separation sampling data at Bonneville Dam in 1979 is less comprehensive than data collected in 1980 and 1981, however sampling effort in 1979 was sufficient to produce accurate stock specific dam count estimates.

Passage of fall chinook salmon adults over dams by way of navigation lock routes, if significant, could affect the accuracy of dam counts. Shad are known to use navigation lock routes in passing Bonneville Dam in substantial numbers (Monan, et. al., 1970). Radio tagging of spring chinook in 1972, 1973 and 1977 failed to identify navigation locks as a migration route for chinook adults (Monan and Liscom, 1973; Monan and Liscom, 1974; Liscom, Stuehrenberg and Monan, 1978). In 1977, only 1 of 90 radio tagged chinook salmon passed Bonneville Dam by way of the navigation lock and none of the same radio tagged chinook passing The Dalles (66 fish) or John Day (61 fish) dams used the navigation lock route. It appears that the error introduced into the overall accounting of fall chinook salmon by lock passage is negligible.

Following dam counts, the major contributing category of fall chinook accountability in the area above Bonneville Dam is catch. Commercial catch is defined as landings documented by fish receiving tickets and averages 35% of the Bonneville Dam count for the period 1977 to 1981. Sport catches occurring between Bonneville and McNary dams, estimated with the use of punch cards, are known to be minor. Indian dip net subsistence catches which occur in the Klickitat river are estimated by the tribes involved.

Ceremonial catches by treaty tribes are recorded on a permit basis. The magnitude of this category of catch during the fall run is very small. Undocumented catches during open seasons are known to exist, as unreported subsistence catches or as tourist sales, but have not been quantified for the period in question. Undocumented catches outside open fishing periods are also known to exist, evidenced by documented seizures of illegal catch by law enforcement officers. It is unknown what proportion of total illegal catches are apprehended, so the magnitude of error resulting from undocumented catch outside open fishing periods cannot be estimated.

The third general category of the accounting ledger contributing to identification of fall chinook loss above Bonneville Dam is escapement. Escapement estimates come from three sources: 1) Hatchery returns; 2) returns to the Wind, White Salmon, and Klickitat (all tributaries to the Bonneville Pool), and Deschutes (tributary to the Dalles Pool) rivers; and 3) the McNary Dam count.

Hatchery return counts are accurate and precise. While fish cannot be counted with accuracy as they enter the hatcheries, complete accounting is possible at the time of disposition. Detailed records are kept on every fish, whether it is killed prior to spawning and sold as surplus, dies naturally prior to spawning, is spawned by hatchery personnel, or given to one of the treaty tribes. Natural spawning estimates in tributaries are based on expansion of redd counts (Deschutes River) or total fish counts (Wind, White Salmon, and Klickitat rivers) on the spawning grounds. The estimates of numbers of fish spawning naturally do not have the precision of hatchery counts or

the McNary Dam count, but the magnitude of this category is quite minor. Comments on precision of the escapement estimate passing McNary Dam have been presented earlier in the discussion of dam counts.

Mainstem spawning escapement in the area immediately below The Dalles, John Day and McNary dams has not been measured by any management agency during the period 1966 to 1980. The most suitable of these areas for spawning, approximately two miles of flowing river immediately below John Day Dam, was surveyed on November 17, 1981 and 29 dead, spawned chinook were counted. The magnitude of mainstem fall chinook spawning is considered to be minor though no estimate has been made at this time.

#### POSSIBLE EXPLANATIONS OF LARGE NUMBERS OF MISSING FALL CHINOOK

After examining the estimation accuracy of those components that identify substantial accounting loss of fall chinook above Bonneville Dam, attention may be focused on explaining the problem and perhaps assigning cause. Possible explanations fall into four general areas: errors in accounting, direct mortality from environmental factors, undocumented catch, fishery related loss and mortality associated with dam passage.

Errors associated with estimation of dam counts, natural spawning and documented catch may contribute to the lack of complete accountability but are not of the magnitude necessary to explain major discrepancies. There is no evidence to suggest that accounting estimates are biased in one direction, thereby resulting in significant accumulation of errors. For example, misidentification of Bonneville Pool Hatchery jacks as adults slightly inflates the adult count at Bonneville Dam but lack of



night counting at the same dam has a compensating effect. As another example, expansion of redd or fish counts to total spawning escapement estimates could result in either over or under estimates in any given year. It is unreasonable to ascribe the cause of an increasing loss of upriver bright fall chinook to techniques of estimation that have been consistently applied to all years.

Direct mortality from known environmental factors may contribute to large unaccountable numbers of fall chinook. Water temperatures in the Columbia River during fall salmon runs are quite high; the average peak over the past five years is 73°F (Table 4), with the peak normally occurring during August. In the years when fish are blocked from entering Spring Creek Hatchery,<sup>1/</sup> high temperatures and flows may hasten death before alternate spawning areas can be located. Notably, the lowest unexplained loss of Bonneville Pool Hatchery stock fish occurred in the year when the mainstem Columbia River was the coolest and the Spring Creek fish ladder remained open throughout the run (1980). Environmental factors cannot be related to recent high loss of the upriver bright stock. Neither peak temperatures nor the date the temperature drops below 70°F was abnormal the past two years when unexplained loss of upriver brights made a quantum jump in magnitude from earlier years. River flow and turbidity varied little during the fall period in contrast to the observed increase in unexplained loss of upriver brights.

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<sup>1/</sup> In 1977 and 1978 Spring Creek Hatchery, which accounts for over 90% of the adult production of the Bonneville Pool Hatchery fall chinook stock, closed the fish collection ladder after escapement needs were achieved. In 1979-1981, returning adults could voluntarily enter the hatchery throughout the run.

The magnitude of loss due to undocumented catch, as previously discussed, is unknown. The contribution to unaccountable loss from other fishery related sources such as net disentanglement or dropout, net avoidance stress and extraction by predators can only be inferred from conclusions drawn by studies conducted in Puget Sound and the Pacific Ocean (French and Dunn, 1973; Thompson, 1969). The applicability of study results to the commercial fishery above Bonneville Dam is questionable however, and though dead gill net marked chinook have been observed in the Bonneville Dam vicinity, no estimate of loss due to this source is available (Hanson, 1950).

Dam related mortality has real potential of contributing to an explanation of unaccountable loss especially of the upriver bright chinook stock. Mainstem hydroelectric dams on the Columbia River have been documented as causing direct mortalities to adult salmonids (Merrell, 1971). The only study designed specifically to measure dam related mortality of fall chinook adults estimated 21 percent were lost in attempting passage of Bonneville Dam in 1973 (Young et al., 1979).

Dam related mortality and undocumented catch/fishery related loss can be more thoroughly examined for their roles in explaining loss with more detailed time and area analysis. Loss estimated by specific interdam area (pool) can identify where passage is critical. A breakdown of loss estimates with respect to time can provide an indirect examination of undocumented catch by estimating the loss that occurs inside or outside open fishing periods. For each of these examinations, increased precision, e.g., loss by stock by pool, may result in increased estimate error. However, a balance between fine detail necessary for indepth study and accuracy provides the maximum amount of usable information without confounding interpretation.

For this analysis, loss is best represented by proportion or rate of the population that is not successful in escaping or exiting a specific area. Loss rate is estimated by dividing the difference in counts between two dams of interest by the count made at the downstream dam. For the area between The Dalles Dam and John Day Dam, turnoffs of bright fall chinook to the Deschutes River is also subtracted, distributed in time on the basis of The Dalles Dam daily counts. Adjustment must be made for interdam travel time to ensure that on the average, counts used for comparison are of the same group of migrating fish. Interdam travel times have been estimated by superimposing plots of daily counts of the two dams and minimizing the differences within a range of reasonable lag or travel times (Figures 3A and 3B).

An examination of loss by interdam area offers the potential of identifying a specific critical point of loss, for example the John Day Pool area. Because no pool specific catch data is available (specific area of catch is not required on Oregon fish receiving tickets), this analysis is limited to time frames closed to legal gill net fishing. Reduced seasons during the 1977-1981 period has resulted in substantial portions of the run passing during non-fishing periods (Table 5), lending confidence to estimates of loss for time periods less than the entire season. Only the upriver bright stock passes the four dams in question, so conclusions derived from this analysis apply only to that stock. This analysis is further limited to upper pools only for the years 1977-1978 when no periodic stock specific data is available at Bonneville Dam.

Upriver bright fall chinook loss rates during periods closed to commercial fishing by specific interdam area for the years 1977 to 1981 are presented

in Table 6. No particular area consistently shows a higher loss rate. Loss rates in all three pools increased between 1979 and 1980-81, corresponding to the observed significant increase in loss rate overall. Relatively high loss rates calculated for 1978 are not comparable to rates calculated for the years 1980 and 1981, because of the low proportion of the run passing through the area during non-fishing periods. Combined area values demonstrate the dramatic effect on survival brought about by the accumulation of loss throughout a series of interdam areas.

Comparison of loss rate inside and outside of commercial fishing periods can only be made for the upriver bright stock as the escapement of Bonneville Pool Hatchery stock is not available by timeperiod. Time being the critical factor, loss rate calculations are made for the entire Bonneville Dam to McNary Dam area, again restricting analysis to the years when stock specific dam counts are available for Bonneville Dam, 1979-1981. Documented catch is subtracted from the Bonneville Dam count along with tributary turnoff and McNary Dam escapement to obtain a loss rate for inside commercial fishing periods that is comparable to the outside fishing periods rate. If loss is found to occur inside or outside fishing periods but not within both it is apparent that fishing related activity (undocumented catch, net drop out, stress from net avoidance, etc.) and not dam passage related mortality is the critical factor determining that loss. If loss occurs inside as well as outside the fishing periods neither dam passage mortality nor fishery related loss can be eliminated as potential causes. If the loss rate is greater outside open fishing periods, two possibilities exist; either illegal catches occurring throughout both periods are being sold legally and documented

during open periods or the fishery is capturing fish that would otherwise become dam passage related mortalities. Finally, if the loss rate is higher inside open fishing periods, undocumented catch and other fishing related loss would be the most reasonable explanation for the difference in rates.

Loss rates calculated for open and closed fishing periods for 1979-1981 are presented in Table 7. Loss occurs inside as well as outside commercial seasons in the high loss years of 1980 and 1981 but only inside fishing periods in 1979. Consistently higher loss rates during open fishing periods, suggests that undocumented catch or other fishing related loss occurs during the open fishing periods. The high loss rates outside open fishing periods in 1980 and 1981, the years of special concern, and the negligible difference in loss rate in 1981 do not allow the elimination of dam passage related mortality as a potential contributing cause.

The search for explanation of unaccountable losses of upper Columbia River fall chinook is a process of elimination. Though no specific cause can be identified it is possible to eliminate certain potential causes. Accounting error can be eliminated as a possible cause for the large unexplained loss of either the upriver bright stock or the Bonneville Pool Hatchery stock. Mortality from environmental factors does not appear to be responsible for losses of the upriver bright stock, but may contribute to losses of the Bonneville Pool Hatchery stock. The process of elimination leaves dam passage related mortality and undocumented catch/fishery related loss as the most probable causes of unexplained loss of upriver bright fall chinook, especially with regard to the marked increase in loss observed between 1979 and 1980. Analysis of loss rate differences between interdam areas and between open and closed commercial fishing periods fail to isolate either

cause as the major explanation of interdam unaccountable loss of the upriver bright stock.

#### IMPACT OF CURRENT LEVEL OF UNACCOUNTABLE LOSS

The current level of unexplained losses has serious impacts in terms of loss of productivity for the upriver bright stock and wastage for the Bonneville Pool Hatchery stock.

The most serious impact from the current level of loss of upriver Columbia River fall chinook is observed for the upriver bright stock. This historically productive stock returned an average of 100,000 adults to the Columbia River over the last ten years, after contributing significant catches to the ocean fisheries of Alaska, British Columbia and Washington. The spawning escapement goal for this stock has not been reached in nine of the last ten years, placing this resource in a sharp declining trend. No regulatory constraints could have been placed on in-river fisheries during 1980 or 1981 which would have resulted in the attainment of the spawning escapement objective because of the unexplained loss. If production from poor escapements of recent years experience current unexplained loss and fishing rates, the upriver bright stock will be lost as a managable productive resource.

Bonneville Pool Hatchery fall chinook, also incurring losses from unknown causes, do not have the declining or threatened status associated with the upriver brights. The impact of unexplained loss on this stock is in terms of lost harvest potential. Lost harvest potential is manifested in the numbers of fish unaccountable as well as lost opportunity in mixed stock fishing areas resulting from regulations designed to protect upriver brights. In 1981, approximately 31,000 additional adult Bonneville Pool Hatchery fall

chinook could have been harvested were it not for unexplained loss and reduced harvest opportunity (18,000 unaccountable and 13,000 surplus to hatchery production needs).

The lost harvest potential of the Bonneville Pool hatchery stock affects the status of treaty catch allocation. Treaty tribes did not attain their federal court ordered share of the fall chinook catch in 1977 and 1980, resulting in a net deficit for the four year period, 1977-1980. Obviously, the redistribution of a portion of this lost harvest potential into the treaty Indian commercial harvest would result in balanced catch sharing.

#### SUMMARY

The magnitude of unaccountable losses of fall chinook is serious, especially in the two most recent years when up to 50 percent of the upriver bright stock is unaccountable by documented sources. Continued high loss rates associated with upriver bright fall chinook may result in the elimination of this resource as a viable production unit.

An examination of possible calculation errors and other contributing causes of loss provides identification of what does not adequately explain the magnitude of these losses but fails to uncover a complete explanation. Though no single potential cause examined demonstrated the capacity to affect accounting discrepancies for upriver bright fall chinook of the magnitude observed in 1980 and 1981, dam passage mortality and undocumented catch/fishery related loss are the most likely explanations.

This examination provides a starting point for more directed attempts at discovering the cause of unexplained loss, understanding that resolution of the unexplained loss problem has both immediate and long term benefits.

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Table 1. Interdam account ledger for combined stocks of upper Columbia River fall chinook, in thousands of adults, 1977-1981.

Category	Year				
	1977	1978	1979	1980	1981 <sup>1/</sup>
Bonneville Dam count	132.0	144.9	144.0	127.4	146.6
Commercial landings	46.4	55.9	60.0	33.6	44.3
Natural Spawning/ tributary turnoffs	8.1	8.8	6.9	6.5	6.7
Dip net	.4	.8	.6	.4	.4
Sport catch	.6	.8	.4	.5	.1
Ceremonial	.6	.4	0	.2	N/A
Escapement	58.9	44.8	49.5	56.7	47.3
Unaccountable difference	17.0	33.4	26.6	29.5	47.8
Percent	13	23	18	23	33

<sup>1/</sup> Preliminary.

Table 2. Interdam account ledger for Bonneville Pool Hatchery fall chinook, in thousands of adults, 1977-1981.

Category	Year				
	1977	1978	1979	1980	1981 <sup>1/</sup>
Bonneville Dam count	67.7	79.0	72.8	57.2	83.7
Commercial landings	22.8	31.2	32.9	24.3	37.5
Natural spawning	1.3	2.3	1.9	2.6	1.5
Klickitat R. Dip net	.4	.8	.6	.4	.4
Escapement (hatchery return)	21.3	17.5	18.3	27.0	26.1
Unaccountable difference	21.9	27.2	19.1	2.9	18.2
Percent of Bonneville Dam count	32	34	26	5	22

<sup>1/</sup> Preliminary

Table 3. Interdam account ledger for upper Columbia River bright fall chinook, in thousands of adults, 1977-1981.

Category	Year				
	1977	1978	1979	1980	1981 <sup>1/</sup>
Bonneville Dam count	64.3	65.9	71.2	70.2	62.9
Commercial landings	23.6	24.7	27.1	9.3	6.8
Deschutes River turnoff	6.8	6.5	5.0	3.9	5.2
Sport catch	.6	.8	.4	.5	.1
Ceremonial catch	0.6	0.4	0	0.2	N/A
Escapement (McNary Dam count)	37.6	27.3	31.2	29.7	21.2
Unaccountable difference	-4.9	6.2	.5	26.6	29.6
Percent of Bonneville Dam count	-8	9	11	38	47

<sup>1/</sup> Preliminary.

Table 4. Flow, temperature and turbidity measured at Bonneville Dam, 1977-1981.

Year	Mean discharge September (CFS)	Peak temp (°F) (date)	# Days peak temperature	Date below 70°F	Mean turbidity September
1977	104,710	74/(8-13)	8	9-9	4.7
1978	150,283	72/(8-8)	5	8-18 <sup>1/</sup>	4.2
1979	102,180	72/(8-1)	2	9-22 <sup>1/</sup>	4.5
1980	107,100	71/(8-11)	4	8-15	4.3
1981	113,670	74/(8-11)	1	8-30	6.6

<sup>1/</sup> Temperature dropped below 70°F on 8-6, 9-4, 9-11, 9-14, 9-17 and remained below on 9-22.

Table 5. Columbia River zone 6 fall chinook commercial fishery seasons and proportion of the total fall chinook run passing Bonneville Dam during closed fishing periods, 1977-1981.

<u>Year</u>	<u>Number of days, opened to commercial fishing above Bonneville Dam</u>		<u>Proportion of run passing Bonneville Dam during closed commercial fishing periods</u>
	<u>Bonneville Pool</u>	<u>Upper Pools</u>	
1977	19	19	n.a.
1978	27	27	n.a.
1979	18	12	.31
1980	5	5	.48
1981	8	4	.20

Table 6. Loss rates of upriver bright fall chinook by interdam section, Bonneville Dam to McNary Dam, during closed fishing periods, 1977-1981.

Category	1977	1978	1979	1980	1981
Bonneville to The Dalles	<u>1/</u>	<u>1/</u>	-.09	.18	.16
The Dalles to John Day	.10	.12	.07	.20	.18
John Day to McNary	-.13	.16	.08	.14	.25
The Dalles to McNary	-.02	.26	.14	.23	.28
Bonneville McNary	<u>1/</u>	<u>1/</u>	.06	.42	.48

1/ Stock specific periodic count data at Bonneville Dam unavailable before 1979.

Table 7. Comparison of loss rates between opened and closed fishing periods, with proportion of total run size entering the fishery, Bonneville Dam to McNary Dam, 1977-1981.

Category	Year		
	1979	1980	1981
Bonneville to McNary closed fishing	0	.29	.43
Bonneville to McNary opened fishing	.19	.47	.49
Bonneville to McNary entire season	.11	.39	.47

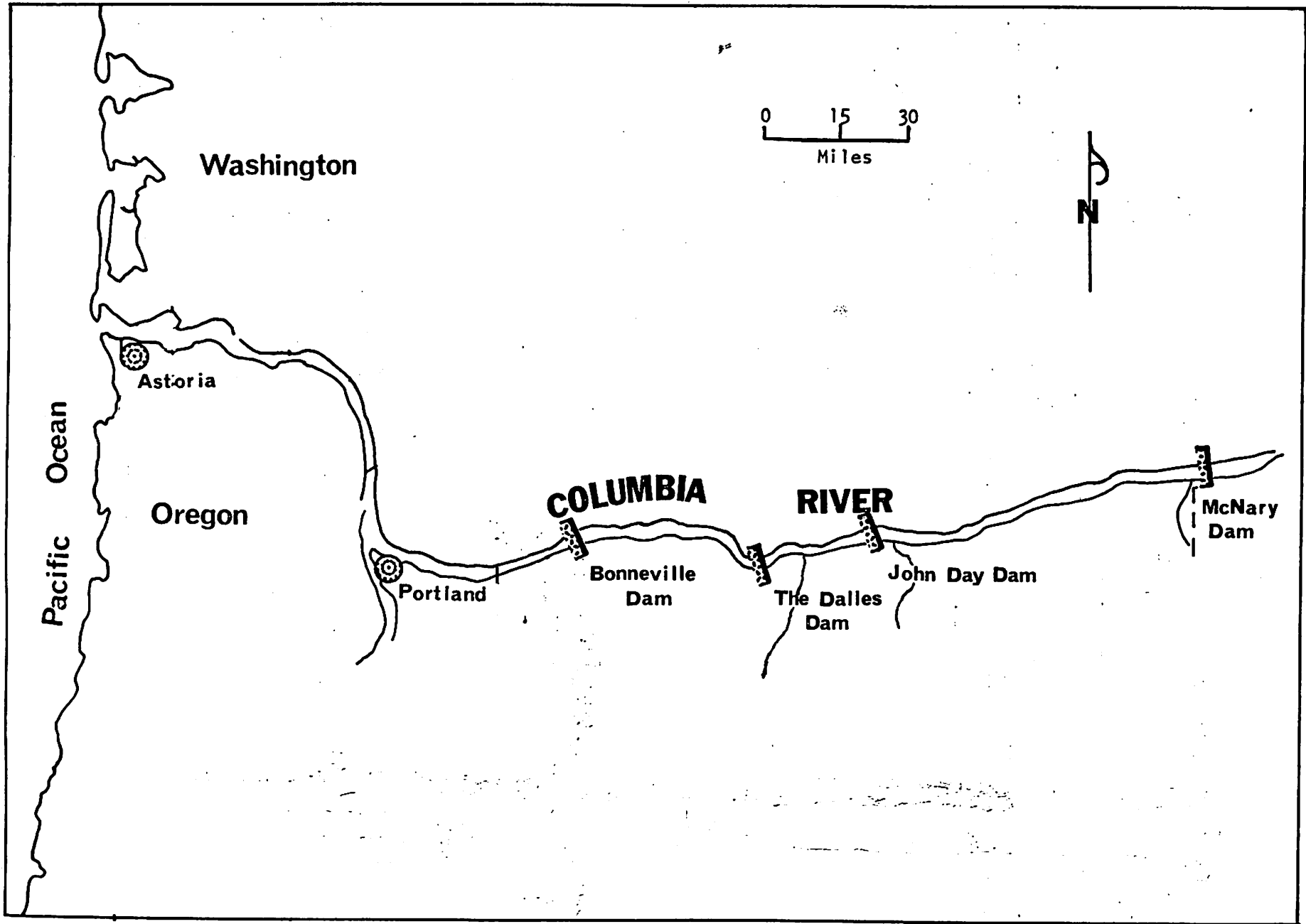


Figure 1. Map of the Columbia River from mouth to McNary Dam.



fig 2. daily counts of upriver bright fall chinook at bonneville and the dalles dams in 1980 with fishing periods in bonneville pool.

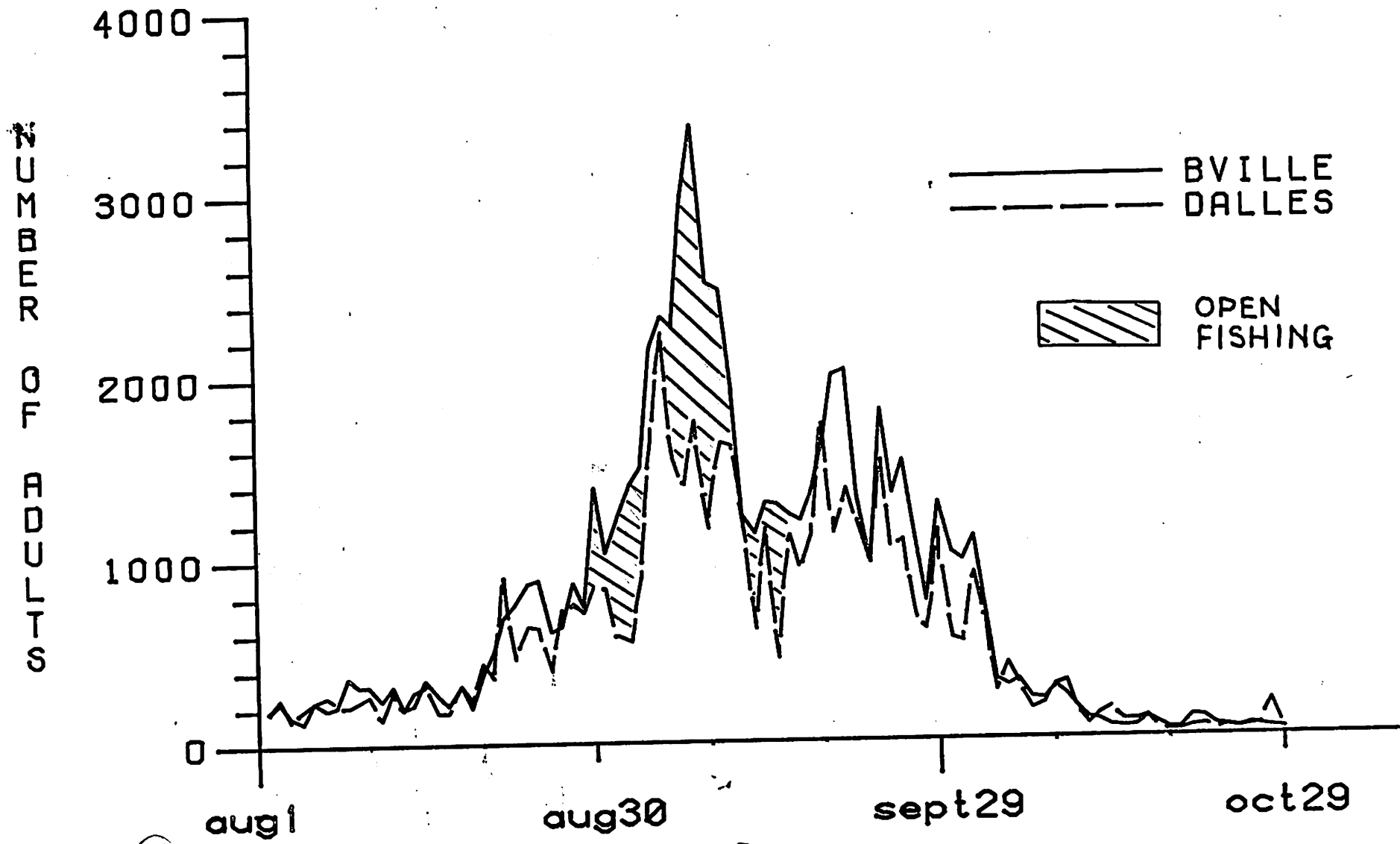


fig.3a daily counts of upriver bright fall chinook at the dalles and john day dams in 1979 unadjusted for travel time.

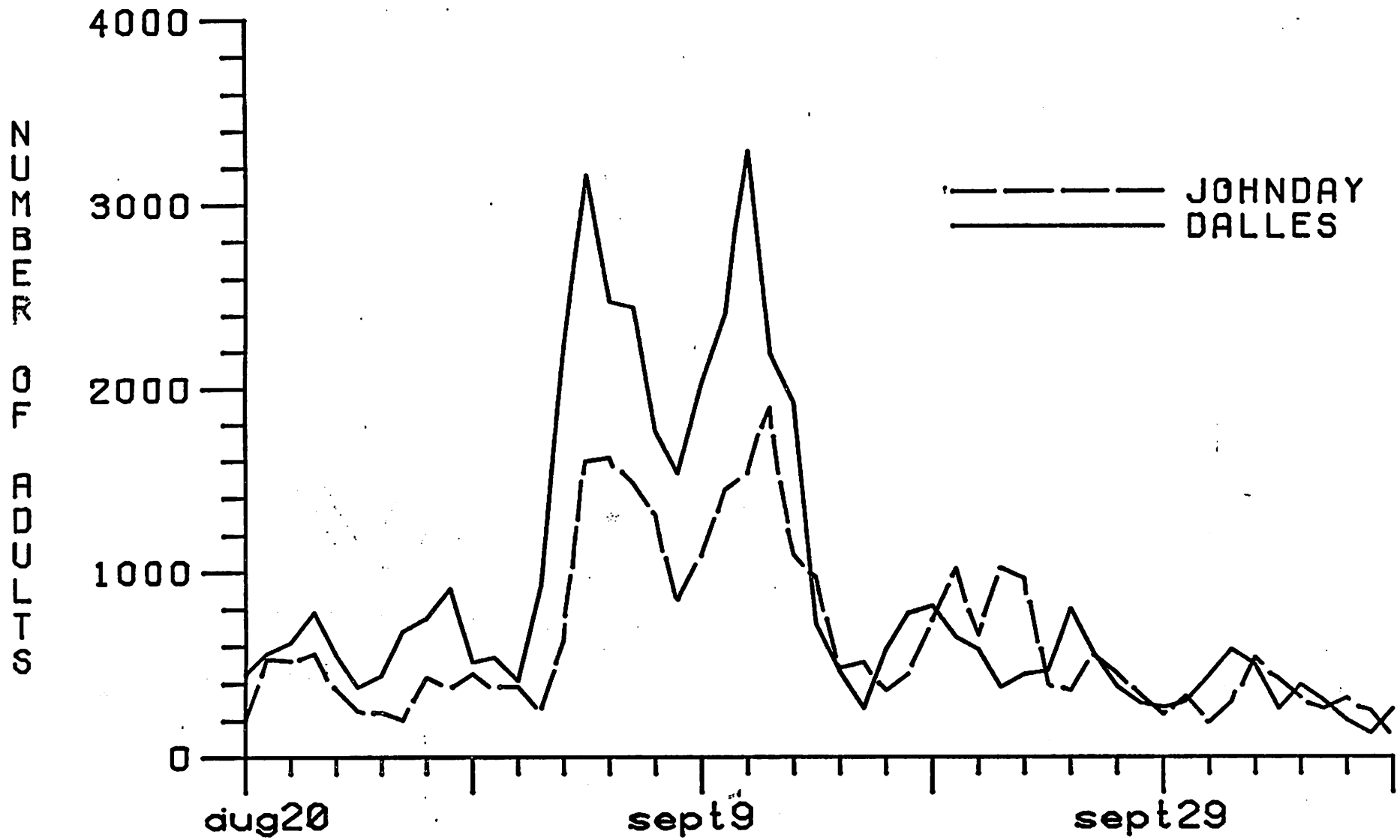
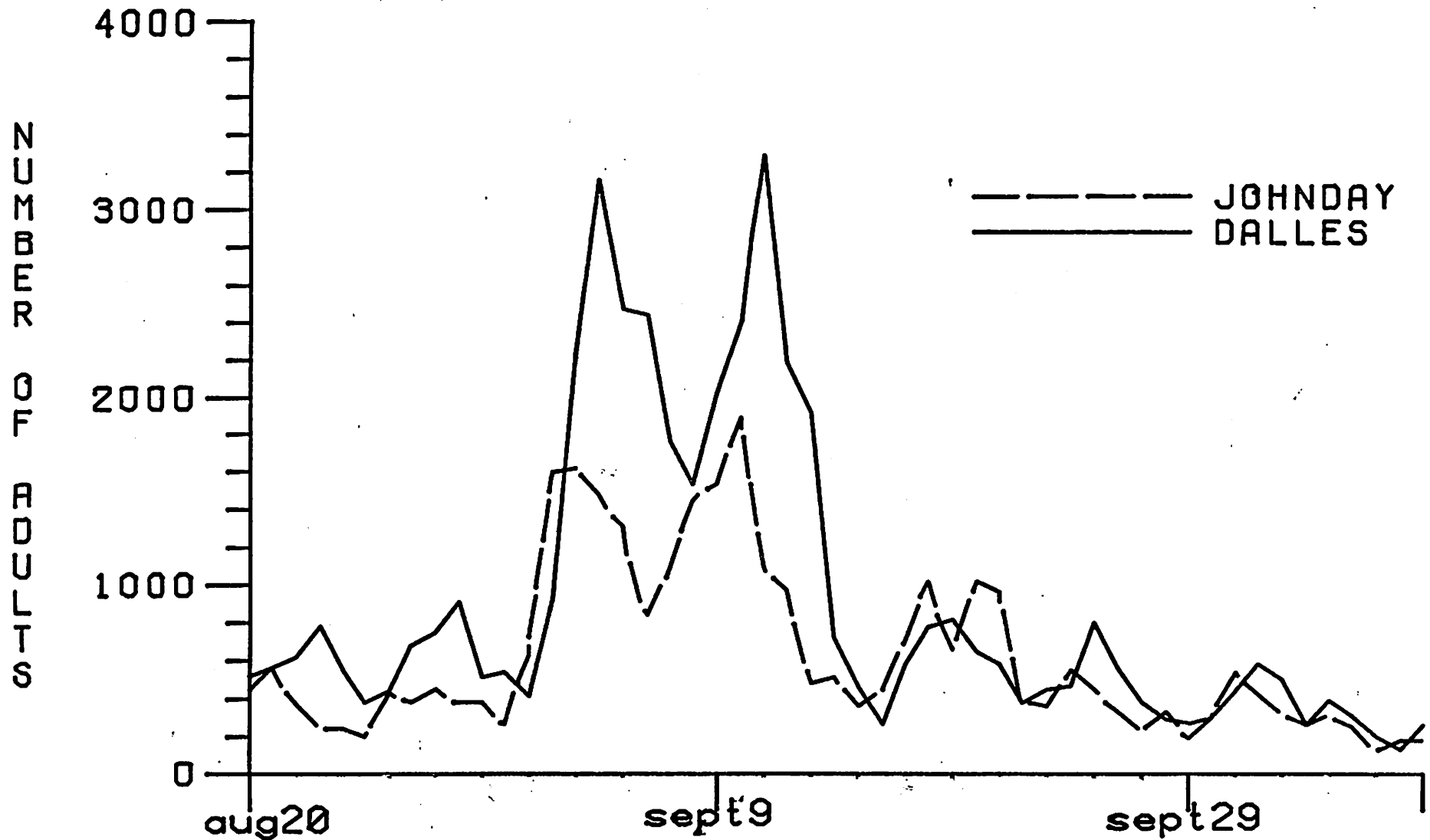



fig.3b daily counts of upriver bright fall chinook at the dalles and john day dams in 1979 adjusted for two day travel time.





# United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

March 19, 1982

Mr. Clement V. Tillion  
Chairman, North Pacific Fishery  
Management Council  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Mr. Tillion:

The North Pacific Fishery Management Council (NPFMC) will meet March 23-25 in Anchorage, Alaska, to take final action on the 1982 Southeast Alaska troll salmon fishery regulations. The Department of the Interior is interested in the Council's efforts to manage this fishery because these efforts currently impact the severely depressed Columbia River chinook salmon stocks and the harvest opportunities of Columbia River Indian tribes and other fishermen.

We understand that during 1982, the NPFMC intends to restrict the ocean harvest of chinook salmon to the lower end of the optimum yield range (243,000 to 272,000 adults). This action would have less adverse impact on chinook spawning escapements to the Columbia River, as well as on Washington, British Columbia, and southeastern Alaska rivers, than higher harvest levels. Any action to improve spawning escapements, especially to the Columbia River, is appreciated.

A harvest reduced to 268,000 chinook salmon in the southeast Alaska fishery last year and the elimination of inside terminal fisheries in the Stikine and Taku Rivers contributed to improved spawning escapement in these rivers. However, other major river systems contributing to the chinook harvest in southeastern Alaska have not shown commensurate improvement. For instance, virtually all of the 350 or so British Columbia chinook stocks remain severely depressed, despite elimination of terminal fisheries. Overall, natural escapement goals in British Columbia are about 35 percent of the optimum escapement. A potential harvest of 1.3 to 1.7 million fish is being foregone annually because of under escapement of chinook salmon to northwest rivers from the Columbia River to Cape Suckling, Alaska.

During 1981, about 37 percent of the total harvest of upper Columbia River fall chinook occurred in southeastern Alaska. Upper Columbia River spring, summer, and fall chinook salmon are returning in numbers that are 49 percent, 70 percent, and 48 percent less than their respective escapement goals. These runs are declining and the forecast of abundance for these stocks is even lower for 1982.

State, Federal, and tribal fishery agencies will conduct investigations during 1982 to identify specific Columbia River dam passage problems which have led to apparent losses of adult upriver fall chinook salmon. Also, the Northwest Power Planning Council, acting under the mandate of Public Law 96-501, will adopt a fish and wildlife program this year that must provide remedial action for adverse impacts on Columbia River salmon stocks.

Because of the critical plight of the upper Columbia River chinook salmon stocks, the Department of the Interior urges you to implement regulations that significantly reduce the harvest of chinook salmon in the southeastern Alaska troll fishery during 1982. To accomplish this, we recommend that the troll season be delayed until July 15, and that the optimum yield range be reduced to prevent overharvest of Columbia River chinook salmon. There is a potential for increased fishing pressure after July 15, which may override potential savings from the delayed opening of the season. The intent is to reduce interception of depleted chinook stocks while minimizing impacts on the troll coho fishery. Historical data indicate that over half of the chinook salmon and only a small fraction of the coho salmon are harvested prior to July 15. We may have further recommendations pertaining to time and area closures and/or reductions in optimum yield when additional data become available.

Canada is engaged in negotiations with the United States concerning the interceptions by United States and Canadian fishermen of all west coast species of salmon, including these chinook stocks. We believe actions by the NPTMC to reduce interceptions of these common chinook stocks in Alaska will strengthen United States efforts to negotiate reduced Canadian interceptions of depressed Columbia River and southeastern Alaska stocks. We have recommended to the Pacific Fishery Management Council that they adopt a May troll closure north of Cape Falcon, Oregon, in addition to other protective measures for chinook stocks. Furthermore, the State of Washington and the Northwest Treaty tribes are developing management measures, under Federal Court direction, that will protect these salmon stocks. We are optimistic that, with coast-wide cooperation, the severely depleted chinook stocks of the Columbia River and elsewhere can be restored to their productive potentials. The cooperative measures mentioned in this letter will result in an increase in the fall chinook spawning escapement above McNary Dam on the Columbia River. While the spawning escapement goal of 40,000 adults and treaty obligations will probably not be met in 1982, even with our recommendations, the decline in spawning escapements can be reversed and a major step taken to rebuild these stocks.

We appreciate your serious consideration in this matter and would welcome your assistance in halting the decline of chinook salmon stocks on the west coast.

Sincerely,

  
RONALD PAUL HOOD  
UNDER SECRETARY

## TENTATIVE AGENDA

### JOINT SESSION OF THE ALASKA BOARD OF FISHERIES AND THE NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL

Anchorage Westward Hilton Hotel  
March 23-25, 1982

Respective topics on the agenda will be addressed first with staff reports, followed by a public hearing to receive public comment and then a discussion and/or decision by the Joint Session members.

#### I. Troll Salmon

- a. Council Reports
- b. Washington Department of Fisheries - Bill Wilkerson, Mike Fraidenberg
- c. Oregon Department of Fisheries and Wildlife - Bernie Bohn
  1. Inriver management status
  2. Inter-dam loss
  3. Research plans 1982
- d. Enforcement Status - NMFS, Seattle - Wayne Lewis
- e. Alaska Region NMFS - Bob McVey
- f. Canadian Presentation - Mike Hunter
- g. Columbia River Tribes - Wilbur Johnson
- h. Inter-council Salmon Group - Bill Demmert/Don Collinsworth

#### II. King Crab - Bering Sea/Aleutian

- a. ADF&G Westward Staff
- b. ADF&G Subsistence Staff
- c. Summary of Seattle Hearing - Fred Gaffney
- d. Council - Steve Davis
- e. NMFS

#### III. Tanner Crab

- a. Bering Sea
  1. NMFS
  2. ADF&G Staff
  3. Council Staff
- b. Yakutat Tanner Pots
  1. ADF&G Staff

#### IV. Sablefish - Gulf of Alaska

- a. Council
- b. ADF&G



STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600

March 19, 1982

Mr. Jim Branson, Executive Director  
North Pacific Fishery Management Council  
Suite 32, 333 West Fourth Avenue  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Mr. Branson:

We have reviewed the draft "SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT ON THE 1982 PROPOSED MANAGEMENT REGIME AND ALTERNATIVES UNDER THE FISHERY MANAGEMENT PLAN FOR THE HIGH-SEAS SALMON FISHERY OFF THE COAST OF ALASKA EAST OF 175 DEGREES EAST LONGITUDE". This is to express our views regarding shortcomings in this Environmental Impact Statement (EIS), the proposed action, and questions regarding the appropriateness of the proposed action in light of the legal requirements of the FCMA and status of the stocks contributing to the fishery.

Management considerations for 1982 relating to chinook salmon harvested off Southeast Alaska should include:

1. Most chinook harvested in Southeast Alaska are naturally produced and originate south of Alaska; therefore the needs of these stocks should be highlighted and addressed.
2. Virtually all stocks in the Southeast Alaska chinook catch appear to be overfished; therefore there is a serious need for basic conservation protection.
3. Terminal area fisheries that target on all naturally produced stocks making significant contributions to the Southeast Alaska harvest have been eliminated; therefore no further terminal area management options exist. Ocean fisheries are the only management option left to address the needs of these stocks.
4. The Southeast Alaskan troll fishery is now the largest U.S. harvester for some important southern U.S.-origin chinook stocks; therefore these fisheries represent the only U.S. management opportunity for these stocks (i.e. they are the only U.S. targeted fisheries remaining on these stocks).
5. For stocks originating in the south, a northern U.S. versus southern U.S. allocation alteration has occurred as runs have declined and as terminal area fisheries have been restricted for conservation needs; therefore terminal area fishermen are carrying a disproportionately large share of the conservation burden.

Mr. Jim Branson  
March 19, 1982  
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Three rationales continually reappear and are cited extensively in the EIS as justifications for not managing this fishery in response to the serious conservation and allocation issues which face us:

1. a desire to not adversely impact the troll salmon industry in Alaska;
2. the presence of Canadian fisheries negates beneficial impacts of Southeast Alaska management measures; and
3. it is irrational to manage the Southeast Alaka fishery for the sole benefit of Columbia River "brights".

We believe these reasons provide inadequate justification for the level of action contemplated in this EIS.

While the Alaska troll catch reductions frequently cited in the EIS are used to imply harvest rate reductions, no evidence is presented or has been presented that harvest rates will actually decline. With stock sizes continuing to decline (Joint Technical Staff Report, 1981), we believe a conclusion that catch declines also imply harvest rate declines is defective. The EIS further concludes that these catch declines by Southeast Alaskan troll fishermen means they are carrying a disproportionate share of the conservation burden. As noted above, we disagree and believe this misrepresents the trend of terminal area management in recent years. Terminal area fisheries on the same depressed natural chinook stocks present in the Southeast Alaskan troll fishery have been virtually eliminated. We believe the mangement standards which have been applied to the Southeast Alaska troll fishery at the direct expense of terminal area fishermen, at the direct expense of spawning escapements, are likely to violate National Standards 1, 3, and 4:

"(1) Conservation and management measures shall prevent over-fishing while achieving, on a continuing basis, the optimum yield from each fishery.

....

"(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and inter-related stocks of fish shall be managed as a unit or in close coordination.

"(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote



Mr. Jim Branson  
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Page 3

conservation; and (C) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges."

Again, the 1982 preferred option would allow a directed fishery by U.S. fishermen in Alaska while at the same time fishermen in southern areas are being severely restricted from direct harvest while both groups of fishermen have the same conservation problem. Another consideration is that state and federal governments are vigorously pursuing rehabilitation and mitigation activities for environmental degradation of the Columbia River. Allowing a fishery to degrade the same resource through overfishing presents obvious inconsistencies.

The rationale dealing with Canadian interceptions is inadequate. Analysis indicates fish saved in Alaska will not simply be caught in Canada. In fact, the majority will survive and accrue to the region of origin. No evidence is presented in the EIS which contradicts this conclusion and which indicates that Canadian interceptions will "wipe out" benefits accruing to southern areas as is implied in the EIS. We disagree with the conclusion that "no further reductions below the 1981 harvest level are warranted unless the Canadian government acts to ensure that those fish saved off Alaska are not reallocated to Canadian fishermen". The sentiment that U.S. fishermen should continue to overfish stocks since Canadians are also fishing will never lead to a resolution of our coastwide problem.

The final rationale which imputes irrationality associated with the concept of managing for the sole benefit of one stock (i.e. upper Columbia River brights) misrepresents the knowledge we have about management needs in this fishery. With nearly every stock that makes significant contributions to this fishery presently overfished and with most stocks originating south of Alaska, the real question has been: "Do we have a southern origin indicator stock we can use to guide management?". We have never suggested stock-specific (e.g. brights) management. The principle is: beneficial management for this one indicator stock also results in beneficial management for other, equally depressed coastal chinook stocks.

Several serious omissions exist in the EIS. A proper evaluation of the cost, in terms of foregone future catch, associated with the chronic under-escapement of stocks supporting this fishery and an examination of the issue of harvest allocations between southern and northern U.S. user groups is needed. While short-term Southeast Alaska user impacts associated with catch reductions are highlighted, no evaluation exists regarding current annual costs resulting from inadequate escapements (Joint Technical Staff Report, 1981). The National Standards under the FCMA require a "fair and equitable" distribution of the conservation burden and the EIS omits any analysis of U.S. harvest sharing alterations which have resulted from terminal area management versus Alaska troll fishery management.

Mr. Jim Branson  
March 19, 1982  
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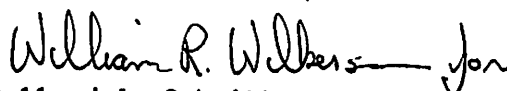
Alternative A does not relate to any defined objective for the southern-origin stocks which support this fishery. The frame of reference for this alternative relates to generalized fishery needs, not biological needs, and a desire not to give up potential Canadian stocks (which are also experiencing conservation problems). No attempt is made to quantify probable impacts of Alternatives B, C, or D. They are simply dismissed as not appropriate or concluded to be "not justified" without any analysis. Opinions rather than empirical evidence (e.g., "...benefits from the proposed action may be minimal and may not justify the socioeconomic cost inflicted on the salmon fishing industry") appear the rule. We question the technical support for such opinions. If this cannot be clearly stated in the EIS, the opinions should be eliminated or at least specified to their source (i.e., the NPFMC, NMFS, the Salmon Team, the individuals who prepared the EIS, or ?).

We have a number of questions we think the Council should address:

1. Do the Council and Secretary of Commerce have the authority to manage ocean salmon fishing so that inadequate fish remain to meet spawning escapement objectives established by the state or country of origin?
2. Do the Council and Secretary of Commerce have the authority to manage ocean salmon fishing so that no harvestable fish remain to be taken subsequently in established inside fisheries where the fish originate?
3. Do the Council and Secretary of Commerce have the authority to selectively manage its fisheries such that they share less of the conservation burden than inside fisheries where the fish are produced?
4. Do the Council and Secretary of Commerce have the authority to manage a stock in only one portion of its geographic range?
5. Do the Council and Secretary of Commerce have the authority to pursue conservation-based mitigation and/or rehabilitation for environmental degradation while at the same time allowing over-harvest in ocean fisheries?

Our staff has continued to develop the technical means for analyzing decisions regarding the chinook salmon resource. Their latest work efforts are appended for your use. The results of this work indicate to me that we have the opportunity to foster wise use of U.S. stocks in the Southeast Alaska troll fishery. Obviously, we are dealing with a very complex issue. I look forward to working with you and the Council in meeting this challenge.

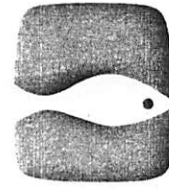
Sincerely,

  
William R. Wellborn  
Rolland A. Schmitten  
Director

RAS:nb  
cc: (attached)

cc: (Mr. Jim Branson, March 19, 1982)

cc: Joyce M. T. Wood (Office of Ecology and Conservation)  
Oregon Department of Fish & Wildlife  
Idaho Department of Fish & Wildlife  
Columbia River Inter-Tribal Fish Commission  
Northwest Indian Fisheries Commission  
Washington coastal tribes  
Columbia River Fishermen's Association  
Fred Olney  
Judge Walter T. Craig  
Canada Department of Fisheries and Oceans  
Alaska Department of Fish & Game



February 18, 1982

COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

Clem Tillion  
North Pacific Fishery Management Council  
P.O. Box 3136DT  
Anchorage, Alaska 99510

8383 N.E. Sandy Blvd.  
Suite 320  
Portland, Oregon 97220  
Telephone (503)  
257-0181

Dear Mr. Tillion:

The Columbia River Inter-Tribal Fish Commission has appointed S. Timothy Wapato to the position of acting executive director, effective February 1, 1982. He replaces former executive director Gary Niles Kimble, who has relocated to California.

Mr. Wapato has been with the commission since August 1979 as its fishery protection and enforcement director and as a policy assistant. In this position, as you may know, he initiated an inter-tribal law enforcement program on the Columbia River and designed and drafted the Columbia River Inter-Tribal Enforcement Code adopted by the Nez Perce, Umatilla, and Warm Springs tribes. Concurrently, his work on water-related issues and projects led to the 1980 Water Conference in Portland and to formation of the Columbia River Drainage Basin Water Committee. He is also known to the agency community through his activities as our staff liaison with state and federal fisheries law enforcement bodies and through his policy involvement in primary legislative and judicial matters concerning the treaty Indian fishery.

Before joining CRITFC, Mr. Wapato spent 20 years with the Los Angeles Police Department, where he earned the rank of Lieutenant of Police. He is an enrolled member of the Confederated Colville Tribes and has been active throughout his career in community and Native American organizations. He is past president of the United American Indian Council, former chairman of the Los Angeles City-County Native American Commission, and a former member of the state of Washington's Law and Justice Planning Committee and the Los Angeles Affirmative Action Task Force.

Our commission is pleased that Mr. Wapato will be carrying out our policies and programs and coordinating our fishery agency activities as acting executive director. We hope you will call on him for whatever is needed to further our mutual objectives for the Columbia River fisheries resource.

Sincerely,

Levi George  
Vice-Chairman

ES:vm:src

cc: All Members

14 \*

REOPENING THE WATER WEST OF CAPE SUCKLING TO TROLLING  
The Only Solution to a Critical Situation

Submitted by

Richard W. Lundahl  
2/17/82

- I. SITUATION AS OF 2/1/82.
  - A. Chinook Stocks.
    1. Chinook stocks South and East of Cape Suckling are generally depressed.
    2. Chinook stocks North and West of Cape Suckling are generally in good shape. These stocks have just this year had a reduction in harvest level by foreign trawlers of approximately 600,000 Kings.
  - B. Harvest Level -- O. Y.
    1. Both the N.P.F.M.C. and the A.B. of F. have drastically cut the O.Y. recently for conservation reasons and for political reasons.
    2. Both the N.P.F.M.C. and the A.B. of F. are now intending to further cut the O.Y. by an additional 10 percent.
  - C. Judge Craig.
    1. Judge Craig has stated his intention to see that the U.S.A. will uphold its treaty obligations to the Wash. Treaty Indian Tribes.
    2. Judge Craig via the N.P.F.M.C. is seriously looking at the Alaskan Troll Fisheries as a real threat to these obligations.
  - D. The Alaska Troll Fisheries are overcapitalized because of Government Mismanagement.
    1. The issuance of permanent permits to the troll fisheries clearly implies (practically guarantees) the viable, permanent, and professional status of these fisheries. We have bought and sold permits and taken out loans with this understanding.
    2. The area designation of "Statewide" strongly implies that the Troll fisheries will again be allowed to fish West of Cape Suckling when the biological condition of these stocks allows. We have bought and sold permits and indebted ourselves with this understanding. This was board intent in 1973 when trolling was restricted to Southeast.

- 24
3. The enactment of the 200 mile limit (The F.C.M.A.) strongly implied to the public that the Federal Government intended to protect the American Fisherman from foreign harvests in our waters.
  4. Despite depressed stock conditions South and East of Cape Suckling and down into Washington and Oregon, and serious habitat ~~degradation~~<sup>degradation</sup> problems to the South, and the threat to Alaskan Trollers of the Judge Boldt Decision; managers allowed high harvests until 1979.
  5. Low interest Government loans during periods of high inflation rates, Government construction fund incentives, and Tax incentives have all encouraged the fisherman to invest in his boat and equipment, especially in lieu of # 1, 2, 3, and 4 above.
  6. The number of Power Troll permits was based upon fishing efforts from 1968 thru 1972 when we were allowed to fish Statewide. In essence managers have restricted a "Statewide" fishery to one region and then blame the trollers for over-fishing that Area.
  7. Legislative over-sight and A. B. of F. inaction allowed the Hand Troll Fleet to grow out of all proportion. This "Statewide" Fishery is also restricted to Southeast.
- E. Approximately  $\frac{1}{2}$  of the Power Troll Fleet is facing Bankruptcy. The current policies are going to hurt us all.
1. At least  $\frac{1}{3}$  of the P. T. Fleet is unable to meet their financial obligations at current harvest levels.
  2. Because of the economic situation in the lower '48 these fishermen can not sell their boats. Who wants to go into debt to fish in a severely restricted fishery.
  3. The bankers don't want to repossess these boats because they can't get rid of them. Who would buy them. Besides, if you repossess it; you have to maintain it.
  4. These fisherman are thus encouraged to try another year or to try alternate fisheries. Another year's interest is piled onto the principle and/or the fisherman buys new gear.

II. OPTIONS --- A REALISTIC LOOK.

A. Hatcheries and Enhancement.

- 1. Too long term. The troll fleets need <sup>a</sup> ~~and~~ solution now.
- 2. Not even a long term solution. The Kings that spawn in Southeast Alaska live and feed in waters West of Cape Suckling.
- 3. Possibly Hatcheries in the lower '48 (placed there in our behalf) would be a solution; but again, it's too long term.

B. Buy Back.

- 1. Not acceptable to vast majority of trollers as of Spring of 1981.
- 2. Unfair. Why should we bear the brunt of government's mismanagement? Besides, Who can afford the 7% tax on our gross. We're paying a voluntary 3% tax on our gross already for hatcheries.
- 3. Too long term. It would be several years to set the system up and get it working. We need a solution now.

C. Alternative Fisheries.

- 1. A possible solution; but not very probable. Subsistence considerations.
- 2. The established lucrative fisheries are already fully exploited and many are protected by Limited Entry. Who can afford to change fisheries now?
- 3. New fisheries are very uncertain. New markets would have to be found and developed for many. Who can afford to experiment now? Possibly too long term to be an effective solution.
- 4. New fisheries can create biological problems. Many species have very low fecundity. Lack of biological data on these fish could seriously deplete these resources thru overharvesting and mismanagement.
- 5. Many of the species currently not being used in large commercial fisheries are used in rural communities by subsistence users.

D. Status Quo and/or raising the O.Y.

- 1. The Chinook stocks South and East of Cape Suckling are generally in a depressed condition.
- 2. The A. B. of F. initiated a 15 to 20 year program of allowing increased escapement in order to rebuild these runs (started during 1981 season).
- 3. Increasing the O. Y. on Southeast stocks could destroy the rebuilding program besides endangering the resource.

- 4/4
4. The troll fleet is in serious even critical trouble now -- with the present O.Y. Status Quo, while being a biological solution, is not an economic solution. It is just too long term.

E. Reopen Westward to Statewide Trolling.

1. The Chinook stocks West of Cape Suckling generally are in good shape.
2. These Stocks have within the last year received a major shot in the arm --- the extreme curtailment of (prohibited) foreign fleet harvests. This amounts to 350,000 to possibly over 1,000,000 extra Kings for escapement and Alaskan fishermen.
3. There is no biological reason for restricting Statewide Trollers to Southeast any longer.
4. There is a tremendous need for biological data about Chinook Salmon. Managers need to know migration patterns and concentrations, feeding patterns, habits, and concentrations, rearing areas, etc. Replacing foreign trawl fleets with Alaskan trawl fleets on the high seas, in the F.C.Z. and in State waters does not reduce the danger of harvesting mixed stocks with high catch rate fisheries.
5. The Troll fisheries are slow attrition fisheries with low catch rates. The Troll fisheries are the only safe way to harvest mixed stocks on the high seas, F.C.Z. and State waters, besides being the cheapest, and fastest way to gather the necessary biological data. This data is going to be needed if the managers are going to protect the mixed salmon stocks and the Alaskan subsistence user from incidental and accidental over-harvest of salmon by Trawl fleets.
6. The Troll caught salmon has the best quality and highest market price of any salmon on the commercial market.
7. Statewide Troll is biologically acceptable and needed. It enhances the managers need for data to ensure <sup>the</sup> subsistence priority, Statewide Troll maximizes the benefits to the public and ensures the health <sup>of</sup> the Southeast fishing economy.

III. Conclusion.

Reopening Statewide waters to the Troll fleet is the only solution to a critical situation in this fishery. This solution ensures the conservation of the resource, satisfies the subsistence priority, and maximizes ~~the~~ benefits to the public.





STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600

March 19, 1982

Mr. Jim Branson, Executive Director  
North Pacific Fishery Management Council  
Suite 32, 333 West Fourth Avenue  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Mr. Branson:

We have reviewed the draft "SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT ON THE 1982 PROPOSED MANAGEMENT REGIME AND ALTERNATIVES UNDER THE FISHERY MANAGEMENT PLAN FOR THE HIGH-SEAS SALMON FISHERY OFF THE COAST OF ALASKA EAST OF 175 DEGREES EAST LONGITUDE". This is to express our views regarding shortcomings in this Environmental Impact Statement (EIS), the proposed action, and questions regarding the appropriateness of the proposed action in light of the legal requirements of the FCMA and status of the stocks contributing to the fishery.

Management considerations for 1982 relating to chinook salmon harvested off Southeast Alaska should include:

1. Most chinook harvested in Southeast Alaska are naturally produced and originate south of Alaska; therefore the needs of these stocks should be highlighted and addressed.
2. Virtually all stocks in the Southeast Alaska chinook catch appear to be overfished; therefore there is a serious need for basic conservation protection.
3. Terminal area fisheries that target on all naturally produced stocks making significant contributions to the Southeast Alaska harvest have been eliminated; therefore no further terminal area management options exist. Ocean fisheries are the only management option left to address the needs of these stocks.
4. The Southeast Alaskan troll fishery is now the largest U.S. harvester for some important southern U.S.-origin chinook stocks; therefore these fisheries represent the only U.S. management opportunity for these stocks (i.e. they are the only U.S. targeted fisheries remaining on these stocks).
5. For stocks originating in the south, a northern U.S. versus southern U.S. allocation alteration has occurred as runs have declined and as terminal area fisheries have been restricted for conservation needs; therefore terminal area fishermen are carrying a disproportionately large share of the conservation burden.

Mr. Jim Branson  
March 19, 1982  
Page 2

Three rationales continually reappear and are cited extensively in the EIS as justifications for not managing this fishery in response to the serious conservation and allocation issues which face us:

1. a desire to not adversely impact the troll salmon industry in Alaska;
2. the presence of Canadian fisheries negates beneficial impacts of Southeast Alaska management measures; and
3. it is irrational to manage the Southeast Alaka fishery for the sole benefit of Columbia River "brights".

We believe these reasons provide inadequate justification for the level of action contemplated in this EIS.

While the Alaska troll catch reductions frequently cited in the EIS are used to imply harvest rate reductions, no evidence is presented or has been presented that harvest rates will actually decline. With stock sizes continuing to decline (Joint Technical Staff Report, 1981), we believe a conclusion that catch declines also imply harvest rate declines is defective. The EIS further concludes that these catch declines by Southeast Alaskan troll fishermen means they are carrying a disproportionate share of the conservation burden. As noted above, we disagree and believe this misrepresents the trend of terminal area management in recent years. Terminal area fisheries on the same depressed natural chinook stocks present in the Southeast Alaskan troll fishery have been virtually eliminated. We believe the mangement standards which have been applied to the Southeast Alaska troll fishery at the direct expense of terminal area fishermen, at the direct expense of spawning escapements, are likely to violate National Standards 1, 3, and 4:

"(1) Conservation and management measures shall prevent over-fishing while achieving, on a continuing basis, the optimum yield from each fishery.

....

"(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and inter-related stocks of fish shall be managed as a unit or in close coordination.

"(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote

Mr. Jim Branson  
March 19, 1982  
Page 3

conservation; and (C) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges."

Again, the 1982 preferred option would allow a directed fishery by U.S. fishermen in Alaska while at the same time fishermen in southern areas are being severely restricted from direct harvest while both groups of fishermen have the same conservaton problem. Another consideration is that state and federal governments are vigorously pursuing rehabilitation and mitigation activities for environmental degradation of the Columbia River. Allowing a fishery to degradate the same resource through overfishing presents obvious inconsistencies.

The rationale dealing with Canadian interceptions is inadequate. Analysis indicates fish saved in Alaska will not simply be caught in Canada. In fact, the majority will survive and accrue to the region of origin. No evidence is presented in the EIS which contradicts this conclusion and which indicates that Canadian interceptions will "wipe out" benefits accruing to southern areas as is implied in the EIS. We disagree with the conclusion that "no further reductions below the 1981 harvest level are warranted unless the Canadian government acts to ensure that those fish saved off Alaska are not reallocated to Canadian fishermen". The sentiment that U.S. fishermen should continue to overfish stocks since Canadians are also fishing will never lead to a resolution of our coastwide problem.

The final rationale which imputes irrationality associated with the concept of managing for the sole benefit of one stock (i.e. upper Columbia River brights) misrepresents the knowledge we have about management needs in this fishery. With nearly every stock that makes significant contributions to this fishery presently overfished and with most stocks originating south of Alaska, the real question has been: "Do we have a southern origin indicator stock we can use to guide management?". We have never suggested stock-specific (e.g. brights) management. The principle is: beneficial mangagement for this one indicator stock also results in beneficial mangement for other, equally depressed coastal chinook stocks.

Several serious omissions exist in the EIS. A proper evaluation of the cost, in terms of foregone future catch, associated with the chronic under-escapement of stocks supporting this fishery and an examination of the issue of harvest allocations between southern and northern U.S. user groups is needed. While short-term Southeast Alaska user impacts associated with catch reductions are highlighted, no evaluation exists regarding current annual costs resulting from inadequate escapements (Joint Technical Staff Report, 1981). The National Standards under the FCMA require a "fair and equitable" distribution of the conservation burden and the EIS omits any analysis of U.S. harvest sharing alterations which have resulted from terminal area management versus Alaska troll fishery management.

Mr. Jim Branson  
March 19, 1982  
Page 4

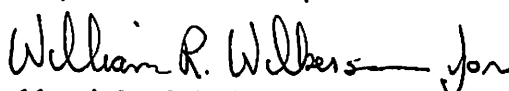
Alternative A does not relate to any defined objective for the southern-origin stocks which support this fishery. The frame of reference for this alternative relates to generalized fishery needs, not biological needs, and a desire not to give up potential Canadian stocks (which are also experiencing conservation problems). No attempt is made to quantify probable impacts of Alternatives B, C, or D. They are simply dismissed as not appropriate or concluded to be "not justified" without any analysis. Opinions rather than empirical evidence (e.g., "...benefits from the proposed action may be minimal and may not justify the socioeconomic cost inflicted on the salmon fishing industry") appear the rule. We question the technical support for such opinions. If this cannot be clearly stated in the EIS, the opinions should be eliminated or at least specified to their source (i.e., the NPFMC, NMFS, the Salmon Team, the individuals who prepared the EIS, or ?).

We have a number of questions we think the Council should address:

1. Do the Council and Secretary of Commerce have the authority to manage ocean salmon fishing so that inadequate fish remain to meet spawning escapement objectives established by the state or country of origin?
2. Do the Council and Secretary of Commerce have the authority to manage ocean salmon fishing so that no harvestable fish remain to be taken subsequently in established inside fisheries where the fish originate?
3. Do the Council and Secretary of Commerce have the authority to selectively manage its fisheries such that they share less of the conservation burden than inside fisheries where the fish are produced?
4. Do the Council and Secretary of Commerce have the authority to manage a stock in only one portion of its geographic range?
5. Do the Council and Secretary of Commerce have the authority to pursue conservation-based mitigation and/or rehabilitation for environmental degradation while at the same time allowing over-harvest in ocean fisheries?

Our staff has continued to develop the technical means for analyzing decisions regarding the chinook salmon resource. Their latest work efforts are appended for your use. The results of this work indicate to me that we have the opportunity to foster wise use of U.S. stocks in the Southeast Alaska troll fishery. Obviously, we are dealing with a very complex issue. I look forward to working with you and the Council in meeting this challenge.

Sincerely,

  
Rolland A. Schmitten  
Director

RAS:nb  
cc: (attached)

cc: (Mr. Jim Branson, March 19, 1982)

cc: Joyce M. T. Wood (Office of Ecology and Conservation)  
Oregon Department of Fish & Wildlife  
Idaho Department of Fish & Wildlife  
Columbia River Inter-Tribal Fish Commission  
Northwest Indian Fisheries Commission  
Washington coastal tribes  
Columbia River Fishermen's Association  
Fred Olney  
Judge Walter T. Craig  
Canada Department of Fisheries and Oceans  
Alaska Department of Fish & Game



Alaska  
Trollers  
Association

MEMORANDUM

TO: Concerned Individuals

FROM: Ed Wojcek *EW*  
Executive Director

DATE: December 4, 1981

-----

The Alaska Trollers Association has received the following information from the NMFS. It indicates that a previously unknown Japanese high-seas gillnet fishery for squid is operating off U.S. shores outside of 200 miles. This fishery has a high incidental catch of salmon.

Section 102 of the Fishery Conservation and Management Act provides for exclusive United States fishery management jurisdiction over "all anadromous species throughout the migratory range of each such species beyond the fishery conservation zone;". Hence, any incidental catch of U.S.-bound salmon, even outside of 200 miles, is subject to the FCMA. Foreign governments must recognize this jurisdiction over salmon to obtain a permit under the Act.

ATA believes that immediate action is needed to assess the impact of this fishery on Alaska salmon stocks. The discontinuance of this "squid" fishery should be sought until we are provided with appropriate historical data.

EJW:LAW  
Attachments

MEMORANDUM

Date: October 2, 1981

To: Craig Hammond, NMFS, Juneau, AK



From: Robert T. B. Iversen, Regional Fisheries Attache

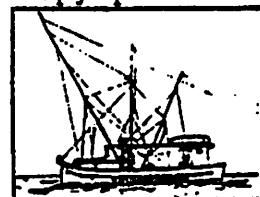
Subject: Japanese squid fishing

Here is the information you requested.

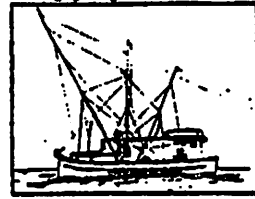
Bill Court, the compiler and translator, is the local manager of Resources Marketing Inst. and a very thorough researcher. I think he probably knows more about Japanese squid fishing than any other non-Japanese.

He also was an observer for NMFS on Japanese tanner crab boats in the North Pacific at one time.

Copy provided by:



Alaska  
Trollers  
Association



## JAPAN'S DRIFT GILL NET FISHERY FOR OMMASTREPHES BARATRAMI

Japan's larger squid jigging boats have been jigging for aka-ika, Ommastrephes baratrami, in the northern Pacific Ocean since 1975. The drift gill net fishery developed very rapidly in 1978 and soon expanded to at one point including 1,000 boats. This fishery has been a source of controversy and problems almost since its inception - the primary problem being competition with the less efficient squid jigging boats. However, by the action of the Central Fisheries Adjustment Committee meeting from late May 1981, as of August 1, 1981 the free status of this fishery has ended and participants must be authorized.

The reasons for this action include the fact that the drift gill net fishery competes severely with the existing squid jigging fishery for the same species. Also, because of the extremely high efficiency of the drift gill net fishing method, the preservation of the resource cannot be left to itself. Furthermore, as salmon is an incidental catch of this fishery there is apprehension that this will lead to international problems.

The new regulation provide that boats may not participate in the fishery without a permit issued to selected boats by the Minister of the Ministry of Agriculture, Forestry and Fisheries. Boats must be between 50 and 500 tons, and the regulated fishing area is north of 20 °N Latitude. However, within this area, fishing is to occur only east of 170 °E Longitude. The mesh of the nets is to be above ten centimeters and landings may be made at any three of thirty designated landing ports, subject to approval of the ports selected by the particular boat.

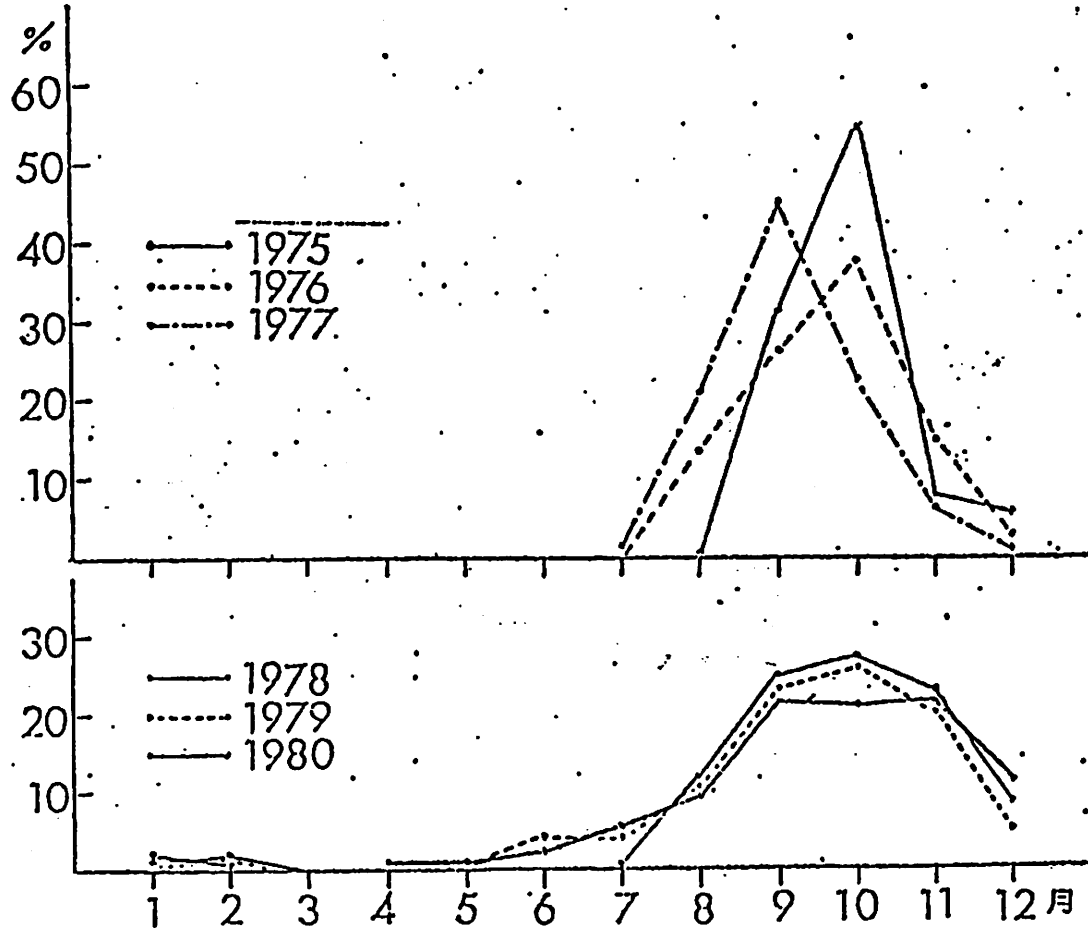
This Fisheries Adjustment Committee action is the result of a two year controversy between the organizations representing the drift gill net fishery and the squid jigging fisheries. Japan's Fisheries Agency has mediated the controversy.

The 1981 drift gill net squid season is five months long from August through December, and the 1982 season will run from June for seven months. Many of the drift gill net permits have been obtained in exchange for squid jigging permits as a means of reducing the number of squid jigging participants. (In September 1981 the All Japan Large Vessel Squid Jigging Association announced a one-third reduction in the number of its member boats from 212 boats to 140. As of mid-September 1981 a total of 534 boats hold permits in the new fishery - of these 163 are over 100 Tons and 371 are under 100 tons in size.

Landings of Ommastrephes baratrami squid were 144,000 MT (200,000 MT round weight equivalent) and over 95 per cent were frozen. Forecast landings for 1981 are from 125,000 to 144,000 MT (180,000 to 200,000 MT round weight equivalent). The very low price of squid in 1980 forced many drift gill net boats to work overtime to process the squid on board and to freeze only the mantles as this would bring a higher return in the market place and enable the boats to at least minimize their deficit.

(Translated, edited and compiled from various Japanese fisheries press items and from information gathered from various industry and government sources by Bill Court September 27, 1981.)





Results of squid jigging

Landings of Jigging AND DRIFT GILL NET FISHERIES

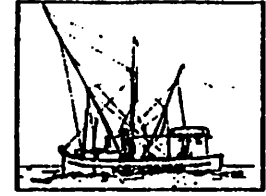
(1980 figures includes SQUID GUTTED ON BOARD)

図5 アカカ漁獲量の月別比率 (上: 釣のみ, 下: 釣と流網)

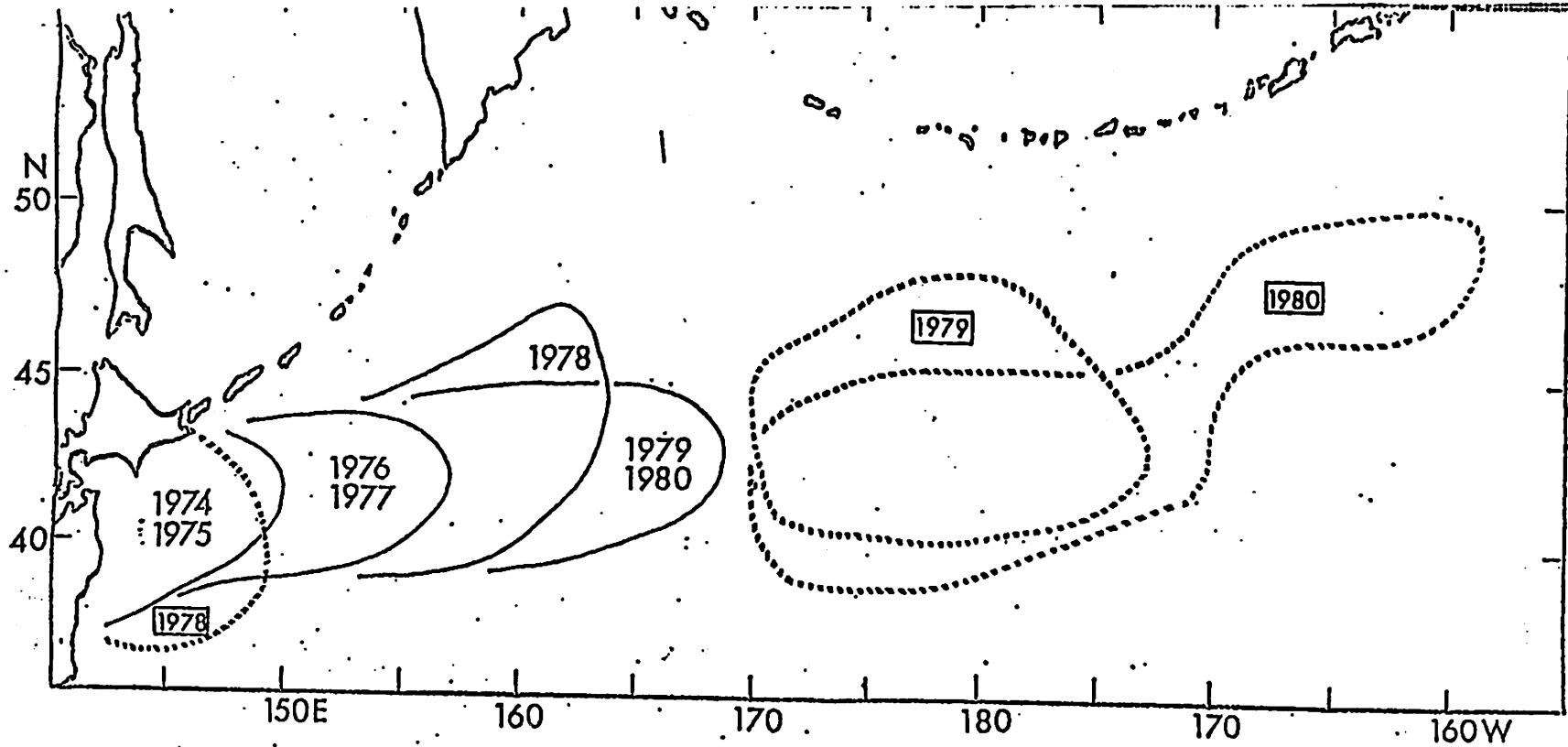
1975: 東北研八ヶ岳支庁資料, 1976-1980: 全漁産 (1980年はツボネキを含む)

Comparison of monthly landings of *O. borealensis*

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Alaska Trollers Association

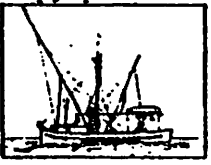


Annual change in Fishing Grounds For *O. baerami* Squid.

図6. アカイカ漁場、経年変化模式図

(年) 釣漁場      (罾) 流網漁場  
 JIGGING              DRIFT GILL NET

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Alaska  
Trollers  
Association

KANAGAWA - PREF. O. BARTRAMI LARGE JIGGING VESSEL.

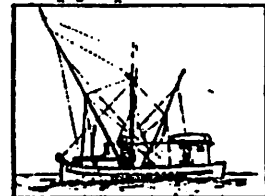
No. of FISHING DAYS AND CATCH PER DAY PER VESSEL

表6. 神奈川県アカイ釣大型船の操業日数(N)と  
1隻1操業日当り漁獲量(CPUE)

(神奈川県水試資料)

		7月	8月	9月	10月	11月	合計
N. (日)	1979	150	454	419	426	133	1,582
	1980	77	309	300	172	17	875
CPUE (kg)	1979	104	227	236	147	76	184
	1980	292	274	377	358	222	327

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Association

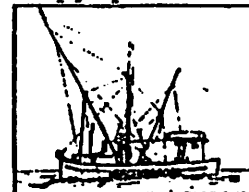
KANAGAWA - PREF. O. BARTRAMI LARGE JIGGING VESSEL  
 No. of FISHING DAYS AND CATCH PER DAY PER VESSEL

表6. 神奈川県アカイ釣大型船の操業日数(N)と  
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Alaska  
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 Association

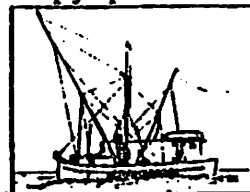
CATCH OF O. BARTRAMI BY LARGE VESSELS PER VESSEL  
 表7. 大型船1隻1操業日当りアカイカ漁獲量: PER FISHING DAY

(北水研、釧路水試、南取資料、単位ト)

漁具	年	7月	8月	9月	10月	11月	合計
釣	1978	1.630	2.920	2.090	2.160	2.770	2,270
	1979	(0.846)	2.464	2.697	1.830	(0.551)	2,178
	1980	3.548	2.986	3,842	3,394	-	3,438
流網	1979	4.225	4.914	5.105	4,899	(4,022)	4,822
	1980	(10,921)	(14,856)	(10,173)	(5,744)	(6,324)	10,697

- (注) 1) 延操業日数100日未満の場合は ( ) に示した。 Less than 100 fishing days.  
 2) 1980年の流網は1隻のみの資料である(使用反数600~800反、  
 主な目合 115<sup>m</sup>/m)。 1980 - data for only one drift gill net port

Copy provided by:



Alaska  
Trollers  
Association

LANDINGS OF O. Bartramii.

表4. アカイカの経年漁獲量

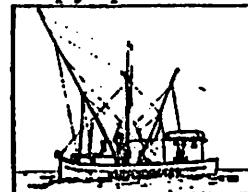
Total Landings (単位: トン)

	総漁獲量			漁具別推定漁獲量	
	FRESH 生	FROZEN 冷凍	TOTAL 合計	JIGGING 釣	DRIFT GILL NET 流網
1975	20,176	20,988	41,164	41,164	0
1976	31,035	53,145	84,180	84,180	0
1977	29,813	91,955	121,768	121,768	0
1978	52,939	92,369	151,308	10~11万	4~5万
1979	30,785	93,867	124,652	7~8万	4~5万
1980	10,745	133,546	144,291	69,105	75,186
	(10,745)	(177,155)	(187,900)	69,105	118,795

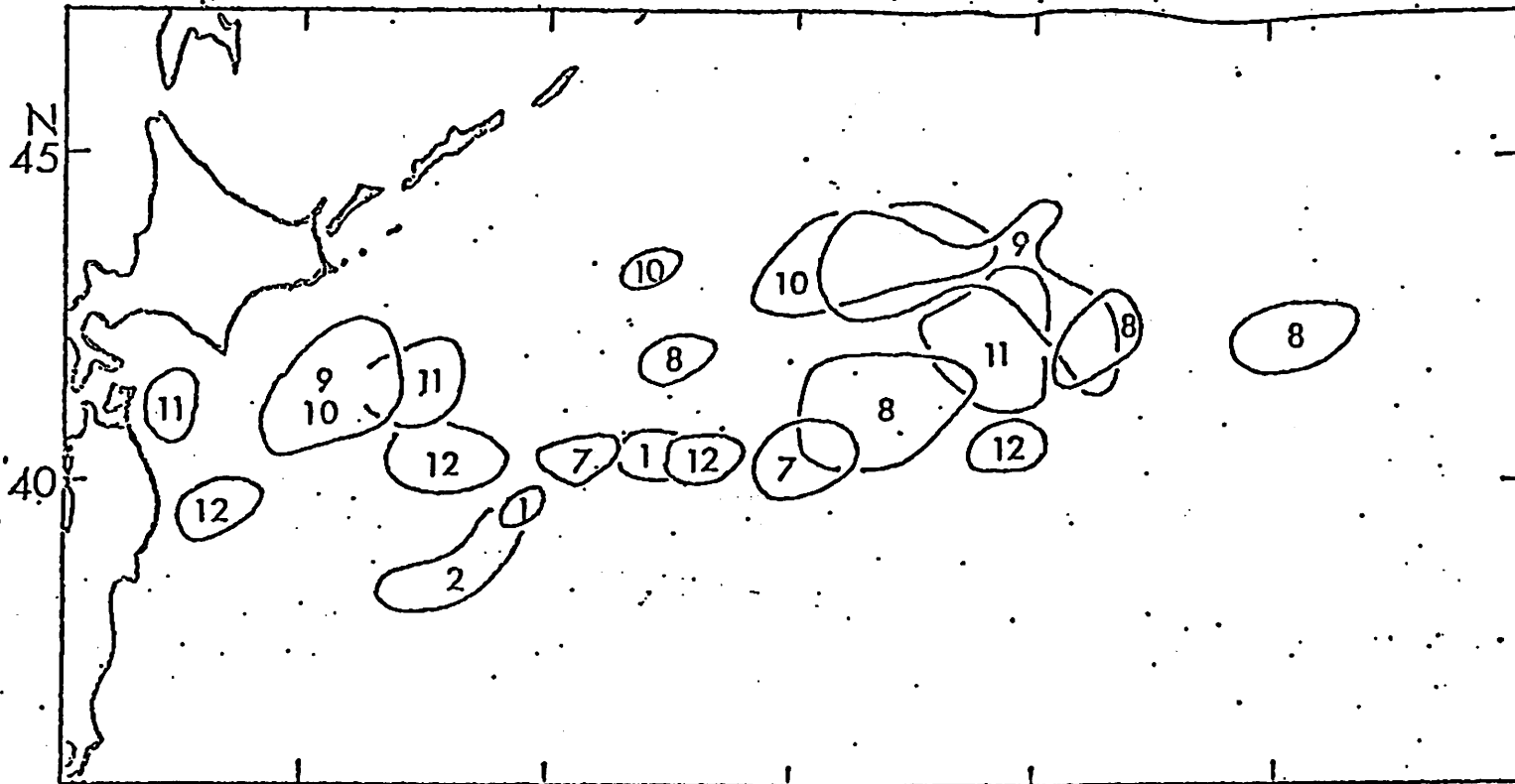
(注) 全漁獲資料による。1980年の漁獲量は「ツボヌキ」を含み、( )は次の方法により「丸」へ換算した推定値である。

- 生は全釣に於ける漁獲であり、かつ「丸」へ換算とする。
- 冷凍はその43.7%が釣、56.3%が流網に於ける漁獲とする。すなわち、釣の漁獲は全「丸」、流網は「丸」41.2%、「ツボヌキ」58.8%とする。
- 「ツボヌキ」から「丸」への換算は次式による。  
「丸」の重量 = 「ツボヌキ」の重量 × 2.0。

Copy provided by:

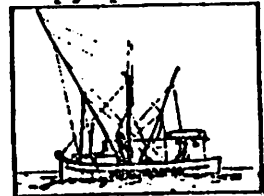


Alaska  
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main Squid jigging grounds for *O. bartramii* squid by month  
 図 7. アカガの月別主要釣漁場 (1980年7月~1981年2月) from July 1980 thru February 1981.  
 北水研・釧路水試資料, 青森県水試資料, 漁業情報サービスセンター資料  
 (month by number)

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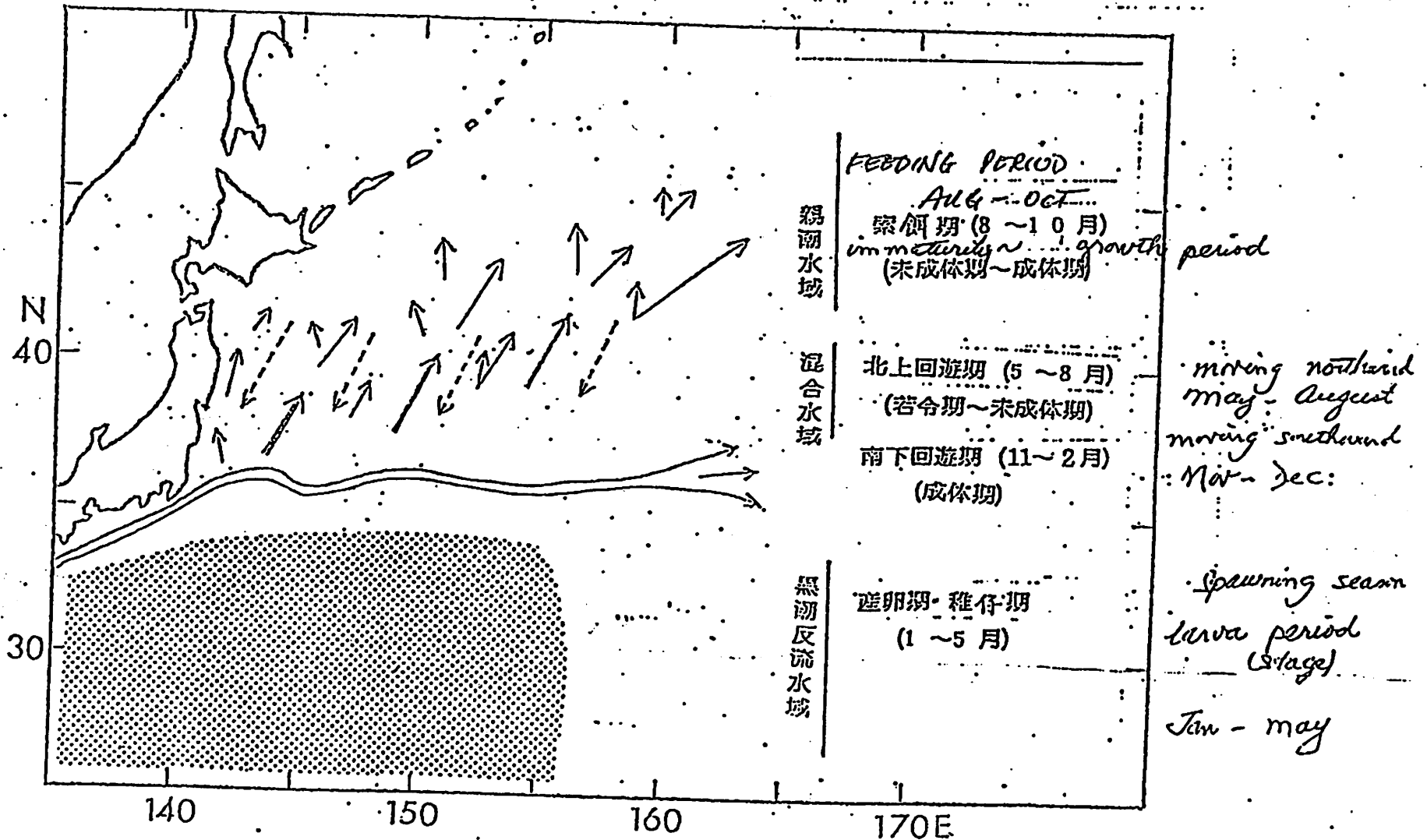
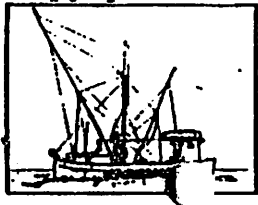


図8. アカイカの回遊模式図

→ 北上回遊 NORTHWARD    - - - - - → 南下回遊 SOUTHWARD    ● 産卵場 SPawning GROUND    ≈ 黒潮 KUROSHIO CURRENT

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 Association



# Homan- McDowell

Economic and Management Consultants

Frank Homan • Eric McDowell • Peter McDowell

March 12, 1982

Ed Wojcek  
Executive Director  
ATA  
Juneau, Alaska 99801

Dear Mr. Wojcek:

There are five major problems with the NMFS statement of Economic Impact of Chinook Catch Reductions, all of which understate the actual economic loss which Alaska Fishermen are likely to experience in 1982:

1. Overstated price. We have surveyed the following executives who purchase most of the Chinook in Southeast Alaska and have found no justification for the high \$2.92 price for 1982 used in the NMFS analysis.

Bob Thorstenson, Chairman - Icicle Seafoods

Bob Syre, Superintendent - Excursion Inlet Packing Co.

Gail Strom, Manager - Halibut Producers Coop.

Tom Thompson, President - Sitka Sound Seafoods

Bruce Mitchell - Pelican Cold Storage

Paul Ohashi - Phillips Cold Storage

None of these knowledgeable men could venture an accurate estimate, especially to the penny, as in \$2.92. Some of them facetiously asked to borrow the NMFS crystal ball in order to find out how much their companies would earn.

A consensus, if they had one, was that prices would be similar to 1981 when the range was about \$2.45 - \$2.75 with an average about \$2.65, according to these processors.

Factors cited to confirm these general price estimates were:

- Deepening national and worldwide recession, especially on the East Coast, a major market for large Chinook.

- the botulism scare, which could have negative impact on Alaska salmon prices in general.
- no current freezer inventory on Chinook, which is the same condition as existed in early in 1981.
- lower volumes of Chinook means higher unit processing costs for plants and distribution systems which in turn means lower prices to the fishermen. Some processors did not come out well paying last year's prices due to reduced volumes.
- the competitive threat of Norwegian farmed salmon in both the 7-11 and 11-18 lb. size. These fish are coming into the fish market in Europe and the U.S. and compete with fresh and frozen chinook and cohos. Alaska processors are concerned.

Thus, as a group these executives could not find justification for a price increase, especially a significant one.

2. Improper comparison of 1981 actual catch of 268,100 (which was nearly 17,000 below the 1981 target catch) with 1982 NMFS target catch of 243,000. This is an apples and oranges type of comparison and underestimates potential lost income. The proper comparison is between target catches for 1981 and 1982 (285,000 vs. 243,000) or for target alternatives for 1982 (288,000 vs. 243,000). This means the reduction is either 42,000 or 45,000 chinook rather than 25,000. In percentage terms, target catch reductions would be 15.6% overall and 16.8% for trollers.
3. Inappropriate assumption that the economic loss from chinook will be made up by a banner coho year in 1982. The problems with this assumption are:
  - the ADF&G preseason forecast is for lower coho catches than in 1981.
  - 1982 may not be a banner coho year. Parent year (1978-9) catches and escapements were generally good. But environmental conditions, high seas gillnetting, and other factors could cause an average or even poor year, although everyone involved hopes for a good year.
  - Even if coho catches are good, closures for chinook can prevent strong peak season harvests as was the case in 1981. Last year, an excellent coho year, became only a fair to good one for trollers because of chinook quota closures and a coho reallocation closure during peak season.

Therefore, it is not appropriate to patently assume that economic compensation will arrive in the form of a banner coho year or that high catches by trollers will occur even if coho runs are strong.

4. The dubious insinuation ("(declining inflation will) . . . improve prospects for economic performance. . .") that since inflation is slowing down fisherman will be better off economically.

Inflation is slowing, but that means operating expenses will still cost more, though not as much more. Instead of 20% higher, expenses for 1982 may only be 10% higher. That's still more. Also, the largest expense, the boat payment, is just as high as last year for most fishermen. Historically, fishing expense inflation (lead, gear, fuel, labor, permits, boats, interest) has likely risen faster than average inflation.

Fish price increases have to exceed the rate of inflation to keep the average fisherman from losing ground, even without catch reductions. 1982's fish price for LRK would have to be about \$4.80 just to keep up with 10% inflation since 1977.

5. The assumption that the cost to individual fisherman can't be calculated at this time. It can be done as follows:

Proposed Reduction: 288,000 - 243,000 = 45,000.  
Average Weight<sup>1</sup>: 16.3  
Average Price<sup>1</sup>: \$2.65  
Total Value of Reduction: \$1,943,775  
Loss to Power Trollers: 86% of total or \$1,671,647.  
Loss to Hand Trollers: 14% of total or \$272,128.  
Number of PT: 835<sup>1</sup>  
Number of HT: 1150<sup>1</sup>  
Loss to Average Power Troller<sup>2</sup>: \$2,001.97  
Loss to Average Hand Troller<sup>2</sup>: \$236.63

<sup>1</sup>1981 averages used.

<sup>2</sup>Does not include loss of incidental species as a result of Chinook closures.

In summary, it seems odd for NMFS to say, in essence, that any group of fishermen can take a significant cut and not suffer economically.

Sincerely,



D. Eric McDowell  
Partner

Mr. Clem Telford

March 22, 1982

Mr. Chairman and Members of The Board:

I have been asked by Mike Thompson of Hoonah to speak on his behalf and on behalf of the trollers who live in Hoonah, concerning the regulations that have been in effect for the past several years whereby the trolling has been restricted during the regular trolling season to 8 days fishing followed by a 6 day closure.

These alternating periods of fishing, 8 days fishing and 6 days off, have made it impractical for the 50 to 60 trollers who live in Hoonah to try to make a living from this fishery. For the Hoonah trollers this restriction plus the 30 days that have been dropped from the opening of the season, that is from April 15 to May 15, plus the two 10 day closures last year, 10 days in July and 10 days in August, has drastically curtailed the fishing time for the Hoonah trollers who are more or less dependent upon fishing in the Icy Straits Area. Many of these fishermen do not have large enough boats in size or shape or equipment to fish out in the ocean so they are restricted to the inside waters of Icy Straits. Now with the present regulations they can't make a living and have had to forego the fishery and look for other work. However, with the present poor economy it has become more and more difficult for these men to find employment and many of them now require public assistance.

Mike Thompson was born in Hoonah and has been a fish buyer for the last 24 to 30 years and employs local people in his fish buying plant and cold storage, but finds it increasingly difficult to maintain his operation as a fish buyer under these present fishing regulations. He has at great expense put out some troll fish buying scows in areas such as Hawtoheen, Murphy Cove, etc., but these operations are very expensive.

It is our understanding in respect to the Chinook catches that the king salmon fishery in Icy Straits was not noticeably affected

Page Two.

by uninterrupted trolling in past years. We realize the closures have been brought about to protect the coho fishery but with the present legal licensing entry system it seems logical that the Icy Straits area will not be overrun by a large flotilla of weekend fishermen.

*Concerning*  
Another factor to be considered, especially this year, is the assumption that there will be a very large run of Pink Salmon throughout southeastern Alaska. A large part of this run will be caught through Icy Straits. With the canned salmon market for Pinks in a rather delicate position right now, it behooves the packers and processors in Alaska to freeze or ship fresh as many of these Pinks as possible. Troll caught Pinks are a very fine merchantable salmon and are excellent quality. Seine caught Pinks, while still a desirable product, are of course not as highly prized in the marketplace as the troll caught. Troll caught Pinks are eviscerated as soon as they come out of the water, and iced down. This makes them an excellent product and this year with the need to ship more Pinks fresh than in the past, it seems logical that the trollers should be allowed to fish in Icy Straits uninterrupted throughout the season in order to take advantage of this very large anticipated run of Pinks.

To finalize, it seems to me that there are several reasons that weigh heavily on the side of permitting a regular troll season in the Icy Straits area which I understand is the only area in southeastern Alaska that is restricted to the 8 and 6 day plan.

- 1) We understand that the fishery does not have an adverse affect on the Chinook runs.
- 2) With the large anticipated Pink salmon run the harvesting of Pinks by trolling gear is very desirable.
- 3) The fact that there is a limited entry licensing system now

Page Three

in effect for trollers should negate the possibility of over-fishing by trollers in Icy Straits.

4) The economic viability of Hoonah is very much dependent upon a troll salmon fishery in Icy Straits without this constant opening and closing.

All in all, Gentlemen, the people of Hoonah and Mike Thompson believe that the restrictions on troll fishing that have been in effect for the past few years are unwarranted and unnecessary as well as uneconomical. We therefore ask your consideration in abolishing these restrictions, thus permitting uninterrupted troll fishing in Icy Straits during the regularly scheduled troll salmon fishery for all of southeastern Alaska.

*Robert Dignow*



STATE OF WASHINGTON

DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600

March 11, 1982

Mr. Nick Szabo, Chairman  
Alaska Board of Fisheries  
Alaska Department of Fish and Game  
Subport Building  
Juneau, Alaska 99802

Dear Mr. Szabo:

Since our consideration of 1982 troll salmon management last January, we have been evaluating the impact of several Alaska Board of Fisheries and North Pacific Fishery Management Council proposals including those dealing with retention of undersize chinook salmon with missing adipose fins. From our review of this proposal, we feel it would be inadvisable to pursue such a program at this time, and that this matter should receive further SSC, Council, and Board of Fisheries review at the March meeting.

Although the information gained by retention of undersized tagged king salmon would be interesting and might be of some limited use for stock management, the information gained will be overshadowed by information lost. The information lost, and the primary reason for which the fish were tagged, is information on stock distribution and fishery contribution under current regulation regimes. By selectively removing tagged individuals from the total population prior to recruitment, the actual contribution is lessened, but to an unknown degree. The problem is further accentuated by the fact that different stocks would no doubt be removed at differential rates. We have examined the technical implications of this proposal and cannot see a means for handling these data consistent with the experimental design of these coded-wire tag experiments. In other words, removal of undersize fish this year will complicate use of tag data in subsequent years and represents changing the experimental design "in the middle" of the many experiments currently in progress.

Large investments have been made by virtually all coastal management agencies in coded-wire tagged salmon that are now at sea. To jeopardize the results of this information is inappropriate. If the information that would be gained by looking at the undersized population of chinook salmon in the Alaskan troll fishery is of importance, we suggest special studies to obtain such information. Unfortunately, our present plans may gain us a little information but this will certainly be at the expense of biasing contribution studies that have been and will be initiated.

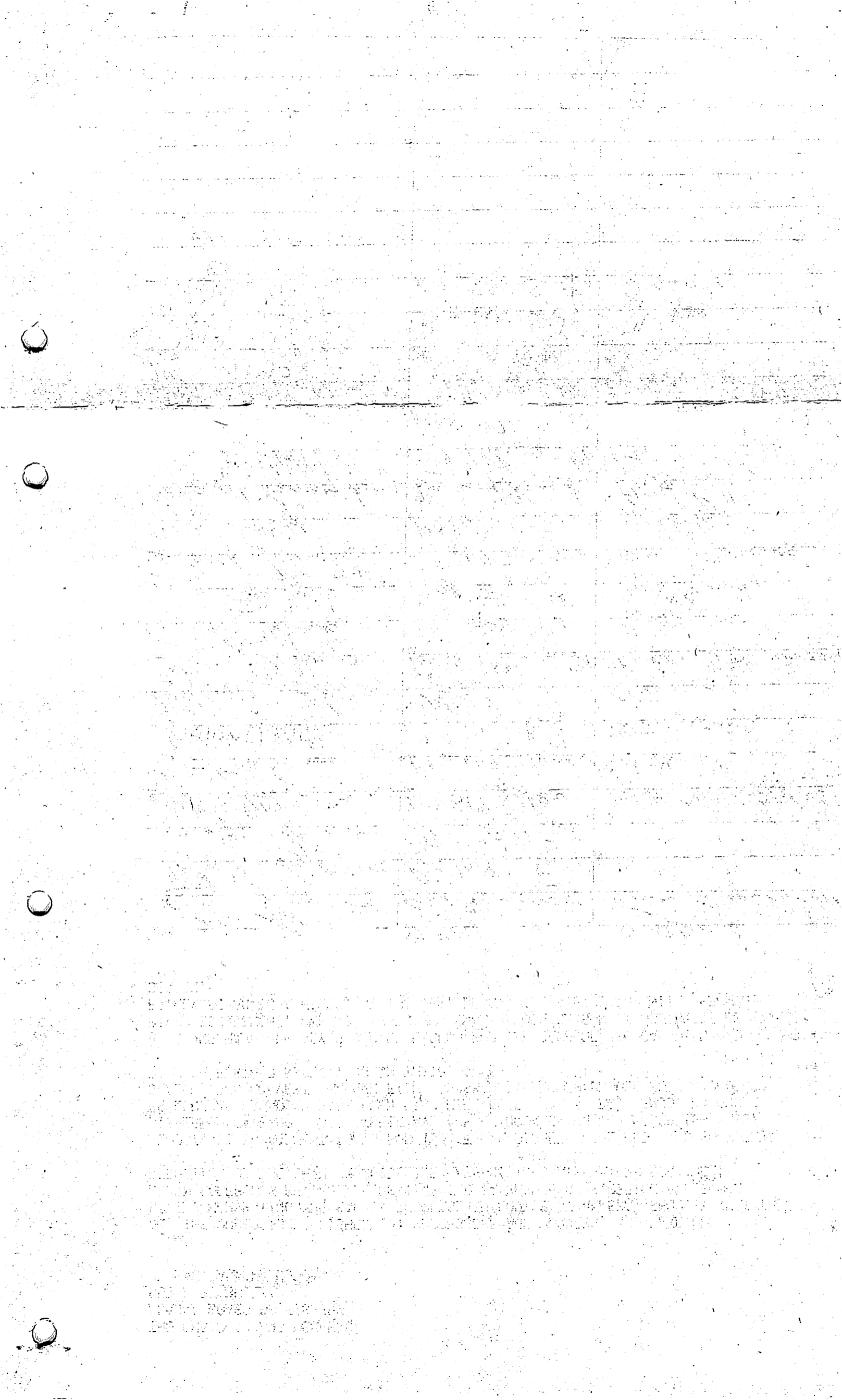
Sincerely,

Rolland A. Schmitt  
Director

cc: Mel Seibel, SSC  
Dr. R. L. Burgner, NPFMC-SSC







THE CHAIRMAN AND MEMBERS  
ALASKA BOARD OF FISHERY  
SUB-PORT BUILDING  
JUNEAU, ALASKA 99801

WE, THE UNDERSIGNED FISHERMEN, PROCESSORS AND WORKERS, WHO MAKE OUR LIVING HARVESTING THE SALMON RESOURCE IN SOUTHEAST ALASKA, REQUEST THAT THE BOARD CAREFULLY REVIEW ALL PERTINENT DATA BEFORE CONSIDERING A FURTHER REDUCTION OF THE CHINOOK GUIDELINE HARVEST IN STATE WATERS FOR 1982.

ALMOST ALL MANAGEMENT GOALS FOR 1981 TROLL FISHERY WERE MET, AND SOUTHEAST FISHERMEN GAVE UP 15% OF THEIR AVERAGE CHINOOK CATCH TO ACCOMPLISH THIS. AS LONG AS CANADIAN FISHERMEN FISH MORE GEAR THAN WE DO, ENJOY A LONGER SEASON, AND HARVEST SMALLER FISH, ALASKAN FISHERMEN SHOULD NOT BE ORDERED TO MAKE FURTHER REDUCTIONS IN THEIR HARVEST.

ALASKANS HAVE ALREADY GIVEN UP ENOUGH FOR THE SAKE OF THE CANADIAN AND COLOMBIA RIVER ESCAPEMENT. WE ASK THAT THE 1982 SALMON SEASON IN SOUTHEAST BE MANAGED FAIRLY SO AS TO ACHIEVE, AT THE VERY LEAST, THE STATUS-QUO WITH THE 1981 SEASON.

(26)

NAME	ADDRESS	BOAT OR COMPANY
Daniel W. Miner	P.O. Box 8340	F/V KIM
Timothy L. Curran	Box 5 P 69	P.A.C.S.CO.
<del>Walter Johnson</del>	PO BOX 8523	F/V RUTHLESS
John W. Skoedig	PO Box 8618, Pox	F/V Kim Shew
Shawn T. Piller	Box 8753	F/V Misty
Reyk Lemme	PO Box 8725	F/V Poor Man
Baron Piller	Box 8753	F/V SHIRASI
Bernard P. Oster	Box 8888 Port Alexander	F/V OTTO
Spencer Remstret	Box 756 Port Alexander	F/V Juanita H
Suzanne Wainlyuk	Box 2424 / Sitka	
Robert N. Coe	1514 SMC Sitka	Sitka Sheppard
Megan R. Pasierdak	Box 830, Sitka, AK	F/V LORY
Dennis Beaman	Box 1994 Sitka Alaska	Outlaw
Wayne L. Finck	Box 1994 Sitka	OUTLAW.
Carolene L. Beaman	Box 1994 Sitka	Outlaw
Stan W. Moore	Refused	Refused
James A. Chesnut	Box 1094	SITKA
Manka Partridge	Box 936 Sitka	MOCLIPS
Eric Hart	Box 799 SITKA Whangell, AK. 99835	CONCERNED SITKAN
Anna M. Yatchewoff Murphy	P.O. Box 572	907-874-3492
Eysaad	1410	GERMAVO
Paul Scherba	Box 401 Juneau, AK	F/V Evening Star
Walt R. O.	Box 2122 SITKA	US Post Office
Kyle Clendenen	Box 1598	
David Ledwith	Box 730	Lory
Mary O. Hellebaker	3519 Jo. 261 <sup>st</sup> Pl.	Fess Black-Die

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(25)

NAME	ADDRESS	BOAT OR COMPANY
Leif Oden	Denial Del. Sitka Alaska	North Star
Pat Diamond	Sitka AK	Solitude
Charles E. Wilber	Sitka AK	Dookey #11
George Hicks	Sitka AK	Emma
Dwight D. Smith	Port Alexander, AK	Betty B
Cheryl Smith	Port Alexander AK	Betty B
<del>John A. Stearns</del>	<del>Box 1474 Sitka Alaska</del>	<del>Loon</del>
LANA BARFEN	P.O. 1944 - SITKA	
Cliff A. Eguira	P.O. Box 1135 Sitka	Rita Lynn
Patricia Kornelje	P.O. Box 8701 Pt. Alexander	Selkie
Ruband Gray	P.O. Box 2316 SITKA	Rusty Hook
Debra Jay	Box 2316 Sitka	Rusty Hook
Earl Johnson	Box 1173 SITKA	W. L. J.
Shawn Berkland	Box 2308 Sitka	
A. J. Perry	Box 8847 Port Alexander	Deckhand
Bruce E. Tenney	Box 8707 Port Alexander	Conclusion
Dennis E. Longstreet	Box 8715 Port ALEXANDER	MORNING STAR
Cindy Plaza Longstreet	Box 8715 Port Alexander	MORNING STAR
Hairy Demergin	Box 1762 Wrangell	Deller D.
David Lettitt	Box 803 Sitka	Long-Deckhand
James Kornelje	Box 8701 Pt. Alexander	Selkie
Stephanie Dahlsten	Box 1914 SITKA	HUNTER IV
Paul Peyton	Box 1370 SITKA	COMM. FISH COOP
Susan D. Stearns	Box 1670 Sitka	Loon
Jim Neumann	Box 2257 Sitka	Loon
Bonnie Neumann	Box 2220	APC



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(74)

NAME	ADDRESS	BOAT OR COMPANY
J. Morrish III	Earlth	AK Bank Number Co.
Stephen Leposki	P.O. Box 863	FV Cricket
Gregory Bejani	P.O. Box <sup>SITKA</sup> 1994	FV Oridiani
Paul N. Seal	Gen. Del. Sitka	AFRO
Maury Gregory	P.O. Box 523	Sitka AK
Robert Coffey	Sherald Alley	Sitka, AK
Phil Prothro	Gen. Del.	FV Lady Ann
Pat Kehoe	Box 1615 Sitka	
Craig Marlin	Box 2371	FV APOGEE
Ann Swornin	Box 1216	SITKA AK
James Smith	Box 1775	Sitka
Bill Orndwal	2039 HPR ST RT	Ms Judy Sitka
Les H. Woodward	Box 1813 Sitka	FV Sea Scape
Thomas Z. Williams	Box 1813 Sitka	FV Sea Scape

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NAME	ADDRESS	BOAT OR COMPANY
Cui Swanson	Box 4536 Mt. Edge	F/V DREAM Weaver BAILEY'S HARDWARE
Larry Smith	Box 2202 Sitka	F/V Pierce
Fred Hunt Jr.	Box 407 Pelican Alaska	SITKA Sound Seafoods.
Jim Armitage	General Delivery Sitka, ALASKA	West I Seattle
John Baker	Box 16 Sitka	Mohawk
Jeff Lassen	Gen. Del. Sitka	S.E. Regional Training
Albert Brookman Jr.	Box #34 - Sitka	F/V OLE. B.
George E. Williams	Box 830 Sitka	F/V Aquila (Pier 11)
Scott Lewis	Box 352 Douglas	Danube
James R. Giddard	Box 1362 Sitka	F/V Four Ladies (Pier 11)
Carol Haddad	" " "	" " "
Frank Goffin	General Del Sitka	GABBY GARY
Doug L. Hendrick	1902 1806 Sitka AK	DAVIN
Ronald L. Paul	Box 9244	Mt. Edgemoor AK
Kathy Billingslea	Box 2288	F/V SURE
John Welford	Box 1810	SHIELD
Tom Ash	Box 86	Bustards Alaska Arctic
John Swanson	Box 904	PETERSBURG AK
James A. Carson	Box 8205 Port Alexander	F/V JUDITH
Kathleen M. Hove	Box 1496	F/V Lydia - S
Don Dymot	Box 2014	F/V TARTAR
Gas H. Jansen Jr.	Box 1073	SITKA
Paul J. Dickert	Box 4302	SITKA - M. EDGE
Doug Rhodes	Box 362 Sitka	HALEEN
Emmett John	Box 1173 SITKA	WRTJ
Dick Curran	Box 1336 SITKA	F/V MIRA

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NAME	ADDRESS	BOAT OR COMPANY
John DeLina	Box 1797, Sitka	Mini DeLina
Peter Cochran	Gen del Sitka	crew / Francis TV
Robert Paul	Box 4582 SITKA	SEABOY ALASKA LAUNCH
Paul R. Clements, crewmember	Box 4591 SITKA	"
John T. Fisher	Box 4582 SITKA	SEABOY ALASKA LAUNCH
Brown & Brown	Box 302 Pelican	Bertha
Kelly Brown	Box 1565 SITKA	ECLIPSE
John Brown	Box 4594 MIE	F/V SeFoem
Shirley C. Hood	Box 830, Sitka	F/V Glenmar
Joseph Wood	Box 830, Sitka	F/V Glenmar
James	HAINES AK.	F/V JEANNIE
Kenneth Stipke	1920 APR	F/V LAUR
Doug C. Sullivan	Box 2275 Sitka	F/V Carolyn S.
Jane Larson	Den Del.	R.V. elden H
Aron Brane	Box 865 Sitka	Sitka Sound Seafoods
George R. Venner	Box 4577-A Mt. Edgemoor	F.V. Schroy A
Sam McDonald	P.O. Box 1721	F/V Miss Helen
William P. Berubault	P.O. Box 356	F/V BARBARA ZEF
Michael P. Arnold	Box 612	F/V Barbara ZEF
Kenneth Trison	Gen del. Sitka	Cape Strait
Wm. Fitzpatrick	gen. Del. Sitka AK. 99835	
Wendell J. Lind	P.O. Box 830 Sitka	"Barley's Marine Hardware"
Melvin Halverson	P.O. Box 1857 Sitka	SIXA ELECTRONICS LAB
John Walker	General Del. Sitka	F/V Margaret
Esther M.	Box 1772 Sitka	Sitka Sound Seafoods
Debbie Wirta	Box 1088 Sitka	Sitka Sound Seafoods



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ALASKANS HAVE ALREADY GIVEN UP ENOUGH FOR THE SAKE OF THE CANADIAN AND COLOMBIA RIVER ESCAPEMENT. WE ASK THAT THE 1982 SALMON SEASON IN SOUTHEAST BE MANAGED FAIRLY SO AS TO ACHIEVE, AT THE VERY LEAST, THE STATUS-QUO WITH THE 1981 SEASON.

(36)

NAME	ADDRESS	BOAT OR COMPANY
Mary Thompson	Box 681 Sitka, AK	FIN St. Ignace - Sitka Sound Seafood
MacDonald Seine	Box 1401 Sitka, AK	Sitka Sound Seafood
Celia Hawkins	Box 163 Sitka, AK	Sitka Sound Seafood
Bob C Adams	Box 830 SITKA, AK	SITKA SOUND SEAFOOD
Bruce Williams	Box Delivery <sup>SITKA</sup>	SITKA SOUND
Michael P. Hanson	Box 872 SITKA	SITKA SOUND SEAFOOD
Joe O'Leary	Box 1724	SITKA SOUND SEAFOOD
Primitivo Nicolas	" 2192	" " "
Francis Kristovich	Box 2423	SITKA SOUND SEAFOOD
Nancy Rose	Box 1395	SITKA SOUND SEAFOOD
Ybbie Miller	Box 1888	" " "
Vicente Pujinao	Box 2375	" " "
Pedro Pujata	P.O. Box 1724	" " "
Raymond J. Kelly Jr.	SRG Apt 5B Sitka AK	" " "
Leon Kavela	Box 1972	" "
Andrea Mikulski	4594 mt Edge	SSS
Valley Lindrickson	154 Sitka	SSS
Makal Kuleta	Box 378 SITKA, AK	SITKA SOUND SEAFOOD
David Taylor	Box 489	SSS
Larry Jones	STAR Route	SSS
Samuel P. Heltun	GENERAL DEL. SITKA	SSS
Frank G. Benson	Box 655 Sitka AK	SSS
Darrell D. Thomas	PO Box 2124 <sup>SITKA AK</sup>	SITKA SOUND SEAFOOD
Mary Knutson	P.O. Box 906	SSS
Mary Lewis	P.O. Box 906	SSS
Ruth Maty	P.O. Box 4184	MT Edgewater AK

The Chairman & Members  
Alaska Board of Fishery  
Sub-Port Building  
Juneau, Alaska, 99801

WE, the undersigned fishermen, who make our living harvesting the salmon resource in Southeast Alaska, request that the Board carefully review all pertinent data before considering a further reduction of the Chinook guideline harvest in State waters for 1982. Almost all management goals for the 1981 troll fishery were met, and Southeast fishermen gave up 15% of their average Chinook catch to accomplish this. As long as Canadian fishermen fish more gear than we do, enjoy a longer season, and harvest smaller fish Alaskan fishermen should not be ordered to make further reductions in their harvest. Alaskans have already given up enough for the sake of Canadian and Columbia River escapement. We ask that the 1982 salmon season in Southeast be managed fairly so as to achieve, at the very least, the status-quo with the 1981 season.

<u>NAME</u>	<u>ADDRESS</u>	<u>BOAT</u>
Ken Howard	Box 2136 Sitka	Skymech
Bruce Ulrich	Box 1198 Sitka, AK.	FV Stormy
Thomas Weber	Box 823 SITKA, AK.	ACE
Tom Penny	Box 1266 SITKA, AK	TUK
Edward Matthews	Box 1394 Sitka, AK	Sultana
Onesimus Westover	BOX 1507 SITKA AK	JANIS - IV
Maac Moats	Box 2288 Sitka AK	SURF
Ruth Solmit	Box 86 Gustavus, AK	Aero
Ernie Bryant	Box 781 Sitka Alaska	Julia Ann
Robert Pelland	Box 950 Sitka Alaska	Opal
Dale Moore	Gen Del Sitka Alaska	ACE
Harvest & Hodson	Box 861 Sitka AK	Peril Strait
William McKen	Box 623 Sitka AK	MYRTLE
Don L. Phelan	Box 1806 Sitka, AK	Dawn
Richard O'Connell	Box 9736 PORT ALEXANDER, AK	FV SABINE
Donald H. Smith	Box 746 Pelican AK	Albatross
Carl Kaminski	Box 43 Sitka AK	FV TON
Fred Barclay	Box 1822 Sitka AK	FV Hydrah
Robney R. E. Lata	Box 1410 SITKA	GERMAINE
Richard Stawig	Box 1901 Sitka	Thomas
Bill Sullivan	Box 777 "	OSCAR
Janet Johnson	Box 4134 Sitka AK	Janice
John L. Hesse	Box 830 Sitka AK	ORIOLE
Chris Selin	Box 2277 Sitka AK	
Nina Piper	Box 132 SITKA AK	MATIE W
Harold Lewis Sr	Box 9359 mt. Edgcomb, AK	
Vern Culp	Box 132 SITKA	COERMORANT
Joe Kelley	865 SITKA	TANIA DEE
John Culp	865 Sitka	Miss Helen
John Towler	2297 Sitka	Rex

THE CHAIRMAN AND MEMBERS  
ALASKA BOARD OF FISHERY  
SUB-PORT BUILDING  
JUNEAU, ALASKA 99801

WE, THE UNDERSIGNED FISHERMEN, PROCESSORS AND WORKERS, WHO MAKE OUR LIVING HARVESTING THE SALMON RESOURCE IN SOUTHEAST ALASKA, REQUEST THAT THE BOARD CAREFULLY REVIEW ALL PERTINENT DATA BEFORE CONSIDERING A FURTHER REDUCTION OF THE CHINOOK GUIDELINE HARVEST IN STATE WATERS FOR 1982.

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NAME	ADDRESS	BOAT OR COMPANY
Kathie Craggan	Box 216 Hoonah	Capella II
Sally Godfrey	Box 292 Hoonah	Marian York
Marta Martensen	Box 173 "	Grace
Ken Britting	Box 356 "	Sundancer
Mike N. Murphy	Box 151	Mays - City of Hoonah
Alvanus P. Hill	Box 272	F/U Donut
Martha A. Osborne	Box 385 Douglas AK	F.V. "Seal"
Thomas E. Osborne	Box 385	"Seal"
Wm. D. Hill	Box 838 Jun	Teddy - BAR
Elizabeth Ruble	Box 838	Teddy - BAR
John Wilcox	1991 denn Ch Rd <sup>Jun</sup> 99801	Virgie "G"
Russell R. Hunter	Box 847 Juneau	MARG
Don Masterson	8614 Coosewack Rd Juneau	HANDROLL Simon charter crew
Donna K. Emerson	FUNTER BAY, AK 99850	IMPERIAL
Harvey J. Smith	Funter Bay AK 99850	Imperial



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NAME	ADDRESS	BOAT OR COMPANY
Richard	PO BOX 3166 JUNEAU AK 99801	FV CHENE LYNN AFDG # 31047
Bert Austen	P.O. BOX 2178 JUNEAU AK 99803	FV AFDG # 25893 VINDICATOR
Harlan Weikelman	5905 Church Hill Way #70 JUNEAU	North Cape
Peter McDonald	PO BOX 959 Auke Bay AK 99821	Diamond L1
Bob Masson	Box 2211	M.V. LE CONTE
Vito	Box 3017	Wly Dot
Richard	5900 Church Hill Way JUNEAU	FV TISKA
J. Richard	Box 2423 JUNEAU	Fred CS Martin
Kenneth Cooper	Box 915 Auke Bay	FV ALL HANDS 16741
M. Musoth	Gen Del Jeanina	Fish on
Greg Bala	Lefina Cove AK	Defense
	P.O. BOX 2356	FV JACKPINE