

Richard  
Lundahl  
1-6-82

REGULATION PROPOSALS TO  
*BOARD OF FISHERIES*  
~~THE ALASKA DEPARTMENT OF FISH AND GAME~~  
FROM  
PELICAN ADF&G ADVISORY COMMITTEE  
RICHARD W. LUNDAHL, CHAIRMAN

Sept. 1981

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1. Statewide Troll
2. Hand Troll-Power Troll Allocations
3. Treble Hooks
4. Seine Boundary Line in Lisianski Inlet.....request for emergency order  
for this coming year
5. Yakutat Troll-Gillnet Equal Fishing Hours
6. Extension of Proposal Deadline for Advisory Committees

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing   x  

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

SAAC 39.171 (New Section) Regulation book page no. 168  
(Alaska Administrative Code No.)

Purpose of proposal Open all state waters to trolling.

Suggested wording of Proposed Regulation (append if lengthy): TROLL GEAR LEGAL IN ALL AREAS. Troll gear may be used in all areas of the state.

- Justification:
1. Troll caught fish are a quality product having a greater dollar value.
  2. The troll fishery uses a large and extensive network of support and supply businesses.
  3. The Alaska ~~general~~ troll permits <sup>are</sup> issued as statewide permits.
  4. Gives the fishing industry an option of diversifying in the event of poor cycle years thus alleviating heavy pressure on specific stocks.
  5. Areas of maximum utilization of the resource could still be protected by area/time closures as is done in Southeast. (cont. on back) (over)

SUBMITTED BY: Pelican ADF&G Advisory Committee  
(Name & Address)

Richard W. Lundahl, Chairman  
Box 793

REPRESENTING:

PELICAN

PHONE NO. \_\_\_\_\_

PELICAN, ALASKA 99832

Many Alaskans living westward would utilize power troll permits to augment their present fishing incomes.

The percentage of Alaskans (as compared to non-residents) owning and fishing Alaska power troll permits would probably increase.

Improve locale economics of Westward communities. The reopening of the westward waters to statewide power trolling would:

- (a) increase the income and profits of the following local groups:
  - (1) the local fisherman;
  - (2) the processing plants and their employers; and
  - (3) the various support businesses and their employees. *ALASKAN*
- (b) increase economic incentive for processors to invest in Westward plants.

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing x

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

SAAC 33.365 (6) (b)

(Alaska Administrative Code No.)

Regulation book page no. 155

Purpose of proposal Addition to Southeast Alaska-Yakutat Chinook and Coho Salmon Troll fisheries management plan. (Chinook split between hand/power trollers)

Suggested wording of Proposed Regulation (append if lengthy): (6) (b) recognizing that the hand troll fleet retains a large potential for expansion in efficiency the Board established a policy to regulate the troll fishery in a manner that will result in 90% of the troll caught chinook salmon being taken by power troll gear and 10% by hand troll gear. ~~Inseason adjustments of regulations to achieve this goal will not be made!~~

Justification: There is a great potential for expansion in efficiency of the hand troll fleet.

Pelican ADF&G Advisory Committee

SUBMITTED BY: Richard W. Lundahl, Chairman  
(Name & Address) Box 793  
Pelican, Alaska 99832

REPRESENTING:  
Pelican

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing   x  

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

5AAC 39.270 (g) Regulation book page no. 174  
(Alaska Administrative Code No.)

Purpose of proposal Reinstate the use of treble hooks in the commercial troll fisheries.

Suggested wording of Proposed Regulation (append if lengthy):

5AAC 39.270 (g) is repealed.

Justification: The Alaska Dept. of Fish and Game and the Alaska Trollers Association has researched this matter through test fisheries and found that the mortality of shakers due to treble hooks is less than single hooks.

SUBMITTED BY: Pelican ADF&G Advisory Committee  
(Name & Address) Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

REPRESENTING:  
Pelican

PHONE NO. \_\_\_\_\_

We realize that Southeast Seining proposals do not come up at this years Fall meeting; however, we request that this be handled by emergency order until such time.

Area(s) affected: Lisianski Inlet in District 113  
5AAC 33.350 (n)(1) Regulation book page no. 151  
(Alaska Administrative Code No.)

Purpose of proposal To move the north seine boundary line (Soapstone-Column Point) to Ewe Ledge-Dace Rock.

Suggested wording of Proposed Regulation (append if lengthy):  
(1) Lisianski inlet; north of a line from 58° 05' 21" N. lat., 136° 27' 23" W. long.; to 58° 05' 30" N. lat., 136° 26' 00" W. long. and south of a line from 57° 56' 46" N. lat., 136° 14' 10" W. long.; to 57° 57' 15" N. lat., 136° 12' 53" W. long., except by trolling.

Justification: 1. Soapstone-Column point is traditionally a troll area for Chinook and Coho salmon.

2. This area is essentially closed to trollers during Seine openings due to severe gear conflicts.

3. Seiners operating in this area harvest an inordinant amount of Chinook and Coho salmon during pink openings.

Pelican ADF&G Advisory Committee  
SUBMITTED BY: Richard W. Lundahl, Chairman  
(Name & Address) Box 793  
Pelican, Alaska 99832

REPRESENTING:  
Pelican

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing   x  

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Yakutat--Dangerous River to Sitagi Bluffs

5AAC 30.310 (b)(1) Regulation book page no. 129  
(Alaska Administrative Code No.)

Purpose of proposal To allow trollers equal fishing time.

Suggested wording of Proposed Regulation (append if lengthy):

(1) in (THE) those waters east of a line from the terminus of the Dangerous River  
(59° 20' 50" N. lat., 139° 18' 30" W. long.) to 59° 20' 50" N. lat., 139° 24' 30" W.  
long. to Sitagi Bluffs (59° 42' 30" N. lat., 140° 40' W. long.) during the period  
from August 1 through September 20, the total of weekly fishing hours (PERIODS) for  
trolling are the same as for gill netting in the Situk River.

- Justification: 1. This is a traditional trolling area.  
2. The existing regulations are unfairly discriminatory against trollers.  
3. Trollers fish day light hours only while gill netters fish around the clock.

SUBMITTED BY: Pelican ADF&G Advisory Committee  
(Name & Address) Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

REPRESENTING:  
Pelican

PHONE NO. \_\_\_\_\_



REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game	<u>  x  </u>	Subsistence	<u>  x  </u>
Sport Fishing	<u>  x  </u>	Advisory Committees	<u>  x  </u>
Commercial Fishing	<u>  x  </u>		

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

SAAC New Section Regulation book page no. \_\_\_\_\_  
(Alaska Administrative Code No.)

Purpose of proposal Extension of proposal deadline.

Suggested wording of Proposed Regulation (append if lengthy): The mid September deadline for proposals to the Boards of Fish and Game for their fall meeting is hereby changed to October 1 for advisory committees.

Justification: It is extremely difficult for advisory committees to meet, establish quorums, listen to public comment, act on and submit proposals by the present deadline as most Southeast Alaska fishermen are actively fishing until at least Sept. 20 and with the current reduced seasons and closures few members can afford the loss of fishing time.

Pelican ADF&G Advisory Committee  
SUBMITTED BY: Richard W. Lundahl, Chairman REPRESENTING: \_\_\_\_\_  
(Name & Address) Box 793  
Pelican, Alaska 99832 Pelican

REQUESTS FOR RESOLUTIONS, POLICIES, AND MANAGERIAL DIRECTIVES TO

*Board of Fisheries*  
THE ALASKA ~~DEPARTMENT OF FISH AND GAME~~

FROM

PELICAN ADF&G ADVISORY COMMITTEE

RICHARD W. LUNDAHL, CHAIRMAN

*Sept. 1981*

## CONTENTS

1. Curtailment of Foreign Nets
2. All Alaskan N.P.F.M.C.
3. Reinstatement of Incidental Troll Halibut Catch
4. Marine Mammal Predators
5. Shark Predators
6. Washington and Treaty Indian Demands
7. Foreign Marketing Gap
8. Salmon Optimum Yield
9. Adoption of and Review of Regulations and Policies
10. Chinook and Coho Hatcheries

RESOLUTION REQUEST

RELATING TO THE CURTAILMENT OF FOREIGN NETS

RESOLUTION: Curtail foreign gillnet and trawl fisheries in the Gulf of Alaska.

JUSTIFICATION: A tremendous number of net marked and injured Chinook and Coho salmon caught by trollers make evident that these species are targets for the foreign net fisheries.

Statistics show a significant number of halibut are taken by foreign trawl gear.

Documented testimony reveals there are miles of nets being used by foreign fleets.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, *Chairman*  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO ALL ALASKAN N.P.F.M.C.

WHEREAS, the F.C.M.A. seats many non-Alaskans on the N.P.F.M.C.; and

WHEREAS, the dollar value of Chinooks and Cohos that migrate from the waters of the N.P.F.M.C. to the waters of the P.F.M.C. is insignificant when compared to the dollar value of the King Crab, Tanner Crab, Black Cod, Halibut, ocean perch, pollock, hake, sockeyes, chums, pinks, cohos, chinooks, and etc. that do not migrate from the waters of the N.P.F.M.C. to the waters of the P.F.M.C.; and

WHEREAS there are already adequate provisions for coordination and cooperation between the N.P.F.M.C. and the P.F.M.C.;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries hereby requests that the Congress of the United States amend the F.C.M.A. to state that all voting members of the N.P.F.M.C. be Alaskan residents; and

BE IT FURTHER RESOLVED, that the vast majority of scientific and statistical committee and the advisory panel members also be Alaskan residents.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican Alaska 99832

RESOLUTION REQUEST

RELATING TO REINSTATEMENT OF INCIDENTAL TROLL  
HALIBUT CATCH (request for resolution to International  
Pacific Halibut Commission)

RESOLUTION: The traditional and historic incidental halibut harvest be  
reinstated to the troll fishery.

JUSTIFICATION: In the past the halibut season ran for most of the troll season.  
During that time the trollers were allowed to harvest a traditional  
incidental catch. Since the halibut fishery has become subjected  
to shorter and shorter openings the troll fishery has lost its  
ability to harvest an incidental catch.

We are requesting that the halibut incidental catch by the  
trollers be determined and that this percentage be allocated  
to the troll fleet. This would alleviate the problem that  
the troll fleet is experiencing in shaking the halibut during  
the troll season.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO MARINE MAMMAL PREDATORS

WHEREAS, the production of high quality protein is a critical concern to all peoples and nations of the world; and

WHEREAS, fish from the high seas is a source of this protein; and

WHEREAS, marine mammals in the Bering Sea harvest 2 pounds of salmon for every pound harvested by man; and

WHEREAS, the Marine Mammal Protection Act of 1972 protects these mammals to the detriment of these high protein fish stocks;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries hereby requests that the Congress of the United States returns control of these marine mammals to the State of Alaska and encourages the reduction of the population of these mammals to within reasonable limits.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO SHARK PREDATORS

WHEREAS, the population of marine mammal predators in the Gulf of Alaska is augmented by a large population of sharks; and

WHEREAS, this population of sharks is known to take a large percentage of salmon and other fishes while in the high seas; and

WHEREAS, the salmon troller is the only American salmon fishery actively competing with these predators on the high seas; and

WHEREAS, the Alaskan troll fleet does at times caught significant numbers of these sharks while engaged in salmon trolling;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries recognizes the value of having the Alaskan salmon troller on the high seas competing with these predators; and

BE IT FURTHER RESOLVED, that the Alaska Board of Fisheries does hereby request the appropriate government and private agencies to search for and develop markets for sharks, shark meat, and shark liver oils.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832



RESOLUTION REQUEST

RELATING TO WASHINGTON AND TREATY INDIAN DEMANDS

WHEREAS, dams and logging practices on the Columbia River and other areas are killing extreme numbers of fingerlings and ruining habitat; and

WHEREAS, foreign net fisheries and Canadian fishermen are taking large numbers of mature and immature Chinook salmon; and

WHEREAS, the Alaska troll fishery has taken the brunt of restrictive regulations in the recent past; and

WHEREAS, the Alaska troll fishery has the least impact on these stocks;

NOW, THEREFORE, BE IT RESOLVED, to take conservation and allocation measures where they will be most effective.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO FOREIGN MARKETING GAP

WHEREAS, the F.C.M.A. allows foreign fishing fleets to augment the American harvest until 100% of the allowable biological catch is harvested; and

WHEREAS, the major markets of these foreign fleets is in their mother countries; and

WHEREAS, the American fisherman is at a great financial overhead disadvantage in competing on the world market in the harvesting of our own American fish; and

WHEREAS, this marketing disadvantage creates a financial incentive for foreign fleets to displace American fleets; and

WHEREAS, our American fleets actually are being displaced by foreign fleets; and

WHEREAS, prices vary with supply and demand; and

WHEREAS, the price for our fish is kept low because 100% of the allowable catch is always harvested; and

WHEREAS, the price for our American fish would rise if the allowable foreign catch was reduced; and

WHEREAS, the incentive for American fishermen to invest in new fisheries and thereby displace foreign competition would increase if the price for American fish increased;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries does hereby request the Congress of the United States to amend the F.C.M.A. to include:

1. that if the American fleets can harvest 100% of the allowable biological catch then the Americans and the Americans only be allowed and encouraged to do so; and
2. that if the American fleets cannot harvest 100% of the allowable biological catch that a 20%<sup>A</sup> foreign marketing gap" be established (as an economic incentive to American fishermen) so that the combination of American and foreign harvest can only total 80% of the allowable biological catch.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

POLICY AND RESOLUTION REQUEST

RELATING TO SALMON OPTIMUM YIELD

WHEREAS, the OY was established during a period of severely depleted stocks; and

WHEREAS, the current Alaska Board of Fisheries and ADF&G management policies are greatly increasing salmon escapements; and

WHEREAS, aquaculture research and enhancement have just developed potentials for greatly increasing Alaska salmon stocks; and

WHEREAS, Alaska is upgrading its timber harvesting standards for environmental protection, including spawning habitats;

NOW, THEREFORE, BE IT RESOLVED, that the OY be reestablished at projected potential harvest levels and that anything less than this potential harvest level be called a temporarily reduced harvest level (or temporary OY).

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
pelican, Alaska 99832

ALASKA BOARD OF FISHERIES  
Policy Request

REGARDING ADOPTION OF AND REVIEW OF REGULATIONS AND POLICIES

In the proposition or adoption of regulations and policy we request that the Board and Department state:

1. the objectives to be achieved,
2. the time frame needed to achieve them, and
3. the projected benefits to that fishery be listed.

JUSTIFICATION: The past system of adoption has led us into the difficulties that most of our fisheries are experiencing today in that there is no system of review of regulations that were adopted in the past. The goals and benefits of these regulations were often unclear.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

ALASKA BOARD OF FISHERIES

REQUEST FOR MANAGEMENT DIRECTIVE

RELATING TO HATCHERIES

Now that the results from experimental Chinook and Coho hatchery programs are determined to be successful;

The Alaska Board of Fisheries directs FRED to implement a program for Chinook and Coho enhancement.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

PERSONAL REQUESTS  
FOR  
RESOLUTIONS, POLICIES, AND MANAGEMENT DIRECTIVES  
TO  
THE ALASKA BOARD OF FISHERIES

FROM  
RICHARD W. LUNDANL  
PELICAN, ALASKA

SEPT 1981

REQUEST FOR MANAGEMENT DIRECTIVE

RELATING TO F.R.E.D. AND FEDERAL HATCHERIES IN OTHER STATES

WHEREAS, the policies of the N.P.F.M.C. are directed toward lowering the OY and reallocating salmon (appearing in our waters and the waters of the FCZ) to the peoples of other states, other Indian tribes, and other nations: and

WHEREAS, our S.E. economies are dependent on our harvesting of these fish; and

WHEREAS, these fish pasture in our waters and feed on our feed stocks; and

WHEREAS, the expertise and technology for raising and enhancing these Washington and Oregon runs is in existence; and

WHEREAS, the bilateral (Canadian and U.S.A.) treaty and several Indian treaties will probably "lock" the OY into "specific" permanent numbers;

NOW, THEREFORE, BE IT RESOLVED that the Alaska Board of Fisheries does hereby direct F.R.E.D. to study the feasibility and benefits of locating several ADF&G Chinook and Coho hatcheries in Washington and Oregon; and

BE IT FURTHER RESOLVED, that the Alaska Board of Fisheries does hereby request the federal government to do the same in our behalf.

FURTHER DISCUSSION: 1. The existence of ADF&G hatcheries in Washington and Oregon would give Alaska a lever in maintaining a reasonably high OY for S.E. Alaska.

2. The possibility of the N.P.F.M.C.'s recommendations for further reducing our activity in the FCZ would be lessened.

Richard W. Lundahl  
Box 793  
Pelican Alaska 99832  
PERSONAL REQUEST

REQUEST FOR MANAGEMENT DIRECTIVE

RELATING TO BIOMASS STUDY OF CHINOOK SALMON

WHEREAS, the size limit for troll caught Chinook salmon has been a constant issue; and

WHEREAS, "shaker mortality" and treble hooks have consequently also been constant issues; and

WHEREAS, the predator caused mortality of salmon in the high seas has always been a subject of conjecture; and

WHEREAS, the "growth potential" of immature salmon has long been a subject of debate; and

WHEREAS, the ability of management to maximize the benefits to the public depends on knowing when the value of the resource is highest;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries does hereby direct ADF&G to initiate a complete study of the Bio-mass value of Chinook salmon throughout their cycle.

Richard W. Lundahl  
Box 793  
Pelican, Alaska 99832  
PERSONAL REQUEST



POLICY REQUEST

RELATING TO TAGGING AND RELEASING OF IMMATURE SALMON  
BY TROLLERS

WHEREAS, aquaculture biologists need continuous research in migration patterns, feeding habits, and growth rates of both natural and hatchery stocks; and

WHEREAS, various trollers and groups of trollers have always been interested in tagging salmon that must be released anyway; and

WHEREAS, the cost of such study would be minimal if the "tagging" were done by commercial fishermen;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries does hereby direct ADF&G and requests the N.M.F.S. biologists to set up a tagging and releasing program of immature salmon with all interested trollers.

Richard W. Lundahl  
Box 793  
Pelican, Alaska 99832  
PERSONAL REQUEST

PELICAN ADP#61 ADVISORY COMMITTEE  
7. RICHARD W. LUNDAN, CHAIRMAN  
P. O. Box 793  
PELICAN ALASKA 99832  
Nov 20, 1981

MEL ZAHN

EXECUTIVE DIRECTOR, BOARDS OF FISHERIES & GAME  
DEPARTMENT OF FISH & GAME  
SUPPORT BUILDING  
JUNEAU, ALASKA 99801

SUBJECT: COMMITTEE MATTERS  
FOR FALL BOARD MEETINGS

DEAR MEL,

INCLUDED ARE THREE ITEMS OF BUSINESS.

ITEM #1. -- REGIONAL ADVISORY COUNCIL BOUNDARIES.  
AT OUR LAST ADVISORY COMMITTEE MEETING (WHICH  
DEALT ALMOST ENTIRELY WITH SUBSISTENCE) A MOTION WAS  
MADE/SECONDED/CARRIED (5/0) TO GO ON RECORD AS  
SUPPORTING THE STATES QUO FOR REGIONAL ADVISORY  
COUNCIL BOUNDARIES FOR THE SOUTHEASTERN - YAKUTAT  
REGION

ITEM #2. -- POSITION OF PELICAN ON COMMERCIAL  
FISHING PROPOSALS.

ATTACHED YOU WILL FIND A 2 PAGE SUMMARY OF  
PELICAN'S POSITION ON THE COMMERCIAL FISHING PROPOSALS

ITEM #3. -- PROPOSAL #116 MAJORITY & MINORITY  
STATEMENTS

ALSO ATTACHED YOU WILL FIND A MINORITY STATEMENT  
STATEMENT ON PELICAN'S SUBMITTED PROPOSAL #116

OVER

CONCERNING HANDROLL, PELICAN'S MAJORITY  
STATEMENT IS THE PROPOSAL ITSELF AND THE  
MINORITY STATEMENT (BY PAUL GUGGENBERGER) IS  
ATTACHED.

THANK YOU FOR YOUR ATTENTION.

Sincerely,

Richard W. Lundahl

PELICAN ADP&G ADVISORY COMMITTEE  
RICHARD W. LUNDAHL, CHAIRMAN

POSITION ON PROPOSALS

Nov 1981

PROPOSAL NO	AMENDMENTS	ACTION	VOTE
100		ACCEPTED	6/0
102		REJECTED	0/6
103		RESERVED	0/6
104		ACCEPTED	6/0
105			

— AMENDED —

PARAGRAPH (b)(1) AMENDED TO READ  
 (b)(1) TO LIMIT THE TOTAL COMMERCIAL  
 KING SALMON HARVEST BY ALL GEAR TYPES  
 IN THE SOUTHEASTERN AND YUKONAT AREAS  
 TO A GUIDELINE HARVEST RANGE OF  
298,000 TO 372,000 (PLUS THE  
 ESTIMATED ANNUAL ALASKA HATCHERY  
 PRODUCTION OF HARVESTABLE KING SALMON  
AND PLUS THE ESTIMATED ANNUAL  
INCREASE IN NATURAL RUN STRENGTH  
DUE TO INCREASE ESCAPEMENT LEVELS)  
 FISH, THE DEPARTMENT WILL MANAGE  
 THE TRILL FISHERIES IN SEASON TO LIMIT  
 THE CHUMOK HARVEST TO APPROXIMATELY  
 THE MIDDLEPOINT OF THE GUIDELINE HARVEST  
 RANGE

PROPOSAL NO	AMENDMENTS	ACTION	VOTE
111	OPTION #3	ACCEPTED	6/0
111	OPTION #4	ACCEPTED	6/0
112		ACCEPTED	6/0
114		ACCEPTED	6/0
115		REJECTED	0/6

PROPOSAL NO.

AMENDMENTS

ACTION VOTE

116

— AMENDED <sup>OUR PROPOSAL</sup>  
 STRIKE THE WORD "NOT" IN  
 THE LAST SENTENCE.  
 (THIS WAS OUR PROPOSAL -  
 SUBMITTED BY US)

VOTE IF AMENDED ACCEPTED 6/0

117		ACCEPTED	6/0
118		ACCEPTED	6/0
119		ACCEPTED	6/0
120		ACCEPTED	6/0
121		1 ABSTAINED	REJECTED 1/4
122			REJECTED 0/6
123	OPTION #1		ACCEPTED 6/0
123	OPTION #2		ACCEPTED 6/0
125			REJECTED 0/6
127			ACCEPTED 6/0
128			ACCEPTED 6/0
130			ACCEPTED 6/0
131			ACCEPTED 6/0
135		1 ABSTAINED	REJECTED 3/2
136	OPTION #1		ACCEPTED 6/0
136	OPTION #2		ACCEPTED 6/0
137			ACCEPTED 6/0
138			ACCEPTED 6/0
145	OPTION #1		ACCEPTED 6/0
145	OPTION #2		REJECTED 0/6
147			ACCEPTED 6/0
158			ACCEPTED 6/0
159			ACCEPTED 6/0
160	OPTION #1		ACCEPTED 6/0
	OPTION #2		REJECTED 0/6
161			ACCEPTED 6/0

N20 120

MAJORITY & MINORITY STATEMENTS ON PROPOSAL # 116

PROPOSAL # 116 WAS SUBMITTED BY PELICAN.  
PELICAN'S MAJORITY STATEMENT IS THE PROPOSAL ITSELF.

THE MINORITY STATEMENT BY PAUL GUGGENBUCHER IS  
ATTACHED BELOW.

The 80/20 allocation applied to the coho troll catch for power and hand trollers respectively should be abolished. The introduction of a limited entry program for handtrollers addresses and will accomplish this goal.

Furthermore the 80/20 allocation is illegal. It is based on the assumption that there are 2150 handtroll permits. In reality there are only 600 handtroll permits being fished out of a possible 1600 issued this year. The state did not make this allocation for conservation purposes. It was done for the protection of the power trollers.

Paul Guggenbucher



C I T Y   A N D   B O R O U G H   O F   S I T K A

RESOLUTION NO. 81-192

A RESOLUTION OF THE CITY AND BOROUGH ASSEMBLY  
OF SITKA, ALASKA REQUESTING THE ALASKA BOARD  
OF FISHERIES TO SUPPORT THE ALASKA TROLL INDUSTRY

WHEREAS, the troll industry is an integral part of the economy of Sitka; and

WHEREAS, the Alaska Board of Fisheries has worked with Sitka groups and individuals in past years to resolve management and allocation problems; and

WHEREAS, Sitka residents have been leaders in efforts to conserve and enhance Southeast Alaska salmon runs; and

WHEREAS, actions by the North Pacific Fisheries Management Council, Federal Courts and British Columbia fishermen could severely curtail the Alaska troll fishery without reasonable chance for future benefit; and

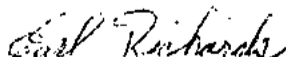
WHEREAS, it is in the interests of the elected leaders of Sitka to respond to the concerns of its residents,

THEREFORE, BE IT RESOLVED that the City and Borough Assembly of Sitka, Alaska requests the Alaska Board of Fisheries to support the Alaska troll industry by:

1. Enacting troll regulations, plans and policies which will conserve and enhance the troll fishery commensurate with the true salmon resource.
2. Supporting Alaskan trollers' traditional take of migratory salmon milling and feeding off our coast.
3. Pursuing Federal court decisions which will prevent allocation of Alaskan trollers' traditional harvest to out-of-state and foreign user groups.
4. Require salmon resource managers to consult carefully with local groups, such as the Sitka Fish & Game Advisory Committee and troll representatives about the impact of specific regulations.
5. Investigating source of net marks on a significant percentage of troll caught salmon.
6. Opening areas west of Cape Suckling to a gradual reintroduction of the traditional troll fishery.
7. Requesting funding for a cooperative tagging program with the fishermen.
8. Aggressively pursue a comprehensive aquaculture policy.

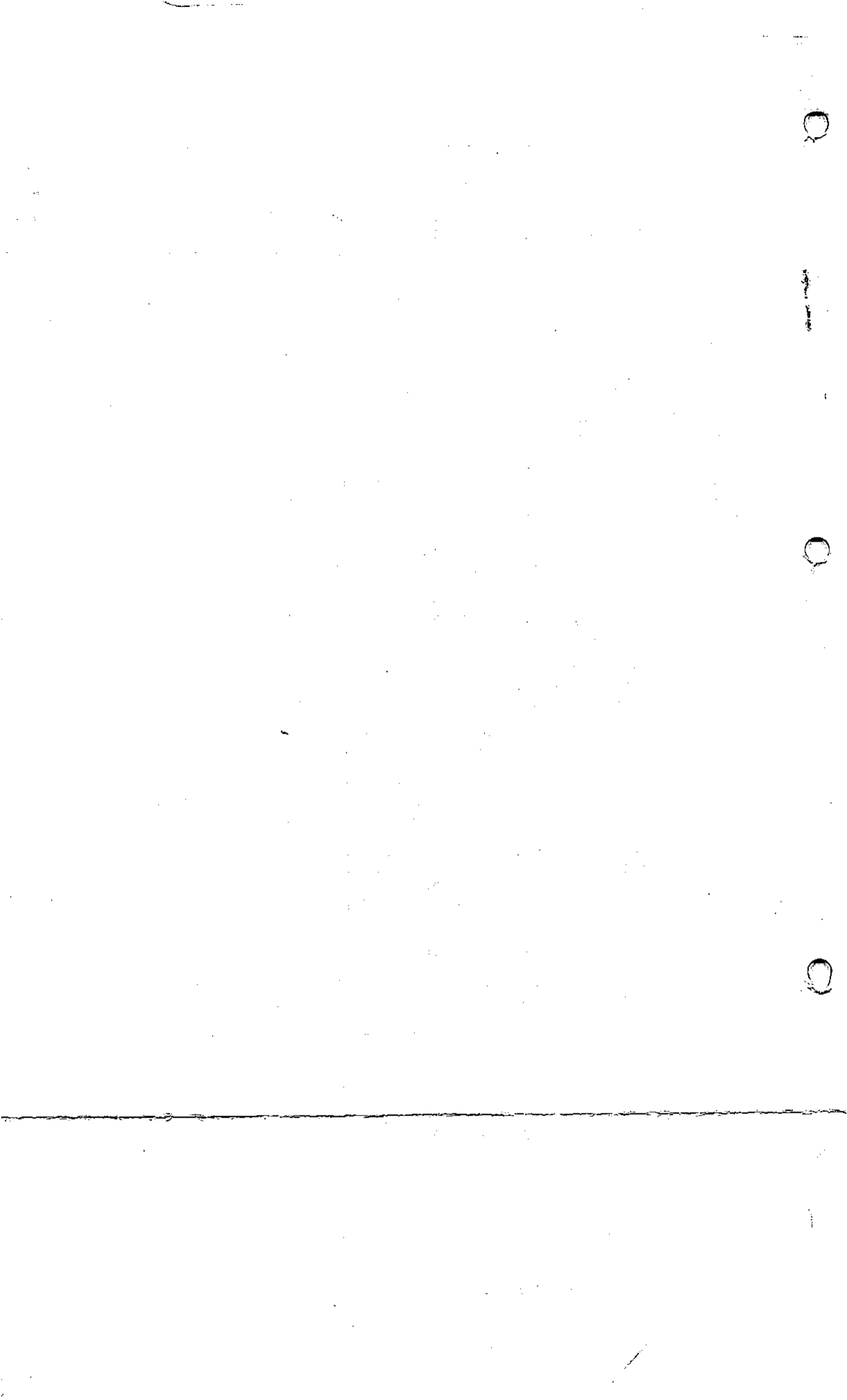
PASSED, APPROVED AND ADOPTED this 22nd day of DECEMBER, 1981.

A T T E S T:

  
Earl Richards, Deputy Mayor

  
Dolores Ingwersen, Clerk





JOHN SPELLMAN  
Governor



AGENDA E-1(c)  
January 1982

*mf*

ROLLAND A. SCHMITTEN  
Director

STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600  
October 2, 1981

Mr. Jim H. Branson  
Executive Director  
North Pacific Fishery  
Management Council  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Jim:

We have received your August 27 letter outlining NPFMC's intentions to adhere to the existing Salmon Plan amendment schedule. In light of this decision and the serious management problems identified in this fishery during the 1981 regulation development process, we wish to make general regulatory proposals which bracket the range of options that should be considered in 1982.

Further chinook O.Y. reductions are essential in response to serious conservation needs experienced by nearly every naturally spawning chinook stock harvested in the southeastern Alaska troll fishery. Additionally, the inequitable distribution of U.S. harvest on southern U.S. chinook stocks (e.g., Columbia River brights) must be addressed. O.Y. reductions above the 1981 levels which should be considered to solve these problems range up to 100 percent. This upper level would represent complete protection of many severely depressed chinook stocks. The minimum O.Y. level, which is necessary in 1982, cannot be quantified at this time, but we feel it is unlikely that this level should be below 30 percent. Season modifications to accomplish various O.Y. reductions should range from complete June to season-long closures.

The Washington Department of Fisheries will be refining its recommendations for management of the 1982 southeastern Alaska troll fishery during the next several months. As these results become available, we will be providing them to the NPFMC. We continue to emphasize that a more realistic 1982 management schedule is needed in response to court mandates and coded-wire tagging data processing time demands.

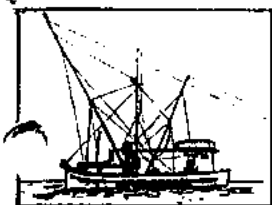
Sincerely,

Handwritten signature of Rolland A. Schmitt.

Rolland A. Schmitt  
Director

RAS:ljf

cc: DiDonato  
Mobrand  
Lincoln  
Wilkerson



Alaska  
Trollers  
Association

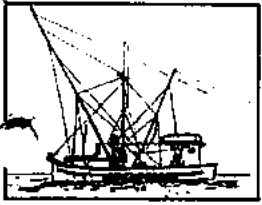
January 4, 1982

Ed Stojack  
1-4-82

ATA POSITION PAPER

The following represents the Alaska Trollers Association's position on proposals concerning the Southeast Alaska troll fishery which have been submitted to the Board of Fisheries at the January 1982 meetings:

<u>Board Proposal</u>	<u>Position</u>
#100 Option #1 Option #2	No comment. ATA proposal/support.
102	Oppose/withdrawn.
103	Oppose.
104	ATA proposal/support.
105	Oppose. There has been insufficient time since last year's closure to assess the impact of such a closure.
106	Oppose.
107 Option #1 Option #2 Option #3	Support. Support. Support. ATA favors seven day per week fishing in all areas.
108	Oppose.
109	Oppose. ATA opposes any overall area closures that do not relate to resource conservation of specific coho stocks.
110	Oppose.
111 Option #1 Option #2 Option #3 Option #4	No comment. No comment. ATA proposal/support. This has been changed from ATA's original proposal which stated as follows:



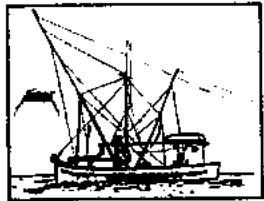
Board Proposal

Position

*"Amend 5 AAC 33.365(b) to include the following language: 'An additional increment of chinook catch (as determined by the Department), above the established range will be permitted to reflect the return of fish from state, federal and private enhancement programs in Alaska.'"*

Option #5

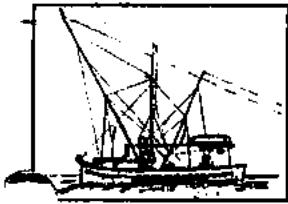
	No comment.
112	ATA proposal/support.
113	No comment.
114	ATA proposal/support.
115	Oppose/withdrawn.
116	No comment. ATA's Board proposal #114 addresses this issue.
117	Support.
118	Withdraw. Although ATA is still concerned with net targeting in outside and corridor areas during troll coho closures, we are reassessing our approach to this issue.
119	ATA proposal/support.
120	No comment.
121	Oppose.
122	Oppose.
123	No comment.
124	No comment.
125	Oppose.



Board Proposal

Position

126	Oppose.
127	ATA proposal/support.
128	Support. ATA's Board proposal #100 addresses specific areas.
129	Support.
130	Support.
131	Oppose.
132	Oppose.
133	Support. See Board proposal #159 submitted by ATA.
134	No comment
135	Oppose.
136	No comment. The International Pacific Halibut Commission is the appropriate forum for this proposal.
140	Oppose.
141	Support.
142	Oppose.
145	Support.
Option #1	Oppose.
Option #2	
147	ATA proposal/support.
158	ATA proposal/support.
159	ATA proposal/support.



Alaska  
Trollers  
Association

### CHINOOK CATCH BY AREAS

		<u>Catch</u>	<u>Change</u>
Prince William Sound	1981	21,400	
	1980	8,700	+146%
Cook Inlet	1981	12,000	
	1980	12,900	- 7%
Bristol Bay	1981	239,000	
	1980	95,000	+152%
Kodiak	1981	1,400	
	1980	500	+180%
Chignik	1981	2,700	
	1980	2,200	+ 23%
Alaska Peninsula	1981	27,400	
	1980	22,000	+ 25%
Alaska, Yukon, Kuskokwim (AYK)	1981	246,300	
	1980	207,500	+ 19%
Total chinook in areas outside Southeastern	1981	550,200	
	1980	348,800	+ 58%
Southeastern	1981	268,100	
	1980	320,600	- 16%

Information Concerning  
the Management Needs  
of the Southeast Alaska Troll Fishery  
for Chinook Salmon

by

Rodney C. Cook

Prepared with funds from a  
grant provided by the  
Pacific Fisheries Foundation

December 1981

## INTRODUCTION

This report reviews the current status of knowledge regarding the mixed stock nature of the Southeast Alaska troll fishery for chinook salmon together with management considerations and research needs commensurate with this knowledge. The following two sections present escapement and catch information for the component stocks. They are intended to give a brief review of the trends of the last 10 years to emphasize the current status of these stocks. Statistics on escapements and catches are presented in the appendices. The next section presents, without significant comment, the results of studies that provide information as to which stocks contribute to the fishery and to what degree. The reader is cautioned to avoid making rash conclusions based upon these data, particularly tagging recovery data. Numerical estimates based solely on tagging studies are tenuous at best due to differences in the number of tags released for different stocks and to variable recovery rates for different fisheries. The data do permit certain conclusions, however these statements must be general in nature. In most cases information pointing to specific conclusions should be considered provisional. Taken together, these studies do portray a general scenario. The supportive information is admittedly sparse and the last three sections delineate prudent measures in consideration of this lack of knowledge.

## ESCAPEMENTS

### Oregon Coast

The Oregon coastal stocks are in good condition with escapement goals of 150,000 to 200,000 being met. Underescapement may occur in some



smaller streams (Cummings 1976 as cited by Pacific Fisheries Management Council 1978). An upward trend in escapement is notable (Appendix A Table 1). Streams with considerable spawning include the Nehalem, Wilson, Trask, Nestucca, Siletz, Yaquina, Alsea, Siuslaw, Smith, Umpqua, Coos, Coquille, and Rogue rivers, together with their tributaries. Rivers to the south are generally longer and contain more suitable spawning habitat. A small portion of the escapement returns to hatcheries. Hatchery returns to Oregon coastal hatcheries have averaged 2,600 spring and 2,700 fall chinook for the years 1976-1977 and 1971-1977, respectively (from PFMC as cited by Natural Resource Consultants 1980). Wild stocks are of overwhelming importance. Past environmental degradation has been largely controlled (PFMC 1978). Future stability and possible increase in the runs are likely.

#### Columbia River

The Columbia River is the major producing system in the Washington-Oregon area. Escapements are given in Appendix A Table 1. There are five major components: Upriver spring, summer, and fall chinook, and lower river spring and fall chinook. In 1980 the total number of chinook entering the Columbia River was estimated at 431,900 fish. Inriver fisheries reduced this number by 162,000 for all races combined and mortalities at dams by 30,500 for upriver bright fall chinook (Washington Department of Fisheries 1980a). Effective escapement was probably in excess of 200,000 for 1980. The racial composition of the run has changed dramatically over the last two decades due to the widespread construction of dams and hatchery facilities. The percentage of the escapement returning to hatcheries in 1980 was 21% for upriver spring chinook, 52% for upriver

falls (this considers the McNary count as total wild escapement, thus the true percentage is probably larger), and 50% for lower river springs. Upriver summer chinook are largely wild stocks, hatchery brood stock have only been recently developed (NRC 1980). Lower river falls are managed chiefly for hatchery production. Underescapement for wild stocks is a problem (NRC 1980). Due to regulation of terminal fisheries, escapements are not declining as seriously as could be the case. However, all stocks (except, perhaps, lower river springs) are depressed: Escapement goals are not being met. For upriver races the primary causé is thought to be outmigrant dam mortality (PFMC 1978). Recent trends do not paint an optimistic picture. The potential increased production from hatcheries and underutilized natural habitat may be largely negated by continued fish passage problems and environmental degradation.

Washington Coastal

Washington coastal streams and hatcheries support several minor runs. These include the Willapa Bay and Grays Harbour runs on the south coast and the Queets, Hoh, and Quillayute rivers on the north coast. Data are not complete but about 1/3 of the escapement returns to hatcheries. Total escapement has been about 30,000 in recent years. For the most part, the runs are in good shape, however certain races such as early Satsop falls and Queets and Hoh springs and summers are severely depleted (PFMC 1978). Degradation of stream and estuarine environments is expected to cause continued declines for the region (PFMC 1978).

Puget Sound

The Puget Sound has received escapements of about 50,000 wild and 30,000 hatchery chinooks over the last 10 years. Environmental degradation has left natural stocks in a depressed state and future declines are expected (PFMC 1978). Spring chinook are particularly depressed. Hatchery production is increasing, however (PFMC 1978). Major spawning streams include the Lyre-Hoko, Elwah-Dungeness, Hood Canal, Quilcene, Lake Washington, Duwamish, Puyallup, Nisqually, Tacoma, Deschutes, Shelton, Kitsap, Nooksack, Skagit, Stillaguamish, and Snohomish basins (NRC 1980).

British Columbia

In British Columbia spawning was reported to take place in less than 260 streams with 50% of the escapement occurring in only 14 streams. The most important spawning grounds in southern British Columbia in order of importance were the Fraser River (Area 29), Squamish River (Area 28), the Nimpkish and Klinakline rivers (Area 12), the Somass River (Area 23), the Cowichan River (Area 18), the Homathko River (Area 13), the Puntledge River (Area 14), and the Southgate River (Area 13). To the north the largest runs have occurred in the Bella Coola River system (Area 8), the Kitimat River (Area 6), and the Skeena River (Area 4). Since Aro and Shepard (1967) collected these data (1951-1963) conditions have changed (Appendix A Table 1). Seveveral major hatcheries release substantial numbers of fall chinook: Robertson (Area 23), Big Qualicum (Area 14), Quinsam (Area 13), Puntledge (Area 14), and Capilano (Area 28), together with smaller numbers from other hatcheries (data from the Regional Mark Processing Center, PMFC, as cited by NRC 1980). Since 1971 escapements

have shown a weak downward trend with goals unmet, often by substantial deficiencies. For Areas 12 and 13 the Nimpkish, Klinaklina, Homathko and Southgate rivers, once rated as prime producers, are in severe trouble (Meadows 1981). The Powell River (Area 15) is virtually wiped out. Clearly many British Columbia stocks are in an extremely depressed state. No major systems are currently attaining escapement goals. In recent years the leading producers have been, in order of importance, the Fraser River, the Bella Coola River, the Skeena River, the Nass River, and the Cowichan River. The adverse effects of environmental degradation are not nearly as severe as to the South (PFMC 1978), however, the overall trend in escapement is downward. Future hatchery production may help reverse this trend.

#### Southeast Alaska

In Southeast Alaska escapements exceeded 50,000 in 1981. In recent years, dramatic upward trends are evident for the Taku and Stikine Rivers, the two major producers (Appendix A Table 3). Most systems are below goals, however. Fourteen hatcheries are currently operating in Southeast Alaska: six are state sponsored, one is operated by the Bureau of Indian Affairs, and seven are private non-profit hatcheries. Together they are operating at 8% design capacity of 90,000 adult returns (NRC 1980), or 7,200 fish. Land use activities have not adversely impacted chinook habitats, however, this may change in the future (NRC 1980).

6

## CATCHES

### Oregon-Washington

The Oregon commercial troll fishery has averaged about 200,000 chinook over the years 1971-1980 (Appendix B Table 1). The catches fluctuate considerably but have been near average levels in recent years. Oregon recreational catches have decreased in recent years to about half the 10-year average of 45,000. Washington troll catches are down dramatically in recent years to slightly more than half of the 250,000 10-year average. In 1980, Washington ocean recreational catches were less than one-third the 10-year average of 160,000. Catches during the Columbia River fall season are declining: The 10-year average is 225,000 compared to a 1980 catch of 137,000. The Columbia River spring season was closed in 1980. The 1971-1974 average was 90,000. The smaller winter season is also declining rapidly. Changes in many of the smaller coastal or river fisheries do not exhibit trends, but fluctuate at lower levels. Puget Sound net catches have averaged 190,000, and a trend is not apparent.

### British Columbia

Catches in British Columbia have been generally stable, with the notable exception of the Fraser River area gillnet catches which have declined substantially (Appendix B Table 2). South coast seine catches have exhibited a general increase while sport catches in this area have exploded. Province-wide, catches approach nearly 1.5 million chinook annually.

### Southeast Alaska

The Alaska troll catch has declined substantially from the late 1930s to the early 1960s (Gunstrom 1980). This decline has been correlated with the decline of runs to the Columbia River associated with the construction of dams, primarily in the 1950s (PFMC 1978). Catches have been relatively stable at an average of 270,000 for the last 10 years.

### STOCK IDENTIFICATION

#### Early Tagging in Southeast Alaska Waters

During the years 1950-1955 the United States tagged 3,098 chinook salmon in the inside waters of Southeast Alaska. There were many recoveries in inside waters and several in outside waters. These fish could have been immature or mature and of British Columbia origin or from rivers further south. The southernmost recovery was from the Columbia River. Most of the recoveries were from streams in Southeast Alaska: Taku River 159; Chilkat River, 6; Stikine River, 4; and unknown, 1. This source of these data is a letter from Mr. Gary Finger to Mr. Robert E. Loeffel, dated February 6, 1965 (Godfrey and Crouter 1968). Kissner (1977) also summarizes these Southeast Alaska tagging experiments. He included the same experiments as above, plus the study by Parker and Kirkness (1956) but excluded 56 tags from 1956 included in Godfrey and Crouters (1968) summary. Kissner (1977) concludes that stocks in outside waters were highly dependent on river systems in British Columbia, Washington and Oregon while the inside waters were primarily of Alaska and British Columbia origin.

Tagging conducted in 1950-1952 in the outside waters of Southeast Alaska caused Parker and Kirkness (1956) to conclude that the Columbia River followed by the Fraser River were the major contributors to the Southeast Alaska troll fishery and that "all major streams from Southern Oregon to Southeastern Alaska contribute, but to a lesser degree." Area I (Cape Spencer to Cape Fairweather) to the north exhibited the highest incidence of Columbia River chinook while Areas II (Sitka to Cross Sound) and III (Warren Island to Cape Felix) showed the highest incidence of Fraser River chinook.

#### Marked Columbia River Fish

Juvenile Columbia River chinooks fin-clipped from 1916 to 1927 have been recovered off the coast of British Columbia and Southeastern Alaska (Rich and Holmes 1928). Tagging operations from 1925 to 1930 in British Columbia by the Biological Board of Canada showed that a large percentage of the troll caught chinook salmon originated in the Columbia River (Williamson 1927, 1929; Williamson and Clemens 1932; Clemens 1932; Pritchard 1934, all cited by Silliman 1948). Similar results were obtained by the U.S. Bureau of Fisheries in 1927 off the west coast of Baranof Island. In this study 382 troll-caught chinook were tagged and 22 of the 38 recovered were taken at the Columbia River (Rich and Ball 1935). From these early data Silliman (1948) concluded that "a general tendency is apparent for the percentage of Columbia River fish to decrease as one proceeds northward." However Funk (1981) discounts this result primarily because Silliman's regression was confounded by the tendency of northern British Columbia experiments to be conducted in inside waters and because the northernmost experiment showed a large percentage of Columbia River

tag returns. Further, Rich and Ball (1935) conclude from their statistical review that Columbia River chinook salmon "evidently dominate the catch throughout at least the northern part of the western coast."

Release and recoveries of 1961-brood Columbia River chinook and a description of the marking program were reported by Worlund, Wahle, and Zimmer (1969). Cleaver (1969) concluded in his study of these fish that fish which mature at different ages are found in different parts of the range and that ocean distribution is not the same for fish from all hatcheries. He further determined that marked fall chinook salmon from lower Columbia River hatcheries were not abundant north of Vancouver Island. Recoveries of the 1962-brood releases were reported by Rose and Arp (1970), of the 1963-brood releases by Arp, Rose and Olhausen (1970) and of the 1964-brood releases by Wahle, Arp, and Olhausen (1972). The resulting studies (Pulford 1970; Lander 1970; Henry 1971, 1972) support the earlier conclusions. There were very few recoveries from Alaskan waters, and these were Kalama River fish.

Van Hying (1973) highlighted the tagging studies conducted from 1928 through 1962 off the coasts of Washington, Oregon, and South Vancouver Island. Citing papers by Kauffman (1951), Bergman (1963), Milne (1957), and Parker and Kirkness (1956), he speculated that certain upriver (Columbia) races migrate to southeast Alaska at a small size where they feed almost unmolested. They are captured primarily on their return migration. The immature chinook taken off Vancouver Island exhibit a large percentage of lower Columbia River chinook, many of which are immature.



### Scale Analysis of Southeast Alaska Chinook

Studies of the chinook salmon resource in Southeast Alaska have been conducted by the Sport Fish Division of the Alaska Department of Fish and Game. Kissner (1973) determined from unpublished tagging data and scale analysis that a high percentage of local chinook rear in the marine environment near the Juneau area. The scale analysis indicated a 10% non-Alaskan component for the Juneau sport catch and a 100% non-Alaskan component for the Sitka sport catch. The age composition of the catch from the Sitka salmon derby and the Fairweather grounds in 1972 showed that fall chinook utilize these outside waters to a high degree (Kissner 1973). This is in contrast to the 1972 derbies in Ketchikan, Haines, and Juneau, and the Juneau sport catch for that year: Less than 5% were considered fall chinook. A similar analysis of the fisheries in 1973 (Kissner 1974) gave the following estimates of the percentage of Alaskan chinook: Fairweather troll, 0%; Taku gillnet (immatures), 53.9%; Juneau sport troll (prior to 6/15), 51.0%; Juneau sport troll (after 6/15), 53.2%; and Ketchikan troll, 28.5%. Chinook scales collected in 1974 in ADF&G areas 111 (Stephens Passage) and 115 (Lynn Canal) indicate that about 72.1% harvested by troll were of Taku, Chilkat and Stikine rivers origin (Kissner 1975). In 1975 the percentage was determined to be 70.6% (Kissner 1976). Kissner (1977) indicated that the range of Alaskan chinook percentages in the Area 111 troll fishery was from 50-72% for 1974-1976.

### Recoveries of Coded Wire Tagged Chinook

Coded wire tags (CWT's) recovered in Southeast Alaska in 1978 (Davis, Wood, and Hunn 1979) show that outside waters included recoveries from

the Columbia River (142), Washington (277), Oregon (388), and British Columbia (478). Inside waters yielded tags from the Columbia River (132), Washington (115), Oregon (95), British Columbia (348) and Southeast Alaska (6). The recoveries of non-Alaska fish in inside waters were primarily from the southern areas. CWT's recovered in 1979 show basically the same patterns, however, more tags released in Southeastern Alaska were recovered (ADF&G 1980a). This is not surprising since coded wire tagging of wild Southeastern chinook began in 1978 (Kissner 1978). Most of these were from inside waters (106 of 130 tags) with statistical area 111 (Stephens Passage) predominant (51 tags).

Recoveries in the 1979 troll fishery in Southeast Alaska of coded wire tagged (CWT) chinook salmon from hatcheries of non-Alaskan origin are summarized in Funk (1981). Recoveries of British Columbia fall chinook hatchery stocks indicate that these fish are found most consistently between Cape Ommaney and Cross Sound and commonly north of Cross Sound, between Cape Ommaney and Cape Muzon, and in the inside waters around Ketchikan. Apparently there are differences in distribution according to age. Washington coast fall chinook, upper Columbia River fall chinook, upper Columbia River summer chinook, lower Columbia River spring chinook, lower Columbia River fall chinook and Oregon coast fall chinook all exhibit greater recovery rates north of Cross Sound.

Twenty-one chinook bearing CWT's have been recovered from the trawl fisheries in British Columbia (Riddell 1981). One fish from the Deschutes River was recovered off Barkley Sound in 1980. Twenty tags were recovered during the 1979 pollock fishery well within Dixon Entrance. One fish

was from the Quinsam hatchery in British Columbia. Nineteen were from hatcheries in Oregon and Washington that feed into the Columbia River or directly into the Pacific Ocean. The majority were lower Columbia River or tributary hatcheries with 10 from the Willamette River and 4 from the Cowlitz River. (I would suspect that these were mostly spring chinook.) Interestingly, tagging of immature fish conducted in Hecate Strait from April to September, 1930, were recovered between April 27 and August 11 in succeeding years (for the Columbia River). Mature fish were recovered between May 10 and July 12 (Pritchard 1934 as cited by Godfrey and Crouter 1968).

A partial summary is available for fin-clipping and tagging experiments for broodyears through 1970 (Garrison and Rosentreter-Peterson 1979). The data are not complete and are being updated as information becomes available. Oregon hatchery spring chinook releases beginning in 1946 resulted in very few recoveries in Alaska except for the Eagle Creek facility. Oregon hatchery fall chinook releases beginning in 1938 show the same pattern except for Trask River releases. Washington chinook hatchery releases beginning in 1961 show the same pattern; Alaska recoveries are the exception. For three 1970 brood British Columbia hatchery releases, 15 of 38 recoveries were from Alaska.

#### Contribution Rates

Catch contributions for various hatchery release groups have been calculated (Mobrand, Mathews, and Olson 1977). The contribution rates to the Alaska troll fishery are: 1.0% for 1961-1964 and 1971 brood lower Columbia River fall chinook, 19.0% for 1971 brood lower Columbia River

spring chinook (considered an educated guess by the authors), 8.3% for 1971 brood Soleduck fall chinook, 0.8% for 1971 brood Soleduck springs, 7.9% for 1971 brood Nemah fall chinook (average of two release groups). Contribution rates were negligible for 1971-1972 brood Skagit River fall chinook, 1971-1972 brood Nooksack-Samish River fall chinook, 1971-1972 brood South and Central Puget Sound fall chinook, and 1971-1972 brood Hood Canal fall and spring chinook.

Observed percentages of 1972 brood spring and fall hatchery chinook taken in various fisheries were computed from Fuss, Rasch, and Johnson (1981). Recoveries varied considerably for different hatcheries and release groups within hatcheries. In very few cases did the Southeast Alaska troll fishery harvest a large percentage of the releases. Various fisheries in Washington and British Columbia were the key beneficiaries. Of the 81 experiments conducted 25 received tag returns from Alaska. Some experiments received fair numbers of returns. The percentages of total returns were 13% for Willapa hatchery experiments, 11% for the Nemah experiments, 15% for the Green River experiments, 1.4% for the Kalama experiments, 4.6% for the Soleduck experiments, 4.8% for the Dungeness River, 0.1% for the Skagit, 0.4% for the Cowlitz, negligible for the Hood Canal (2 of 4,764 recoveries), 4.5% for the Issaquah experiments and 2.7% for Toutle River experiments.

#### Other Techniques

The Salmon Harvest Management Division of WDF has endeavored to determine the contributions of chinook salmon from Washington chinook salmon stocks (WDF 1980b). Priest Rapids hatchery-reared upriver brights

were microtagged in 1975, 1976 and 1977. Observed recoveries of the 1975 brood in the 1978 and 1979 coastal fisheries indicate that the fish are harvested at age 2 in British Columbia almost exclusively; at age 3 primarily in British Columbia (about half north of Vancouver Island) and secondarily in Southeast Alaska; and at age 4 primarily in Alaska, secondarily in British Columbia. Recoveries increased with age of the fish. The Washington Department of Fisheries/National Bureau of Standards computer model (Johnson 1978) was used to determine the percentage of upriver brights and Bonneville pool stock harvested by various coastal fisheries. This model relies heavily on migration and catch data provided as input. The resulting evaluation shows that the British Columbia troll fishery is the primary harvester of upriver brights with the Alaska troll fishery taking about 35% of the catch. The Bonneville pool stock is not harvested significantly by the Alaska troll fishery. This is not surprising since eggs are freely exchanged between Bonneville pool and lower Columbia river hatcheries. Willapa Bay hatchery stocks (Nemah and Willapa) were similarly modeled and about 15% were calculated as being harvested by the Alaska troll fishery. From this, WDF states:

"These results also demonstrate a far northerly ocean distribution similar to upper Columbia River brights. The distribution of northern Washington coastal stocks, if represented by Willapa Bay tagging experiments, would be a conservative measure of northerly distribution. This is because Willapa Hatchery stocks at one time were interbred with Puget Sound chinook stocks which are known to have a more southerly distribution."

The WDF/NBS model (Johnson 1978) asserts that 80% of the United States harvest of Columbia River upriver brights is taken off Alaska. Gowen (1980) disputes this and computes a percentage of 58% (average of 3 release groups). His conclusions are based upon expansions of CWT recoveries.

#### Return Migrations

Tagging studies indicate that maturing chinook move southward from their feeding grounds along the outer coastal areas of, Southeastern Alaska, British Columbia, Washington and Oregon (Loeffel and Wendler 1969). These fish are potentially vulnerable to fisheries being conducted in this area. The extent of this vulnerability is not precisely known.

An analysis of Parker and Kirkness' (1956) tagging results indicate that the terminal area and escapement benefits resulting from reduced harvest of southern United States stocks in Southeastern Alaska would be significantly greater than interceptions by the British Columbia troll fishery of these fish on their southern migration (WDF 1980b). The interceptions would be substantial, however (NRC 1980). Current fishing patterns have changed substantially since this tagging study was conducted. The WDF/NBS model was used to examine time closures as a means of minimizing interceptions of upper Columbia River bright fall chinook. Closures of the months of April, May, June and September were modelled, and transfer rates were computed to be 24%, 30%, 42% and 16%, respectively. The transfer rates were through Alaska and Canadian fisheries to southern U.S. ocean fisheries and the Columbia River.

### Current and Future Studies

During 1981 the ADF&G disc-tagged about 765 troll-caught chinook in the vicinity of Icy Strait. Most of these were tagged well inside Icy Strait but a few hundred were tagged in the outer area. Recoveries to date were primarily from Southeast Alaska (25-27) with 7 from British Columbia, 2 from Washington and 1 from Oregon. In addition, 9 CWT were recovered during the tagging operation: Six from Southeastern Alaska, 1 from Robertson Creek hatchery (British Columbia), and 2 from Oregon. These data are preliminary and the final report should be ready in January, 1982.<sup>1</sup>

The Fisheries Research Institute at the University of Washington is currently conducting three studies directed at the stock identification of chinook salmon. The North Pacific Fishery Management Council is providing funds to investigate the origins of chinook salmon taken incidentally in the foreign trawl fisheries of the Bering Sea and Gulf of Alaska. The Alaska Department of Fish and Game is sponsoring a similar study on the Japanese mothership driftnet fishery. The National Marine Fisheries Service (NMFS) is funding the analyses of chinook salmon taken in the Japanese landbased driftnet fishery. All studies require coast-wide scale collections of chinook salmon. These studies will determine the feasibility of scale pattern recognition to identify major stocks of chinook salmon in mixed stock fisheries. Data bases thus constructed will be compatible with ADF&G data management systems so future studies may be expeditiously conducted.

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<sup>1</sup>Personal communication with Mike Bethers, ADF&G, October 13, 1981.

The Alaska Department of Fish and Game is engaging in a study to determine the origins of chinook salmon in the Southeast Alaska troll fishery. The project will emphasize the collection of scale samples from major chinook spawning sites in Southeast Alaska and the Alaska commercial troll fishery, and the analyses of these samples along with escapement samples from British Columbia, Washington, Oregon, and California. The objective is to determine harvest rates by area, time, and gear type of Alaskan versus non-Alaskan chinook in the troll fishery, to determine these harvest rates for major component stocks within the Alaskan portion of the troll catch, and to determine various effects of the troll fishery on the escapement for major component Alaskan stocks. The study is geared toward the management needs of Southeast Alaskan stocks.<sup>2</sup>

#### CONCLUSIONS ON RACIAL CONTRIBUTIONS

Early evidence asserts that lower Columbia River fall chinook are not present in significant quantities in Southeast Alaska. Recent studies support this conclusion. Apparently the Columbia River races found in S.E. Alaska consist of spring chinook of both upper and lower river origins, upriver fall chinook (excluding the Bonneville Pool hatchery stock), and the upriver summer chinook. Harvest rates or contribution rates are largely unknown, but there is provisional evidence that the upriver bright fall chinook may have the highest contribution rates of

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<sup>2</sup>Personal communication with Scott Marshall, ADF&G, December 21, 1981.



of the Oregon or Washington stocks. The production of this stock has decreased considerably from historic levels, and continues to decline. No doubt, its importance to the Alaska troll fishery has also declined.

Contribution rates (the percentage of the production from a given hatchery that is harvested by the S.E. Alaska troll fishery) are extremely variable for Oregon and Washington coastal stocks. Oregon coastal stocks are in evidence. Tag recoveries indicate that most contribution rates are low or negligible (with notable exceptions). Taken together the overall contribution of Oregon coastal stocks to the Southeast Alaska fishery may be substantial. Contribution rates of Washington coastal stocks appear to be slightly higher than Oregon on the average. These stocks are in lower abundance and the overall contribution of Washington coastal stocks may not be as high as the Oregon coastal stocks. Puget Sound contributions are largely negligible. British Columbia contributions may be of major importance. Close proximity and large production imply that large contributions would be the rule. Tag recoveries support this contention. Southeastern Alaska production of chinook is relatively low and its immediate proximity is the primary factor affecting its contribution to the fishery.

Information regarding the time-area distributions of the component stocks in the Southeast Alaska fishery is sparse at best. As one would expect the percentage of chinook of Southeast Alaska origin is highest in inshore areas, primarily around Juneau, however the percentage of non-Alaska stocks may be as high as 50% in this area. The origins of this non-Alaskan proportion is thought to be largely British Columbian but

evidence of Oregon and Washington stocks is strong, particularly in the southern inside waters of S.E. Alaska. Near Ketchikan 75% of the catch may be from outside Alaska. Recent coded wire tag recoveries indicate a high percentage of British Columbia fish with significant contributions of Oregon and Washington coastal and Columbia River stocks. It has been generally thought that the percentage of non-Alaskan stocks increases in outside waters. This is undoubtedly true, however, the relative proportions of the non-Alaskan components may change significantly. Indeed, the 1978 coded wire recoveries indicate that the percentage of Columbia River chinook is larger near Ketchikan than in outside waters. This is likely due to the different migratory habits of the various races of Columbia River chinook. There is provisional evidence to indicate that spring chinook utilize the inside waters to a greater extent than do fall chinook, and that southern U.S. stocks utilize the Fairweather Grounds to a greater extent than do British Columbia stocks. Variations in stock composition with time have already proven beneficial to the management of southeastern Alaska stocks, and it appears that such variations may occur for other stocks. Carefully conceived studies would have a high probability of detecting significant time and area differences in stock composition.

#### MANAGEMENT CONSIDERATIONS

It is clear that most stocks contributing to the Southeast Alaska troll fishery are in a depressed state. For some stocks the situation is critical. (Such is the case for the upper Columbia River bright fall chinook.) There exists a need to substantially reduce the harvest of

such stocks in order to facilitate their rebuilding. However, for those severely depressed stocks there are usually factors other than the Southeast Alaska troll fishery that have contributed to their decline. (The inter-dam mortality of returning adults and outmigrant dam mortality are more important problems for upriver races of Columbia River chinook.) If a general reduction in the Southeast Alaska troll fishery is used exclusively to meet the management needs of these depressed stocks then this troll fishery would suffer unjustly severe economic consequences. Given the importance of this fishery to the region, restrictions of the fishery should be based upon strong scientific information outlining the benefits of such restrictions.

Given the depressed nature of the component stocks of the fishery a general reduction in catch would benefit the escapement and ultimately benefit the fishery from the resulting increased production. Past restrictions of terminal area net and troll fisheries have been largely successful in rebuilding runs to the larger producing systems within Southeast Alaska. There is considerable room for improvement for the smaller producing systems. General restrictions would be of some benefit. The key beneficiary of reduced catches in Southeast Alaska would be British Columbia. Both catches and escapements should increase in British Columbia while only escapements would increase in S.E. Alaska. The catch increase would consist of both returning British Columbian chinook and intercepted southern U.S. stocks. Benefits to southern U.S. catches and escapements would be reduced correspondingly. Due to the variable nature of catches and escapements, small reductions might not be noticed. Large general reductions (of up to 50%) might lead to a

decrease in overall benefits to U.S. harvesters. Without being able to predict or control Canadian management practices, it is difficult if not impossible to assess the long-term effects. International cooperation and agreement is needed to effectively implement conservation measures and to avoid allocation shifts associated with these measures.

Small general reductions (of 10 to 15% below the average of recent years) appear to be in order, however such reductions will not be sufficient to contribute to the rebuilding of severely depressed stocks. In order to assist the rebuilding of these stocks time-area restrictions of the fishery designed to protect these stocks would be in order. To minimize adverse economic impacts to the fishery the harvest of stocks in relatively good condition should not be reduced to the same degree. Further the protection of endangered stocks should be accompanied by measures directed at the other problems encountered by such stocks. These time-area management needs require information of the migratory patterns and mixing proportions of the component stocks in Southeast Alaska. This information is lacking and is urgently needed. Recent dramatic declines in upper Columbia River stocks indicate this. The side effects of time-area restrictions should also be assessed. The resulting shifts in efforts might cause excessive harvest of depressed stocks other than those for which the regulations were implemented. Further, the effects on coho catches should be considered. To reduce the over-exploitation of local coho populations, inshore effort shifts might prove desirable.

## RESEARCH RECOMMENDATIONS

The key problem in regulating the Southeast Alaska troll fishery for chinook salmon is insufficient knowledge concerning the mixed stock nature of the fishery. Past studies have provided a substantial body of information from which some qualitative (or general descriptive) conclusions may be drawn. However, quantitative (or precise numerical) statements are precluded by the changing importance of various runs known to contribute to the fishery and the basic nature of tagging data. Quantitative studies are needed to effectively manage this fishery, but existing data needs to be evaluated to structure effective experimental designs for future research.

The most basic lack of knowledge concerns the migratory habits of component stocks. There is considerable information available from early marking and tagging studies. These studies were directed toward particular questions and the migratory patterns of the various stocks are not directly discernable. These studies together with recent coded wire tagging recoveries undoubtedly contain much useful information. If these data were consolidated into one compatible data base then the migratory habits of most major substocks could be evaluated without ignoring any relevant data. For many major stocks or runs the data should be sufficient to portray a fairly complete picture of the migratory pattern. For other stocks the picture might be less complete, however useful information could be obtained. The results might determine when and where a depressed stock is absent or in low abundance. The migratory pattern of a particular stock is the major factor in determining which fishery will harvest major portions of the production. Management implications for

conservation and allocation are obvious. It would be desirable to conduct such studies on a coast-wide basis so that a wide variety of management considerations could be investigated. However, studies within S.E. Alaska should provide much useful information.

The information provided by qualitative description of chinook migrations would be extremely useful for subsequent quantitative studies. To determine the mixing proportion of component stocks in the troll fishery it would be expedient to determine in advance which stocks are most likely to be present in detectable or significant percentages. Scale pattern recognition studies have the capability to provide point and interval estimates of the mixing proportion of components stocks in the fishery. (The number of stocks that may be recognized and the precision of the estimates is unknown at this time.) This would require that scale samples be taken from vessels participating in the fishery. The scales would be compared to scales from those stocks previously determined to have a certain probability of occurrence. The resulting stock composition estimates would show where and when fishing effort could be increased or decreased to change the racial composition of the catch. Such changes might be made without reducing the overall catch.

Scale pattern analysis is not the only tool available for making such estimates. The expansion of coded wire tag recoveries could provide much information. The coded wire tagging program is not without its problems, however. There are currently political and economic pressures within each region that restrict the availability of peripheral information and the development of techniques required to analyze the vast

amount of information available. Qualitative descriptions of migration patterns from these data may be realized well in advance of quantitative descriptions of stock composition. For immediate management needs it is likely that quantitative estimates from coded wire tagging data will be unavailable.

Finally, tagging studies conducted on the fishing grounds are not without their usefulness. Because of their cost these studies are best directed at questions not immediately answerable with existing data or scale studies. The Canadian interception of southern U.S. stocks on their homeward migration is a particular example. Entry patterns of Alaskan stocks is another.

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**Appendix A: Escapement Estimates**

Appendix A Table 1.

Oregon and Washington Escapement Estimates

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>GOAL</u>
<u>Oregon Coastal Streams</u> (1)	55.0	64.6	59.2	76.6	85.3	56.6	88.3	90.7	96.4	110.8		150,000 -200,000
<u>Columbia River</u>												
Upriver Spring Chinook												
Run Size	146,500	269,500	223,800	99,800	< 97,900	63,900	138,400	127,000	48,600	53,100 <sup>P</sup>		
Escapement	96,800	136,000	101,200	61,900	< 97,900	63,700	98,600	124,700	48,100	53,100 <sup>P</sup>		100,000- 120,000
Upriver Summer Chinook												
Run Size	89,500	77,500	52,400	34,000	44,400	42,100	41,200	43,400	34,400 <sup>P</sup>	31,200 <sup>P</sup>		
Escapement	72,100	66,400	43,400	34,000	44,400	42,100	41,000	43,000	34,200 <sup>P</sup>	31,100 <sup>P</sup>		80,000 90,000
Upriver Fall Chinook												
Run Size	244,800	188,600	249,300	176,900	311,600	260,400	199,000	183,800	172,100 <sup>P</sup>	160,400 <sup>P</sup>		--
Bonneville Esc.	102,000	55,200	91,100	74,100	97,200	107,200	85,700	89,500	84,000 <sup>P</sup>	96,900 <sup>P</sup>		--
McNary Count.	49,000	37,600	46,600	34,600	29,600	28,800	37,600	27,300	31,200 <sup>P</sup>	29,000 <sup>P</sup>		40,000
Lower River Spring Chinook												
Willamette R. Run Size	67,400	47,100	54,500	71,800	32,600	40,700	58,000	71,400	44,600 <sup>P</sup>	42,500 <sup>P</sup>		
Willamette R. Esc.	44,600	26,200	42,000	44,500	19,100	22,200	40,000	47,500	26,600 <sup>P</sup>	27,000 <sup>P</sup>		30,000 -
Cowlitz R. Esc.	11,000	9,200	13,700	27,800	45,200	53,000	35,800	35,700	17,200	30,000		35,000
<u>Hatcheries</u>												
Spring Chinook												
Below Bonneville <sup>I</sup>	16,900	9,300	15,100	33,200	25,900	29,900	30,200	25,200	19,200	28,400		(2)
Above Bonneville <sup>I</sup>	8,200	20,500	19,800	6,400	12,000	14,800	20,100	14,100	9,300	11,200		(3)
Fall Chinook												
Below Bonneville	55,700	41,200	50,100	34,200	34,800	51,600	41,600	59,400	46,800	36,300		(2)
Above Bonneville <sup>I</sup>	17,100	9,600	20,400	14,200	36,800	25,800	22,200	20,100	21,200	31,100		(2)
<u>Willapa Bay</u> (8) (hatchery)	2,689	2,544	5,487	4,729	3,995	2,939	5,780					5,000
<u>Grays Harbor</u> (natural) (8) (hatchery)	10	100	18	9	32	59	192			<14,600		14,600 2,500
<u>North Washington Coast</u> (4)												
Queets Spring/Summer	X	X	488	519	600	256	1079	1092	955	805 <sup>P</sup>		1,400 <sup>(5)</sup>
Queets Fall Chinook	X	X	3,615	1,621	2,498	1,262	3,422	2,063	6,147	3,800 <sup>P</sup>		4,300 <sup>(5)</sup>
Hoh Spring/Summer	X	X	817	791	546	621	1,212	1,626	1,442	842 <sup>P</sup>		1,550 <sup>(5)</sup>
Hoh Fall Chinook	X	X	1,966	563	400	469	1,191	797	1,750	1,389 <sup>P</sup>		2,400 <sup>(6)</sup>
Quillayute Fall	X	X	2,591	3,804	2,023	2,027	3,224	4,824	4,968	4,478 <sup>P</sup>		6,100 <sup>(6)</sup>

Appendix A Table 1. (continued)

Oregon and Washington Escapement Estimates

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>GOAL</u>
<u>N. Wash. Coast Hatchery</u>												
Spring/Summer	-	19	127	78	1,421	2,304	925					600
Fall Chinook	381	202	42	81	165	39	2,347					1,700
<u>Puget Sound (7)</u>												
Hatchery (8)	31,016	34,108	37,584	24,226	21,200	24,800	27,920					35,575
Wild (8)					(50,000 average)							

Source: Data from PFMC (1981) unless otherwise noted.

(1) These data are numbers of spawning fish 1 mile observed in Oregon index streams. These numbers are considered adequate for the desired goal of 150,000-200,000.

P Preliminary

(2) Adequate egg takes.

(3) Inadequate egg takes.

I Included in above escapement estimates.

(4) Derived from in-season evaluation fisheries. All wild.

(5) WDF goal.

(6) Jointly agreed to by state and tribe.

(7) Values currently being assessed

(8) From PFMC or cited by Natural Resource Consultants (1980).

## Appendix A Table 2.

British Columbia Chinook Escapement Estimates.

Area	1971 <sup>(1)</sup>	1972 <sup>(1)</sup>	1973 <sup>(1)</sup>	1974 <sup>(1)</sup>	1975 <sup>(1)</sup>	1976 <sup>(2)</sup>	1977 <sup>(2)</sup>	1978 <sup>(2)</sup>	1979 <sup>(2)</sup>	1980	1981	GOAL <sup>(3)</sup>
1. N. Queen Charlotte Is.	500	1,000	900	1,000	1,500	700	800	600	475			5,000
2. E. W. Queen Ch. Is.	-	-	-	-	-	-	-	-	-			
3. Nass River	16,350	19,800	3,550	3,775	6,001	4,830	9,060	10,190	8,180			30,000
4. Lower Skeena (12)	20,000	20,380	40,295	31,976	20,459	12,834	29,512	23,363	17,202			50,000
5. Grenville/Principe	-	-	-	-	-	25	-	25	25			
6. Butedale (4)	23,325	14,060	14,055	12,125	5,050	6,779	3,883	6,512	6,510			25,000
7. Bella Bella	-	-	-	-	-	-	-	-	-			
8. Bella Coola (11)	39,250	21,325	25,950	21,925	7,425	28,550	33,600	24,000	19,600			35,000
9. Rivers Inlet	1,741	860	1,630	6,700	3,255	1,640	2,205	2,800	2,150			7,500
10. Smith Inlet	700	800	570	1,800	960	1,000	1,050	2,100	500			2,000
11. Seymour/Belize	-	-	-	-	-	-	-	-	-			
12. Johnstone Straits (8)	3,500	12,075	17,025	14,450	11,800	15,150	3,955	8,150	3,610	1,407 <sup>(13)</sup>		40,000
13. Quathiaski (9)	14,150	14,850	16,200	12,125	12,775	9,325	18,800	13,741	9,649	4,891 <sup>(13)</sup>		54,000
14. Comox/Qualicum Beach (7)	1,725	1,475	2,475	1,559	2,729	2,645	5,437	5,605	9,509			10,000
15. Powell River	19,000	11,700	9,500	-	-	-	110	-	25			25,000
16. Pender Harbour	-	-	-	-	-	-	-	1	4			
17. Nanaimo/Ladysmith	880	2,010	1,265	2,440	545	1,160	2,950	2,761	4,595			20,000
18. Cowichan (10)	7,925	8,800	8,425	4,125	6,575	10,025	7,925	4,730	7,775			30,000
19.	-	-	-	-	-	-	-	-	-			
20. Juan de Fuca Strait	1,900	7,225	7,400	1,152	625	105	150	121	482			
21.	-	-	-	-	-	-	-	30	-			
22. Nitinat Lake	1,200	800	850	3,000	800	650	1,000	1,200	3,500			
23. Barkley Sound (5)	16,375	10,850	12,350	14,180	16,800	14,510	13,495	9,525	11,100			18,000
24. Clayoquot Sound	750	550	750	325	665	383	275	176	465			2,000
25. Nootka Sound	4,675	5,345	6,900	4,375	1,900	1,380	3,355	5,809	2,503			
26. Kyuquot Sound	1,950	1,850	4,125	2,100	525	950	309	140	580			
27. Quatsina Sound	625	602	200	400	400	400	950	2,250	1,180			1,000
28. Howe Sd.-Burrard In. (6)	11,279	9,488	14,015	9,343	4,817	6,008	4,170	2,055	5,303			35,000
29. Fraser River	60,700	47,693	81,635	78,250	79,185	44,805	81,461	72,396	62,410			155,000
Total	248,500	213,538	270,065	227,125	184,791	163,854	224,427	196,255	177,332			

(1) (Aro, Miller and McDonald, 1977)

(2) Supplied by K. V. Aro to R. A. Fredin in a letter dated 2/9/81.

(3) (Austin, 1981)

(4) Includes Kitimat River and its hatchery.

(5) Includes Robertson Creek Hatchery and the Somass River.



- (6) Includes Capilano Hatchery and Squamish River.
- (7) Includes Big Qualicum and Puntledge hatchery facilities and the Puntledge River.
- (8) Includes the Nimpkish and Kilnakiini Rivers.
- (9) Includes the Homathko and Southgate Rivers and the Quinsam hatchery.
- (10) Includes the Cowichan River.
- (11) Includes the Bella Coola River.
- (12) Includes the Skeena River.
- (13) (Meadows, 1981)

## Appendix A Table 3.

Southeast Alaska Escapement Estimates

<u>River System</u>	<u>1971</u> <sup>(1)</sup>	<u>1972</u> <sup>(1)</sup>	<u>1973</u> <sup>(1)</sup>	<u>1974</u> <sup>(1)</sup>	<u>1975</u> <sup>(1)</sup>	<u>1976</u> <sup>(1)</sup>	<u>1977</u> <sup>(1)</sup>	<u>1978</u> <sup>(1)</sup>	<u>1979</u> <sup>(1)</sup>	<u>1980</u> <sup>(1)</sup>	<u>1981</u> <sup>(2)</sup>	<u>GOAL</u> <sup>(1)</sup>
Taku R. (3)	X	3333	6667	6000	6000	10,000	12,833	5400	7033	15,000	17,000	30,000
(Nakina R.)	X	1000 <sup>A</sup>	2000 <sup>A</sup>	1800 <sup>A</sup>	1800 <sup>H</sup>	3000 <sup>H</sup>	3850 <sup>H</sup>	1620 <sup>H</sup>	2110 <sup>H</sup>	4500 <sup>H</sup>	5100 <sup>H</sup>	9000 <sup>A</sup>
Stikine R. (4)	X	X	X	X	5600 <sup>H</sup>	3200 <sup>H</sup>	6400 <sup>H</sup>	5056 <sup>H</sup>	9328 <sup>H</sup>	17,096	26,672	16,800
(Little Tahltan R.)	X	X	X	X	700 <sup>H</sup>	400 <sup>H</sup>	800 <sup>H</sup>	632 <sup>H</sup>	1166 <sup>H</sup>	2137 <sup>H</sup>	3334 <sup>H</sup>	2100 <sup>A</sup>
Alsek R. (5)		469	1719			1917	5000	3570	4002	2189	3300	5000
(Kluckshu Lake)		300 <sup>A/F</sup>	1100 <sup>A/F</sup>	X	X	1227 <sup>W</sup>	3200 <sup>W</sup>	2285 <sup>W</sup>	2561 <sup>W</sup>	1401 <sup>W</sup>	2112 <sup>W</sup>	3200 <sup>W</sup>
Unuk R. (6)	X	1770	364	X	110	396	2332	3530	1152	2104	1462	3600
	X	885 <sup>A</sup>	182 <sup>A</sup>	X	55 <sup>H</sup>	198 <sup>H/W-F</sup>	1166 <sup>H/W-F</sup>	1765 <sup>H/W-F</sup>	576 <sup>H/W-F</sup>	1052 <sup>H/W-F</sup>	731 <sup>H/W-F</sup>	1800 <sup>A</sup>
Chikamin R. (6)	X	1720	458	352	702	244	470	362	280	522	550	1800
	X	860 <sup>A</sup>	229 <sup>A</sup>	176 <sup>H</sup>	351 <sup>H</sup>	122 <sup>H</sup>	235 <sup>H</sup>	181 <sup>H</sup>	140 <sup>H</sup>	261 <sup>H</sup>	275 <sup>H</sup>	900 <sup>A</sup>
Situk R.	-	964 <sup>F1</sup>	400 <sup>F1</sup>	500 <sup>F1</sup>	702 <sup>F1</sup>	1180 <sup>F1</sup>	1933	1872	1103	1754	1125	807
							1933 <sup>W</sup>	1872 <sup>W</sup>	1103 <sup>W</sup>	1754 <sup>W</sup>	1125 <sup>W</sup>	807 <sup>W</sup>
Wilson/Blossum R. (6)	X	1000	X	332	306	136	224	286	108	178	318	1600
	X	500 <sup>A</sup>	X	166 <sup>H</sup>	153 <sup>H</sup>	68 <sup>H</sup>	112 <sup>H</sup>	143 <sup>H</sup>	54 <sup>H</sup>	89 <sup>H</sup>	159 <sup>H</sup>	800 <sup>A</sup>
Keta R. (6)	X	X	X	X	406	168	460	784	852	384	658	1000
	X	X	X	X	203 <sup>H</sup>	84 <sup>H</sup>	230 <sup>H</sup>	392 <sup>H</sup>	426 <sup>H</sup>	192 <sup>H</sup>	329 <sup>H</sup>	500 <sup>A</sup>
King Salmon R. (Adm. In.) <sup>(6)</sup>	-	94 <sup>F</sup>	90 <sup>F</sup>	211 <sup>F</sup>	104 <sup>F</sup>	42 <sup>F</sup>	130	268	114	176	140	400
							65 <sup>F/H</sup>	134 <sup>F/H</sup>	57 <sup>F/H</sup>	88 <sup>F/H</sup>	70 <sup>F/H</sup>	200 <sup>A</sup>

(1) (ADF&amp;G, 1981 a)

(2) (ADF&amp;G, 1981 b)

(3) Taku R. values obtained by dividing Nakina R. counts by 0.3 (an average Nakina R. contribution of 40% is assumed, and an aerial/peak survey counting rate of 75% is assumed).

(4) Stikine R. values obtained by dividing Little Tahltan R. counts by 0.125. (An average Little Tahltan R. contribution of 25% is assumed, and an aerial/peak survey counting rate of 50% is assumed).

(5) Alsek R. values obtained by dividing Kluckshu L. counts by 0.64. (An average Kluckshu contribution of 64% is assumed).

(6) Values obtained by dividing counts by 0.50. (An average aerial/peak survey counting rate of 50% is assumed).

**Appendix B: Catch Statistics**

Appendix B Table 1.

Oregon - Washington Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Oregon Commercial Troll	102,900	127,300	383,300	224,100	224,700	184,345	340,014	191,532	245,473	209,324 <sup>P</sup>	
By Area of Landing:											
Columbia River	-	-	-	-	-	28,102	21,884	15,196	9,506	9,865 <sup>P</sup>	
Tillamook	-	-	-	-	-	9,076	28,145	8,138	4,289	6,101 <sup>P</sup>	
Newport	-	-	-	-	-	29,943	61,619	54,122	37,253	43,524 <sup>P</sup>	
Coos Bay	-	-	-	-	-	75,025	142,519	66,825	86,950	86,092 <sup>P</sup>	
Brookings	-	-	-	-	-	42,199	87,847	47,251	107,475	63,742 <sup>P</sup>	
Ore. Recreational Fishery	29,600	44,100	61,000	36,700	75,700	79,316	61,364	22,844	20,902	18,494 <sup>P</sup>	
By Area of Landing:											
Columbia River	-	-	-	-	-	44,578	22,630	7,939	7,542	5,541 <sup>P</sup>	
Tillamook	-	-	-	-	-	2,323	1,541	833	981	1,487 <sup>P</sup>	
Newport	-	-	-	-	-	4,570	2,626	2,068	1,431	1,771 <sup>P</sup>	
Coos Bay	-	-	-	-	-	14,613	22,727	4,751	4,537	5,442 <sup>P</sup>	
Brookings	-	-	-	-	-	13,232	11,840	7,253	6,411	4,273 <sup>P</sup>	
Washington Troll	252,200	202,900	317,300	353,100	274,200	361,400	267,500	166,200	148,100 <sup>P</sup>	132,700 <sup>P</sup>	
By Coastal Area:											
Cape Flattery	-	-	-	-	-	68,100	52,200	46,000	35,500	35,000	
Quillayute	-	-	-	-	-	86,300	44,800	39,500	29,200	29,400	
Grays Harbor	-	-	-	-	-	153,000	94,100	49,500	58,100	52,600	
Columbia River	-	-	-	-	-	46,300	40,500	10,500	9,600	10,700	
Wash. Ocean Rec. Fishery	160,000	212,300	203,800	214,600	261,600	170,700	175,000	96,400	76,900	53,600	
By Coastal Area:											
Neah Bay	-	-	-	-	-	11,300	7,300	7,200	2,600	2,800	
La Push	-	-	-	-	-	6,900	2,700	2,700	1,000	900	
Westport	-	-	-	-	-	91,500	101,000	64,800	48,900	33,500	
Ilwaco	-	-	-	-	-	61,000	64,000	21,700	24,400	16,400	
Col. R. Winter Season <sup>(1)</sup>	13,400	15,800	17,200	13,300	9,100	4,700	6,800	13,500	5,500 <sup>P</sup>	400 <sup>P</sup>	
Col. R. Spring Season <sup>(2)</sup>											
Commercial	22,600	69,900	60,500	8,400	0	0	9,300	0	0	0	
Sport	19,900	24,400	30,300	14,000	0	0	14,800	100	0	0	
Treaty	12,700	42,800	34,200	17,500	0	400	17,200	2,600	500	0	
Col. R. Summer Season <sup>(3)</sup>	closed	--	--	--	--	--	--	--	--	closed	
Col. R. Fall Season											
Upriver Non-Treaty	93,800	96,300	105,400	52,200	95,900	33,400	69,200	39,700	28,400	28,000	
Upriver Treaty	56,500	42,900	67,900	54,900	140,600	135,000	55,200	61,600	62,500	30,600	
Lower River Chinook	122,100	43,400	165,300	44,700	77,400	114,900	97,900	70,300	72,800	78,400 <sup>(4)</sup>	

Appendix B Table 1. (continued)

Oregon - Washington Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Willapa Bay											
Early Season <sup>(5)</sup>	2,059	2,378	27,857	4,997	6,791 <sup>(8)</sup>	15,678 <sup>(8)</sup>	21,934 <sup>(6)</sup>	3,781	5,482	11,800	
Regular Fall Season	7,830	8,562	12,586	8,727	8,620	13,340	9,420	7,599	12,696	12,800	
Grays Harbor											
Early Season <sup>(7)</sup>	449	440	6,054	1,734	401	5,280	13,536	901	881	1,550	
Fall Non-Indian	8,880	10,113	10,474	7,941	7,013	2,874	1,840	703	0	3,343	
Fall Indian	-	-	-	70	1,294	3,086	4,006	2,674	95	5,350	
Chehalis R. Indian Gill-net											
Spring Chinook	607	852	773	239	149	388	775	559	675	286	
Fall Chinook	489	1,655	2,262	547	578	386	1,406	1,235	1,502	434	
Quinalt R. Indian Gill-net											
Spring Chinook	X	X	428	208	63	311	208	540 <sup>P</sup>	947 <sup>P</sup>	1,109 <sup>P</sup>	
Fall Chinook	2,112	2,938	1,596	2,458	1,578	3,236	5,856	6,843 <sup>P</sup>	6,484 <sup>P</sup>	4,550 <sup>(9)</sup>	
Queets R. Indian Gill-net											
Spring/Summer	1,111	1,241	459	481	380	135	356	209	479 <sup>P</sup>	123 <sup>P</sup>	
Fall Chinook	1,128	668	3,629	3,063	2,052	1,274	1,864	895	860	2,615	
Hoh R. Indian Gill-net											
Spring/Summer	1,470	1,380	715	623	513	509	875	1,051 <sup>P</sup>	766 <sup>P</sup>	165 <sup>P</sup>	
Fall Chinook	1,128	668	2,187	820	677	483	1,619	843	450	461	
Quillayute R. Ind. Gill-net											
Spring/Summer	373	763	292	117	2,256	2,513	2,595	3,201	2,473 <sup>P</sup>	1,000 <sup>P</sup>	
Fall Chinook	2,941	3,523	3,507	3,849	2,290	2,246	5,297	1,357	2,610	1,390	
Puget Sound Net											
Non-Indian	130,715	83,867	94,126	80,156	130,424	91,146	136,208	115,726	74,393 <sup>P</sup>	93,723 <sup>(10)</sup>	
Indian	29,234	33,823	42,262	64,482	99,964	122,953	108,472	124,361	109,048 <sup>P</sup>	164,947 <sup>(10)</sup>	
Puget Sound Recreational											(11)

Source: Data are from PFMC (1981) unless otherwise noted.

<sup>P</sup>Preliminary data.

(1) January-March.

(2) April-May.

(3) June-July

(4) Estimate of lower river stocks caught in all fisheries below Bonneville Dam, September - October.

(5) Prior to August 26.

(6) Includes non-treaty Indian catches.

(7) Prior to August 16.

(8) Grays Harbor tributary.

(9) Based on data collected through November 30, 1980.

(10) Preliminary data through November 20, 1980.

(11) Estimate not available due to agency budget constraints.

Appendix B Table 2.

British Columbia Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<sup>a</sup> North Coast											
Gill-net	46,524	69,960	60,820	56,967	58,478	41,736	53,050	41,282			
Seine	39,840	57,248	58,495	56,922	57,462	35,108	60,193	74,705			
Troll	269,877	326,231	252,455	293,877	305,417	286,080	206,696	206,018			
<sup>b</sup> South Coast											
Gill-net	35,197	24,735	27,626	29,848	36,862	46,404	47,354	50,506			
Seine	68,964	55,360	92,228	77,572	81,857	91,065	132,913	110,627			
Troll	992,513	895,171	832,915	864,737	778,229	959,988	897,489	821,125			
<sup>c</sup> Fraser Area											
Gill-net	132,201	121,146	94,518	67,778	73,833	79,869	90,893	56,744			
Seine	119	-	-	-	-	-	-	-			
Troll	8,021	1,953	5,369	19,145	19,591	2,802	7,222	6,280			
Subtotals											
Gill-net	213,922	215,841	182,964	154,593	169,173	168,009	191,297	148,532			
Seine	108,923	112,608	150,723	134,494	139,313	126,173	193,108	185,332			
Troll	1,270,411	1,223,355	1,090,739	1,177,759	1,103,237	1,248,870	1,111,407	1,033,423			

Sources: British Columbia Catch Statistics, 1971-1978,  
Department of Fisheries and Oceans.

<sup>a</sup>Statistical Areas 1-10, 30

<sup>b</sup>Statistical Areas 11-27 (inc. C)

<sup>c</sup>Statistical Areas 28,29

Appendix B Table 2. (continued)

British Columbia Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<b>Subsistence</b>											
<sup>a</sup> Queen Charlotte Is.	15	30	17	0	-	0					
<sup>b</sup> North Coast	2,165	3,327	3,092	3,836	5,626	4,682					
<sup>c</sup> W. Coast Van. Is.	728	966	309	66	156	145					
<sup>d</sup> South Coast	15,575	18,904	14,046	21,031	22,863	25,296					
<b>Sport Catch</b>											
Queen Charlotte Is.	< 50	-	100	< 50	100	300					
North Coast	3,000	4,300	4,600	6,500	9,800	17,000					
W. Coast Van. Is.	13,200	4,000	6,900	10,500	13,000	12,800					
South Coast	106,400	145,300	136,600	141,800	181,100	262,300					

<sup>a</sup>Statistical Areas 1,2

<sup>b</sup>Statistical Areas 3-8

<sup>c</sup>Statistical Areas 11-20, 28, 29

<sup>d</sup>Statistical Areas .

Source: INPFC Statistical Yearbook



Appendix B Table 3.

Southeast Alaska Catches

	<u>1971</u> <sup>(7)</sup>	<u>1972</u> <sup>(7)</sup>	<u>1973</u> <sup>(7)</sup>	<u>1974</u> <sup>(7)</sup>	<u>1975</u> <sup>(7)</sup>	<u>1976</u> <sup>(7)</sup>	<u>1977</u> <sup>(7)</sup>	<u>1978</u> <sup>(7)</sup>	<u>1979</u> <sup>(7)</sup>	<u>1980</u> <sup>(3)</sup>	<u>1981</u> <sup>D(2)</sup>
All Troll <sup>(1)</sup>	333,717	242,088	307,715	322,120	287,337	231,178	271,777	375,368	338,034	298,502	258,600
By Types:											
Power Troll	-	-	-	-	259,183	204,878	238,601	321,057	279,068	247,785 <sup>(6)</sup>	-
Hand Troll	-	-	-	-	28,154	26,300	33,176	54,311	58,966	50,717 <sup>(6)</sup>	-
Gill Net	-	-	-	-	-	-	-	-	-	5,817 <sup>(d)</sup> 2,800 <sup>(s)</sup>	7,900
Seine	-	-	-	-	-	-	-	-	-	12,508	7,100
S. E. Total										320,270 <sup>(5)</sup>	274,600 <sup>(4)</sup>

(1) (ADF&G, 1980 b) for 1971-79.

(2) (ADF&G, 1981 b)

(3) (NMFS, 1981)

(4) Includes 1000 misc.

(5) Includes 642 misc.

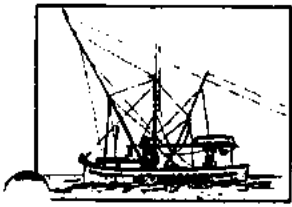
(6) Handwritten draft table in (ADF&G, 1980 c).

(7) (Funk, 1981)

d Drift gill net.

s Set gill net.





Alaska  
Trollers  
Association

WESTWARD FISHERMEN

Name

Barton Sollars  
Tom Jackson  
Orrie Bell  
Harold Johnson  
Don Kenney  
Bob Gay  
Roger Bailey  
Dick Threenit  
Bob Hammer  
John, Jim Phillips  
Joe Zavodnik  
Leif Stromdahl  
Jake White  
Tom Osborne  
Russ Wyatt  
Mark Wendel  
Dave Corbin  
Roy Debritt  
Phil Templeton  
Stan Reddekopp  
Elinor Williams  
Toivo Andersen  
Bill Hammer  
Chuck Mason  
Forrest Hart  
Ted Sires  
Conrad Klippart  
Dick Kendall  
Clarence Moy  
Jim Guilmet  
David Templeton  
Jake Phillips  
John DeBoer  
John Claussen  
Fred Grant  
Allen Andersen  
Tony Guggenbickler  
Chuck Barker  
Ingvald Ask  
Art Theberge

TED MOSSBYRAG

JOE RIEDERER

Vessel

Bertha R.  
  
Lindy  
  
Haley Christine  
Suzie M  
Southern Miss  
Naired  
  
Shamrock  
Doric  
Coral  
Mermaid  
Seal  
Bavaria  
Swan  
Demijohn  
  
Sword  
Carol Ann  
Elinor  
  
Silver Lady  
Silver Tip  
Pacific Star  
Pacific Sun  
Armenta  
  
Queen Ester  
Lone Fisherman  
Admiral  
Nancy J  
Ingot  
Lightly  
  
Greta  
Toni Marie  
Martin  
Agile  
Deep Sea

LEA

FAIRWEATHER

SOUTHEAST ALASKA SALMON TROLL FISHERY PROPOSALS FOR 1982  
SEASON FOR JOINT CONSIDERATION BY ALASKA BOARD OF FISHERIES  
AND NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL (January 7, 1982)

- (1) Chinook salmon harvest guideline optimum yield range.  
Alaska Board of Fisheries proposals # 109 (staff), 111, 112  
NPFMC OY proposals # 2-8
- (2) Open area west of Cape Suckling to trolling.  
Alaska Board of Fisheries # 128  
NPFMC area proposal # 2
- (3) Treble hooks.  
Alaska Board of Fisheries proposal # 127  
NPFMC gear proposal # 7
- (4) Retention of tagged, undersized salmon.  
Alaska Board of Fisheries proposal # 130 (staff)  
NPFMC size limit proposal # 2
- (5) Number of lines.  
Alaska Board of Fisheries proposals # 120, 121, 122, 125  
NPFMC gear proposals # 2, 3, 4, 6
- (6) Definition of FCZ Management Unit.  
Alaska Board of Fisheries proposal # 133  
NPFMC area proposals # 3, 4



EXECUTIVE OFFICE OF THE PRESIDENT  
 OFFICE OF MANAGEMENT AND BUDGET  
 WASHINGTON, D.C. 20503

TW IAW

December 16, 1981

RECEIVED

OR

DEC 29 1981

by GCAK

DEC 22 11 09 AM '81

OFFICE OF THE  
 GENERAL COUNSEL

Mr. Sherman E. Unger  
 General Counsel  
 Department of Commerce  
 Washington, D.C. 20230

Dear Mr. Unger:

Pursuant to discussions between our respective staffs, I hereby exempt from Sections 3, 4, and 7 of Executive Order 12291 the following Fishery Management Plan (FMP) actions, provided that the actions are within the scope of the underlying FMPs and implementing regulations:

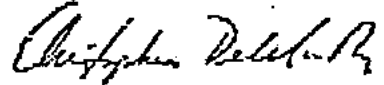
- Annual establishment and inseason adjustments of fishing season and time restrictions on fishing;
- Annual establishment and inseason adjustments to fishing quotas, including annual and quarterly quotas, TALFPs (Total Allowable Level of Foreign Fishing), reserves (that portion of the optimum yield reserved for inseason allocation if warranted by catch statistics), and Joint Venture Processing quotas;
- Annual establishment and inseason adjustment to catch restrictions, including trip or bag limits, incidental or prohibited-species allowances, catch size and weight limits, and catch restrictions based on sex of species;
- Annual and inseason opening, closing, and altering of fishing areas and subareas;
- Annual establishment and inseason adjustments of fishing gear limitations; limitations may include the type, construction, amount, in-use placement, and storage of fishing gear.

The publication of a management action in the Federal Register should include a statement giving the basis for the action under the applicable FMP and the need and justification for the action.

RECEIVED DEC 23 1981

The exemption does not apply to actions that are major regulations as defined in section 1(b) of Executive Order 12291. The exemption will be reviewed upon completion of the review of selected FMP's that was announced at the Vice President's Press Conference on March 25. In any event, the exemption will expire in one year.

Yours truly,



Christopher DeMuth  
Administrator for Information  
and Regulatory Affairs

JOHN SPELLMAN  
Governor



AGENDA E-1(c)  
January 1982

*mf*

ROLLAND A. SCHMITTEN  
Director

STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600  
October 2, 1981

Mr. Jim H. Branson  
Executive Director  
North Pacific Fishery  
Management Council  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Jim:

We have received your August 27 letter outlining NPFMC's intentions to adhere to the existing Salmon Plan amendment schedule. In light of this decision and the serious management problems identified in this fishery during the 1981 regulation development process, we wish to make general regulatory proposals which bracket the range of options that should be considered in 1982.

Further chinook O.Y. reductions are essential in response to serious conservation needs experienced by nearly every naturally spawning chinook stock harvested in the southeastern Alaska troll fishery. Additionally, the inequitable distribution of U.S. harvest on southern U.S. chinook stocks (e.g., Columbia River brights) must be addressed. O.Y. reductions above the 1981 levels which should be considered to solve these problems range up to 100 percent. This upper level would represent complete protection of many severely depressed chinook stocks. The minimum O.Y. level, which is necessary in 1982, cannot be quantified at this time, but we feel it is unlikely that this level should be below 30 percent. Season modifications to accomplish various O.Y. reductions should range from complete June to season-long closures.

The Washington Department of Fisheries will be refining its recommendations for management of the 1982 southeastern Alaska troll fishery during the next several months. As these results become available, we will be providing them to the NPFMC. We continue to emphasize that a more realistic 1982 management schedule is needed in response to court mandates and coded-wire tagging data processing time demands.

Sincerely,

*Rolland A. Schmitt*

Rolland A. Schmitt  
Director

RAS:ljf

cc: DiDonato  
Mobrand  
Lincoln  
Wilkerson

Table 1. A Comparison of Recovery Areas of Chinook Salmon Disc Tagged in Inner Icy Strait and Outside Coastal Areas.

<u>Recovery Area</u>	<u>Tagging Locations</u>		<u>Total</u>
	<u>Outer Areas</u> n (%)	<u>Inner Icy Strait</u> n (%)	
ALASKA:	<u>4 (28.6%)</u>	<u>25 (80.6%)</u>	<u>29 (64.4%)</u>
Milling (within 5 mi. of tagging location)	0 (00.0%)	6 (19.4%)	6
Inside waters of Alaska	0 (00.0%)	15 (48.3%)	15
Outside waters of Alaska	4 (28.6%)	0 (00.0%)	4
Alaskan Chinook systems	0 (00.0%)	4 (12.9%)	4*
NON-ALASKAN:	<u>10 (71.4%)</u>	<u>6 (19.4%)</u>	<u>16 (35.6%)</u>
A) British Columbia	7 (50.0%)	6 (19.4%)	13
B) Washington	2 (14.3%)	0 (00.0%)	2
C) Oregon	1 (07.1%)	0 (00.0%)	1
TOTAL	14/109 (12.8%)	31/656 (4.7%)	45/765 (5.8%)

\* 3 from Taku, 1 from Stikine River



W.D.F.  
Production  
Escapement

ANNUAL BENEFITS FROM ACHIEVING SPAWNING ESCAPEMENT GOALS  
(Number of Fish X 1,000)

Production Unit	Catch to Escapement Ratio Used	
	3:1	4:1
Southeast Alaska	129	172
British Columbia		
Northern	244	325
Southern	97	130
Georgia St.	231	308
Fraser River	255	340
Washington Coastal	35	46
Columbia River	282	376
Oregon Coast	escapement goals currently being developed	
Total	1,273	1,697

ACCOUNT LEDGER FOR BRIGHTS  
(preliminary)

	81	80	79	78	77	76	75	7
BDC	63	70	71	66	64	80	84	7
CATCH	10	9	27	25	24			
ESC	21	30	31	27	38			
DES	4	4	4	5	5			
CER	NA	.2	0	.4	.6			
%	44	39	13	12	<del>12</del>	0	17	9
UN	28	27	9	8	0	0	14	7

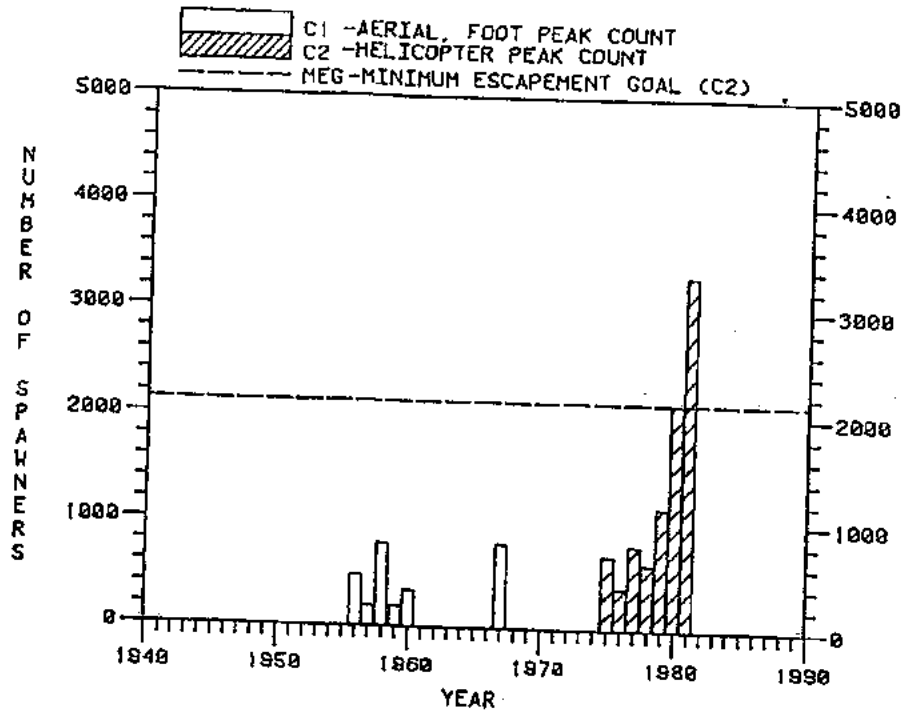


FIGURE 7. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE LITTLE TAHLTAN RIVER TRIBUTARY OF THE STIKINE RIVER, SOUTHEAST ALASKA 1958 TO 1981. (ADF&G 11/81)

(Note: Average contribution of Little Tahltan River tributary to total Stikine River chinook salmon production estimated to be approximately 25%.)

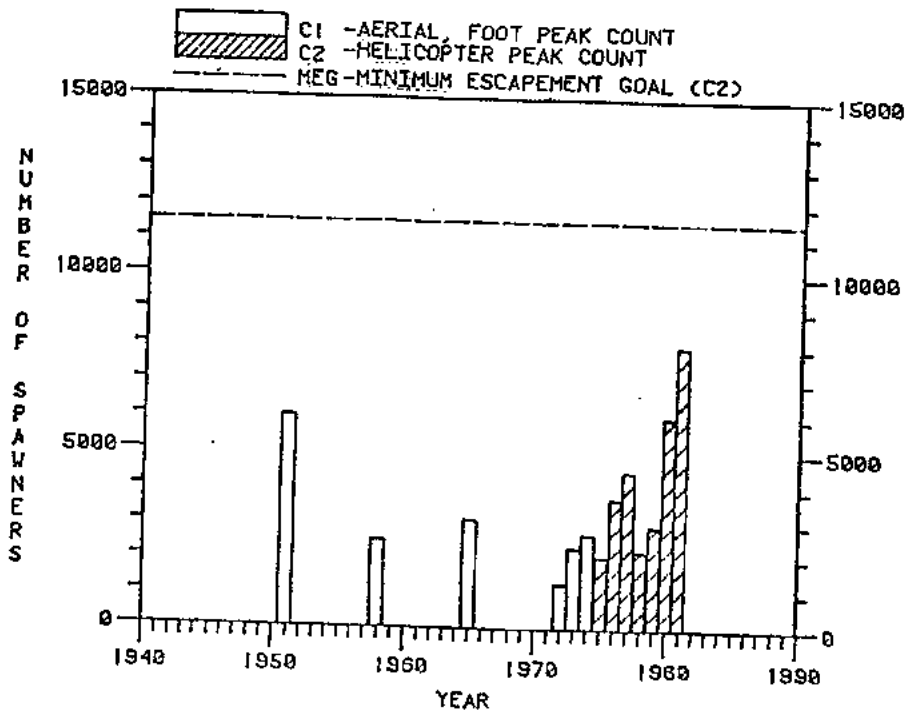


FIGURE 6. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE NAKIINA AND NAHLIN TRIBUTARIES OF THE TAKU RIVER, SOUTHEAST ALASKA 1951 TO 1981. (ADF&G 11/81)

(Note: Average contribution of Nakiina and Nahlin tributaries to total Taku River chinook salmon production estimated to be approximately 60%.)

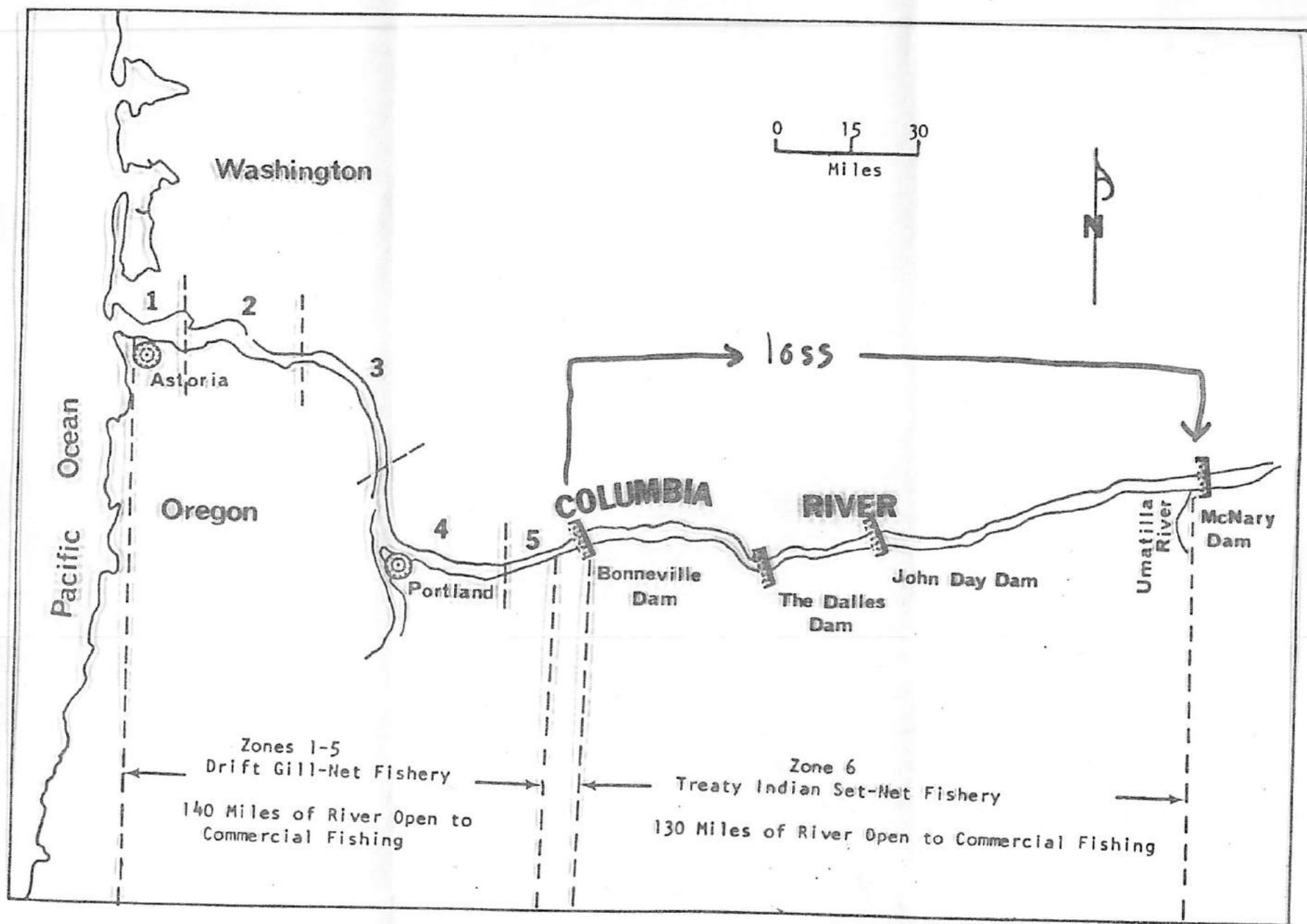


Figure 1. Map of the Columbia River below McNary Dam Showing Areas Open to Commercial Fishing

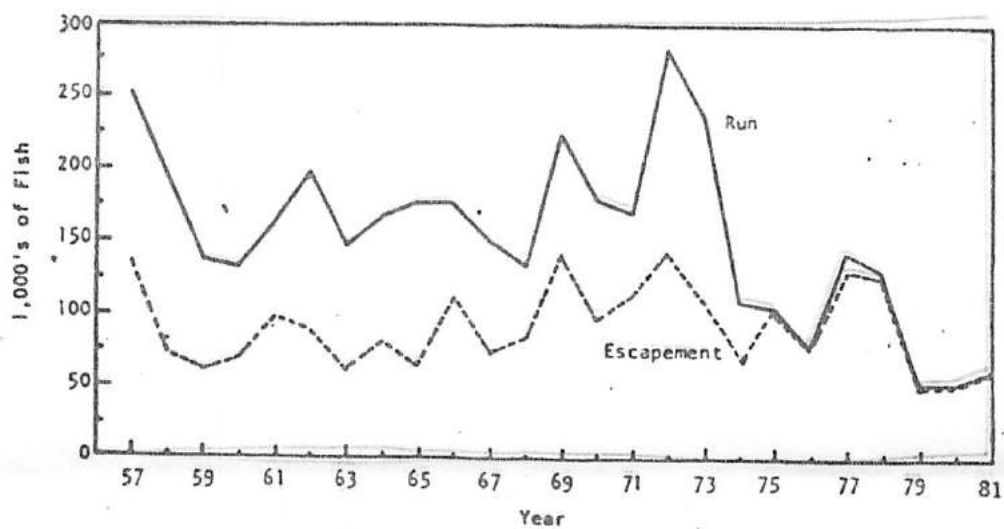


Figure 5. Estimated Numbers of Upriver Spring Chinook Entering the Columbia River, and Escapement Above Bonneville Dam, 1957-79

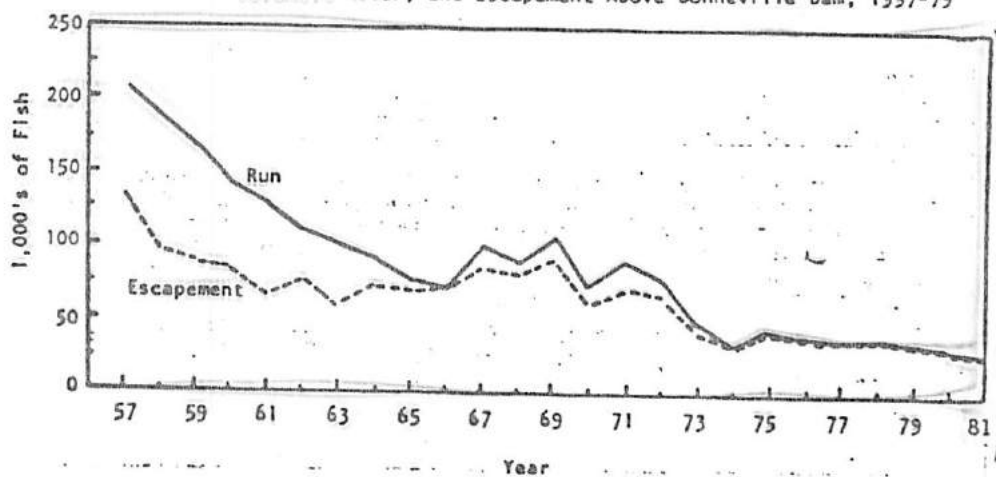
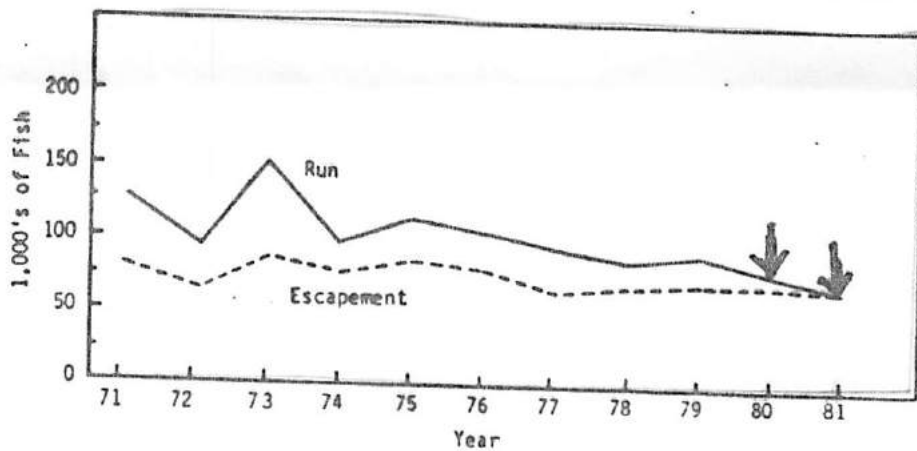


Figure 7. Estimated Numbers of Upper River Summer Chinook Entering the Columbia River and Escapement Above Bonneville Dam, 1957-79



Estimated Numbers of Upper River Wild Fall Chinook (Brights) Entering the Columbia River and Escapement Above Bonneville Dam

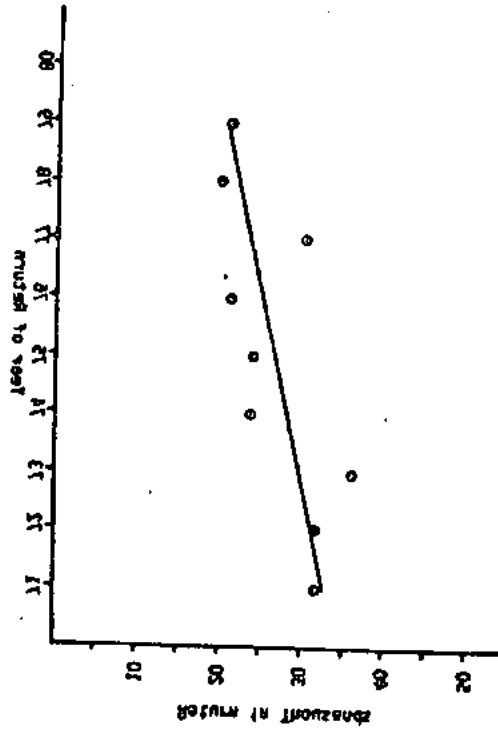
STOCK COMPOSITION OF THE IN-RIVER RUN OF COLUMBIA RIVER  
FALL CHINOOK

Stock	All Stocks	Percent of the Run	
		Lower river	Upper River
Lower River			
Wild	5%	12%	
Hatchery	39%	88%	
Upper River			
Wild <u>1/</u>	24%		43%
Hatchery	32%		57%

1/ Brights

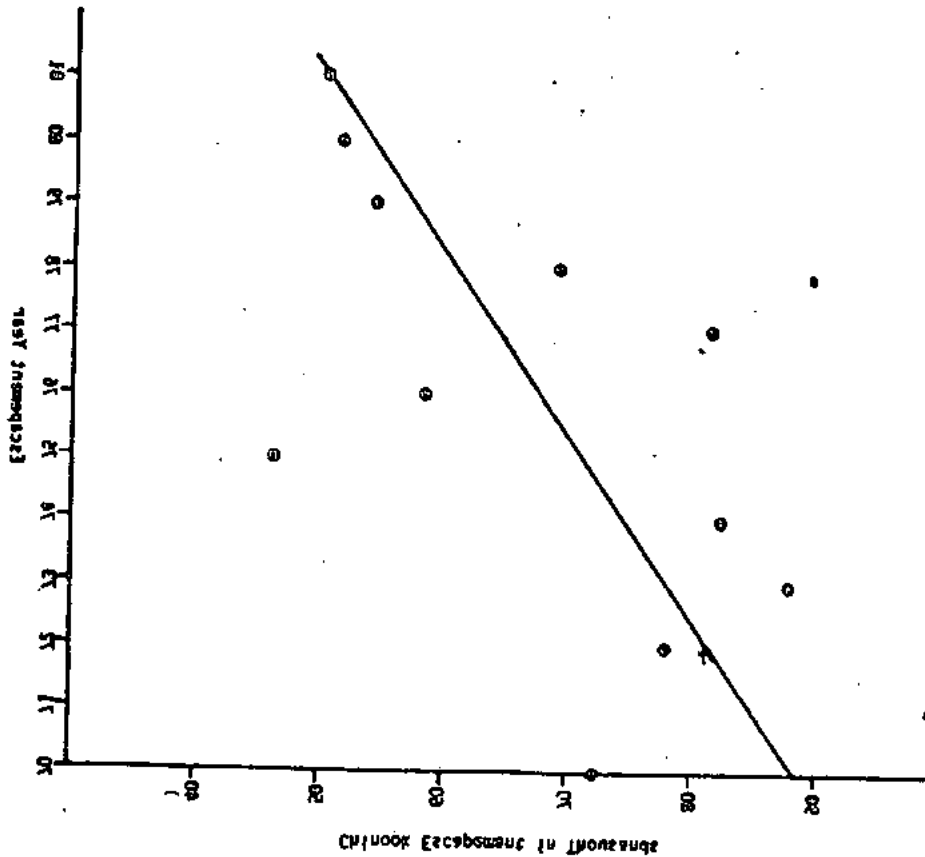
Одесса, Белозов, Коммунистический.

Рисунок 2. Число выходов на море в 1910-1920 гг. (Средние данные по годам).



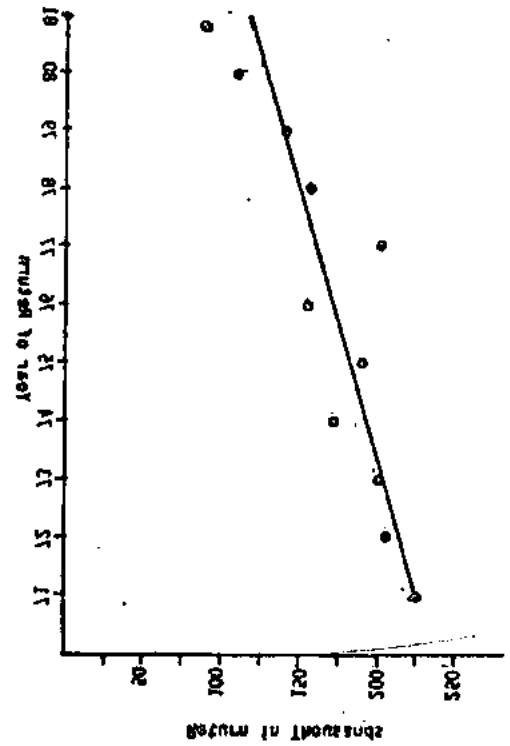
Одесса, Белозов, Коммунистический.

Рисунок 3. Число выходов на море в 1910-1920 гг. (Средние данные по годам).



Одесса, Белозов, Коммунистический.

Рисунок 4. Число выходов на море в 1910-1920 гг. (Средние данные по годам).



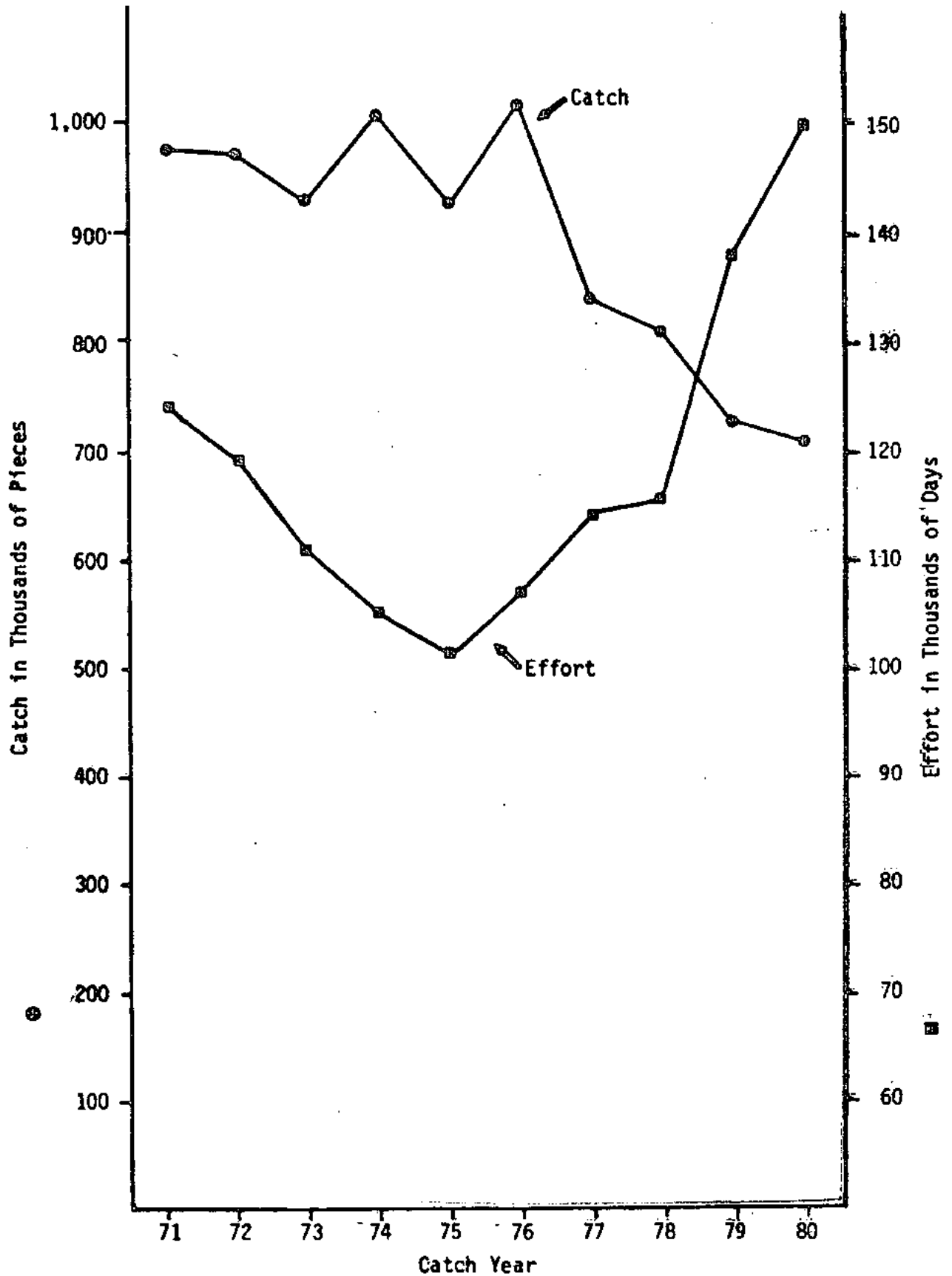
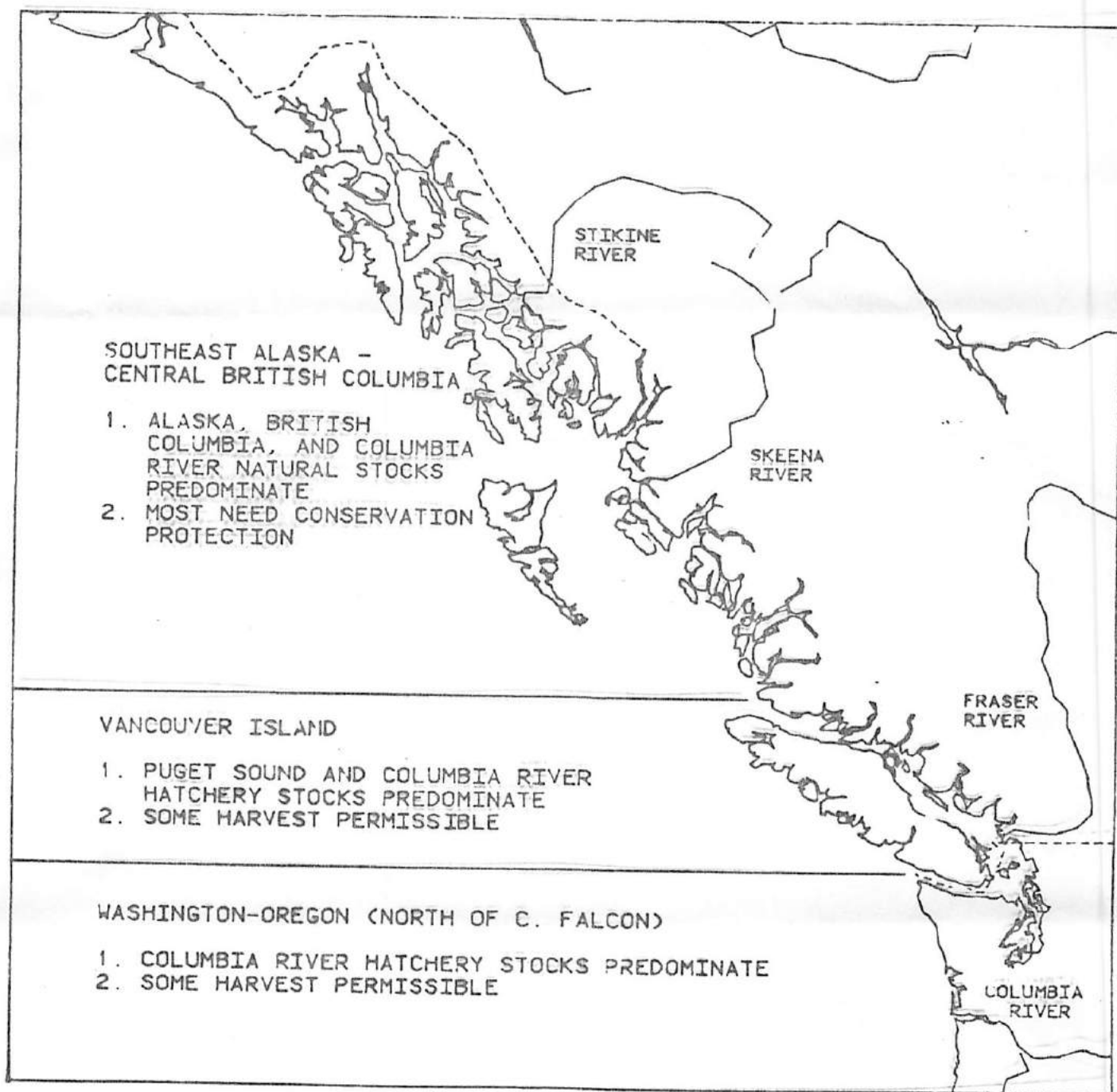


Figure 1. Catch of chingok salmon and fishing effort in ocean troll fishery. (Canadian data, Ken Pitre, Canada Department of Fisheries and Oceans, personal communication.)





GENERALIZED CHINOOK STOCK MANAGEMENT CONCERNS

COASTWIDE CHINOOK ESCAPEMENT GOAL ACHIEVEMENT

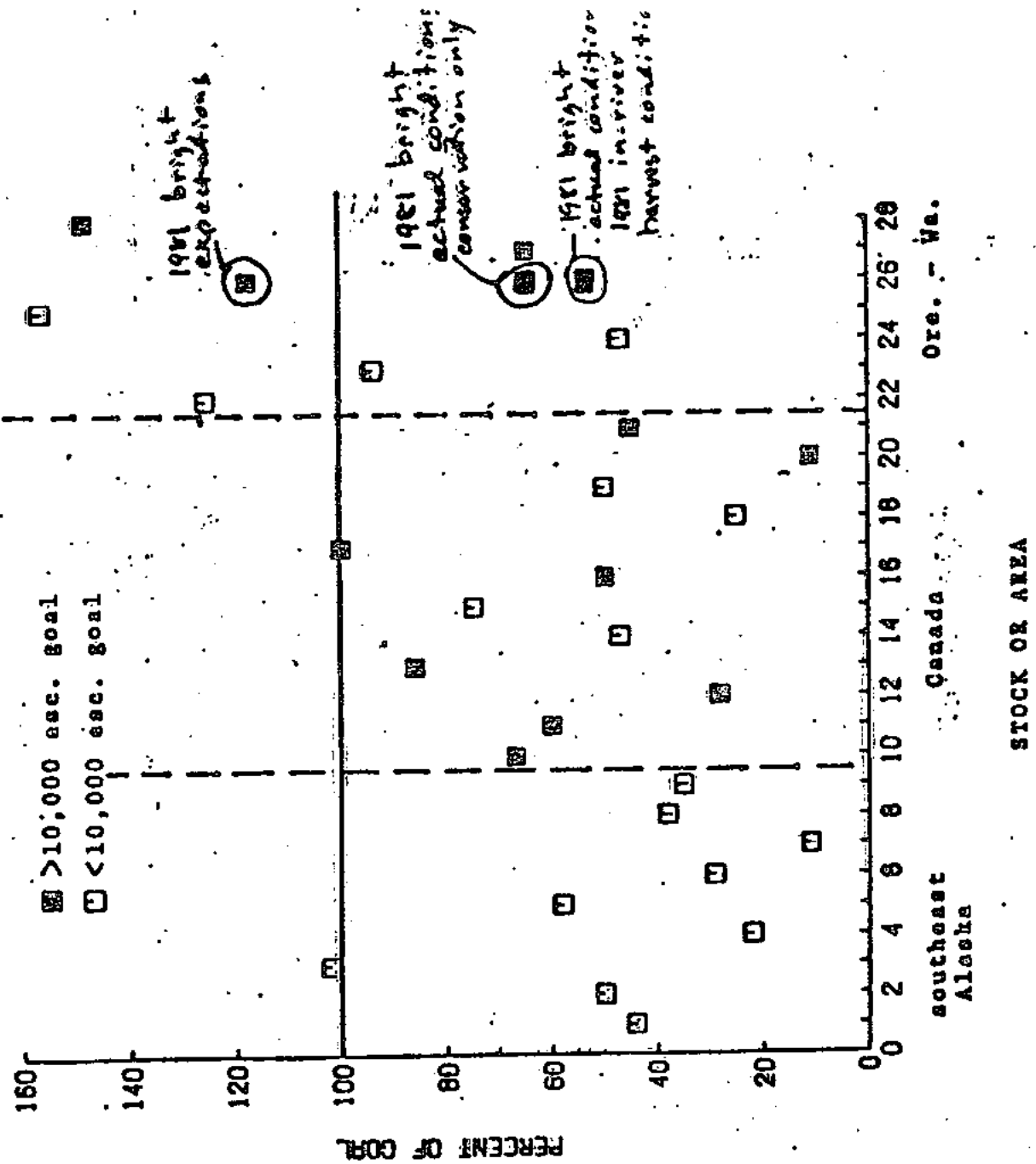
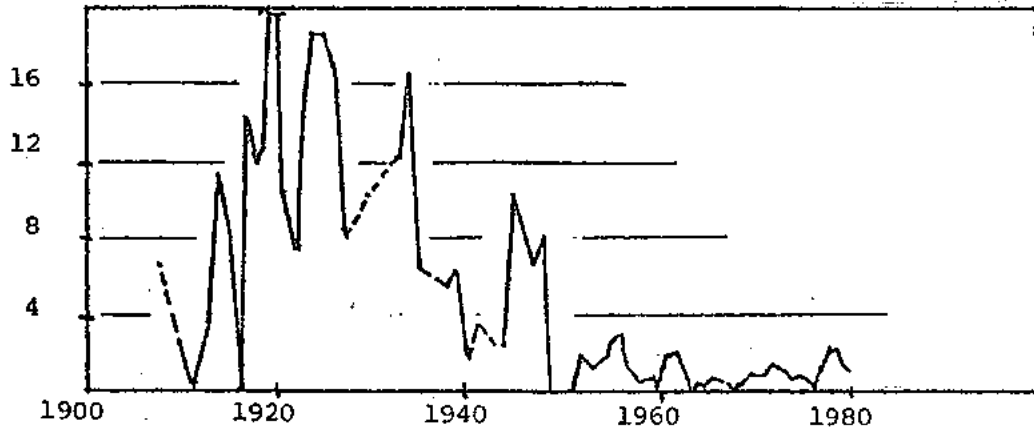


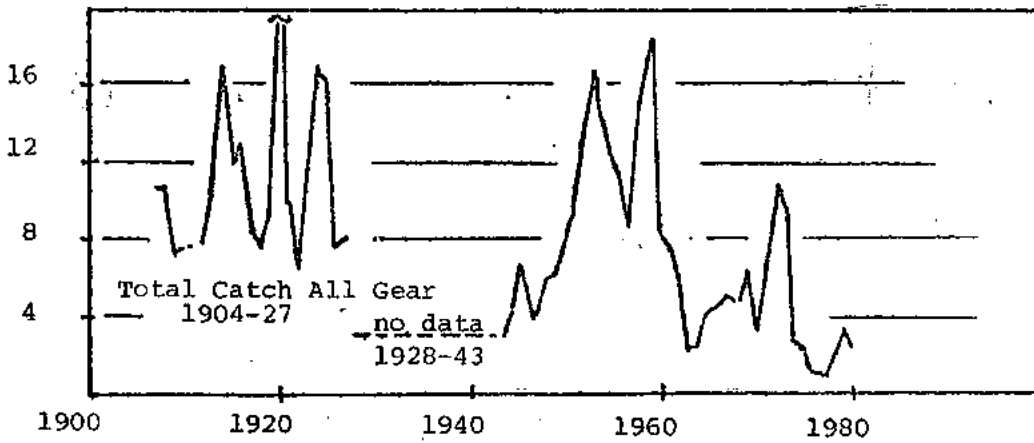
Figure 1. Run size in relation to escapement goals (Alaska=1980 observed, elsewhere = 1981 expectations).

CATCH IN THOUSANDS OF FISH

Alsek River Gillnet Harvest



Taku River Gillnet Harvest



Stikine River Gillnet Harvest

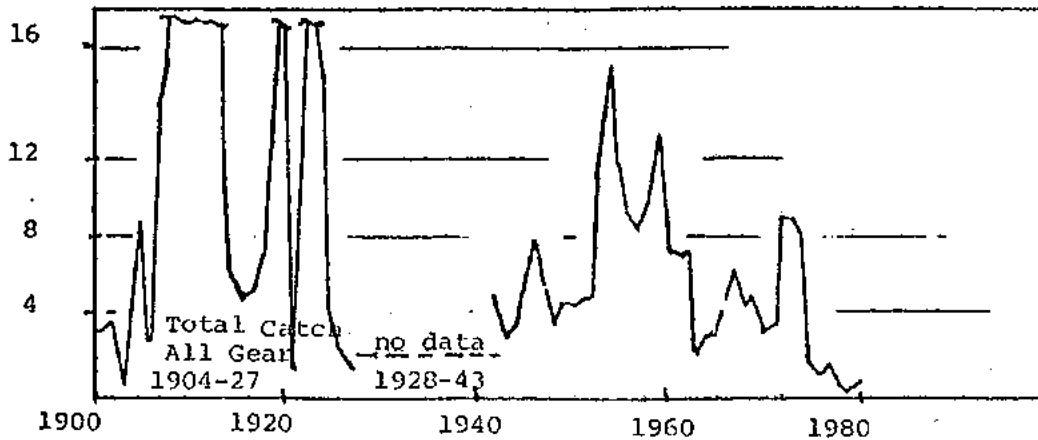


Figure 4. Historical Chinook Salmon Catches in Terminal Area Fisheries on the Alsek, Taku, and Stikine Rivers. (ADF&G 12/81)

MILLIONS OF KING

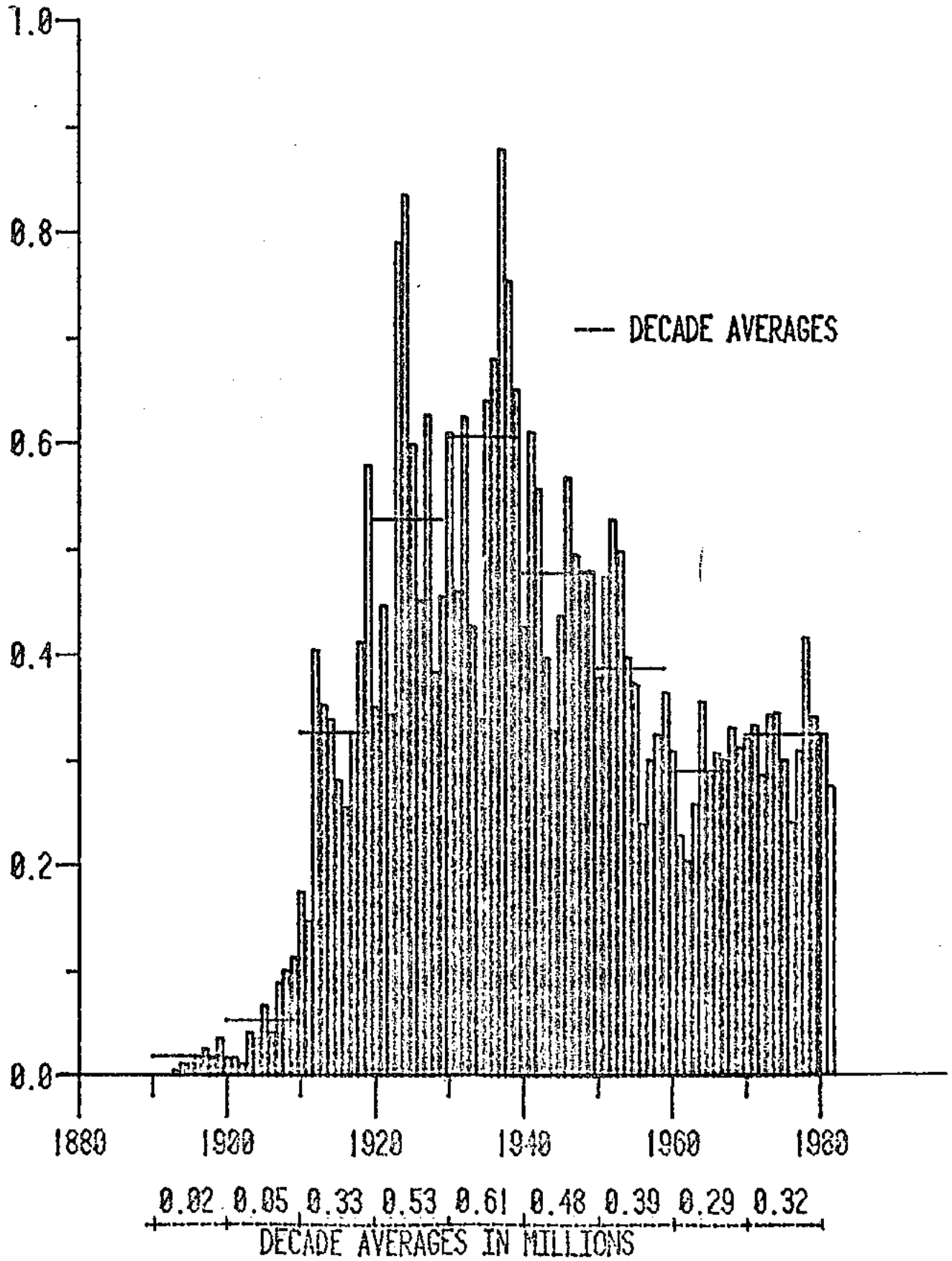
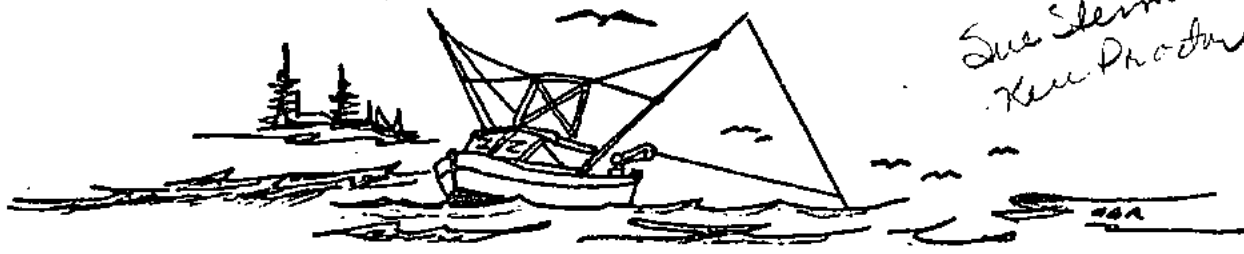


Figure 2. Southeast Alaska Region Annual Commercial Chinook Salmon Catches, 1893 to Present. (ADG&G 12/81)



*Sue Slemm  
Ken Proctor*

FROM: SITKA HANDROLLERS ASSOCIATION

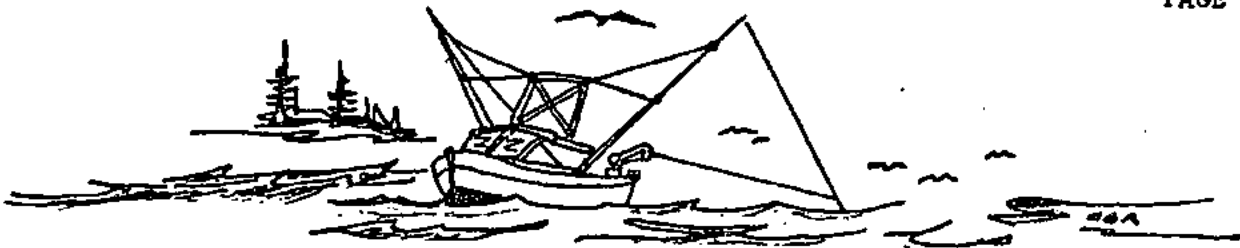
TO: STATE OF ALASKA BOARD OF FISH

ABSTRACT: The purpose of this document is to communicate to the Alaska Board of Fish the position and comments of the Sitka Handtrollers Association on the proposed regulation changes now under consideration by the Alaska Board of Fish. The format of this document will be the listing of the proposal number, the page it is found on in the proposal book and the position taken by the Sitka Handtrollers Association.

PROPOSAL # 147 PAGE # 52 5 AAC 30.310. FISHING SEASONS: The proposed regulation reads as follows: (b) Salmon may be taken by troll gear seven days a week with the following exceptions: (3) king salmon may be taken only from May 1 (15) through September 20, except that there is no closed season for the taking of king salmon in those waters of Yakutat Bay east of a line from the easternmost tip of Ocean Cape to the southernmost tip of Point Manby. POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The preservation of Alaskan natural stocks must be a dominant feature in any closure. The Sitka Handtrollers Association is of the position that the troll fishery should be opened simultaneously in all areas.

PROPOSAL # 103 PAGE # 61 5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows: (1) coho salmon may be taken only from July 10 (June 15) through September 20. POSITION: The Sitka Handtrollers Association approves of this proposal. Coho Salmon taken later in the fishing season are a larger more valuable salmon. As the coho salmon are in closer fishery managers can more accurately determine the strength of the coho run and act accordingly.

PROPOSAL # 102 PAGE # 61 5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 1 (20) (summer season) except as provided in 5 AAC 33.350 and as follows. POSITION: The Sitka Handtrollers Association is in opposition to this section of this proposal as it does not give fishery managers the ability to judge late runs strengths. A later opening date is of more value to the coho run than an earlier closing date.



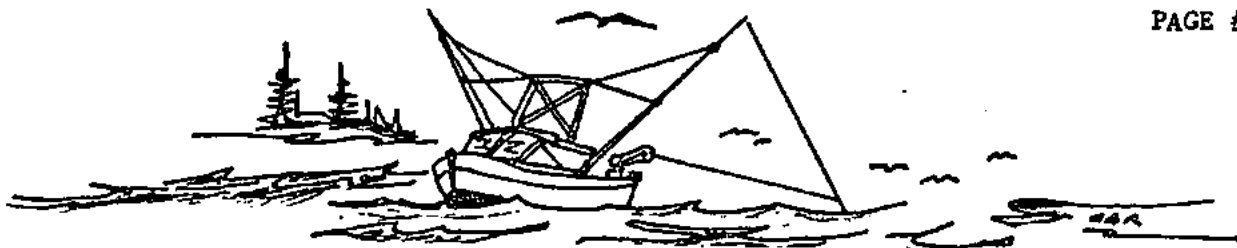
PROPOSAL # 104      PAGE # 62      5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS: (b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 1 (15) through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows: (2) in district 16 and those waters west and south of the surf line, king salmon may be taken only from May 1 (15) through September 20; (12) from May 1 (15) through September 20 salmon may be taken in the following locations only during the periods set forth in (D) of this paragraph. POSITION: The Sitka Handtrollers Association is in opposition to this proposal. IF the preservation and rebuilding of Alaskan natural salmon stocks require closures, so be it. Our comments on proposal #147 also apply to this proposal.

PROPOSAL # 109      PAGE # 65      5 AAC 33.365 (b) (1) - (3) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. POSITION: The Sitka Handtrollers Association approves of this lengthy Staff proposal.

PROPOSAL # 110      PAGE # 66      5 AAC 33.365 (a) and (b) (3)- (7) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. 5 AAC 39.270 (a) (5) (new subsection) POSITION: The Sitka Handtrollers Association is in opposition to this very lengthy proposal, as shown in the proposal book. This proposal is not the historical nature of the fishery. It is an unnecessary burden on the handtroll fishery and causes more problems than it solves.

PROPOSAL # 111      PAGE # 68      5 AAC 33.365 SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. POSITION: The Sitka Handtrollers Association approves of option #4 of this proposal as we percieve it to be identical with the Staff proposal #109.

PROPOSAL # 112      PAGE # 71      5 AAC 33.365 SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The Sitka Handtrollers Association is of the position that because of the high mobility of the troll fleet that any thing other than a simultaneous opening of all areas would not be in the best interest of Coho runs. Mass gathering in the open ereas would create a fishery managers nightmare.

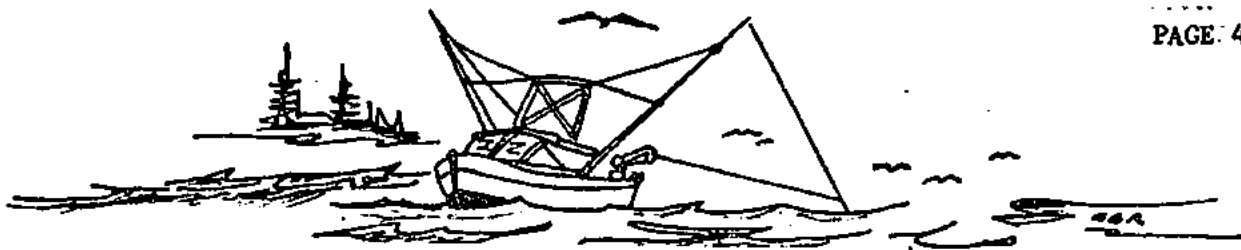


PROPOSAL # 113      PAGE # 71      5 AAC 33.365 (b) (3) and (5)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The Sitka Handtrollers Association is of the position that the fishery managers need the ability to manage the salmon resource in the most expeditious manner possible.

PROPOSAL # 114      PAGE # 72      5 AAC 33.365 (b) (8) (new subsection)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      (b) (8) It is the policy of the Board of Fisheries to regulate the troll fishery in a manner that will result in 89%-91% of the troll caught chinook salmon being taken by power troll gear and 9%-11% by hand troll gear; The Department shall evaluate the power and hand troll chinook salmon catches throughout the season and impose time and area closures as required to achieve this goal.      POSITION: The Sitka Handtrollers Association is in violent opposition to this proposal for the very same reasons that we appose the 80-20 Coho allocation management scheme and the execrable method of its implementation upon the handtroll fishery. The Sitka Handtroll Association is and will be opposed to any prejudice of a common property resource and is aggresively pursuing judicial relief from this blatant discriminatory regulation.

PROPOSAL # 115      PAGE # 72      5 AAC 33.365 (b) (8) (new subsection)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      (b) (8) a minimum of 15% and a maximum of 30% of the chinook salmon guideline harvest level will be allocated to the winter troll fishery.      POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The proposal is not a realistic proposal as there is no allocation on the winter troll fishery. What are they going to do if the winter allocation isn't met? Add it to next winter allocation?

PROPOSAL # 116      PAGE # 73      5 AAC 33.365 (b) (8) (new subsection)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      POSITION: The Sitka Handtrollers Association is in opposition with this proposal. As the proposal is basically identical with proposal # 114 our comments are the same as those on proposal # 114.



PROPOSAL # 117 PAGE # 73 5 AAC 33.365 (b)(8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON FISHERIES MANAGEMENT PLAN. (b) (8) chinook and coho taken in authorized salmon derbies will not be counted as commercial harvest. POSITION: The Sitka Handtrollers Association approves of this proposal. The Sitka Handtrollers Association would bring to your attention that derby caught fish are not commercially caught salmon. Special permits for derbies should be issued and the king salmon turned in should not be counted on the king salmon O.Y.

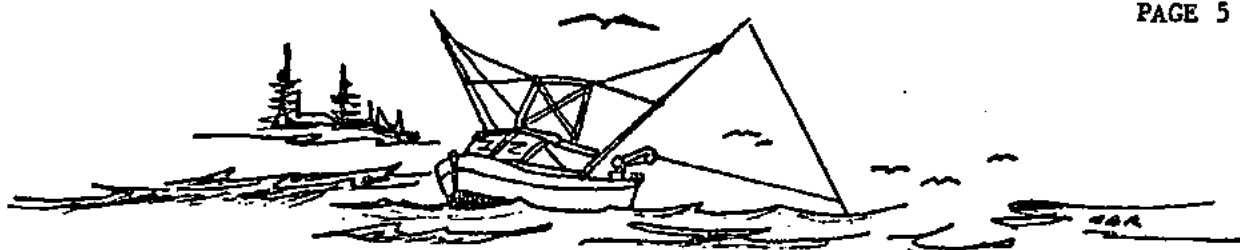
PROPOSAL # 118 PAGE # 73 5 AAC 33.365 (b) (8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. (b) (8) It is a policy of the Board of Fisheries to prevent the net fisheries from targeting on coho salmon during troll coho closures; the department will issue orders adjusting the time and areas of net fishing together with its announcements of troll closures. POSITION: The Sitka Handtrollers Association is in opposition to this proposal.

PROPOSAL # 119 PAGE # 74 5 AAC 33.365 (b)(8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON FISHERIES MANAGEMENT PLAN. (b)(8) the department shall conduct a troll test fishery during coho salmon troll closures that will allow a tagging and sampling effort to start to accrue data on transit pathways and stock strengths and origin. POSITION: The Sitka Handtrollers Association approves of this proposal. The hard data generated by this test fishery would benefit fishery managers and fishermen equally.

PROPOSAL # 120 PAGE # 74 5 AAC 39.240(f)(new subsection) GENERAL GEAR SPECIFICATIONS AND OPERATION. (f) This section does not apply to troll gear. POSITION: The Sitka Handtrollers Association approves of this proposal. This regulation has been an unnecessary burden on the handtroll fishery. This proposal is justified so long as the extra gear (gurdies) is not mounted.

PROPOSAL # 121 PAGE # 75 5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION (a) the maximum number of trolling lines that may be operated from any salmon troll vessel is as follows: (1) from power troll vessels: four lines POSITION: The Sitka Handtrollers Association approves of this proposal and is in agreement with the justification presented with the proposal.



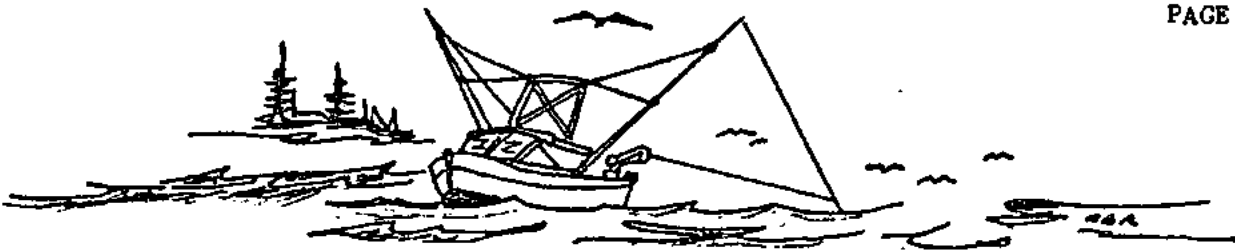


PROPOSAL # 122 PAGE # 75 5 AAC 39.270 (a) (3) TROLL SPECIFICATIONS AND OPERATION. (a) The maximum number of trolling lines that may be operated from any salmon troll vessel is as follows. (3) A total of four lines consisting of up to 4 hand troll gurdies or 4 fishing rods or in combination (AN AGGREGATE OF FOUR FISHING RODS OR AN AGGREGATE OF TWO HAND TROLL GURDIES) may be operated from a hand troll vessel. (e) No more than six troll gurdies may be mounted on board any salmon power troll vessel. No more than four (TWO) troll gurdies and (OR) four fishing rods may be on board any salmon hand troll vessel. A troll gurdy is a spool type device around which a troll line can be wrapped and includes devices commonly called "down riggers". POSITION: The Sitka Handtrollers Association is in opposition to this proposal.

PROPOSAL # 123 PAGE # 76 5 AAC 39.270 (b) TROLL SPECIFICATION AND OPERATION. (b) A trolling vessel may have, or use for taking bait, a fishing rod equipped exclusively for taking bait, and/or a gill net of a mesh not more than 2½ inches and made of not greater than number 20 gill net thread. POSITION: The Sitka Handtrollers Association approves of option one of this proposal.

PROPOSAL # 124 PAGE # 76 5 AAC 39.270 (d) TROLL SPECIFICATIONS AND OPERATION. (d) Each registered hand troll vessel must display the letters HT in permanent block letters. Each letter must be painted on both sides of the vessel hull or cabin in a color contrasting with the background, at least eight (FOUR) inches in height, at least one half inch in width, plainly visible and unobscured at all times until the end of the calendar year. No hand troll vessel may display its permanent vessel plate number (ADF&G number) in any location other than on the vessel license plate. POSITION: The Sitka Handtrollers Association approves of this proposal and agrees with the justification presented with the proposal.

PROPOSAL # 126 PAGE # 77 5 AAC 39.270(f) TROLL SPECIFICATIONS AND OPERATION. (f) A (NO) salmon power troll vessel may be used to take salmon with hand troll gear once that vessels has been licensed and marked as required in (c) of this subsection, provided such salmon are sold on the power troll permit. The Sitka Handtrollers Association is in opposition to this proposal.



PROPOSAL # 127 PAGE # 78 5 AAC 39.270 TROLL SPECIFICATIONS AND OPERATION  
 (g) Repealed 4/ /82 POSITION: The Sitka Handtrollers Association approves of this  
 proposal and agrees with the justification presented with the proposal.

PROPOSAL # 130 PAGE # 79 5 AAC 30.392 and 33.392 SIZE LIMIT AND LANDING OF  
 KING SALMON. POSITION: The Sita Handtrollers Association approves of this proposal  
 and agrees with the justification presented with the proposal. What can be done  
 with the carcasses of the undersized king salmon needs more clarification.

PROPOSAL # 131 PAGE # 80 5 AAC 30.120 (g)(1), (2), (3), (4) and (5).  
 REGISTRATION OF COMMERCIAL FISHING VESSELS. (g) Repealed 4/ /82. POSITION: The  
 Sitka Handtrollers Association approves of this proposal and is in agreement with  
 the justification presented with the proposal.

PROPOSAL # 132 PAGE # 81 5 AAC 39.120 (g) (2) REGISTRATION OF COMMERCIAL  
 FISHING VESSELS. (g) Registration requirements for salmon troll vessels are as  
 follows: (2) repealed 4/ /82. POSITION: The Sitka Handtrollers Association is  
 in opposition to this proposal.

PROPOSAL # 135 PAGE # 82 5 AAC48.090(1) SPORT FISHING FROM A COMMERCIAL  
 SALMON TROLL VESSEL. (1) No person may sport fish from a salmon hand troll or  
 power troll vessel in areas closed to commercial trolling, as those vessels are  
 identified by the marking requirements of 5 AAC 39.270 (c) and (d), in any area  
 except that this prohibition does not apply to "authorized derbies." POSITION: The  
 Sitka Handtrollers Association approves of this proposal and agrees with the  
 justification presented with the proposal.

PROPOSAL # 136 PAGE # 82 5 AAC39.381(c) (new subsection) Gear for Halibut.  
 (c) Commercial trolling vessels may take up to 15% of total catch (by weight) of  
 legal sized halibut during the open troll season. Option Two; (c) Commercial  
 trolling vessels may take two legal sized halibut per boat per day during the open  
 troll season. POSITION: The Sitka Handtrollers Association is in opposition to  
 this proposal.

Richard  
Lundahl

1-6-82

REGULATION PROPOSALS TO  
*BOARD OF FISHERIES*  
THE ALASKA ~~DEPARTMENT OF FISH AND GAME~~

FROM

PELICAN ADF&G ADVISORY COMMITTEE

RICHARD W. LUNDAHL, CHAIRMAN

Sept. 1981

## CONTENTS

1. Statewide Troll
2. Hand Troll-Power Troll Allocations
3. Treble Hooks
4. Seine Boundary Line in Lisianski Inlet.....request for emergency order  
for this coming year
5. Yakutat Troll-Gillnet Equal Fishing Hours
6. Extension of Proposal Deadline for Advisory Committees

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing x

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

5AAC 39.171 (New Section) Regulation book page no. 168  
(Alaska Administrative Code No.)

Purpose of proposal Open all state waters to trolling.

Suggested wording of Proposed Regulation (append if lengthy): TROLL GEAR LEGAL IN ALL AREAS. Troll gear may be used in all areas of the state.

- Justification:
1. Troll caught fish are a quality product having a greater dollar value.
  2. The troll fishery uses a large and extensive network of support and supply businesses.
  3. The Alaska ~~permits~~ troll permits <sup>are</sup> issued as statewide permits.
  4. Gives the fishing industry an option of diversifying in the event of poor cycle years thus alleviating heavy pressure on specific stocks.
  5. Areas of maximum utilization of the resource could still be protected by area/time closures as is done in Southeast. (cont. on back) (over)

SUBMITTED BY: Pelican ADF&G Advisory Committee  
(Name & Address)

Richard W. Lundahl, Chairman

Box 793

PELICAN, ALASKA 99832

REPRESENTING:

PELICAN

PHONE NO. \_\_\_\_\_

Many Alaskans living westward would utilize power troll permits to augment their present fishing incomes.

The percentage of Alaskans (as compared to non-residents) owning and fishing Alaska power troll permits would probably increase.

Improve locale economics of Westward communities. The reopening of the westward waters to statewide power trolling would:

- (a) increase the income and profits of the following local groups:
  - (1) the local fisherman;
  - (2) the processing plants and their employers; and
  - (3) the various support businesses and their employees. *ALASKAN*
- (b) increase economic incentive for processors to invest in Westward plants. *1*

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing x

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

5AAC 33.365 (6)(b)

(Alaska Administrative Code No.)

Regulation book page no. 155

Purpose of proposal Addition to Southeast Alaska-Yakutat Chinook and Coho Salmon Troll fisheries management plan. (Chinook split between hand/power trollers)

Suggested wording of Proposed Regulation (append if lengthy): (6) (b) recognizing that the hand troll fleet retains a large potential for expansion in efficiency the Board established a policy to regulate the troll fishery in a manner that will result in 90% of the troll caught chinook salmon being taken by power troll gear and 10% by hand troll gear. ~~Season adjustments of regulations to achieve this goal will not be made!~~

Justification: There is a great potential for expansion in efficiency of the hand troll fleet.

Pelican ADF&G Advisory Committee  
SUBMITTED BY: Richard W. Lundahl, Chairman  
(Name & Address) Box 793  
Pelican, Alaska 99832

REPRESENTING:  
Pelican

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_  
Sport Fishing \_\_\_\_\_  
Commercial Fishing   x  

Subsistence \_\_\_\_\_  
Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

5AAC 39.270 (g) Regulation book page no. 174  
(Alaska Administrative Code No.)

Purpose of proposal Reinstate the use of treble hooks in the commercial troll fisheries.

Suggested wording of Proposed Regulation (append if lengthy):  
5AAC 39.270 (g) is repealed.

Justification: The Alaska Dept. of Fish and Game and the Alaska Trollers Association has researched this matter through test fisheries and found that the mortality of shakers due to treble hooks is less than single hooks.

SUBMITTED BY: Pelican ADF&G Advisory Committee  
(Name & Address) Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

REPRESENTING:  
Pelican



We realize that Southeast Seining proposals do not come up at this years Fall meeting; however, we request that this be handled by emergency order until such time.

Area(s) affected: Lisianski Inlet in District 113  
5AAC 33.350 (n)(1) Regulation book page no. 151  
(Alaska Administrative Code No.)

Purpose of proposal To move the north seine boundary line (Soapstone-Column Point) to Ewe Ledge-Dace Rock.

Suggested wording of Proposed Regulation (append if lengthy):  
(1) Lisianski inlet; north of a line from 58° 05' 21" N. lat., 136° 27' 23" W. long.; to 58° 05' 30" N. lat., 136° 26' 00" W. long. and south of a line from 57° 56' 46" N. lat., 136° 14' 10" W. long.; to 57° 57' 15" N. lat., 136° 12' 53" W. long., except by trolling.

- Justification: 1. Soapstone-Column point is traditionally a troll area for Chinook and Coho salmon.  
2. This area is essentially closed to trollers during Seine openings due to severe gear conflicts.  
3. Seiners operating in this area harvest an inordinant amount of Chinook and Coho salmon during pink openings.

Pelican ADF&G Advisory Committee  
SUBMITTED BY: Richard W. Lundahl, Chairman REPRESENTING:  
(Name & Address) Box 793  
Pelican, Alaska 99832 Pelican

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game \_\_\_\_\_

Sport Fishing \_\_\_\_\_

Commercial Fishing   x  

Subsistence \_\_\_\_\_

Advisory Committees \_\_\_\_\_

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Yakutat--Dangerous River to Sitagi Bluffs

30.310 (b)(1)

129

5AAC

(Alaska Administrative Code No.)

Regulation book page no.

Purpose of proposal To allow trollers equal fishing time.

Suggested wording of Proposed Regulation (append if lengthy):

(1) in (THE) those waters east of a line from the terminus of the Dangerous River

(59° 20' 50" N. lat., 139° 18' 30" W. long.) to 59° 20' 50" N. lat., 139° 24' 30" W.

long. to Sitagi Bluffs (59° 42' 30" N. lat., 140° 40' W. long.) during the period

from August 1 through September 20, the total of weekly fishing hours (PERIODS) for

trolling are the same as for gill netting in the Situk River.

Justification: 1. This is a traditional trolling area.

2. The existing regulations are unfairly discriminatory against trollers.

3. Trollers fish day light hours only while gill netters fish around the clock.

SUBMITTED BY: Pelican ADF&G Advisory Committee  
(Name & Address) Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

REPRESENTING:

Pelican

PHONE NO. \_\_\_\_\_

REGULATION PROPOSAL FORM  
Alaska Department of Fish and Game

Proposal Concerns

Game	<u>  x  </u>	Subsistence	<u>  x  </u>
Sport Fishing	<u>  x  </u>	Advisory Committees	<u>  x  </u>
Commercial Fishing	<u>  x  </u>		

\* \* \* SEE OTHER SIDE FOR INSTRUCTIONS ON COMPLETING THIS FORM \* \* \*

Area(s) affected: Statewide

SAAC New Section Regulation book page no. \_\_\_\_\_  
(Alaska Administrative Code No.)

Purpose of proposal Extension of proposal deadline.

Suggested wording of Proposed Regulation (append if lengthy): The mid September deadline for proposals to the Boards of Fish and Game for their fall meeting is hereby changed to October 1 for advisory committees.

Justification: It is extremely difficult for advisory committees to meet, establish quorums, listen to public comment, act on and submit proposals by the present deadline as most Southeast Alaska fishermen are actively fishing until at least Sept. 20 and with the current reduced seasons and closures few members can afford the loss of fishing time.

Pelican ADF&G Advisory Committee  
SUBMITTED BY: Richard W. Lundahl, Chairman REPRESENTING: \_\_\_\_\_  
(Name & Address) Box 793  
Pelican, Alaska 99832 Pelican

REQUESTS FOR RESOLUTIONS, POLICIES, AND MANAGERIAL DIRECTIVES TO

*Board of Fisheries*  
THE ALASKA DEPARTMENT OF FISH AND GAME

FROM

PELICAN ADF&G ADVISORY COMMITTEE

RICHARD W. LUNDAHL, CHAIRMAN

*Sept. 1981*

## CONTENTS

1. Curtailment of Foreign Nets
2. All Alaskan N.P.F.M.C.
3. Reinstatement of Incidental Troll Halibut Catch
4. Marine Mammal Predators
5. Shark Predators
6. Washington and Treaty Indian Demands
7. Foreign Marketing Gap
8. Salmon Optimum Yield
9. Adoption of and Review of Regulations and Policies
10. Chinook and Coho Hatcheries

RESOLUTION REQUEST

RELATING TO THE CURTAILMENT OF FOREIGN NETS

RESOLUTION: Curtail foreign gillnet and trawl fisheries in the Gulf of Alaska.

JUSTIFICATION: A tremendous number of net marked and injured Chinook and Coho salmon caught by trollers make evident that these species are targets for the foreign net fisheries.

Statistics show a significant number of halibut are taken by foreign trawl gear.

Documented testimony reveals there are miles of nets being used by foreign fleets.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, *Chairman*  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO ALL ALASKAN N.P.F.M.C.

WHEREAS, the F.C.M.A. seats many non-Alaskans on the N.P.F.M.C.; and

WHEREAS, the dollar value of Chinooks and Cohos that migrate from the waters of the N.P.F.M.C. to the waters of the P.F.M.C. is insignificant when compared to the dollar value of the King Crab, Tanner Crab, Black Cod, Halibut, ocean perch, pollock, hake, sockeyes, chums, pinks, cohos, chinooks, and etc. that do not migrate from the waters of the N.P.F.M.C. to the waters of the P.F.M.C.; and

WHEREAS there are already adequate provisions for coordination and cooperation between the N.P.F.M.C. and the P.F.M.C.;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries hereby requests that the Congress of the United States amend the F.C.M.A. to state that all voting members of the N.P.F.M.C. be Alaskan residents; and

BE IT FURTHER RESOLVED, that the vast majority of scientific and statistical committee and the advisory panel members also be Alaskan residents.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican Alaska 99832

RESOLUTION REQUEST

RELATING TO REINSTATEMENT OF INCIDENTAL TROLL  
HALIBUT CATCH (request for resolution to International  
Pacific Halibut Commission)

RESOLUTION: The traditional and historic incidental halibut harvest be  
reinstated to the troll fishery.

JUSTIFICATION: In the past the halibut season ran for most of the troll season.  
During that time the trollers were allowed to harvest a traditional  
incidental catch. Since the halibut fishery has become subjected  
to shorter and shorter openings the troll fishery has lost its  
ability to harvest an incidental catch.

We are requesting that the halibut incidental catch by the  
trollers be determined and that this percentage be allocated  
to the troll fleet. This would alleviate the problem that  
the troll fleet is experiencing in shaking the halibut during  
the troll season.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832



RESOLUTION REQUEST

RELATING TO MARINE MAMMAL PREDATORS

WHEREAS, the production of high quality protein is a critical concern to all peoples and nations of the world; and

WHEREAS, fish from the high seas is a source of this protein; and

WHEREAS, marine mammals in the Bering Sea harvest 2 pounds of salmon for every pound harvested by man; and

WHEREAS, the Marine Mammal Protection Act of 1972 protects these mammals to the detriment of these high protein fish stocks;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries hereby requests that the Congress of the United States returns control of these marine mammals to the State of Alaska and encourages the reduction of the population of these mammals to within reasonable limits.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO SHARK PREDATORS

WHEREAS, the population of marine mammal predators in the Gulf of Alaska is augmented by a large population of sharks; and

WHEREAS, this population of sharks is known to take a large percentage of salmon and other fishes while in the high seas; and

WHEREAS, the salmon troller is the only American salmon fishery actively competing with these predators on the high seas; and

WHEREAS, the Alaskan troll fleet does at times caught significant numbers of these sharks while engaged in salmon trolling;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries recognizes the value of having the Alaskan salmon troller on the high seas competing with these predators; and

BE IT FURTHER RESOLVED, that the Alaska Board of Fisheries does hereby request the appropriate government and private agencies to search for and develop markets for sharks, shark meat, and shark liver oils.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO WASHINGTON AND TREATY INDIAN DEMANDS

WHEREAS, dams and logging practices on the Columbia River and other areas are killing extreme numbers of fingerlings and ruining habitat; and

WHEREAS, foreign net fisheries and Canadian fishermen are taking large numbers of mature and immature Chinook salmon; and

WHEREAS, the Alaska troll fishery has taken the brunt of restrictive regulations in the recent past; and

WHEREAS, the Alaska troll fishery has the least impact on these stocks;

NOW, THEREFORE, BE IT RESOLVED, to take conservation and allocation measures where they will be most effective.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

RESOLUTION REQUEST

RELATING TO FOREIGN MARKETING GAP

- WHEREAS, the F.C.M.A. allows foreign fishing fleets to augment the American harvest until 100% of the allowable biological catch is harvested; and
- WHEREAS, the major markets of these foreign fleets is in their mother countries; and
- WHEREAS, the American fisherman is at a great financial overhead disadvantage in competing on the world market in the harvesting of our own American fish; and
- WHEREAS, this marketing disadvantage creates a financial incentive for foreign fleets to displace American fleets; and
- WHEREAS, our American fleets actually are being displaced by foreign fleets; and
- WHEREAS, prices vary with supply and demand; and
- WHEREAS, the price for our fish is kept low because 100% of the allowable catch is always harvested; and
- WHEREAS, the price for our American fish would rise if the allowable foreign catch was reduced; and
- WHEREAS, the incentive for American fishermen to invest in new fisheries and thereby displace foreign competition would increase if the price for American fish increased;
- NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries does hereby request the Congress of the United States to amend the F.C.M.A. to include:
1. that if the American fleets can harvest 100% of the allowable biological catch then the Americans and the Americans only be allowed and encouraged to do so; and
  2. that if the American fleets cannot harvest 100% of the allowable biological catch that a 20%<sup>a</sup> foreign marketing gap" be established (as an economic incentive to American fishermen) so that the combination of American and foreign harvest can only total 80% of the allowable biological catch.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

POLICY AND RESOLUTION REQUEST

RELATING TO SALMON OPTIMUM YIELD

WHEREAS, the OY was established during a period of severely depleted stocks; and

WHEREAS, the current Alaska Board of Fisheries and ADF&G management policies are greatly increasing salmon escapements; and

WHEREAS, aquaculture research and enhancement have just developed potentials for greatly increasing Alaska salmon stocks; and

WHEREAS, Alaska is upgrading its timber harvesting standards for environmental protection, including spawning habitats;

NOW, THEREFORE, BE IT RESOLVED, that the OY be reestablished at projected potential harvest levels and that anything less than this potential harvest level be called a temporarily reduced harvest level (or temporary OY).

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
pelican, Alaska 99832

ALASKA BOARD OF FISHERIES  
Policy Request

REGARDING ADOPTION OF AND REVIEW OF REGULATIONS AND POLICIES

In the proposition or adoption of regulations and policy we request that the Board and Department state:

1. the objectives to be achieved,
2. the time frame needed to achieve them, and
3. the projected benefits to that fishery be listed.

JUSTIFICATION: The past system of adoption has led us into the difficulties that most of our fisheries are experiencing today in that there is no system of review of regulations that were adopted in the past. The goals and benefits of these regulations were often unclear.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

ALASKA BOARD OF FISHERIES

REQUEST FOR MANAGEMENT DIRECTIVE

RELATING TO HATCHERIES

Now that the results from experimental Chinook and Coho hatchery programs are determined to be successful;

The Alaska Board of Fisheries directs FRED to implement a program for Chinook and Coho enhancement.

Pelican ADF&G Advisory Committee  
Richard W. Lundahl, Chairman  
Box 793  
Pelican, Alaska 99832

PERSONAL REQUESTS  
FOR  
RESOLUTIONS, POLICIES, AND MANAGEMENT DIRECTIVES  
TO  
THE ALASKA BOARD OF FISHERIES

FROM  
RICHARD W. LUNDAHL  
PELICAN, ALASKA

SEPT 1981



REQUEST FOR MANAGEMENT DIRECTIVE

RELATING TO F.R.E.D. AND FEDERAL HATCHERIES IN OTHER STATES

WHEREAS, the policies of the N.P.F.M.C. are directed toward lowering the OY and reallocating salmon (appearing in our waters and the waters of the FCZ) to the peoples of other states, other Indian tribes, and other nations: and

WHEREAS, our S.E. economies are dependent on our harvesting of these fish; and

WHEREAS, these fish pasture in our waters and feed on our feed stocks; and

WHEREAS, the expertise and technology for raising and enhancing these Washington and Oregon runs is in existence; and

WHEREAS, the bilateral (Canadian and U.S.A.) treaty and several Indian treaties will probably "lock" the OY into "specific" permanent numbers;

NOW, THEREFORE, BE IT RESOLVED that the Alaska Board of Fisheries does hereby direct F.R.E.D. to study the feasibility and benefits of locating several ADF&G Chinook and Coho hatcheries in Washington and Oregon; and

BE IT FURTHER RESOLVED, that the Alaska Board of Fisheries does hereby request the federal government to do the same in our behalf.

FURTHER DISCUSSION: 1. The existence of ADF&G hatcheries in Washington and Oregon would give Alaska a lever in maintaining a reasonably high OY for S.E. Alaska.

2. The possibility of the N.P.F.M.C.'s recommendations for further reducing our activity in the FCZ would be lessened.

Richard W. Lundahl  
Box 793  
Pelican Alaska 99832  
PERSONAL REQUEST

REQUEST FOR MANAGEMENT DIRECTIVE

RELATING TO BIOMASS STUDY OF CHINOOK SALMON

WHEREAS, the size limit for troll caught Chinook salmon has been a constant issue; and

WHEREAS, "shaker mortality" and treble hooks have consequently also been constant issues; and

WHEREAS, the predator caused mortality of salmon in the high seas has always been a subject of conjecture; and

WHEREAS, the "growth potential" of immature salmon has long been a subject of debate; and

WHEREAS, the ability of management to maximize the benefits to the public depends on knowing when the value of the resource is highest;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries does hereby direct ADF&G to initiate a complete study of the Bio-mass value of Chinook salmon throughout their cycle.

Richard W. Lundahl  
Box 793  
Pelican, Alaska 99832  
PERSONAL REQUEST

POLICY REQUEST

RELATING TO TAGGING AND RELEASING OF IMMATURE SALMON  
BY TROLLERS

WHEREAS, aquaculture biologists need continuous research in migration patterns, feeding habits, and growth rates of both natural and hatchery stocks; and

WHEREAS, various trollers and groups of trollers have always been interested in tagging salmon that must be released anyway; and

WHEREAS, the cost of such study would be minimal if the "tagging" were done by commercial fishermen;

NOW, THEREFORE, BE IT RESOLVED, that the Alaska Board of Fisheries does hereby direct ADF&G and requests the N.M.F.S. biologists to set up a tagging and releasing program of immature salmon with all interested trollers.

Richard W. Lundahl  
Box 793  
Pelican, Alaska 99832  
PERSONAL REQUEST

PELICAN ADP+61 ADVISORY COMMITTEE  
7. RICHARD W. LUNDHOLM, CHAIRMAN  
P. O. Box 793  
PELICAN ALASKA 99832  
Nov 20, 1981

MEL ZAHN

EXECUTIVE DIRECTOR, BOARDS OF FISHERIES & GAME  
DEPARTMENT OF FISH & GAME  
SUPPORT BUILDING  
JUNEAU, ALASKA 99801

SUBJECT: MOTION COMMITTEE  
FOR FALL BOARD MEETINGS

DEAR MEL,

INCLUDED ARE THREE ITEMS OF BUSINESS.

ITEM #1. -- REGIONAL ADVISORY COUNCIL BOUNDARIES.  
AT OUR LAST ADVISORY COMMITTEE MEETING (WHICH  
DEALT ALMOST ENTIRELY WITH SUBSISTENCE) A MOTION WAS  
MADE/SECONDED/ENLARGED (S/O) TO GO ON RECORD AS  
SUPPORTING THE STATE'S GOAL FOR REGIONAL ADVISORY  
COUNCIL BOUNDARIES FOR THE SOUTHEASTERN - YAKUTAT  
REGION

ITEM #2 -- POSITION OF PELICAN ON COMMERCIAL  
FISHING PROPOSALS.

ATTACHED YOU WILL FIND A 2 PAGE SUMMARY OF  
PELICAN'S POSITION ON THE COMMERCIAL FISHING PROPOSALS

ITEM #3 -- PROPOSAL #116 MAJORITY & MINORITY  
STATEMENTS

ALSO ATTACHED YOU WILL FIND A MINORITY STATEMENT  
STATEMENT ON PELICAN'S SUBMITTED PROPOSAL #116

OVEN

CONCERNING HANDROLL, PELICAN'S MAJORITY  
STATEMENT IS THE PROPOSAL ITSELF AND THE  
MINORITY STATEMENT (BY PAUL GUGGENBERGER) IS  
ATTACHED.

THANK YOU FOR YOUR ATTENTION.

SINCERELY,

Richard W. Lundahl

PELICAN ADP&G ADVISORY COMMITTEE  
RICHARD W. LUNDAHL, CHAIRMAN

POSITION ON PROPOSALS

Nov 1981

PROPOSAL NO	AMMENDMENTS	ACTION	VOTE
100		ACCEPTED	6/0
102		REJECTED	0/6
103		REJECTED	0/6
104		ACCEPTED	6/0
109			

— AMMENDED —

PARAGRAPH (b)-(1) AMENDED TO READ  
 (b)-(1) TO LIMIT THE TOTAL COMMERCIAL  
 KING SALMON HARVEST BY ALL GEAR TYPES  
 IN THE SOUTHEASTERN AND YUKONAT AREAS  
 TO A GUIDELINE HARVEST RANGE OF  
298,000 TO 372,000 (PLUS THE  
ESTIMATED ANNUAL ALASKA HATCHERY  
PRODUCTION OF HARVESTABLE KING SALMON  
AND PLUS THE ESTIMATED ANNUAL  
INCREASE IN NATURAL RUN STRENGTH  
DUE TO INCREASE ESCAPEMENT LEVELS)  
 FISH, THE DEPARTMENT WILL MANAGE  
 THE TRILL FISHERIES INSEASON TO LIMIT  
 THE CHINOOK HARVEST TO APPROXIMATELY  
 THE MIDDLEPOINT OF THE GUIDELINE HARVEST  
 RANGE

PROPOSAL NO	AMMENDMENTS	ACTION	VOTE
111	OPTION #3	ACCEPTED	6/0
111	OPTION #4	ACCEPTED	6/0
112		ACCEPTED	6/0
114		ACCEPTED	6/0
115		REJECTED	0/6

PROPOSAL NO.

AMENDMENTS

ACTION VOTE

116

— AMENDED OUR PROPOSAL  
 STRIKE THE WORD "NOT" IN  
 THE LAST SENTENCE.  
 (THIS WAS OUR PROPOSAL -  
 SUBMITTED BY US)

VOTE IF AMENDED

117  
 118  
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OPTION #1  
 OPTION #2

1 ABSTAINED  
 1 ABSTAINED

ACCEPTED 6/0  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 REJECTED 1/4  
 REJECTED 0/6  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 REJECTED 0/6  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 REJECTED 3/2  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 REJECTED 0/6  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 ACCEPTED 6/0  
 REJECTED 0/6  
 ACCEPTED 6/0

MAJORITY & MINORITY STATEMENTS ON PROPOSAL # 116

PROPOSAL # 116 WAS SUBMITTED BY PELICAN.  
PELICAN'S MAJORITY STATEMENT IS THE PROPOSAL ITSELF.

THE MINORITY STATEMENT BY PAUL BRUGENBICKER IS  
ATTACHED BELOW.

The 80/20 allocation applied to the coho troll catch for power and hand trollers respectively should be abolished. The introduction of a limited entry program for handtrollers addresses and will accomplish this goal.

Furthermore the 80/20 allocation is illegal. It is based on the assumption that there are 2150 handtroll permits. In reality there are only 600 handtroll permits being fished out of a possible 1600 issued this year. The state did not make this allocation for conservation purposes. It was done for the protection of the power trollers.

Paul Brugenbicker





# City and Borough of Sitka

P.O. BOX 79 · SITKA, ALASKA · 99835

December 23  
19 81

DEC 28 1981

AGENDA E-1(b)  
January 1982

North Pacific Fisheries Management Council  
P. O. Box 3136 DT  
Anchorage, Alaska 99510

Gentlemen:

Because of its concern about the Alaska troll industry, the Assembly of the City and Borough of Sitka adopted Resolution 81-192 at its regular meeting last evening. A copy of that resolution is enclosed.

Sincerely,

Dolores Ingwersen  
Municipal Clerk

C I T Y   A N D   B O R O U G H   O F   S I T K A

RESOLUTION NO. 81-192

A RESOLUTION OF THE CITY AND BOROUGH ASSEMBLY  
OF SITKA, ALASKA REQUESTING THE ALASKA BOARD  
OF FISHERIES TO SUPPORT THE ALASKA TROLL INDUSTRY

WHEREAS, the troll industry is an integral part of the economy of Sitka; and

WHEREAS, the Alaska Board of Fisheries has worked with Sitka groups and individuals in past years to resolve management and allocation problems; and

WHEREAS, Sitka residents have been leaders in efforts to conserve and enhance Southeast Alaska salmon runs; and

WHEREAS, actions by the North Pacific Fisheries Management Council, Federal Courts and British Columbia fishermen could severely curtail the Alaska troll fishery without reasonable chance for future benefit; and


WHEREAS, it is in the interests of the elected leaders of Sitka to respond to the concerns of its residents,

THEREFORE, BE IT RESOLVED that the City and Borough Assembly of Sitka, Alaska requests the Alaska Board of Fisheries to support the Alaska troll industry by:

1. Enacting troll regulations, plans and policies which will conserve and enhance the troll fishery commensurate with the true salmon resource.
2. Supporting Alaskan trollers' traditional take of migratory salmon milling and feeding off our coast.
3. Pursuing Federal court decisions which will prevent allocation of Alaskan trollers' traditional harvest to out-of-state and foreign user groups.
4. Require salmon resource managers to consult carefully with local groups, such as the Sitka Fish & Game Advisory Committee and troll representatives about the impact of specific regulations.
5. Investigating source of net marks on a significant percentage of troll caught salmon.
6. Opening areas west of Cape Suckling to a gradual reintroduction of the traditional troll fishery.
7. Requesting funding for a cooperative tagging program with the fishermen.
8. Aggressively pursue a comprehensive aquaculture policy.

PASSED, APPROVED AND ADOPTED this 22nd day of DECEMBER, 1981.

A T T E S T:

  
Earl Richards, Deputy Mayor

  
Arnes Ingwersen, Clerk

  
Dolores

JOHN SPELLMAN  
Governor



AGENDA E-1(c)  
January 1982

*mt*

ROLLAND A. SCHMITTEN  
Director

STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600  
October 2, 1981

Mr. Jim H. Branson  
Executive Director  
North Pacific Fishery  
Management Council  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Jim:

We have received your August 27 letter outlining NPFMC's intentions to adhere to the existing Salmon Plan amendment schedule. In light of this decision and the serious management problems identified in this fishery during the 1981 regulation development process, we wish to make general regulatory proposals which bracket the range of options that should be considered in 1982.

Further chinook O.Y. reductions are essential in response to serious conservation needs experienced by nearly every naturally spawning chinook stock harvested in the southeastern Alaska troll fishery. Additionally, the inequitable distribution of U.S. harvest on southern U.S. chinook stocks (e.g., Columbia River brights) must be addressed. O.Y. reductions above the 1981 levels which should be considered to solve these problems range up to 100 percent. This upper level would represent complete protection of many severely depressed chinook stocks. The minimum O.Y. level, which is necessary in 1982, cannot be quantified at this time, but we feel it is unlikely that this level should be below 30 percent. Season modifications to accomplish various O.Y. reductions should range from complete June to season-long closures.

The Washington Department of Fisheries will be refining its recommendations for management of the 1982 southeastern Alaska troll fishery during the next several months. As these results become available, we will be providing them to the NPFMC. We continue to emphasize that a more realistic 1982 management schedule is needed in response to court mandates and coded-wire tagging data processing time demands.

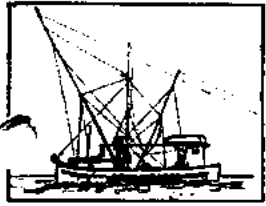
Sincerely,

Handwritten signature of Rolland A. Schmitt.

Rolland A. Schmitt  
Director

RAS:ljf

cc: DiDonato  
Mobrand  
Lincoln  
Wilkerson



Alaska  
Trollers  
Association

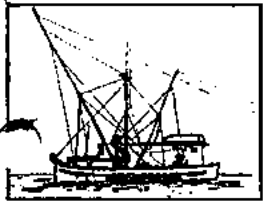
January 4, 1982

Ed Stoyeck  
1-6-82

ATA POSITION PAPER

The following represents the Alaska Trollers Association's position on proposals concerning the Southeast Alaska troll fishery which have been submitted to the Board of Fisheries at the January 1982 meetings:

<u>Board Proposal</u>	<u>Position</u>
#100 Option #1 Option #2	No comment. ATA proposal/support.
102	Oppose/withdrawn.
103	Oppose.
104	ATA proposal/support.
105	Oppose. There has been insufficient time since last year's closure to assess the impact of such a closure.
106	Oppose.
107 Option #1 Option #2 Option #3	Support. Support. Support. ATA favors seven day per week fishing in all areas.
108	Oppose.
109	Oppose. ATA opposes any overall area closures that do not relate to resource conservation of specific coho stocks.
110	Oppose.
111 Option #1 Option #2 Option #3 Option #4	No comment. No comment. ATA proposal/support. This has been changed from ATA's original proposal which stated as follows:



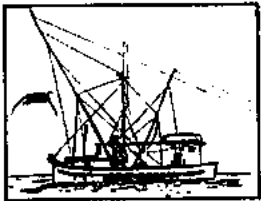
Board Proposal

Position

*"Amend 5 AAC 33.365(b) to include the following language: 'An additional increment of chinook catch (as determined by the Department), above the established range will be permitted to reflect the return of fish from state, federal and private enhancement programs in Alaska.'"*

Option #5

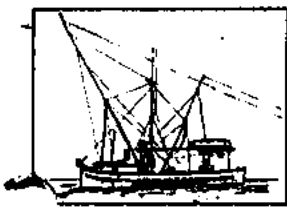
	No comment.
112	ATA proposal/support.
113	No comment.
114	ATA proposal/support.
115	Oppose/withdrawn.
116	No comment. ATA's Board proposal #114 addresses this issue.
117	Support.
118	Withdraw. Although ATA is still concerned with net targeting in outside and corridor areas during troll coho closures, we are reassessing our approach to this issue.
119	ATA proposal/support.
120	No comment.
121	Oppose.
122	Oppose.
123	No comment.
124	No comment.
125	Oppose.



Board Proposal

Position

126	Oppose.
127	ATA proposal/support.
128	Support. ATA's Board proposal #100 addresses specific areas.
129	Support.
130	Support.
131	Oppose.
132	Oppose.
133	Support. See Board proposal #159 submitted by ATA.
134	No comment
135	Oppose.
136	No comment. The International Pacific Halibut Commission is the appropriate forum for this proposal.
140	Oppose.
141	Support.
142	Oppose.
145	Support.
Option #1	Oppose.
Option #2	
147	ATA proposal/support.
158	ATA proposal/support.
159	ATA proposal/support.



Alaska  
Trollers  
Association

### CHINOOK CATCH BY AREAS

		<u>Catch</u>	<u>Change</u>
Prince William Sound	1981	21,400	
	1980	8,700	+146%
Cook Inlet	1981	12,000	
	1980	12,900	- 7%
Bristol Bay	1981	239,000	
	1980	95,000	+152%
Kodiak	1981	1,400	
	1980	500	+180%
Chignik	1981	2,700	
	1980	2,200	+ 23%
Alaska Peninsula	1981	27,400	
	1980	22,000	+ 25%
Alaska, Yukon, Kuskokwim (AYK)	1981	246,300	
	1980	207,500	+ 19%
Total chinook in areas outside Southeastern	1981	550,200	
	1980	348,800	+ 58%
Southeastern	1981	268,100	
	1980	320,600	- 16%



Information Concerning  
the Management Needs  
of the Southeast Alaska Troll Fishery  
for Chinook Salmon

by

Rodney C. Cook

Prepared with funds from a  
grant provided by the  
Pacific Fisheries Foundation

December 1981

## INTRODUCTION

This report reviews the current status of knowledge regarding the mixed stock nature of the Southeast Alaska troll fishery for chinook salmon together with management considerations and research needs commensurate with this knowledge. The following two sections present escapement and catch information for the component stocks. They are intended to give a brief review of the trends of the last 10 years to emphasize the current status of these stocks. Statistics on escapements and catches are presented in the appendices. The next section presents, without significant comment, the results of studies that provide information as to which stocks contribute to the fishery and to what degree. The reader is cautioned to avoid making rash conclusions based upon these data, particularly tagging recovery data. Numerical estimates based solely on tagging studies are tenuous at best due to differences in the number of tags released for different stocks and to variable recovery rates for different fisheries. The data do permit certain conclusions, however these statements must be general in nature. In most cases information pointing to specific conclusions should be considered provisional. Taken together, these studies do portray a general scenario. The supportive information is admittedly sparse and the last three sections delineate prudent measures in consideration of this lack of knowledge.

## ESCAPEMENTS

### Oregon Coast

The Oregon coastal stocks are in good condition with escapement goals of 150,000 to 200,000 being met. Underescapement may occur in some

smaller streams (Cummings 1976 as cited by Pacific Fisheries Management Council 1978). An upward trend in escapement is notable (Appendix A Table 1). Streams with considerable spawning include the Nehalem, Wilson, Trask, Nestucca, Siletz, Yaquina, Alsea, Siuslaw, Smith, Umpqua, Coos, Coquille, and Rogue rivers, together with their tributaries. Rivers to the south are generally longer and contain more suitable spawning habitat. A small portion of the escapement returns to hatcheries. Hatchery returns to Oregon coastal hatcheries have averaged 2,600 spring and 2,700 fall chinook for the years 1976-1977 and 1971-1977, respectively (from PFMC as cited by Natural Resource Consultants 1980). Wild stocks are of overwhelming importance. Past environmental degradation has been largely controlled (PFMC 1978). Future stability and possible increase in the runs are likely.

#### Columbia River

The Columbia River is the major producing system in the Washington-Oregon area. Escapements are given in Appendix A Table 1. There are five major components: Upriver spring, summer, and fall chinook, and lower river spring and fall chinook. In 1980 the total number of chinook entering the Columbia River was estimated at 431,900 fish. Inriver fisheries reduced this number by 162,000 for all races combined and mortalities at dams by 30,500 for upriver bright fall chinook (Washington Department of Fisheries 1980a). Effective escapement was probably in excess of 200,000 for 1980. The racial composition of the run has changed dramatically over the last two decades due to the widespread construction of dams and hatchery facilities. The percentage of the escapement returning to hatcheries in 1980 was 21% for upriver spring chinook, 52% for upriver

falls (this considers the McNary count as total wild escapement, thus the true percentage is probably larger), and 50% for lower river springs. Upriver summer chinook are largely wild stocks, hatchery brood stock have only been recently developed (NRC 1980). Lower river falls are managed chiefly for hatchery production. Underescapement for wild stocks is a problem (NRC 1980). Due to regulation of terminal fisheries, escapements are not declining as seriously as could be the case. However, all stocks (except, perhaps, lower river springs) are depressed: Escapement goals are not being met. For upriver races the primary causé is thought to be outmigrant dam mortality (PFMC 1978). Recent trends do not paint an optimistic picture. The potential increased production from hatcheries and underutilized natural habitat may be largely negated by continued fish passage problems and environmental degradation.

#### Washington Coastal

Washington coastal streams and hatcheries support several minor runs. These include the Willapa Bay and Grays Harbour runs on the south coast and the Queets, Hoh, and Quillayute rivers on the north coast. Data are not complete but about 1/3 of the escapement returns to hatcheries. Total escapement has been about 30,000 in recent years. For the most part, the runs are in good shape, however certain races such as early Satsop falls and Queets and Hoh springs and summers are severely depleted (PFMC 1978). Degradation of stream and estuarine environments is expected to cause continued declines for the region (PFMC 1978).

### Puget Sound

The Puget Sound has received escapements of about 50,000 wild and 30,000 hatchery chinooks over the last 10 years. Environmental degradation has left natural stocks in a depressed state and future declines are expected (PFMC 1978). Spring chinook are particularly depressed. Hatchery production is increasing, however (PFMC 1978). Major spawning streams include the Lyre-Hoko, Elwah-Dungeness, Hood Canal, Quilcene, Lake Washington, Duwamish, Puyallup, Nisqually, Tacoma, Deschutes, Shelton, Kitsap, Nooksack, Skagit, Stillaguamish, and Snohomish basins (NRC 1980).

### British Columbia

In British Columbia spawning was reported to take place in less than 260 streams with 50% of the escapement occurring in only 14 streams. The most important spawning grounds in southern British Columbia in order of importance were the Fraser River (Area 29), Squamish River (Area 28), the Nimpkish and Klinakline rivers (Area 12), the Somass River (Area 23), the Cowichan River (Area 18), the Homathko River (Area 13), the Puntledge River (Area 14), and the Southgate River (Area 13). To the north the largest runs have occurred in the Bella Coola River system (Area 8), the Kitimat River (Area 6), and the Skeena River (Area 4). Since Aro and Shepard (1967) collected these data (1951-1963) conditions have changed (Appendix A Table 1). Several major hatcheries release substantial numbers of fall chinook: Robertson (Area 23), Big Qualicum (Area 14), Quinsam (Area 13), Puntledge (Area 14), and Capilano (Area 28), together with smaller numbers from other hatcheries (data from the Regional Mark Processing Center, PMFC, as cited by NRC 1980). Since 1971 escapements

have shown a weak downward trend with goals unmet, often by substantial deficiencies. For Areas 12 and 13 the Nimpkish, Klinaklina, Homathko and Southgate rivers, once rated as prime producers, are in severe trouble (Meadows 1981). The Powell River (Area 15) is virtually wiped out. Clearly many British Columbia stocks are in an extremely depressed state. No major systems are currently attaining escapement goals. In recent years the leading producers have been, in order of importance, the Fraser River, the Bella Coola River, the Skeena River, the Nass River, and the Cowichan River. The adverse effects of environmental degradation are not nearly as severe as to the South (PFMC 1978), however, the overall trend in escapement is downward. Future hatchery production may help reverse this trend.

#### Southeast Alaska

In Southeast Alaska escapements exceeded 50,000 in 1981. In recent years, dramatic upward trends are evident for the Taku and Stikine Rivers, the two major producers (Appendix A Table 3). Most systems are below goals, however. Fourteen hatcheries are currently operating in Southeast Alaska: six are state sponsored, one is operated by the Bureau of Indian Affairs, and seven are private non-profit hatcheries. Together they are operating at 8% design capacity of 90,000 adult returns (NRC 1980), or 7,200 fish. Land use activities have not adversely impacted chinook habitats, however, this may change in the future (NRC 1980).

## CATCHES

### Oregon-Washington

The Oregon commercial troll fishery has averaged about 200,000 chinook over the years 1971-1980 (Appendix B Table 1). The catches fluctuate considerably but have been near average levels in recent years. Oregon recreational catches have decreased in recent years to about half the 10-year average of 45,000. Washington troll catches are down dramatically in recent years to slightly more than half of the 250,000 10-year average. In 1980, Washington ocean recreational catches were less than one-third the 10-year average of 160,000. Catches during the Columbia River fall season are declining: The 10-year average is 225,000 compared to a 1980 catch of 137,000. The Columbia River spring season was closed in 1980. The 1971-1974 average was 90,000. The smaller winter season is also declining rapidly. Changes in many of the smaller coastal or river fisheries do not exhibit trends, but fluctuate at lower levels. Puget Sound net catches have averaged 190,000, and a trend is not apparent.

### British Columbia

Catches in British Columbia have been generally stable, with the notable exception of the Fraser River area gillnet catches which have declined substantially (Appendix B Table 2). South coast seine catches have exhibited a general increase while sport catches in this area have exploded. Province-wide, catches approach nearly 1.5 million chinook annually.

### Southeast Alaska

The Alaska troll catch has declined substantially from the late 1930s to the early 1960s (Gunstrom 1980). This decline has been correlated with the decline of runs to the Columbia River associated with the construction of dams, primarily in the 1950s (PFMC 1978). Catches have been relatively stable at an average of 270,000 for the last 10 years.

### STOCK IDENTIFICATION

#### Early Tagging in Southeast Alaska Waters

During the years 1950-1955 the United States tagged 3,098 chinook salmon in the inside waters of Southeast Alaska. There were many recoveries in inside waters and several in outside waters. These fish could have been immature or mature and of British Columbia origin or from rivers further south. The southernmost recovery was from the Columbia River. Most of the recoveries were from streams in Southeast Alaska: Taku River 159; Chilkat River, 6; Stikine River, 4; and unknown, 1. This source of these data is a letter from Mr. Gary Finger to Mr. Robert E. Loeffel, dated February 6, 1965 (Godfrey and Crouter 1968). Kissner (1977) also summarizes these Southeast Alaska tagging experiments. He included the same experiments as above, plus the study by Parker and Kirkness (1956) but excluded 56 tags from 1956 included in Godfrey and Crouters (1968) summary. Kissner (1977) concludes that stocks in outside waters were highly dependent on river systems in British Columbia, Washington and Oregon while the inside waters were primarily of Alaska and British Columbia origin.



Tagging conducted in 1950-1952 in the outside waters of Southeast Alaska caused Parker and Kirkness (1956) to conclude that the Columbia River followed by the Fraser River were the major contributors to the Southeast Alaska troll fishery and that "all major streams from Southern Oregon to Southeastern Alaska contribute, but to a lesser degree." Area I (Cape Spencer to Cape Fairweather) to the north exhibited the highest incidence of Columbia River chinook while Areas II (Sitka to Cross Sound) and III (Warren Island to Cape Felix) showed the highest incidence of Fraser River chinook.

#### Marked Columbia River Fish

Juvenile Columbia River chinooks fin-clipped from 1916 to 1927 have been recovered off the coast of British Columbia and Southeastern Alaska (Rich and Holmes 1928). Tagging operations from 1925 to 1930 in British Columbia by the Biological Board of Canada showed that a large percentage of the troll caught chinook salmon originated in the Columbia River (Williamson 1927, 1929; Williamson and Clemens 1932; Clemens 1932; Pritchard 1934, all cited by Silliman 1948). Similar results were obtained by the U.S. Bureau of Fisheries in 1927 off the west coast of Baranof Island. In this study 382 troll-caught chinook were tagged and 22 of the 38 recovered were taken at the Columbia River (Rich and Ball 1935). From these early data Silliman (1948) concluded that "a general tendency is apparent for the percentage of Columbia River fish to decrease as one proceeds northward." However Funk (1981) discounts this result primarily because Silliman's regression was confounded by the tendency of northern British Columbia experiments to be conducted in inside waters and because the northernmost experiment showed a large percentage of Columbia River

tag returns. Further, Rich and Ball (1935) conclude from their statistical review that Columbia River chinook salmon "evidently dominate the catch throughout at least the northern part of the western coast."

Release and recoveries of 1961-brood Columbia River chinook and a description of the marking program were reported by Worlund, Wahle, and Zimmer (1969). Cleaver (1969) concluded in his study of these fish that fish which mature at different ages are found in different parts of the range and that ocean distribution is not the same for fish from all hatcheries. He further determined that marked fall chinook salmon from lower Columbia River hatcheries were not abundant north of Vancouver Island. Recoveries of the 1962-brood releases were reported by Rose and Arp (1970), of the 1963-brood releases by Arp, Rose and Olhausen (1970) and of the 1964-brood releases by Wahle, Arp, and Olhausen (1972). The resulting studies (Pulford 1970; Lander 1970; Henry 1971, 1972) support the earlier conclusions. There were very few recoveries from Alaskan waters, and these were Kalama River fish.

Van Hying (1973) highlighted the tagging studies conducted from 1928 through 1962 off the coasts of Washington, Oregon, and South Vancouver Island. Citing papers by Kauffman (1951), Bergman (1963), Milne (1957), and Parker and Kirkness (1956), he speculated that certain upriver (Columbia) races migrate to southeast Alaska at a small size where they feed almost unmolested. They are captured primarily on their return migration. The immature chinook taken off Vancouver Island exhibit a large percentage of lower Columbia River chinook, many of which are immature.

### Scale Analysis of Southeast Alaska Chinook

Studies of the chinook salmon resource in Southeast Alaska have been conducted by the Sport Fish Division of the Alaska Department of Fish and Game. Kissner (1973) determined from unpublished tagging data and scale analysis that a high percentage of local chinook rear in the marine environment near the Juneau area. The scale analysis indicated a 10% non-Alaskan component for the Juneau sport catch and a 100% non-Alaskan component for the Sitka sport catch. The age composition of the catch from the Sitka salmon derby and the Fairweather grounds in 1972 showed that fall chinook utilize these outside waters to a high degree (Kissner 1973). This is in contrast to the 1972 derbies in Ketchikan, Haines, and Juneau, and the Juneau sport catch for that year: Less than 5% were considered fall chinook. A similar analysis of the fisheries in 1973 (Kissner 1974) gave the following estimates of the percentage of Alaskan chinook: Fairweather troll, 0%; Taku gillnet (immatures), 53.9%; Juneau sport troll (prior to 6/15), 51.0%; Juneau sport troll (after 6/15), 53.2%; and Ketchikan troll, 28.5%. Chinook scales collected in 1974 in ADF&G areas 111 (Stephens Passage) and 115 (Lynn Canal) indicate that about 72.1% harvested by troll were of Taku, Chilkat and Stikine rivers origin (Kissner 1975). In 1975 the percentage was determined to be 70.6% (Kissner 1976). Kissner (1977) indicated that the range of Alaskan chinook percentages in the Area 111 troll fishery was from 50-72% for 1974-1976.

### Recoveries of Coded Wire Tagged Chinook

Coded wire tags (CWT's) recovered in Southeast Alaska in 1978 (Davis, Wood, and Hunn 1979) show that outside waters included recoveries from

the Columbia River (142), Washington (277), Oregon (388), and British Columbia (478). Inside waters yielded tags from the Columbia River (132), Washington (115), Oregon (95), British Columbia (348) and Southeast Alaska (6). The recoveries of non-Alaska fish in inside waters were primarily from the southern areas. CWT's recovered in 1979 show basically the same patterns, however, more tags released in Southeastern Alaska were recovered (ADF&G 1980a). This is not surprising since coded wire tagging of wild Southeastern chinook began in 1978 (Kissner 1978). Most of these were from inside waters (106 of 130 tags) with statistical area 111 (Stephens Passage) predominant (51 tags).

Recoveries in the 1979 troll fishery in Southeast Alaska of coded wire tagged (CWT) chinook salmon from hatcheries of non-Alaskan origin are summarized in Funk (1981). Recoveries of British Columbia fall chinook hatchery stocks indicate that these fish are found most consistently between Cape Ommaney and Cross Sound and commonly north of Cross Sound, between Cape Ommaney and Cape Muzon, and in the inside waters around Ketchikan. Apparently there are differences in distribution according to age. Washington coast fall chinook, upper Columbia River fall chinook, upper Columbia River summer chinook, lower Columbia River spring chinook, lower Columbia River fall chinook and Oregon coast fall chinook all exhibit greater recovery rates north of Cross Sound.

Twenty-one chinook bearing CWT's have been recovered from the trawl fisheries in British Columbia (Riddell 1981). One fish from the Deschutes River was recovered off Barkley Sound in 1980. Twenty tags were recovered during the 1979 pollock fishery well within Dixon Entrance. One fish

was from the Quinsam hatchery in British Columbia. Nineteen were from hatcheries in Oregon and Washington that feed into the Columbia River or directly into the Pacific Ocean. The majority were lower Columbia River or tributary hatcheries with 10 from the Willamette River and 4 from the Cowlitz River. (I would suspect that these were mostly spring chinook.) Interestingly, tagging of immature fish conducted in Hecate Strait from April to September, 1930, were recovered between April 27 and August 11 in succeeding years (for the Columbia River). Mature fish were recovered between May 10 and July 12 (Pritchard 1934 as cited by Godfrey and Crouter 1968).

A partial summary is available for fin-clipping and tagging experiments for broodyears through 1970 (Garrison and Rosentreter-Peterson 1979). The data are not complete and are being updated as information becomes available. Oregon hatchery spring chinook releases beginning in 1946 resulted in very few recoveries in Alaska except for the Eagle Creek facility. Oregon hatchery fall chinook releases beginning in 1938 show the same pattern except for Trask River releases. Washington chinook hatchery releases beginning in 1961 show the same pattern; Alaska recoveries are the exception. For three 1970 brood British Columbia hatchery releases, 15 of 38 recoveries were from Alaska.

#### Contribution Rates

Catch contributions for various hatchery release groups have been calculated (Mobrand, Mathews, and Olson 1977). The contribution rates to the Alaska troll fishery are: 1.0% for 1961-1964 and 1971 brood lower Columbia River fall chinook, 19.0% for 1971 brood lower Columbia River

spring chinook (considered an educated guess by the authors), 8.3% for 1971 brood Soleduck fall chinook, 0.8% for 1971 brood Soleduck springs, 7.9% for 1971 brood Nemah fall chinook (average of two release groups). Contribution rates were negligible for 1971-1972 brood Skagit River fall chinook, 1971-1972 brood Nooksack-Samish River fall chinook, 1971-1972 brood South and Central Puget Sound fall chinook, and 1971-1972 brood Hood Canal fall and spring chinook.

Observed percentages of 1972 brood spring and fall hatchery chinook taken in various fisheries were computed from Fuss, Rasch, and Johnson (1981). Recoveries varied considerably for different hatcheries and release groups within hatcheries. In very few cases did the Southeast Alaska troll fishery harvest a large percentage of the releases. Various fisheries in Washington and British Columbia were the key beneficiaries. Of the 81 experiments conducted 25 received tag returns from Alaska. Some experiments received fair numbers of returns. The percentages of total returns were 13% for Willapa hatchery experiments, 11% for the Nemah experiments, 15% for the Green River experiments, 1.4% for the Kalama experiments, 4.6% for the Soleduck experiments, 4.8% for the Dungeness River, 0.1% for the Skagit, 0.4% for the Cowlitz, negligible for the Hood Canal (2 of 4,764 recoveries), 4.5% for the Issaquah experiments and 2.7% for Toutle River experiments.

#### Other Techniques

The Salmon Harvest Management Division of WDF has endeavored to determine the contributions of chinook salmon from Washington chinook salmon stocks (WDF 1980b). Priest Rapids hatchery-reared upriver brights

were microtagged in 1975, 1976 and 1977. Observed recoveries of the 1975 brood in the 1978 and 1979 coastal fisheries indicate that the fish are harvested at age 2 in British Columbia almost exclusively; at age 3 primarily in British Columbia (about half north of Vancouver Island) and secondarily in Southeast Alaska; and at age 4 primarily in Alaska, secondarily in British Columbia. Recoveries increased with age of the fish. The Washington Department of Fisheries/National Bureau of Standards computer model (Johnson 1978) was used to determine the percentage of upriver brights and Bonneville pool stock harvested by various coastal fisheries. This model relies heavily on migration and catch data provided as input. The resulting evaluation shows that the British Columbia troll fishery is the primary harvester of upriver brights with the Alaska troll fishery taking about 35% of the catch. The Bonneville pool stock is not harvested significantly by the Alaska troll fishery. This is not surprising since eggs are freely exchanged between Bonneville pool and lower Columbia river hatcheries. Willapa Bay hatchery stocks (Nemah and Willapa) were similarly modeled and about 15% were calculated as being harvested by the Alaska troll fishery. From this, WDF states:

"These results also demonstrate a far northerly ocean distribution similar to upper Columbia River brights. The distribution of northern Washington coastal stocks, if represented by Willapa Bay tagging experiments, would be a conservative measure of northerly distribution. This is because Willapa Hatchery stocks at one time were interbred with Puget Sound chinook stocks which are known to have a more southerly distribution."

The WDF/NBS model (Johnson 1978) asserts that 80% of the United States harvest of Columbia River upriver brights is taken off Alaska. Gowen (1980) disputes this and computes a percentage of 58% (average of 3 release groups). His conclusions are based upon expansions of CWT recoveries.

#### Return Migrations

Tagging studies indicate that maturing chinook move southward from their feeding grounds along the outer coastal areas of, Southeastern Alaska, British Columbia, Washington and Oregon (Loeffel and Wendler 1969). These fish are potentially vulnerable to fisheries being conducted in this area. The extent of this vulnerability is not precisely known.

An analysis of Parker and Kirkness' (1956) tagging results indicate that the terminal area and escapement benefits resulting from reduced harvest of southern United States stocks in Southeastern Alaska would be significantly greater than interceptions by the British Columbia troll fishery of these fish on their southern migration (WDF 1980b). The interceptions would be substantial, however (NRC 1980). Current fishing patterns have changed substantially since this tagging study was conducted. The WDF/NBS model was used to examine time closures as a means of minimizing interceptions of upper Columbia River bright fall chinook. Closures of the months of April, May, June and September were modelled, and transfer rates were computed to be 24%, 30%, 42% and 16%, respectively. The transfer rates were through Alaska and Canadian fisheries to southern U.S. ocean fisheries and the Columbia River.



### Current and Future Studies

During 1981 the ADF&G disc-tagged about 765 troll-caught chinook in the vicinity of Icy Strait. Most of these were tagged well inside Icy Strait but a few hundred were tagged in the outer area. Recoveries to date were primarily from Southeast Alaska (25-27) with 7 from British Columbia, 2 from Washington and 1 from Oregon. In addition, 9 CWT were recovered during the tagging operation: Six from Southeastern Alaska, 1 from Robertson Creek hatchery (British Columbia), and 2 from Oregon. These data are preliminary and the final report should be ready in January, 1982.<sup>1</sup>

The Fisheries Research Institute at the University of Washington is currently conducting three studies directed at the stock identification of chinook salmon. The North Pacific Fishery Management Council is providing funds to investigate the origins of chinook salmon taken incidentally in the foreign trawl fisheries of the Bering Sea and Gulf of Alaska. The Alaska Department of Fish and Game is sponsoring a similar study on the Japanese mothership driftnet fishery. The National Marine Fisheries Service (NMFS) is funding the analyses of chinook salmon taken in the Japanese landbased driftnet fishery. All studies require coast-wide scale collections of chinook salmon. These studies will determine the feasibility of scale pattern recognition to identify major stocks of chinook salmon in mixed stock fisheries. Data bases thus constructed will be compatible with ADF&G data management systems so future studies may be expeditiously conducted.

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<sup>1</sup>Personal communication with Mike Bethers, ADF&G, October 13, 1981.

The Alaska Department of Fish and Game is engaging in a study to determine the origins of chinook salmon in the Southeast Alaska troll fishery. The project will emphasize the collection of scale samples from major chinook spawning sites in Southeast Alaska and the Alaska commercial troll fishery, and the analyses of these samples along with escapement samples from British Columbia, Washington, Oregon, and California. The objective is to determine harvest rates by area, time, and gear type of Alaskan versus non-Alaskan chinook in the troll fishery, to determine these harvest rates for major component stocks within the Alaskan portion of the troll catch, and to determine various effects of the troll fishery on the escapement for major component Alaskan stocks. The study is geared toward the management needs of Southeast Alaskan stocks.<sup>2</sup>

#### CONCLUSIONS ON RACIAL CONTRIBUTIONS

Early evidence asserts that lower Columbia River fall chinook are not present in significant quantities in Southeast Alaska. Recent studies support this conclusion. Apparently the Columbia River races found in S.E. Alaska consist of spring chinook of both upper and lower river origins, upriver fall chinook (excluding the Bonneville Pool hatchery stock), and the upriver summer chinook. Harvest rates or contribution rates are largely unknown, but there is provisional evidence that the upriver bright fall chinook may have the highest contribution rates of

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<sup>2</sup>Personal communication with Scott Marshall, ADF&G, December 21, 1981.

of the Oregon or Washington stocks. The production of this stock has decreased considerably from historic levels, and continues to decline. No doubt, its importance to the Alaska troll fishery has also declined.

Contribution rates (the percentage of the production from a given hatchery that is harvested by the S.E. Alaska troll fishery) are extremely variable for Oregon and Washington coastal stocks. Oregon coastal stocks are in evidence. Tag recoveries indicate that most contribution rates are low or negligible (with notable exceptions). Taken together the overall contribution of Oregon coastal stocks to the Southeast Alaska fishery may be substantial. Contribution rates of Washington coastal stocks appear to be slightly higher than Oregon on the average. These stocks are in lower abundance and the overall contribution of Washington coastal stocks may not be as high as the Oregon coastal stocks. Puget Sound contributions are largely negligible. British Columbia contributions may be of major importance. Close proximity and large production imply that large contributions would be the rule. Tag recoveries support this contention. Southeastern Alaska production of chinook is relatively low and its immediate proximity is the primary factor affecting its contribution to the fishery.

Information regarding the time-area distributions of the component stocks in the Southeast Alaska fishery is sparse at best. As one would expect the percentage of chinook of Southeast Alaska origin is highest in inshore areas, primarily around Juneau, however the percentage of non-Alaska stocks may be as high as 50% in this area. The origins of this non-Alaskan proportion is thought to be largely British Columbian but

evidence of Oregon and Washington stocks is strong, particularly in the southern inside waters of S.E. Alaska. Near Ketchikan 75% of the catch may be from outside Alaska. Recent coded wire tag recoveries indicate a high percentage of British Columbia fish with significant contributions of Oregon and Washington coastal and Columbia River stocks. It has been generally thought that the percentage of non-Alaskan stocks increases in outside waters. This is undoubtedly true, however, the relative proportions of the non-Alaskan components may change significantly. Indeed, the 1978 coded wire recoveries indicate that the percentage of Columbia River chinook is larger near Ketchikan than in outside waters. This is likely due to the different migratory habits of the various races of Columbia River chinook. There is provisional evidence to indicate that spring chinook utilize the inside waters to a greater extent than do fall chinook, and that southern U.S. stocks utilize the Fairweather Grounds to a greater extent than do British Columbia stocks. Variations in stock composition with time have already proven beneficial to the management of southeastern Alaska stocks, and it appears that such variations may occur for other stocks. Carefully conceived studies would have a high probability of detecting significant time and area differences in stock composition.

#### MANAGEMENT CONSIDERATIONS

It is clear that most stocks contributing to the Southeast Alaska troll fishery are in a depressed state. For some stocks the situation is critical. (Such is the case for the upper Columbia River bright fall chinook.) There exists a need to substantially reduce the harvest of

such stocks in order to facilitate their rebuilding. However, for those severely depressed stocks there are usually factors other than the Southeast Alaska troll fishery that have contributed to their decline. (The inter-dam mortality of returning adults and outmigrant dam mortality are more important problems for upriver races of Columbia River chinook.) If a general reduction in the Southeast Alaska troll fishery is used exclusively to meet the management needs of these depressed stocks then this troll fishery would suffer unjustly severe economic consequences. Given the importance of this fishery to the region, restrictions of the fishery should be based upon strong scientific information outlining the benefits of such restrictions.

Given the depressed nature of the component stocks of the fishery a general reduction in catch would benefit the escapement and ultimately benefit the fishery from the resulting increased production. Past restrictions of terminal area net and troll fisheries have been largely successful in rebuilding runs to the larger producing systems within Southeast Alaska. There is considerable room for improvement for the smaller producing systems. General restrictions would be of some benefit. The key beneficiary of reduced catches in Southeast Alaska would be British Columbia. Both catches and escapements should increase in British Columbia while only escapements would increase in S.E. Alaska. The catch increase would consist of both returning British Columbian chinook and intercepted southern U.S. stocks. Benefits to southern U.S. catches and escapements would be reduced correspondingly. Due to the variable nature of catches and escapements, small reductions might not be noticed. Large general reductions (of up to 50%) might lead to a

decrease in overall benefits to U.S. harvesters. Without being able to predict or control Canadian management practices, it is difficult if not impossible to assess the long-term effects. International cooperation and agreement is needed to effectively implement conservation measures and to avoid allocation shifts associated with these measures.

Small general reductions (of 10 to 15% below the average of recent years) appear to be in order, however such reductions will not be sufficient to contribute to the rebuilding of severely depressed stocks. In order to assist the rebuilding of these stocks time-area restrictions of the fishery designed to protect these stocks would be in order. To minimize adverse economic impacts to the fishery the harvest of stocks in relatively good condition should not be reduced to the same degree. Further the protection of endangered stocks should be accompanied by measures directed at the other problems encountered by such stocks. These time-area management needs require information of the migratory patterns and mixing proportions of the component stocks in Southeast Alaska. This information is lacking and is urgently needed. Recent dramatic declines in upper Columbia River stocks indicate this. The side effects of time-area restrictions should also be assessed. The resulting shifts in efforts might cause excessive harvest of depressed stocks other than those for which the regulations were implemented. Further, the effects on coho catches should be considered. To reduce the over-exploitation of local coho populations, inshore effort shifts might prove desirable.

## RESEARCH RECOMMENDATIONS

The key problem in regulating the Southeast Alaska troll fishery for chinook salmon is insufficient knowledge concerning the mixed stock nature of the fishery. Past studies have provided a substantial body of information from which some qualitative (or general descriptive) conclusions may be drawn. However, quantitative (or precise numerical) statements are precluded by the changing importance of various runs known to contribute to the fishery and the basic nature of tagging data. Quantitative studies are needed to effectively manage this fishery, but existing data needs to be evaluated to structure effective experimental designs for future research.

The most basic lack of knowledge concerns the migratory habits of component stocks. There is considerable information available from early marking and tagging studies. These studies were directed toward particular questions and the migratory patterns of the various stocks are not directly discernable. These studies together with recent coded wire tagging recoveries undoubtedly contain much useful information. If these data were consolidated into one compatible data base then the migratory habits of most major substocks could be evaluated without ignoring any relevant data. For many major stocks or runs the data should be sufficient to portray a fairly complete picture of the migratory pattern. For other stocks the picture might be less complete, however useful information could be obtained. The results might determine when and where a depressed stock is absent or in low abundance. The migratory pattern of a particular stock is the major factor in determining which fishery will harvest major portions of the production. Management implications for

conservation and allocation are obvious. It would be desirable to conduct such studies on a coast-wide basis so that a wide variety of management considerations could be investigated. However, studies within S.E. Alaska should provide much useful information.

The information provided by qualitative description of chinook migrations would be extremely useful for subsequent quantitative studies. To determine the mixing proportion of component stocks in the troll fishery it would be expedient to determine in advance which stocks are most likely to be present in detectable or significant percentages. Scale pattern recognition studies have the capability to provide point and interval estimates of the mixing proportion of components stocks in the fishery. (The number of stocks that may be recognized and the precision of the estimates is unknown at this time.) This would require that scale samples be taken from vessels participating in the fishery. The scales would be compared to scales from those stocks previously determined to have a certain probability of occurrence. The resulting stock composition estimates would show where and when fishing effort could be increased or decreased to change the racial composition of the catch. Such changes might be made without reducing the overall catch.

Scale pattern analysis is not the only tool available for making such estimates. The expansion of coded wire tag recoveries could provide much information. The coded wire tagging program is not without its problems, however. There are currently political and economic pressures within each region that restrict the availability of peripheral information and the development of techniques required to analyze the vast



amount of information available. Qualitative descriptions of migration patterns from these data may be realized well in advance of quantitative descriptions of stock composition. For immediate management needs it is likely that quantitative estimates from coded wire tagging data will be unavailable.

Finally, tagging studies conducted on the fishing grounds are not without their usefulness. Because of their cost these studies are best directed at questions not immediately answerable with existing data or scale studies. The Canadian interception of southern U.S. stocks on their homeward migration is a particular example. Entry patterns of Alaskan stocks is another.

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Appendix A: Escapement Estimates

Appendix A Table 1.

Oregon and Washington Escapement Estimates

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>GOAL</u>
<u>Oregon Coastal Streams</u> (1)	55.0	64.6	59.2	76.6	85.3	56.8	88.3	90.7	96.4	110.8		150,000 -200,000
<u>Columbia River</u>												
<u>Upriver Spring Chinook</u>												
Run Size	146,500	269,500	223,800	99,800	< 97,900	63,900	138,400	127,000	48,600	53,100 <sup>P</sup>		
Escapement	96,800	136,000	101,200	61,900	< 97,900	63,700	98,600	124,700	48,100	53,100 <sup>P</sup>		100,000- 120,000
<u>Upriver Summer Chinook</u>												
Run Size	89,500	77,500	52,400	34,000	44,400	42,100	41,200	43,400	34,400 <sup>P</sup>	31,200 <sup>P</sup>		
Escapement	72,100	66,400	43,400	34,000	44,400	42,100	41,000	43,000	34,200 <sup>P</sup>	31,100 <sup>P</sup>		80,000 90,000
<u>Upriver Fall Chinook</u>												
Run Size	244,800	188,600	249,300	176,900	311,600	260,400	199,000	183,800	172,100 <sup>P</sup>	160,400 <sup>P</sup>		
Bonneville Esc.	102,000	55,200	91,100	74,100	97,200	107,200	85,700	89,500	84,000 <sup>P</sup>	96,900 <sup>P</sup>		--
McNary Count.	49,000	37,600	46,600	34,600	29,600	28,800	37,600	27,300	31,200 <sup>P</sup>	29,000 <sup>P</sup>		40,000
<u>Lower River Spring Chinook</u>												
Willamette R. Run Size	67,400	47,100	54,500	71,800	32,600	40,700	58,000	71,400	44,600 <sup>P</sup>	42,500 <sup>P</sup>		
Willamette R. Esc.	44,600	26,200	42,000	44,500	19,100	22,200	40,000	47,500	26,600 <sup>P</sup>	27,000 <sup>P</sup>		30,000 -
Cowlitz R. Esc.	11,000	9,200	13,700	27,800	45,200	53,000	35,800	35,700	17,200	30,000		35,000
<u>Hatcheries</u>												
<u>Spring Chinook</u>												
Below Bonneville <sup>I</sup>	16,900	9,300	15,100	33,200	25,900	29,900	30,200	25,200	19,200	28,400		(2)
Above Bonneville <sup>I</sup>	8,200	20,500	19,800	6,400	12,000	14,800	20,100	14,100	9,300	11,200		(3)
<u>Fall Chinook</u>												
Below Bonneville	55,700	41,200	50,100	34,200	34,800	51,600	41,600	59,400	46,800	36,300		(2)
Above Bonneville <sup>I</sup>	17,100	9,600	20,400	14,200	36,800	25,800	22,200	20,100	21,200	31,100		(2)
<u>Willapa Bay</u> (8) (hatchery)	2,689	2,544	5,487	4,729	3,995	2,939	5,780					5,000
<u>Grays Harbor</u> (natural) (8)												14,600
(hatchery) (8)	10	100	18	9	32	59	192					2,500
<u>North Washington Coast</u> (4)												
<u>Queets Spring/Summer</u>	X	X	488	519	600	256	1079	1092	955	805 <sup>P</sup>		1,400 <sup>(5)</sup>
<u>Queets Fall Chinook</u>	X	X	3,615	1,621	2,498	1,262	3,422	2,063	6,147	3,800 <sup>P</sup>		4,300 <sup>(5)</sup>
<u>Hoh Spring/Summer</u>	X	X	817	791	546	621	1,212	1,626	1,442	842 <sup>P</sup>		1,550 <sup>(5)</sup>
<u>Hoh Fall Chinook</u>	X	X	1,966	563	400	469	1,191	797	1,750	1,389 <sup>P</sup>		2,400 <sup>(6)</sup>
<u>Quillayute Fall</u>	X	X	2,591	3,804	2,023	2,027	3,224	4,824	4,968	4,478 <sup>P</sup>		6,100 <sup>(6)</sup>



Appendix A Table 1. (continued)

Oregon and Washington Escapement Estimates

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>GOAL</u>
<u>N. Wash. Coast Hatchery</u>												
Spring/Summer	-	19	127	78	1,421	2,304	925					600
Fall Chinook	381	202	42	81	165	39	2,347					1,700
<u>Puget Sound (7)</u>												
Hatchery (8)	31,016	34,108	37,584	24,226	21,200	24,800	27,920					35,575
Wild					(50,000 average)							

Source: Data from PFMC (1981) unless otherwise noted.

(1) These data are numbers of spawning fish 1 mile observed in Oregon index streams. These numbers are considered adequate for the desired goal of 150,000-200,000.

P Preliminary

(2) Adequate egg takes.

(3) Inadequate egg takes.

I Included in above escapement estimates.

(4) Derived from in-season evaluation fisheries. All wild.

(5) WDF goal.

(6) Jointly agreed to by state and tribe.

(7) Values currently being assessed

(8) From PFMC or cited by Natural Resource Consultants (1980).

## Appendix A Table 2.

British Columbia Chinook Escapement Estimates.

Area	1971 <sup>(1)</sup>	1972 <sup>(1)</sup>	1973 <sup>(1)</sup>	1974 <sup>(1)</sup>	1975 <sup>(1)</sup>	1976 <sup>(2)</sup>	1977 <sup>(2)</sup>	1978 <sup>(2)</sup>	1979 <sup>(2)</sup>	1980	1981	GOAL <sup>(3)</sup>
1. N. Queen Charlotte Is.	500	1,000	900	1,000	1,500	700	800	600	475			5,000
2. E. W. Queen Ch. Is.	-	-	-	-	-	-	-	-	-			
3. Nass River	16,350	19,800	3,550	3,775	8,001	4,830	9,060	10,190	8,180			30,000
4. Lower Skeena (12)	20,000	20,380	40,295	31,976	20,459	12,834	29,512	23,363	17,202			50,000
5. Grenville/Principe	-	-	-	-	-	25	-	25	25			
6. Butedale (4)	23,325	14,060	14,055	12,125	5,050	6,779	3,883	6,512	6,510			25,000
7. Bella Bella	-	-	-	-	-	-	-	-	-			
8. Bella Coola (11)	39,250	21,325	25,950	21,925	7,425	28,550	33,600	24,000	19,600			35,000
9. Rivers Inlet	1,741	860	1,630	6,700	3,255	1,640	2,205	2,800	2,150			7,500
10. Smith Inlet	700	800	570	1,800	960	1,000	1,050	2,100	500			2,000
11. Seymour/Belize	-	-	-	-	-	-	-	-	-			
12. Johnstone Straits (8)	3,500	12,075	17,025	14,450	11,800	15,150	3,955	6,150	3,610	1,407 <sup>(13)</sup>		40,000
13. Quathlaski (9)	14,150	14,850	16,200	12,125	12,775	9,325	18,800	13,741	9,649	4,891 <sup>(13)</sup>		54,000
14. Comox/Qualicum Beach (7)	1,725	1,475	2,475	1,559	2,729	2,645	5,437	5,605	9,509			10,000
15. Powell River	19,000	11,700	9,500	-	-	-	110	-	25			25,000
16. Pender Harbour	-	-	-	-	-	-	-	1	4			
17. Nanaimo/Ladysmith	880	2,010	1,265	2,440	545	1,160	2,950	2,761	4,595			20,000
18. Cowichan (10)	7,925	8,800	8,425	4,125	6,575	10,025	7,925	4,730	7,775			30,000
19.	-	-	-	-	-	-	-	-	-			
20. Juan de Fuca Strait	1,900	7,225	7,400	1,152	625	105	150	121	482			
21.	-	-	-	-	-	-	-	30	-			
22. Nitinat Lake	1,200	800	850	3,000	800	650	1,000	1,200	3,500			
23. Barkley Sound (5)	16,375	10,850	12,350	14,180	16,800	14,510	13,495	9,525	11,100			18,000
24. Clayoquot Sound	750	550	750	325	665	383	275	176	465			2,000
25. Nootka Sound	4,675	5,345	6,900	4,375	1,900	1,380	3,355	5,809	2,503			
26. Kyuquot Sound	1,950	1,850	4,125	2,100	525	950	309	140	580			
27. Quatsina Sound	625	602	200	400	400	400	950	2,250	1,180			1,000
28. Howe Sd.-Burrard In. (6)	11,279	9,488	14,015	9,343	4,817	6,008	4,170	2,055	5,303			35,000
29. Fraser River	80,700	47,693	81,635	78,250	79,185	44,805	81,461	72,396	62,410			155,000
Total	248,500	213,538	270,065	227,125	184,791	163,854	224,427	196,255	177,332			

(1) (Aro, Miller and McDonald, 1977)

(2) Supplied by K. V. Aro to R. A. Fredin in a letter dated 2/9/81.

(3) (Austin, 1981)

(4) Includes Kitimat River and its hatchery.

(5) Includes Robertson Creek Hatchery and the Somass River.

- (6) Includes Capilano Hatchery and Squamish River.
- (7) Includes Big Qualicum and Puntledge hatchery facilities and the Puntledge River.
- (8) Includes the Nimpkish and Klinaklini Rivers.
- (9) Includes the Homathko and Southgate Rivers and the Quinsam hatchery.
- (10) Includes the Cowichan River.
- (11) Includes the Bella Coola River.
- (12) Includes the Skeena River.
- (13) (Meadows, 1981)

## Appendix A Table 3.

Southeast Alaska Escapement Estimates

River System	1971 <sup>(1)</sup>	1972 <sup>(1)</sup>	1973 <sup>(1)</sup>	1974 <sup>(1)</sup>	1975 <sup>(1)</sup>	1976 <sup>(1)</sup>	1977 <sup>(1)</sup>	1978 <sup>(1)</sup>	1979 <sup>(1)</sup>	1980 <sup>(1)</sup>	1981 <sup>(2)</sup>	GOAL <sup>(1)</sup>	
Taku R. (3) (Nakina R.)	X X	3333 1000 <sup>A</sup>	6667 2000 <sup>A</sup>	6000 1800 <sup>A</sup>	6000 <sup>H</sup> 1800 <sup>H</sup>	10,000 <sup>H</sup> 3000 <sup>H</sup>	12,833 <sup>H</sup> 3850 <sup>H</sup>	5400 <sup>H</sup> 1620 <sup>H</sup>	7033 <sup>H</sup> 2110 <sup>H</sup>	15,000 <sup>H</sup> 4500 <sup>H</sup>	17,000 <sup>H</sup> 5100 <sup>H</sup>	30,000 <sup>A</sup> 9000 <sup>A</sup>	
Stikine R. (4) (Little Tahltan R.)	X X	X X	X X	X X	5600 <sup>H</sup> 700 <sup>H</sup>	3200 <sup>H</sup> 400 <sup>H</sup>	6400 <sup>H</sup> 800 <sup>H</sup>	5056 <sup>H</sup> 632 <sup>H</sup>	9328 <sup>H</sup> 1166 <sup>H</sup>	17,096 <sup>H</sup> 2137 <sup>H</sup>	26,672 <sup>H</sup> 3334 <sup>H</sup>	16,800 <sup>A</sup> 2100 <sup>A</sup>	
Alsek R. (5) (Kluckshu Lake)		469 <sup>A/F</sup> 300 <sup>A/F</sup>	1719 <sup>A/F</sup> 1100 <sup>A/F</sup>	X X	X X	1917 <sup>W</sup> 1227 <sup>W</sup>	5000 <sup>W</sup> 3200 <sup>W</sup>	3570 <sup>W</sup> 2285 <sup>W</sup>	4002 <sup>W</sup> 2561 <sup>W</sup>	2189 <sup>W</sup> 1401 <sup>W</sup>	3300 <sup>W</sup> 2112 <sup>W</sup>	5000 <sup>W</sup> 3200 <sup>W</sup>	
Unuk R. (6)	X X	1770 <sup>A</sup> 885 <sup>A</sup>	364 <sup>A</sup> 182 <sup>A</sup>	X X	110 <sup>H</sup> 55 <sup>H</sup>	396 <sup>H/W-F</sup> 198 <sup>H/W-F</sup>	2332 <sup>H/W-F</sup> 1166 <sup>H/W-F</sup>	3530 <sup>H/W-F</sup> 1765 <sup>H/W-F</sup>	1152 <sup>H/W-F</sup> 576 <sup>H/W-F</sup>	2104 <sup>H/W-F</sup> 1052 <sup>H/W-F</sup>	1482 <sup>H/W-F</sup> 731 <sup>H/W-F</sup>	3600 <sup>A</sup> 1800 <sup>A</sup>	
Chikamin R. (6)	X X	1720 <sup>A</sup> 860 <sup>A</sup>	458 <sup>A</sup> 229 <sup>A</sup>	352 <sup>H</sup> 176 <sup>H</sup>	702 <sup>H</sup> 351 <sup>H</sup>	244 <sup>H</sup> 122 <sup>H</sup>	470 <sup>H</sup> 235 <sup>H</sup>	362 <sup>H</sup> 181 <sup>H</sup>	280 <sup>H</sup> 140 <sup>H</sup>	522 <sup>H</sup> 261 <sup>H</sup>	550 <sup>H</sup> 275 <sup>H</sup>	1800 <sup>A</sup> 900 <sup>A</sup>	
Situk R.	-	964 <sup>F1</sup>	400 <sup>F1</sup>	500 <sup>F1</sup>	702 <sup>F1</sup>	1180 <sup>F1</sup>	1933 <sup>W</sup> 1933 <sup>W</sup>	1872 <sup>W</sup> 1872 <sup>W</sup>	1103 <sup>W</sup> 1103 <sup>W</sup>	1754 <sup>W</sup> 1754 <sup>W</sup>	1125 <sup>W</sup> 1125 <sup>W</sup>	807 <sup>W</sup> 807 <sup>W</sup>	5100 <sup>W</sup> 5100 <sup>W</sup>
Wilson/Blossum R. (6)	X X	1000 <sup>A</sup> 500 <sup>A</sup>	X X	332 <sup>H</sup> 166 <sup>H</sup>	306 <sup>H</sup> 153 <sup>H</sup>	136 <sup>H</sup> 68 <sup>H</sup>	224 <sup>H</sup> 112 <sup>H</sup>	286 <sup>H</sup> 143 <sup>H</sup>	108 <sup>H</sup> 54 <sup>H</sup>	178 <sup>H</sup> 89 <sup>H</sup>	318 <sup>H</sup> 159 <sup>H</sup>	1600 <sup>A</sup> 800 <sup>A</sup>	
Keta R. (6)	X X	X X	X X	X X	406 <sup>H</sup> 203 <sup>H</sup>	168 <sup>H</sup> 84 <sup>H</sup>	460 <sup>H</sup> 230 <sup>H</sup>	784 <sup>H</sup> 392 <sup>H</sup>	852 <sup>H</sup> 426 <sup>H</sup>	384 <sup>H</sup> 192 <sup>H</sup>	658 <sup>H</sup> 329 <sup>H</sup>	1000 <sup>A</sup> 500 <sup>A</sup>	
King Salmon R. (Adm. In.) (6)	-	94 <sup>F</sup>	90 <sup>F</sup>	211 <sup>F</sup>	104 <sup>F</sup>	42 <sup>F</sup>	130 <sup>F/H</sup> 65 <sup>F/H</sup>	268 <sup>F/H</sup> 134 <sup>F/H</sup>	114 <sup>F/H</sup> 57 <sup>F/H</sup>	176 <sup>F/H</sup> 88 <sup>F/H</sup>	140 <sup>F/H</sup> 70 <sup>F/H</sup>	202 <sup>F/H</sup> 101 <sup>F/H</sup>	400 <sup>A</sup> 200 <sup>A</sup>

(1) (ADFLG, 1981 a)

(2) (ADFLG, 1981 b)

(3) Taku R. values obtained by dividing Nakina R. counts by 0.3 (an average Nakina R. contribution of 40% is assumed, and an aerial/peak survey counting rate of 75% is assumed).

(4) Stikine R. values obtained by dividing Little Tahltan R. counts by 0.125. (An average Little Tahltan R. contribution of 25% is assumed, and an aerial/peak survey counting rate of 50% is assumed).

(5) Alsek R. values obtained by dividing Kluckshu L. counts by 0.64. (An average Kluckshu contribution of 64% is assumed).

(6) Values obtained by dividing counts by 0.50. (An average aerial/peak survey counting rate of 50% is assumed).

**Appendix B: Catch Statistics**

Appendix B Table 1.

Oregon - Washington Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Oregon Commercial Troll	102,900	127,300	363,300	224,100	224,700	184,345	340,014	191,532	245,473	209,324 <sup>P</sup>	
By Area of Landing:											
Columbia River	-	-	-	-	-	28,102	21,884	15,196	9,506	9,865 <sup>P</sup>	
Tillamook	-	-	-	-	-	9,076	26,145	8,138	4,289	6,101 <sup>P</sup>	
Newport	-	-	-	-	-	29,943	61,619	54,122	37,253	43,524 <sup>P</sup>	
Coos Bay	-	-	-	-	-	75,025	142,518	66,825	86,950	86,092 <sup>P</sup>	
Brookings	-	-	-	-	-	42,199	87,847	47,251	107,475	63,742 <sup>P</sup>	
Ore. Recreational Fishery	29,600	44,100	61,000	36,700	75,700	79,316	61,364	22,844	20,902	18,494 <sup>P</sup>	
By Area of Landing:											
Columbia River	-	-	-	-	-	44,578	22,630	7,939	7,542	5,541 <sup>P</sup>	
Tillamook	-	-	-	-	-	2,323	1,541	833	981	1,467 <sup>P</sup>	
Newport	-	-	-	-	-	4,570	2,626	2,068	1,431	1,771 <sup>P</sup>	
Coos Bay	-	-	-	-	-	14,613	22,727	4,751	4,537	5,442 <sup>P</sup>	
Brookings	-	-	-	-	-	13,232	11,840	7,253	6,411	4,273 <sup>P</sup>	
Washington Troll	252,200	202,900	317,300	353,100	274,200	361,400	267,500	166,200	148,100 <sup>P</sup>	132,700 <sup>P</sup>	
By Coastal Area:											
Cape Flattery	-	-	-	-	-	68,100	52,200	46,000	35,500	35,000	
Quillayute	-	-	-	-	-	86,300	44,800	39,500	29,200	29,400	
Grays Harbor	-	-	-	-	-	153,000	94,100	49,500	58,100	52,600	
Columbia River	-	-	-	-	-	46,300	40,500	10,500	9,600	10,700	
Wash. Ocean Rec. Fishery	160,000	212,300	203,800	214,600	261,600	170,700	175,000	96,400	76,900	53,600	
By Coastal Area:											
Neah Bay	-	-	-	-	-	11,300	7,300	7,200	2,600	2,800	
La Push	-	-	-	-	-	6,900	2,700	2,700	1,000	900	
Westport	-	-	-	-	-	91,500	101,000	64,800	48,900	33,500	
Ilwaco	-	-	-	-	-	61,000	64,000	21,700	24,400	16,400	
Col. R. Winter Season <sup>(1)</sup>	13,400	15,800	17,200	13,300	9,100	4,700	6,800	13,500	5,500 <sup>P</sup>	400 <sup>P</sup>	
Col. R. Spring Season <sup>(2)</sup>											
Commercial	22,600	69,900	60,500	8,400	0	0	9,300	0	0	0	
Sport	19,900	24,400	30,300	14,000	0	0	14,800	100	0	0	
Treaty	12,700	42,800	34,200	17,500	0	400	17,200	2,600	500	0	
Col. R. Summer Season <sup>(3)</sup>	closed	--	--	--	--	--	--	--	--	--	closed
Col. R. Fall Season											
Upriver Non-Treaty	93,800	96,300	105,400	52,200	95,900	33,400	69,200	39,700	28,400	28,000	
Upriver Treaty	56,500	42,900	67,900	54,900	140,600	135,000	55,200	61,600	62,500	30,600	
Lower River Chinook	122,100	43,400	165,300	44,700	77,400	114,900	97,900	70,300	72,800	78,400 <sup>(4)</sup>	

Appendix B Table 1. (continued)

Oregon - Washington Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Willapa Bay											
Early Season <sup>(5)</sup>	2,059	2,376	27,857	4,997	6,791 <sup>(6)</sup>	15,678 <sup>(6)</sup>	21,934 <sup>(6)</sup>	3,781	5,482	11,800	
Regular Fall Season	7,830	8,562	12,586	8,727	8,620	13,340	9,420	7,599	12,696	12,800	
Grays Harbor											
Early Season <sup>(7)</sup>	449	440	6,054	1,734	401	5,280	13,536	901	881	1,550	
Fall Non-Indian	8,880	10,113	10,474	7,941	7,013	2,874	1,840	703	0	3,343	
Fall Indian	-	-	-	70	1,294	3,086	4,006	2,674	95	5,350	
Chehalis R. Indian Gill-net											
Spring Chinook	607	852	773	239	149	388	775	559	675	286	
Fall Chinook	489	1,655	2,262	547	578	386	1,406	1,235	1,502	434	
Quinalt R. Indian Gill-net											
Spring Chinook	X	X	428	208	63	311	208	540 <sup>P</sup>	947 <sup>P</sup>	1,109 <sup>P</sup>	
Fall Chinook	2,112	2,938	1,596	2,458	1,578	3,236	5,856	6,843 <sup>P</sup>	6,484 <sup>P</sup>	4,550 <sup>(9)</sup>	
Queets R. Indian Gill-net											
Spring/Summer	1,111	1,241	459	481	380	135	356	209	479 <sup>P</sup>	123 <sup>P</sup>	
Fall Chinook	1,128	668	3,629	3,063	2,052	1,274	1,864	895	860	2,615	
Hoh R. Indian Gill-net											
Spring/Summer	1,470	1,380	715	623	513	509	875	1,051 <sup>P</sup>	766 <sup>P</sup>	165 <sup>P</sup>	
Fall Chinook	1,128	668	2,187	820	677	483	1,619	843	450	461	
Quillayute R. Ind. Gill-net											
Spring/Summer	373	763	292	117	2,256	2,513	2,595	3,201	2,473 <sup>P</sup>	1,000 <sup>P</sup>	
Fall Chinook	2,941	3,523	3,507	3,849	2,290	2,246	5,297	1,357	2,610	1,390	
Puget Sound Net											
Non-Indian	130,715	83,867	94,126	80,156	130,424	91,146	136,208	115,726	74,393 <sup>P</sup>	93,723 <sup>(10)</sup>	
Indian	29,234	33,823	42,262	64,482	99,964	122,953	108,472	124,361	109,048 <sup>P</sup>	164,947 <sup>(10)</sup>	
Puget Sound Recreational											(11)

Source: Data are from PFMC (1981) unless otherwise noted.

<sup>P</sup>Preliminary data.

(1) January-March.

(2) April-May.

- (3) June-July
- (4) Estimate of lower river stocks caught in all fisheries below Bonneville Dam, September - October.
- (5) Prior to August 26.
- (6) Includes non-treaty Indian catches.
- (7) Prior to August 16.
- (8) Grays Harbor tributary.
- (9) Based on data collected through November 30, 1980.
- (10) Preliminary data through November 20, 1980.
- (11) Estimate not available due to agency budget constraints.



Appendix B Table 2.

British Columbia Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<sup>a</sup> North Coast											
Gill-net	46,524	69,960	60,820	56,967	58,478	41,736	53,050	41,262			
Seine	39,840	57,248	58,495	56,922	57,462	35,108	60,193	74,705			
Troll	269,877	326,231	252,455	293,877	305,417	286,080	206,696	206,018			
<sup>b</sup> South Coast											
Gill-net	35,197	24,735	27,826	29,848	36,862	46,404	47,354	50,506			
Seine	68,964	55,360	92,228	77,572	81,857	91,065	132,913	110,627			
Troll	992,513	895,171	832,915	864,737	778,229	959,988	897,489	821,125			
<sup>c</sup> Fraser Area											
Gill-net	132,201	121,146	94,518	67,778	73,833	79,869	90,893	56,744			
Seine	119	-	-	-	-	-	-	-			
Troll	8,021	1,953	5,369	19,145	19,591	2,802	7,222	6,280			
Subtotals											
Gill-net	213,922	215,841	182,964	154,593	169,173	168,009	191,297	148,532			
Seine	108,923	112,608	150,723	134,494	139,313	126,173	193,106	185,332			
Troll	1,270,411	1,223,355	1,090,739	1,177,759	1,103,237	1,248,870	1,111,407	1,033,423			

Sources: British Columbia Catch Statistics, 1971-1978,  
Department of Fisheries and Oceans.

<sup>a</sup>Statistical Areas 1-10, 30

<sup>b</sup>Statistical Areas 11-27 (inc. C)

<sup>c</sup>Statistical Areas 28,29

Appendix B Table 2. (continued)

British Columbia Catches

	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
<b>Subsistence</b>											
<sup>a</sup> Queen Charlotte Is.	15	30	17	0	-	0					
<sup>b</sup> North Coast	2,165	3,327	3,092	3,836	5,626	4,682					
<sup>c</sup> W. Coast Van. Is.	728	966	309	66	156	145					
<sup>d</sup> South Coast	15,575	18,904	14,046	21,031	22,863	25,296					
<b>Sport Catch</b>											
Queen Charlotte Is.	< 50	-	100	< 50	100	300					
North Coast	3,000	4,300	4,600	6,500	9,800	17,000					
W. Coast Van. Is.	13,200	4,000	6,900	10,500	13,000	12,800					
South Coast	106,400	145,300	136,600	141,800	181,100	262,300					

<sup>a</sup>Statistical Areas 1,2

<sup>b</sup>Statistical Areas 3-8

<sup>c</sup>Statistical Areas 11-20, 28, 29

<sup>d</sup>Statistical Areas .

Source: INPFC Statistical Yearbook

Appendix B Table 3.

Southeast Alaska Catches

	<u>1971</u> <sup>(7)</sup>	<u>1972</u> <sup>(7)</sup>	<u>1973</u> <sup>(7)</sup>	<u>1974</u> <sup>(7)</sup>	<u>1975</u> <sup>(7)</sup>	<u>1976</u> <sup>(7)</sup>	<u>1977</u> <sup>(7)</sup>	<u>1978</u> <sup>(7)</sup>	<u>1979</u> <sup>(7)</sup>	<u>1980</u> <sup>(3)</sup>	<u>1981</u> <sup>P(2)</sup>
All Troll <sup>(1)</sup>	333,717	242,088	307,715	322,120	287,337	231,178	271,777	375,368	338,034	298,502	258,600
By Types:											
Power Troll	-	-	-	-	259,183	204,878	238,601	321,057	279,088	247,785 <sup>(6)</sup>	-
Hand Troll	-	-	-	-	28,154	26,300	33,176	54,311	58,966	50,717 <sup>(6)</sup>	-
Gill Net	-	-	-	-	-	-	-	-	-	5,817 <sup>(d)</sup> 2,800 <sup>(s)</sup>	7,900
Seine	-	-	-	-	-	-	-	-	-	12,508	7,100
S. E. Total										320,270 <sup>(5)</sup>	274,600 <sup>(4)</sup>

(1) (ADF&G, 1980 b) for 1971-79.

(2) (ADF&G, 1981 b)

(3) (NMFS, 1981)

(4) Includes 1000 misc.

(5) Includes 642 misc.

(6) Handwritten draft table in (ADF&G, 1980 c).

(7) (Funk, 1981)

<sup>d</sup> Drift gill net.

<sup>s</sup> Set gill net.

JOHN SPELLMAN  
Governor



STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

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

December 29, 1981

ACTION	ROUTE TO	INITIAL
	Exec. Dir.	
	ROLLAND A. SCHMITTEN	RS
	Director	

DEC 31 1981

Mr. Jim Branson  
North Pacific Fisheries  
Management Council  
P. O. Box 3136DT  
Anchorage, AK 99510

Dear Jim:

On October 2 I wrote to you to convey the Department of Fisheries' general view on regulatory proposals for the 1982 Alaska troll fishery.

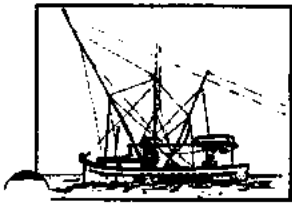
In reviewing the list of proposals for consideration at the January Council meeting, I do not see a proposal consistent with that earlier letter. I am attaching a copy of that letter in case the original was not received, and reiterate that our views remain as stated.

Sincerely,

Rolland A. Schmitt  
Director

Tmd

Attachment



Alaska  
Trollers  
Association

WESTWARD FISHERMEN

Name

Barton Sollars  
Tom Jackson  
Orrie Bell  
Harold Johnson  
Don Kenney  
Bob Gay  
Roger Bailey  
Dick Threenit  
Bob Hammer  
John, Jim Phillips  
Joe Zavodnik  
Leif Stromdahl  
Jake White  
Tom Osborne  
Russ Wyatt  
Mark Wendel  
Dave Corbin  
Roy Debritt  
Phil Templeton  
Stan Reddekopp  
Elinor Williams  
Toivo Andersen  
Bill Hammer  
Chuck Mason  
Forrest Hart  
Ted Sires  
Conrad Klippart  
Dick Kendall  
Clarence Moy  
Jim Guilmet  
David Templeton  
Jake Phillips  
John DeBoer  
John Claussen  
Fred Grant  
Allen Andersen  
Tony Guggenbickler  
Chuck Barker  
Ingvald Ask  
Art Theberge

TED MOSSBYRAG

JOE RIEDEKER

Vessel

Bertha R.  
  
Lindy  
  
Haley Christine  
Suzie M  
Southern Miss  
Naired  
  
Shamrock  
Doric  
Coral  
Mermaid  
Seal  
Bavaria  
Swan  
Demijohn  
  
Sword  
Carol Ann  
Elinor  
  
Silver Lady  
Silver Tip  
Pacific Star  
Pacific Sun  
Armenta  
  
Queen Ester  
Lone Fisherman  
Admiral  
Nancy J  
Ingot  
Lightly  
  
Greta  
Toni Marie  
Martin  
Agile  
Deep Sea

LEA

FAIRWEATHER

SOUTHEAST ALASKA SALMON TROLL FISHERY PROPOSALS FOR 1982  
SEASON FOR JOINT CONSIDERATION BY ALASKA BOARD OF FISHERIES  
AND NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL (January 7, 1982)

- (1) Chinook salmon harvest guideline optimum yield range.  
Alaska Board of Fisheries proposals # 109 (staff), 111, 112  
NPFMC OY proposals # 2-8
- (2) Open area west of Cape Suckling to trolling.  
Alaska Board of Fisheries # 128  
NPFMC area proposal # 2
- (3) Treble hooks.  
Alaska Board of Fisheries proposal # 127  
NPFMC gear proposal # 7
- (4) Retention of tagged, undersized salmon.  
Alaska Board of Fisheries proposal # 130 (staff)  
NPFMC size limit proposal # 2
- (5) Number of lines.  
Alaska Board of Fisheries proposals # 120, 121, 122, 125  
NPFMC gear proposals # 2, 3, 4, 6
- (6) Definition of FCZ Management Unit.  
Alaska Board of Fisheries proposal # 133  
NPFMC area proposals # 3, 4



EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF MANAGEMENT AND BUDGET  
WASHINGTON, D.C. 20503

TJ IAW

December 16, 1981

RECEIVED

ON

DEC 29 1981

by GCAK

Dec 22 11 03 AM '81

OFFICE OF THE  
GENERAL COUNSEL

Mr. Sherman E. Unger  
General Counsel  
Department of Commerce  
Washington, D.C. 20230

Dear Mr. Unger:

Pursuant to discussions between our respective staffs, I hereby exempt from Sections 3, 4, and 7 of Executive Order 12291 the following Fishery Management Plan (FMP) actions, provided that the actions are within the scope of the underlying FMPs and implementing regulations:

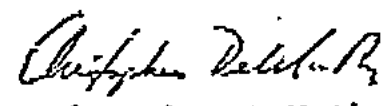
- Annual establishment and inseason adjustments of fishing season and time restrictions on fishing;
- Annual establishment and inseason adjustments to fishing quotas, including annual and quarterly quotas, TALFPs (Total Allowable Level of Foreign Fishing), reserves (that portion of the optimum yield reserved for inseason allocation if warranted by catch statistics), and Joint Venture Processing quotas;
- Annual establishment and inseason adjustment to catch restrictions, including trip or bag limits, incidental or prohibited-species allowances, catch size and weight limits, and catch restrictions based on sex of species;
- Annual and inseason opening, closing, and altering of fishing areas and subareas;
- Annual establishment and inseason adjustments of fishing gear limitations; limitations may include the type, construction, amount, in-use placement, and storage of fishing gear.

The publication of a management action in the Federal Register should include a statement giving the basis for the action under the applicable FMP and the need and justification for the action.

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The exemption does not apply to actions that are major regulations as defined in section 1(b) of Executive Order 12291. The exemption will be reviewed upon completion of the review of selected FMP's that was announced at the Vice President's Press Conference on March 25. In any event, the exemption will expire in one year.

Yours truly,



Christopher DeMuth  
Administrator for Information  
and Regulatory Affairs



JOHN SPELLMAN  
Governor



AGENDA E-1(c)  
January 1982

*mf*

ROLLAND A. SCHMITTEN  
Director

STATE OF WASHINGTON  
DEPARTMENT OF FISHERIES

115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600  
October 2, 1981

Mr. Jim H. Branson  
Executive Director  
North Pacific Fishery  
Management Council  
P.O. Box 3136 DT  
Anchorage, Alaska 99510

Dear Jim:

We have received your August 27 letter outlining NPFMC's intentions to adhere to the existing Salmon Plan amendment schedule. In light of this decision and the serious management problems identified in this fishery during the 1981 regulation development process, we wish to make general regulatory proposals which bracket the range of options that should be considered in 1982.

Further chinook O.Y. reductions are essential in response to serious conservation needs experienced by nearly every naturally spawning chinook stock harvested in the southeastern Alaska troll fishery. Additionally, the inequitable distribution of U.S. harvest on southern U.S. chinook stocks (e.g., Columbia River brights) must be addressed. O.Y. reductions above the 1981 levels which should be considered to solve these problems range up to 100 percent. This upper level would represent complete protection of many severely depressed chinook stocks. The minimum O.Y. level, which is necessary in 1982, cannot be quantified at this time, but we feel it is unlikely that this level should be below 30 percent. Season modifications to accomplish various O.Y. reductions should range from complete June to season-long closures.

The Washington Department of Fisheries will be refining its recommendations for management of the 1982 southeastern Alaska troll fishery during the next several months. As these results become available, we will be providing them to the NPFMC. We continue to emphasize that a more realistic 1982 management schedule is needed in response to court mandates and coded-wire tagging data processing time demands.

Sincerely,

Handwritten signature of Rolland A. Schmitt.

Rolland A. Schmitt  
Director

RAS:ljf

cc: DiDonato  
Mobrand  
Lincoln  
Wilkerson

Table 1. A Comparison of Recovery Areas of Chinook Salmon Disc Tagged in Inner Icy Strait and Outside Coastal Areas.

<u>Recovery Area</u>	<u>Tagging Locations</u>		<u>Total</u>
	<u>Outer Areas</u> n (%)	<u>Inner Icy Strait</u> n (%)	
ALASKA:	<u>4 (28.6%)</u>	<u>25 (80.6%)</u>	<u>29 (64.4%)</u>
Milling (within 5 mi. of tagging location)	0 (00.0%)	6 (19.4%)	6
Inside waters of Alaska	0 (00.0%)	15 (48.3%)	15
Outside waters of Alaska	4 (28.6%)	0 (00.0%)	4
Alaskan Chinook systems	0 (00.0%)	4 (12.9%)	4*
NON-ALASKAN:	<u>10 (71.4%)</u>	<u>6 (19.4%)</u>	<u>16 (35.6%)</u>
A) British Columbia	7 (50.0%)	6 (19.4%)	13
B) Washington	2 (14.3%)	0 (00.0%)	2
C) Oregon	<u>1 (07.1%)</u>	<u>0 (00.0%)</u>	<u>1</u>
TOTAL	14/109 (12.8%)	31/656 (4.7%)	45/765 (5.8%)

\* 3 from Taku, 1 from Stikine River

WDF  
Brennabaton  
Winnberg

ANNUAL BENEFITS FROM ACHIEVING SPAWNING ESCAPEMENT GOALS  
(Number of Fish X 1,000)

Production Unit	Catch to Escapement Ratio Used	
	3:1	4:1
Southeast Alaska	129	172
British Columbia		
Northern	244	325
Southern	97	130
Georgia St.	231	308
Fraser River	255	340
Washington Coastal	35	46
Columbia River	282	376
Oregon Coast	escapement goals currently being developed	
Total	1,273	1,697

ACCOUNT LEDGER FOR BRIGHTS  
(preliminary)

	81	80	79	78	77	76	75	7
BDC	63	70	71	66	64	80	84	7
CATCH	10	9	27	25	24			
ESC	21	30	31	27	38			
DES	4	4	4	5	5			
CER	NA	.2	0	.4	.6			
%	44	39	13	12	<del>1</del>	0	17	9
UN	28	27	9	8	0	0	14	7

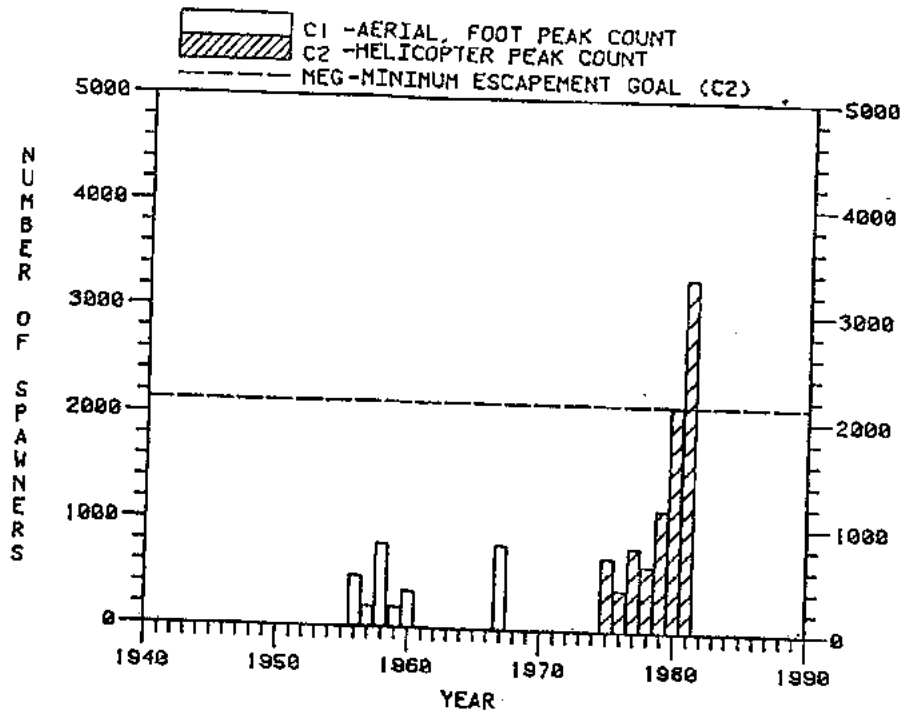


FIGURE 7. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE LITTLE TAHLTAN RIVER TRIBUTARY OF THE STIKINE RIVER, SOUTHEAST ALASKA 1956 TO 1981. (ADF&G 11/81)

(Note: Average contribution of Little Tahltan River tributary to total Stikine River chinook salmon production estimated to be approximately 25%.)

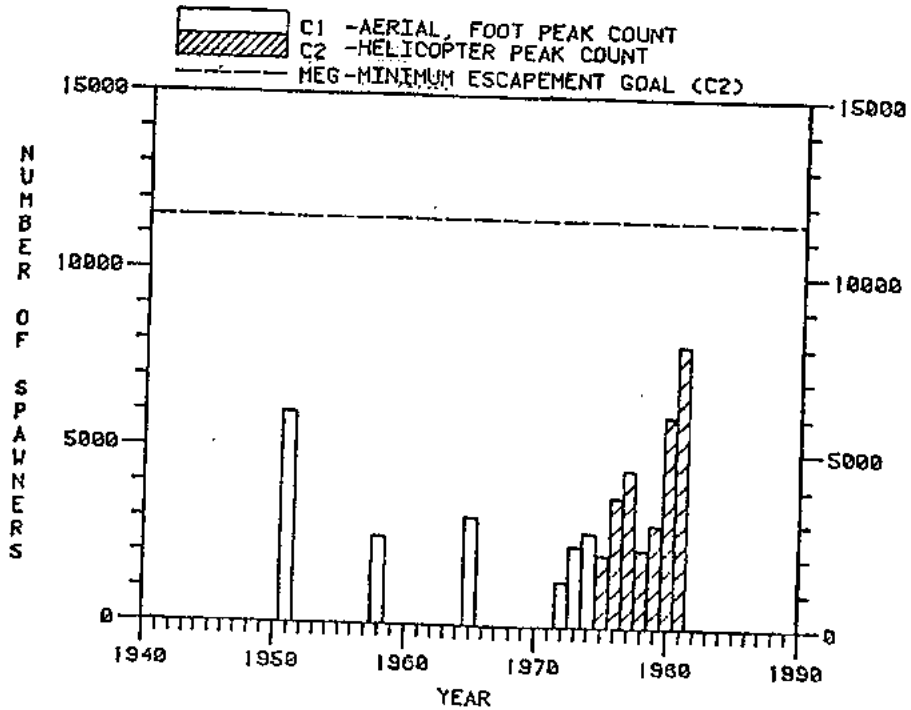


FIGURE 6. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE NAKINA AND NAHLIN TRIBUTARIES OF THE TAKU RIVER, SOUTHEAST ALASKA 1951 TO 1981. (ADF&G 11/81)

(Note: Average contribution of Nakina and Nahlin tributaries to total Taku River chinook salmon production estimated to be approximately 60%.)

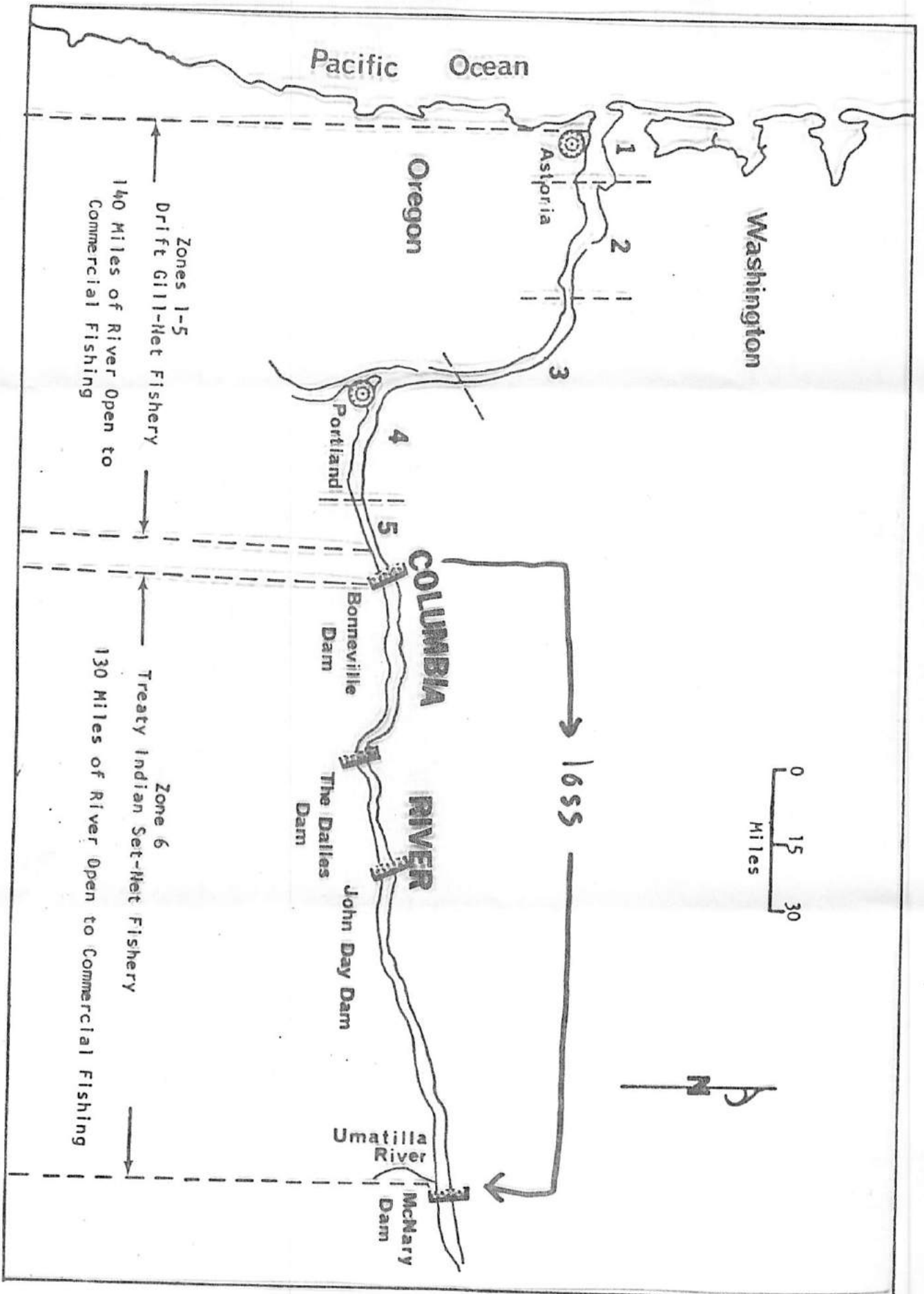


Figure 1. Map of the Columbia River below McLary Dam Showing Areas Open to Commercial Fishing

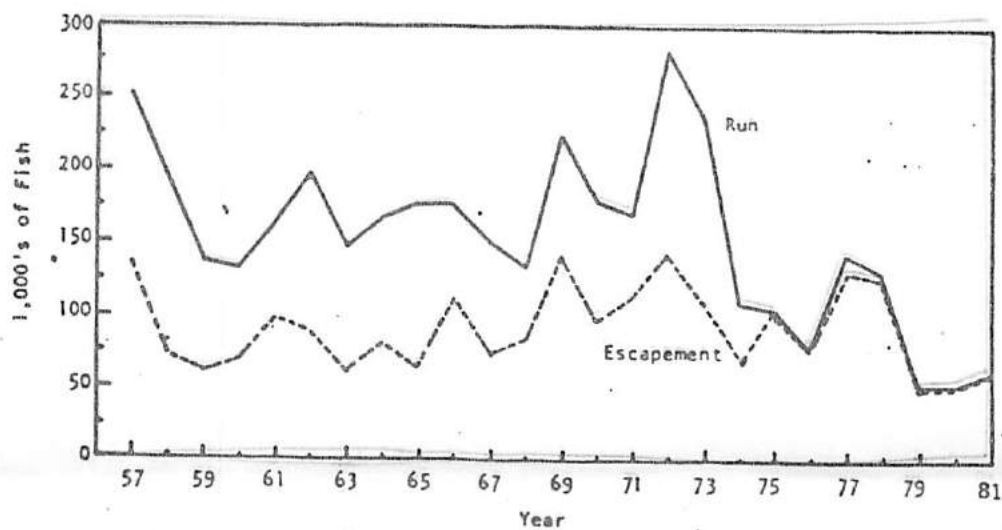


Figure 5. Estimated Numbers of Upriver Spring Chinook Entering the Columbia River, and Escapement Above Bonneville Dam, 1957-79

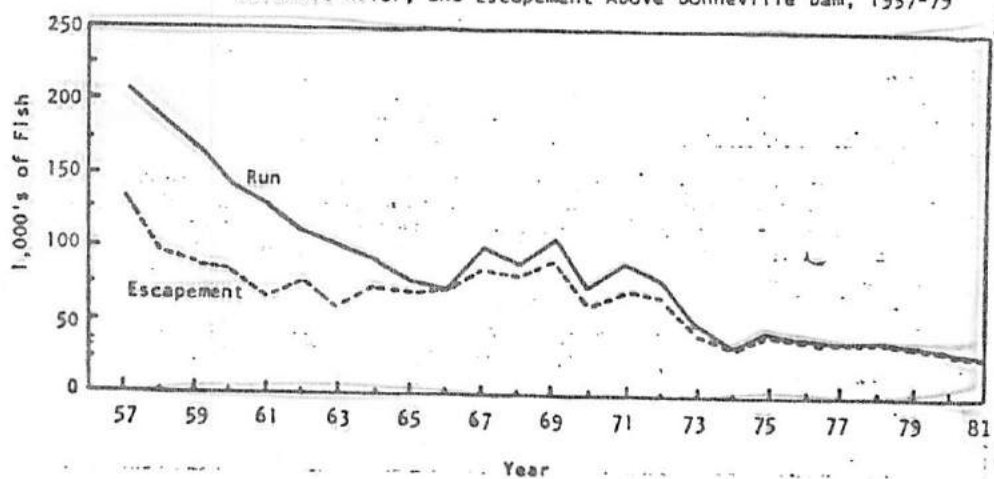
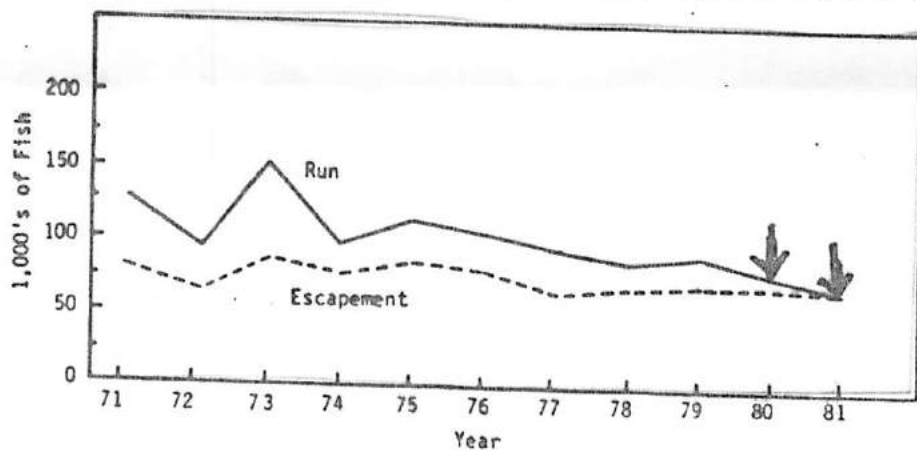


Figure 7. Estimated Numbers of Upper River Summer Chinook Entering the Columbia River and Escapement Above Bonneville Dam, 1957-79



Estimated Numbers of Upper River Wild Fall Chinook (Brights) Entering the Columbia River and Escapement Above Bonneville Dam

STOCK COMPOSITION OF THE IN-RIVER RUN OF COLUMBIA RIVER  
FALL CHINOOK

Stock	All Stocks	Percent of the Run	
		Lower river	Upper River
Lower River			
Wild	5%	12%	
Hatchery	39%	88%	
Upper River			
Wild <u>1/</u>	24%		43%
Hatchery	32%		57%

1/ Brights



Figure 2. (Caption text in Cyrillic)

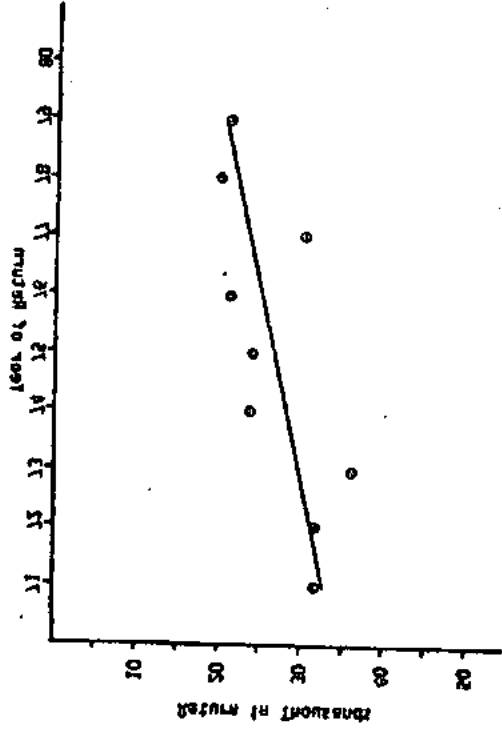


Figure 3. (Caption text in Cyrillic)

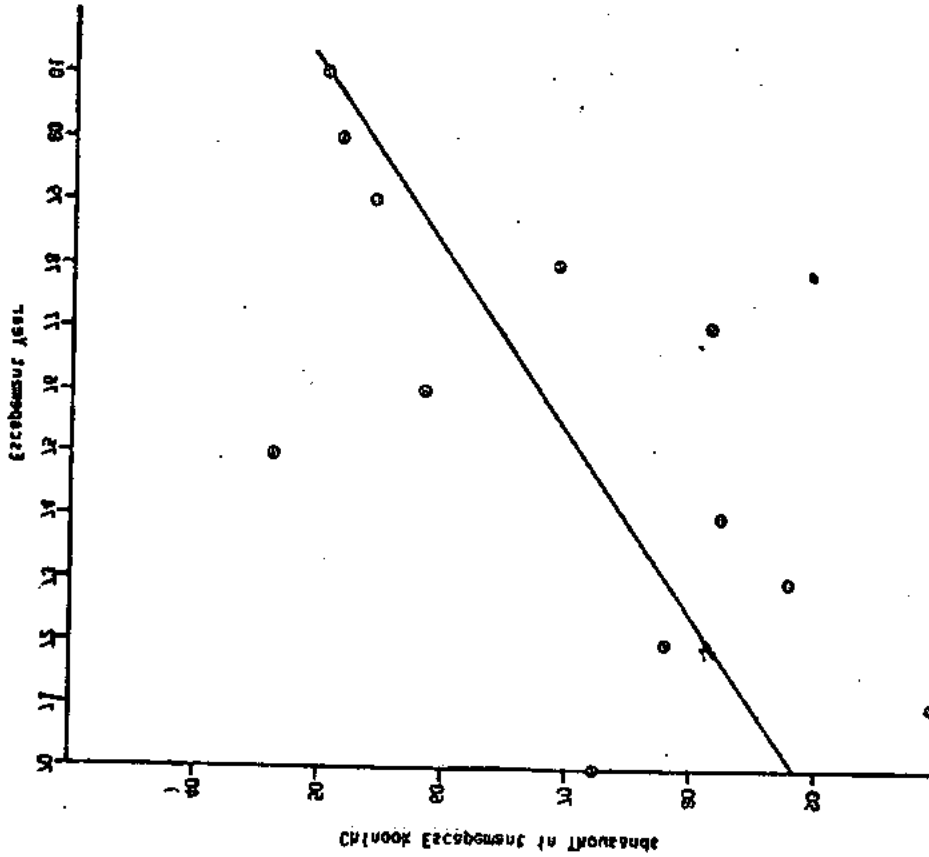
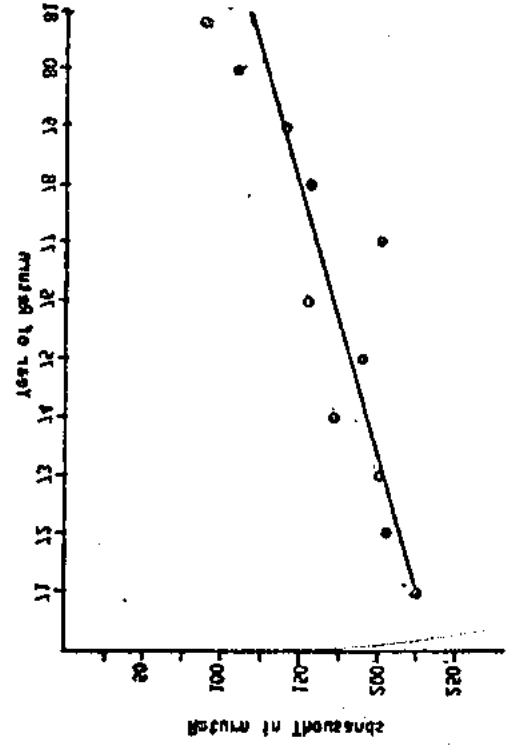


Figure 4. (Caption text in Cyrillic)



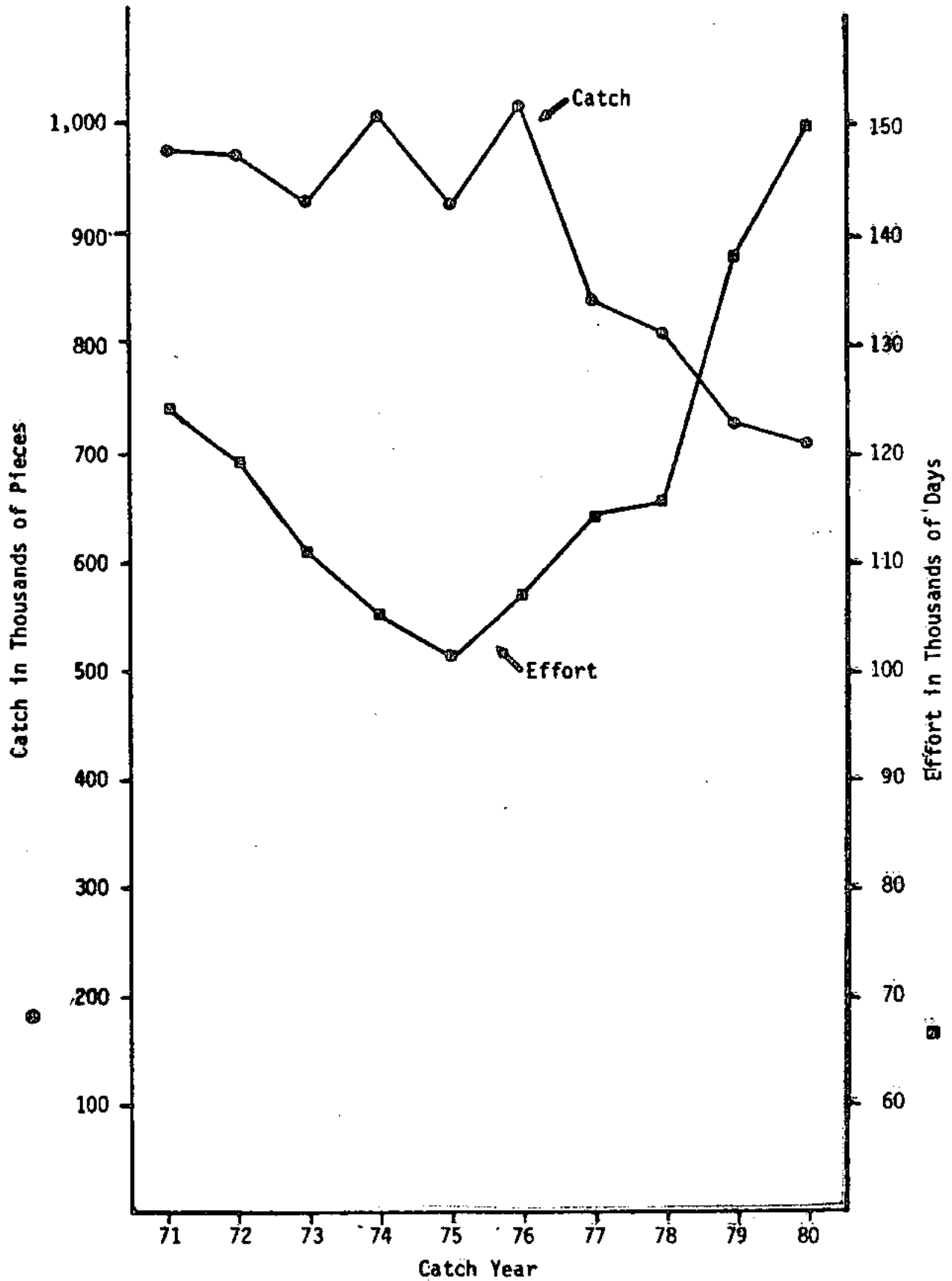
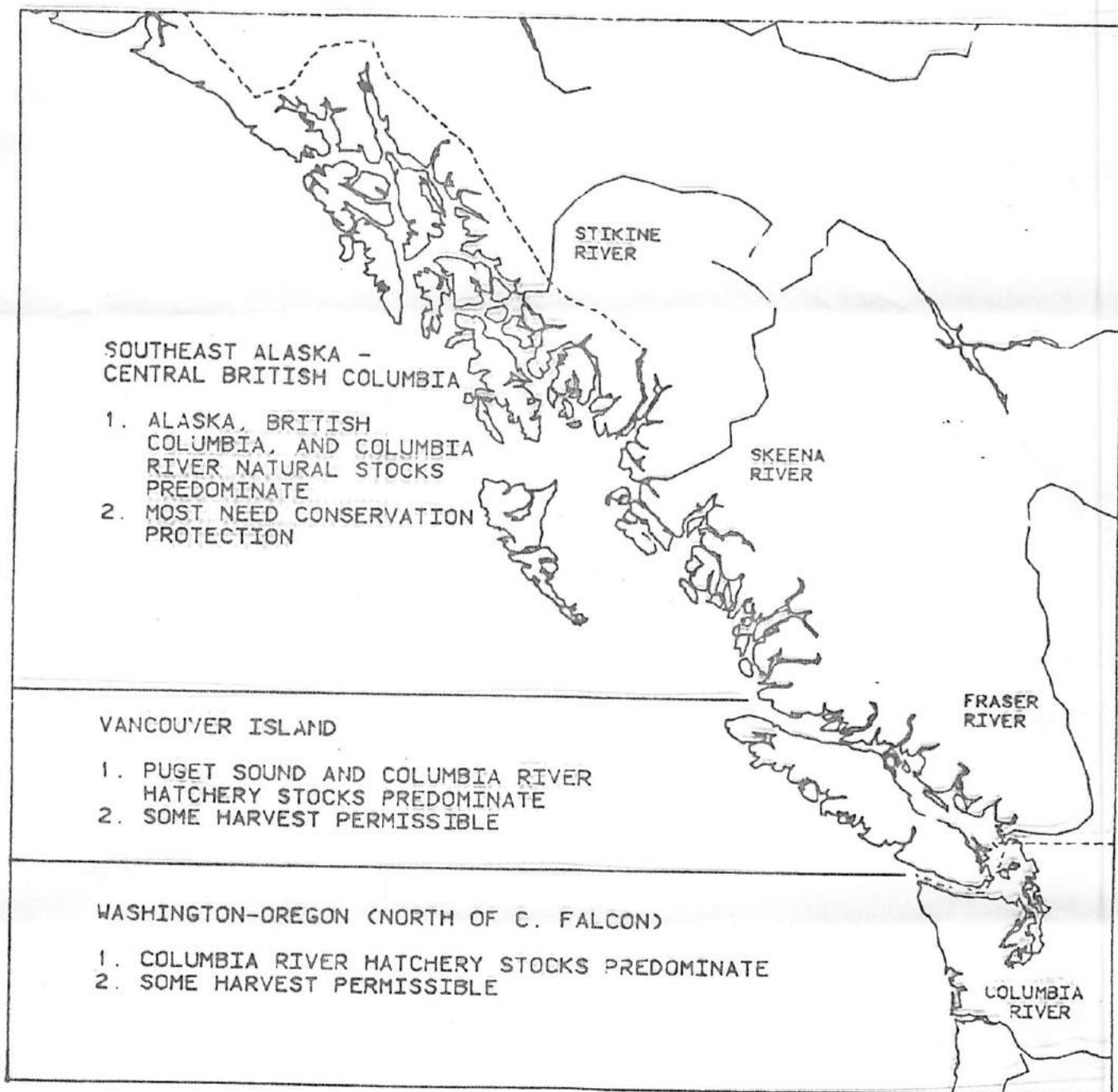


Figure 1. Catch of chinook salmon and fishing effort in ocean troll fishery. (Canadian data, Ken Pitre, Canada Department of Fisheries and Oceans, personal communication.)



GENERALIZED CHINOOK STOCK MANAGEMENT CONCERNS

# COASTWIDE CHINGOOK ESCAPEMENT GOAL ACHIEVEMENT

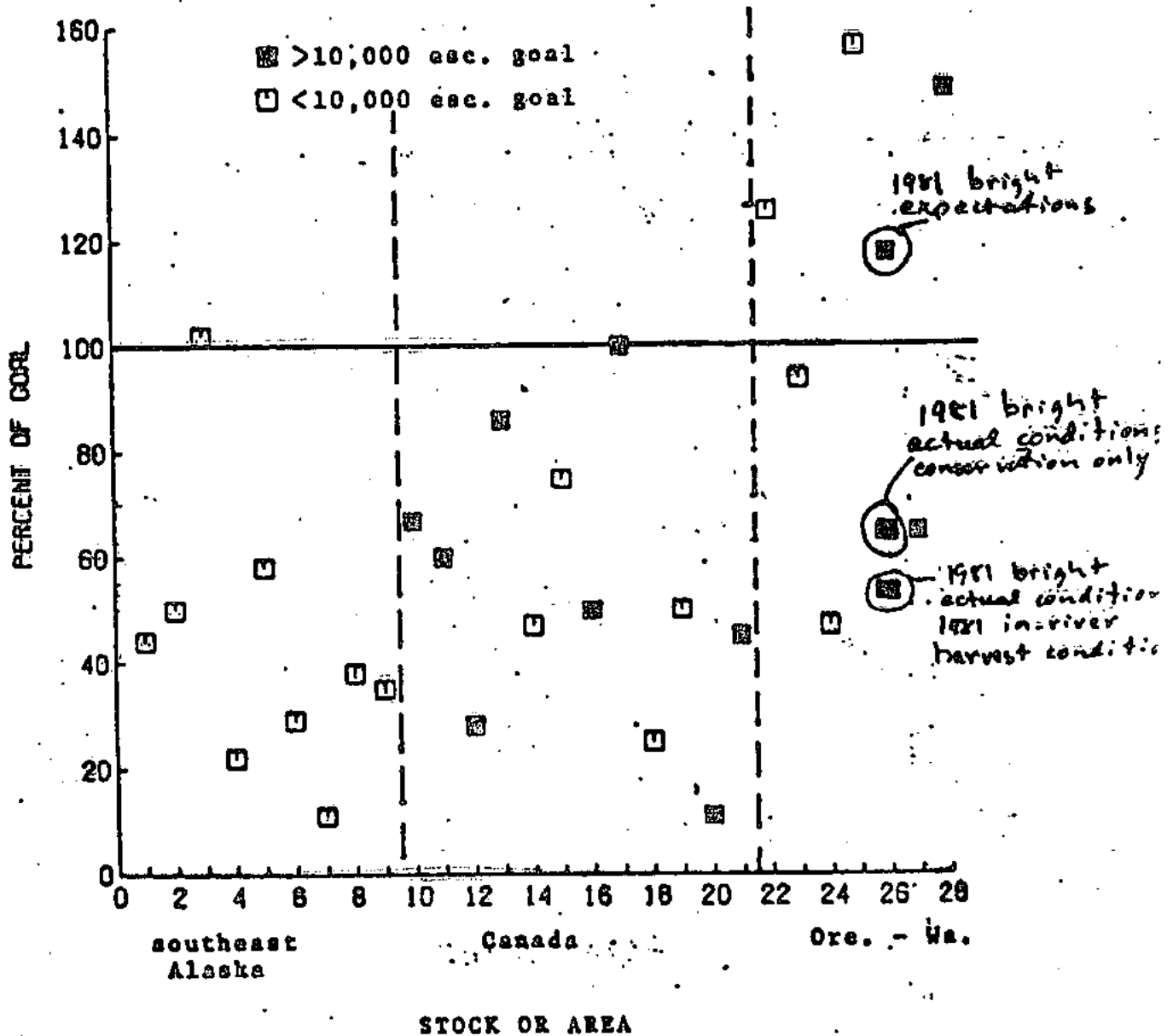
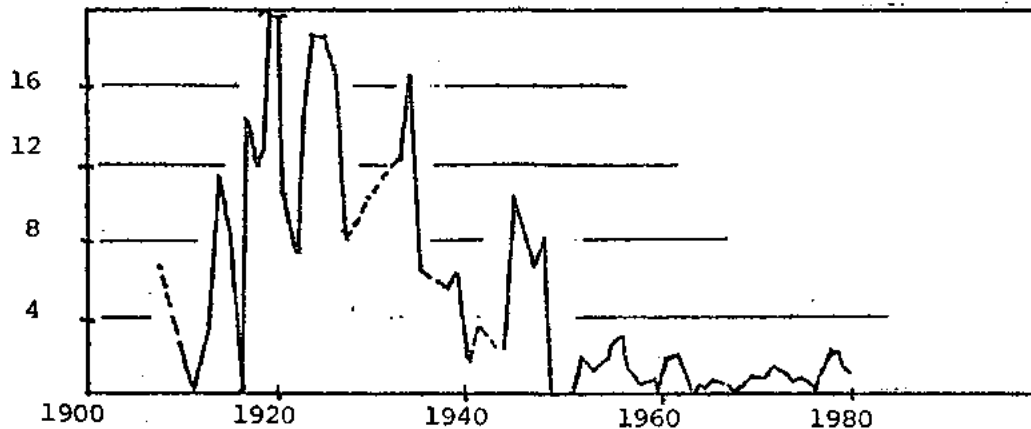


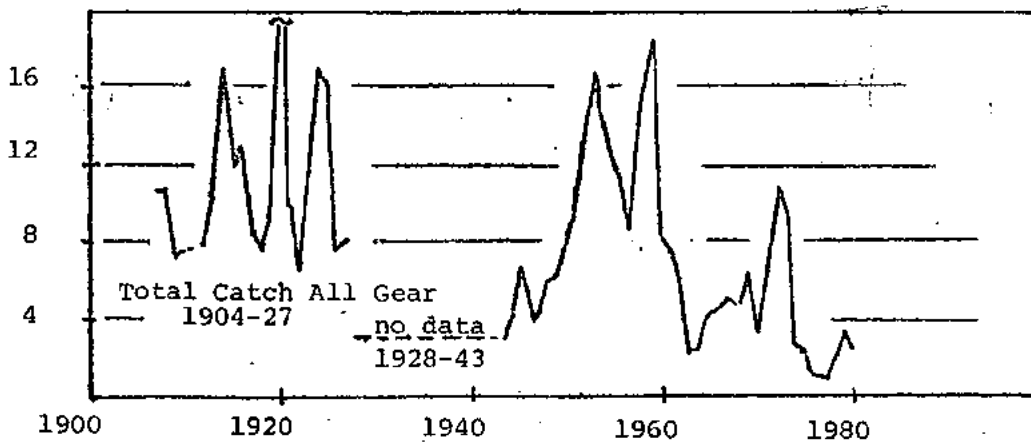
Figure 1. Run size in relation to escapement goals (Alaska=1980 observed, elsewhere = 1981 expectations).

CATCH IN THOUSANDS OF FISH

Alsek River Gillnet Harvest



Taku River Gillnet Harvest



Stikine River Gillnet Harvest

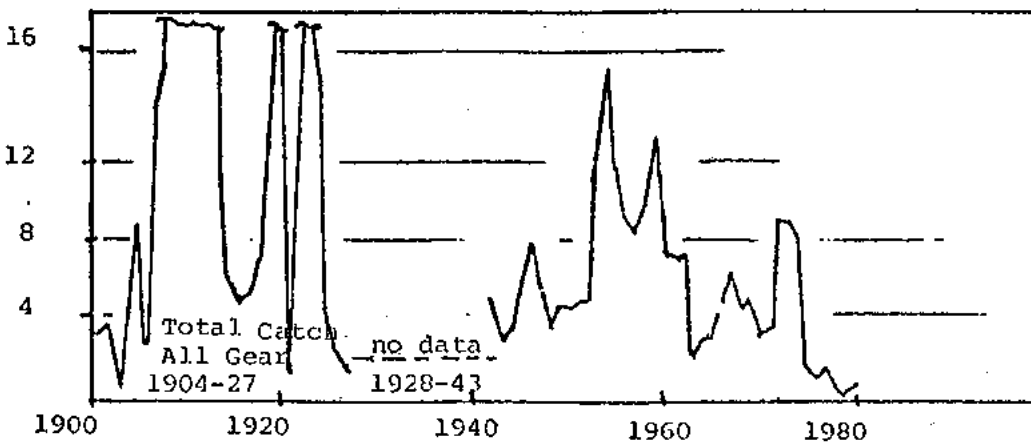


Figure 4. Historical Chinook Salmon Catches in Terminal Area Fisheries on the Alsek, Taku, and Stikine Rivers. (ADF&G 12/81)

MILLIONS OF KING

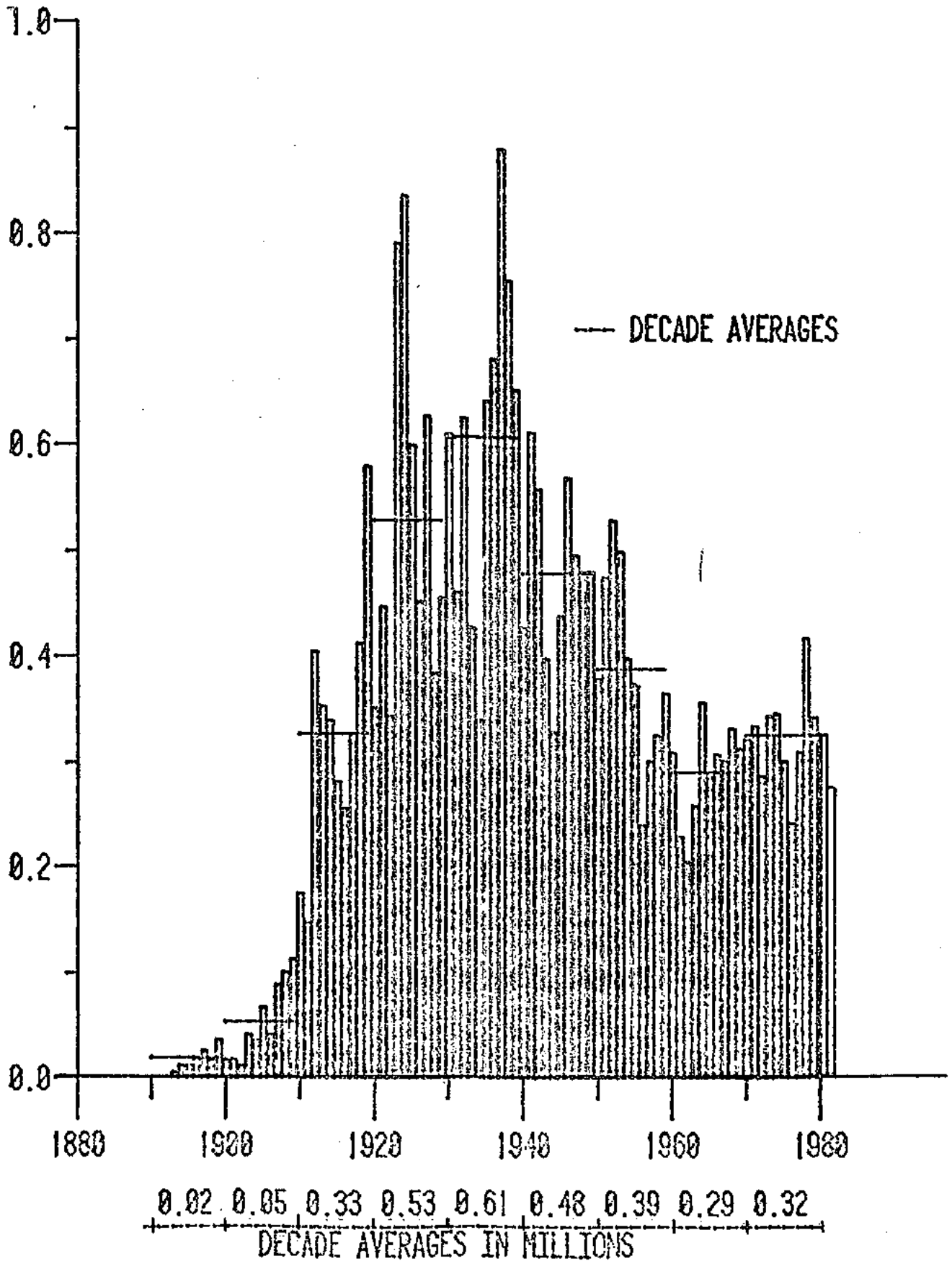
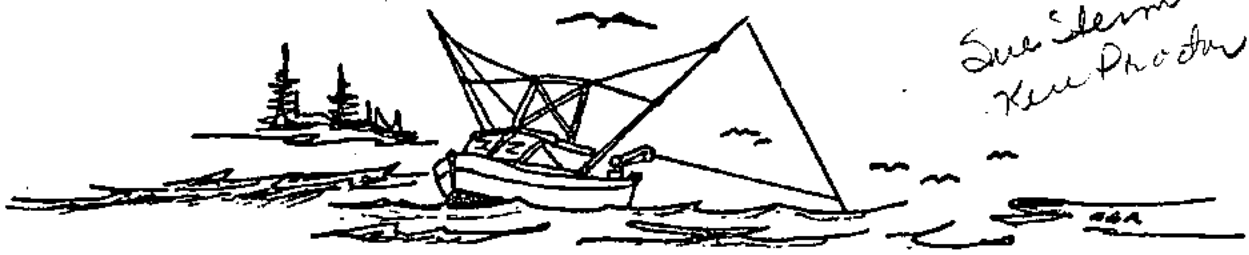


Figure 2. Southeast Alaska Region Annual Commercial Chinook Salmon Catches, 1893 to Present. (ADG&G 12/81)



*See Salem  
Ken Proctor*

FROM: SITKA HANDROLLERS ASSOCIATION

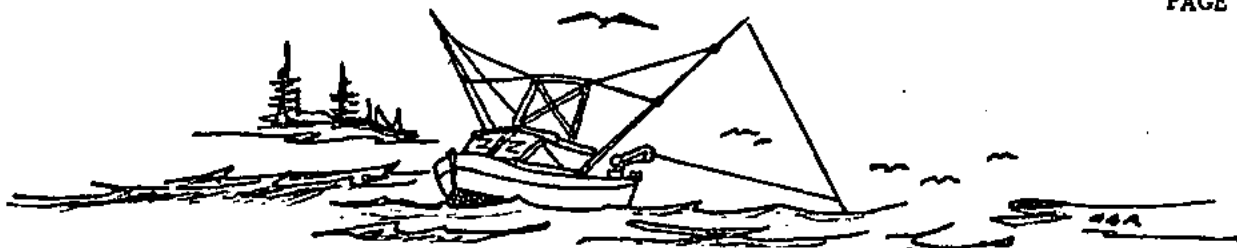
TO: STATE OF ALASKA BOARD OF FISH

ABSTRACT: The purpose of this document is to communicate to the Alaska Board of Fish the position and comments of the Sitka Handtrollers Association on the proposed regulation changes now under consideration by the Alaska Board of Fish. The format of this document will be the listing of the proposal number, the page it is found on in the proposal book and the position taken by the Sitka Handtrollers Association.

PROPOSAL # 147 PAGE # 52 5 AAC 30.310. FISHING SEASONS: The proposed regulation reads as follows: (b) Salmon may be taken by troll gear seven days a week with the following exceptions: (3) king salmon may be taken only from May 1 (15) through September 20, except that there is no closed season for the taking of king salmon in those waters of Yakutat Bay east of a line from the easternmost tip of Ocean Cape to the southernmost tip of Point Manby. POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The preservation of Alaskan natural stocks must be a dominant feature in any closure. The Sitka Handtrollers Association is of the position that the troll fishery should be opened simultaneously in all areas.

PROPOSAL # 103 PAGE # 61 5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows: (1) coho salmon may be taken only from July 10 (June 15) through September 20. POSITION: The Sitka Handtrollers Association approves of this proposal. Coho Salmon taken later in the fishing season are a larger more valuable salmon. As the coho salmon are in closer fishery managers can more accurately determine the strength of the coho run and act accordingly.

PROPOSAL # 102 PAGE # 61 5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 1 (20) (summer season) except as provided in 5 AAC 33.350 and as follows. POSITION: The Sitka Handtrollers Association is in opposition to this section of this proposal as it does not give fishery managers the ability to judge late runs strengths. A later opening date is of more value to the coho run than an earlier closing date.



PROPOSAL # 104      PAGE # 62      5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS: (b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 1 (15) through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows: (2) in district 16 and those waters west and south of the surf line, king salmon may be taken only from May 1 (15) through September 20; (12) from May 1 (15) through September 20 salmon may be taken in the following locations only during the periods set forth in (D) of this paragraph. POSITION: The Sitka Handtrollers Association is in opposition to this proposal. IF the preservation and rebuilding of Alaskan natural salmon stocks require closures, so be it. Our comments on proposal #147 also apply to this proposal.

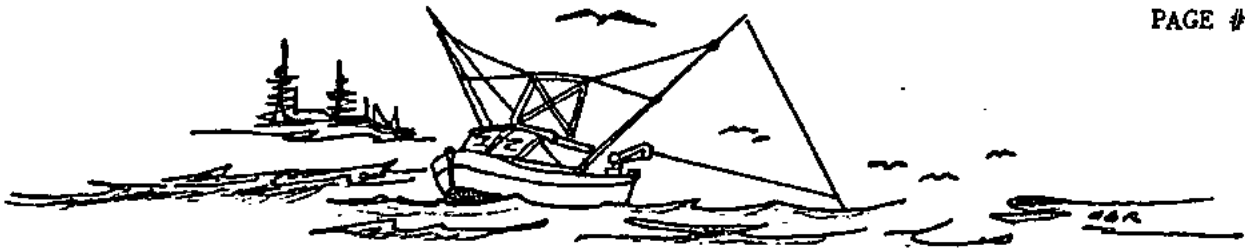
PROPOSAL # 109      PAGE # 65      5 AAC 33.365 (b) (1) - (3) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. POSITION: The Sitka Handtrollers Association approves of this lengthy Staff proposal.

PROPOSAL # 110      PAGE # 66      5 AAC 33.365 (a) and (b) (3)- (7) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. 5 AAC 39.270 (a) (5) (new subsection) POSITION: The Sitka Handtrollers Association is in opposition to this very lengthy proposal, as shown in the proposal book. This proposal is not the historical nature of the fishery. It is an unnecessary burden on the handtroll fishery and causes more problems than it solves.

PROPOSAL # 111      PAGE # 68      5 AAC 33.365 SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. POSITION: The Sitka Handtrollers Association approves of option #4 of this proposal as we percieve it to be identical with the Staff proposal #109.

PROPOSAL # 112      PAGE # 71      5 AAC 33.365 SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The Sitka Handtrollers Association is of the position that because of the high mobility of the troll fleet that any thing other than a simultaneous opening of all areas would not be in the best interest of Coho runs. Mass gathering in the open areas would create a fishery managers nightmare.



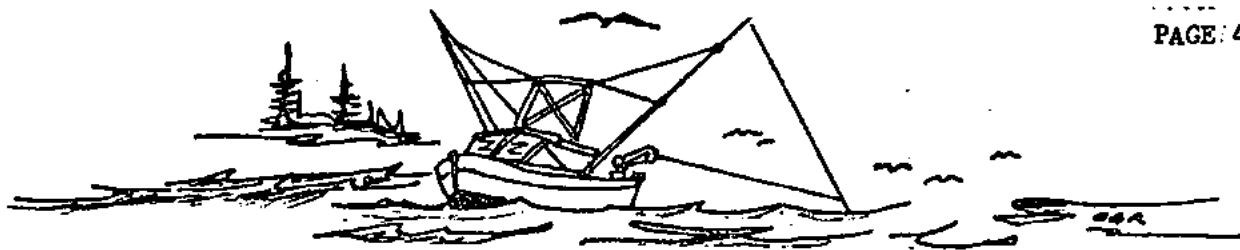


PROPOSAL # 113      PAGE # 71      5 AAC 33.365 (b) (3) and (5)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The Sitka Handtrollers Association is of the position that the fishery managers need the ability to manage the salmon resource in the most expeditious manner possible.

PROPOSAL # 114      PAGE # 72      5 AAC 33.365 (b) (8) (new subsection)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      (b) (8) It is the policy of the Board of Fisheries to regulate the troll fishery in a manner that will result in 89%-91% of the troll caught chinook salmon being taken by power troll gear and 9%-11% by hand troll gear; The Department shall evaluate the power and hand troll chinook salmon catches throughout the season and impose time and area closures as required to achieve this goal.      POSITION: The Sitka Handtrollers Association is in violent opposition to this proposal for the very same reasons that we appose the 80-20 Coho allocation management scheme and the execrable method of its implementation upon the handtroll fishery. The Sitka Handtroll Association is and will be opposed to any prejudice of a common property resource and is aggressively pursuing judicial relief from this blatant discriminatory regulation.

PROPOSAL # 115      PAGE # 72      5 AAC 33.365 (b) (8) (new subsection)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      (b) (8) a minimum of 15% and a maximum of 30% of the chinook salmon guideline harvest level will be allocated to the winter troll fishery.      POSITION: The Sitka Handtrollers Association is in opposition to this proposal. The proposal is not a realistic proposal as there is no allocation on the winter troll fishery. What are they going to do if the winter allocation isn't met? Add it to next winter allocation?

PROPOSAL # 116      PAGE # 73      5 AAC 33.365 (b) (8) (new subsection)      SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.      POSITION: The Sitka Handtrollers Association is in opposition with this proposal. As the proposal is basically identical with proposal # 114 our comments are the same as those on proposal # 114.



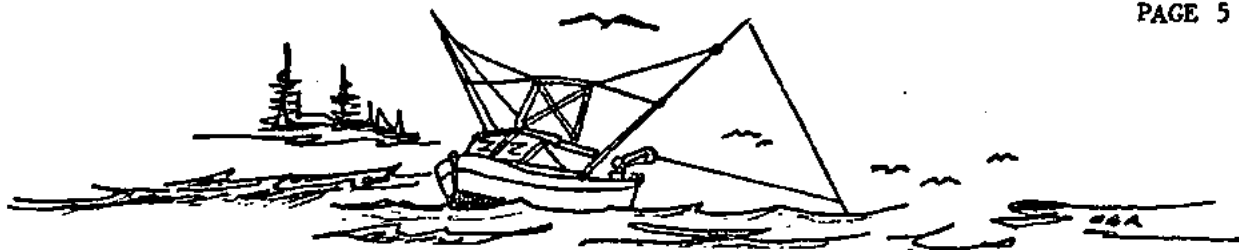
PROPOSAL # 117 PAGE # 73 5 AAC 33.365 (b)(8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON FISHERIES MANAGEMENT PLAN. (b) (8) chinook and coho taken in authorized salmon derbies will not be counted as commercial harvest. POSITION: The Sitka Handtrollers Association approves of this proposal. The Sitka Handtrollers Association would bring to your attention that derby caught fish are not commercially caught salmon. Special permits for derbies should be issued and the king salmon turned in should not be counted on the king salmon O.Y.

PROPOSAL # 118 PAGE # 73 5 AAC 33.365 (b) (8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. (b) (8) It is a policy of the Board of Fisheries to prevent the net fisheries from targeting on coho salmon during troll coho closures; the department will issue orders adjusting the time and areas of net fishing together with its announcements of troll closures. POSITION: The Sitka Handtrollers Association is in opposition to this proposal.

PROPOSAL # 119 PAGE # 74 5 AAC 33.365 (b)(8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON FISHERIES MANAGEMENT PLAN. (b)(8) the department shall conduct a troll test fishery during coho salmon troll closures that will allow a tagging and sampling effort to start to accrue data on transit pathways and stock strengths and origin. POSITION: The Sitka Handtrollers Association approves of this proposal. The hard data generated by this test fishery would benefit fishery managers and fishermen equally.

PROPOSAL # 120 PAGE # 74 5 AAC 39.240(f)(new subsection) GENERAL GEAR SPECIFICATIONS AND OPERATION. (f) This section does not apply to troll gear. POSITION: The Sitka Handtrollers Association approves of this proposal. This regulation has been an unnecessary burden on the handtroll fishery. This proposal is justified so long as the extra gear (gurdies) is not mounted.

PROPOSAL # 121 PAGE # 75 5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION (a) the maximum number of trolling lines that may be operated from any salmon troll vessel is as follows: (1) from power troll vessels: four lines POSITION: The Sitka Handtrollers Association approves of this proposal and is in agreement with the justification presented with the proposal.

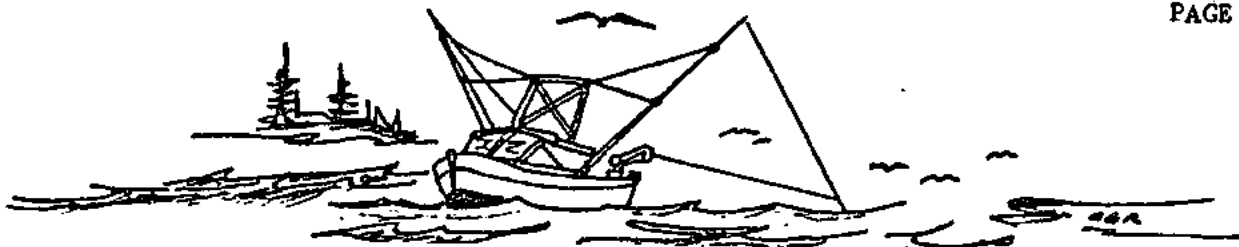


PROPOSAL # 122 PAGE # 75 5 AAC 39.270 (a) (3) TROLL SPECIFICATIONS AND OPERATION. (a) The maximum number of trolling lines that may be operated from any salmon troll vessel is as follows. (3) A total of four lines consisting of up to 4 hand troll gurdies or 4 fishing rods or in combination (AN AGGREGATE OF FOUR FISHING RODS OR AN AGGREGATE OF TWO HAND TROLL GURDIES) may be operated from a hand troll vessel. (e) No more than six troll gurdies may be mounted on board any salmon power troll vessel. No more than four (TWO) troll gurdies and (OR) four fishing rods may be on board any salmon hand troll vessel. A troll gurdy is a spool type device around which a troll line can be wrapped and includes devices commonly called "down riggers". POSITION: The Sitka Handtrollers Association is in opposition to this proposal.

PROPOSAL # 123 PAGE # 76 5 AAC 39.270 (b) TROLL SPECIFICATION AND OPERATION. (b) A trolling vessel may have, or use for taking bait, a fishing rod equipped exclusively for taking bait, and/or a gill net of a mesh not more than 2½ inches and made of not greater than number 20 gill net thread. POSITION: The Sitka Handtrollers Association approves of option one of this proposal.

PROPOSAL # 124 PAGE # 76 5 AAC 39.270 (d) TROLL SPECIFICATIONS AND OPERATION. (d) Each registered hand troll vessel must display the letters HT in permanent block letters. Each letter must be painted on both sides of the vessel hull or cabin in a color contrasting with the background, at least eight (FOUR) inches in height, at least one half inch in width, plainly visible and unobscured at all times until the end of the calendar year. No hand troll vessel may display its permanent vessel plate number (ADF&G number) in any location other than on the vessel license plate. POSITION: The Sitka Handtrollers Association approves of this proposal and agrees with the justification presented with the proposal.

PROPOSAL # 126 PAGE # 77 5 AAC 39.270(f) TROLL SPECIFICATIONS AND OPERATION. (f) A (NO) salmon power troll vessel may be used to take salmon with hand troll gear once that vessel has been licensed and marked as required in (c) of this subsection, provided such salmon are sold on the power troll permit. The Sitka Handtrollers Association is in opposition to this proposal.



PROPOSAL # 127      PAGE # 78      5 AAC 39.270 TROLL SPECIFICATIONS AND OPERATION  
 (g) Repealed 4/ /82      POSITION: The Sitka Handtrollers Association approves of this proposal and agrees with the justification presented with the proposal.

PROPOSAL # 130      PAGE # 79      5 AAC 30.392 and 33.392 SIZE LIMIT AND LANDING OF KING SALMON.      POSITION: The Sita Handtrollers Association approves of this proposal and agrees with the justification presented with the proposal. What can be done with the carcasses of the undersized king salmon needs more clarification.

PROPOSAL # 131      PAGE # 80      5 AAC 30.120 (g)(1), (2), (3), (4) and (5).  
 REGISTRATION OF COMMERCIAL FISHING VESSELS. (g) Repealed 4/ /82.      POSITION: The Sitka Handtrollers Association approves of this proposal and is in agreement with the justification presented with the proposal.

PROPOSAL # 132      PAGE # 81      5 AAC 39.120 (g) (2) REGISTRATION OF COMMERCIAL FISHING VESSELS. (g) Registration requirements for salmon troll vessels are as follows: (2) repealed 4/ /82.      POSITION: The Sitka Handtrollers Association is in opposition to this proposal.

PROPOSAL # 135      PAGE # 82      5 AAC48.090(1) SPORT FISHING FROM A COMMERCIAL SALMON TROLL VESSEL. (1) No person may sport fish from a salmon hand troll or power troll vessel in areas closed to commercial trolling, as those vessels are identified by the marking requirements of 5 AAC 39.270 (c) and (d), in any area except that this prohibition does not apply to "authorized derbies."      POSITION: The Sitka Handtrollers Association approves of this proposal and agrees with the justification presented with the proposal.

PROPOSAL # 136      PAGE # 82      5 AAC39.381(c) (new subsection) Gear for Halibut. (c) Commercial trolling vessels may take up to 15% of total catch (by weight) of legal sized halibut during the open troll season. Option Two; (c) Commercial trolling vessels may take two legal sized halibut per boat per day during the open troll season.      POSITION: The Sitka Handtrollers Association is in opposition to this proposal.

M E M O R A N D U M

TO: Council, SSC and AP Members  
FROM: Jim H. Branson  
Executive Director  
DATE: December 29, 1981  
SUBJECT: Salmon FMP amendment, 1982 troll regulations

*ACTION REQUIRED*

*Approval of preferred alternatives.*

BACKGROUND

In July the Council sent out a request for proposals for 1982 Southeast salmon regulations. The proposal period, originally scheduled to end in late September, was extended until at least the January Council/Board joint meeting. Several public proposals were received by the Council during this period, and other proposals sent to the Board would also affect FCZ management. The proposals were sent out in the Council mailing.

The Council and Board will listen to staff reports by ADF&G Southeast Region biologists and presentations by the PMT and other PDT members. A meeting of salmon managers from Washington, Oregon, Alaska and Canada was held December 22 to discuss chinook stocks and the impacts of 1981 management. A draft report generated from this meeting is attached as E-1(a).

The Pacific Council inter-council salmon group has been authorized to deal with us on possible solutions to the Tribal court case. Bob McVey will elucidate and offer a suggestion for NPFMC interaction.

A letter and resolution from the City of Sitka regarding ocean salmon management is also attached as E-1(b).

SALMON PMT REPORT  
January 4, 1982

The function of the PMT is to determine the need for amendment of the FMP and to ensure that schedules are met, documents produced, etc. The criteria for determining the need for amendment are:

- (1) the success of the current regulatory regime in accomplishing the FMP objectives;
- (2) new information; and
- (3) legal obligations.

The PMT reviewed the most recent data available on catch, distribution, effort and escapements. The team recognizes that additional and revised information will be available by March which may influence any tentative conclusions reached at this time.

The team felt that FMP Objective No. 1 is the critical goal at this time. The goal is 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 following summary describes that status of chinook stocks coastwide:

- (1) Columbia River - record low runs; predicted lower for 1982
- (2) Washington coastal stocks - near escapement levels
- (3) Oregon coastal stocks - stable at recently improved levels
- (4) British Columbia - a 50-60% decline in Georgia Straits and Fraser R. escapements in 10 years
- (5) Southeast Alaska - stable at depressed level with some rebuilding started

The PMT concluded that the 1981 regulatory regime contributed to the improvement in Southeast Alaska runs. There was less positive improvement to other stocks. Some minor producers showed significant improvement but many major producers showed little or no improvement.

The consensus of the PMT was that major natural chinook stocks on a coastwide basis (Columbia River to Cape Suckling, Alaska) are still viable but are currently achieving escapements which are far below optimum or even minimum escapement goals.

There was not a consensus that an amendment to the FMP is necessary to address this problem.

The team feels that amendment may be necessary and that the Council should proceed on this assumption so that implementation requirements can be met. The team recommends that the Council address the following alternatives for the 1982 season.



ALTERNATIVE 1: Status quo, harvest guideline at 272,000

Discussion:

1. In accord with continuing the rebuilding of S.E. Alaska stocks
2. Minimal additional impact on industry
3. Similar management to 1981 (in-season closures similar)
4. Continue to contribute fish to southern areas
5. Would not prevent predicted record low returns to Columbia River in 1982
6. Would maintain adequate returns to meet escapement goals for Washington coastal stocks.
7. Does not require FMP amendment

ALTERNATIVE 2: Status quo, harvest guideline at 243,000

Discussion:

1. Would accelerate rebuilding of S.E. Alaska stocks
2. Would have additional social and economic impacts on the fishing industry.
3. Would require an additional 7 - 10 day closure (beyond the 1981 in-season closure) to slow harvest, plus a possible late-season adjustment
4. A small increase to the Columbia River would be predicted
5. Would reduce catch by 25,000 fish from 1981 levels
6. Washington coastal stocks would show increases beyond basic escapement levels
7. Would contribute an increased number of fish to southern areas
8. Substantial increases to Canadian waters would occur. These fish would go to Canadian catch, primarily, rather than transfers south or to escapements unless the current high effort levels in British Columbia are reduced significantly.
9. Does not require FMP amendment

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

Discussion:

1. May reduce harvest of non-Alaskan stocks in proportion to their availability to offshore harvest
2. This would apply to that portion of the FCZ seaward of the surfline
3. Will deflect fishing effort to inside waters
4. Greater benefits to stocks would occur if harvests were reduced or not redistributed to remaining open areas
5. If compensatory effort increases were not allowed in open areas, harvest would be reduced from the 1981 level by a maximum of 57,700 kings
6. Strict enforcement of the closure would be necessary to ensure its effectiveness
7. Would require an FMP amendment

ALTERNATIVE 4: No directed fishery for chinook salmon in S.E. Alaska (The possibility of an incidental catch allowance while coho and pink fishing should be considered)

Discussion:

1. Would accelerate rebuilding at all currently depressed S.E. Alaska stocks
2. Would not achieve defined escapement goals of some major systems in 1982 but might meet or exceed goals in some systems
3. Would reduce gross ex-vessel income to fleet by at least one-half unless mitigated by an incidental catch allowance
4. Would greatly increase Canadian interceptions and escapements into Canadian systems
5. Increase Washington coastal stocks above escapement goals
6. Redistribute harvest sharing patterns
7. Wastage of chinook would occur with incidental allowance
8. Adverse economic impacts on processors and communities
9. Would require FMP amendment



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 1668

Juneau, Alaska 99802

January 4, 1982

Mr. Clem Tillion, Chairman  
North Pacific Fishery Management Council  
Halibut Cove, AK 99603

Dear Clem:

Attached is the draft report of the technical committee appointed to develop various ocean management options in response to the Confederated Tribes v. Baldrige litigation. The committee was instructed to evaluate the reductions needed from the various ocean fisheries that would increase the Columbia River upriver "bright" run size from the 1981 level of 63,900 to (1) 80,000, and (2) 100,000 "brights." The highlights of the report are as follows:

1. The Washington Department of Fisheries has estimated the minimum run size necessary to achieve the spawning escapement goal of 40,000 fish at McNary Dam with no inriver harvest is about 100,000 "brights" assuming the 1981 interdam loss rate.
2. Total closure of the FCZ off both Alaska and Washington-Oregon (North of Cape Falcon) is estimated to return somewhat less than 7,000-11,000 additional "brights" to the Columbia River after a full brood cycle.
3. The maximum achievable run size from total closure of all United States ocean fisheries North of Cape Falcon is estimated to be 91,000 "brights."
4. Significant reductions in the British Columbia ocean fisheries must also occur in order to achieve a return to the Columbia River in excess of 100,000 "brights".
5. A return of 80,000 "brights" to the river can be achieved by a 67 percent reduction in the Alaska catch with no change to the Washington-Oregon seasons North of Cape Falcon, or by a 54 percent reduction in the Alaska catch combined with total closure of the Washington-Oregon fishery North of Cape Falcon (assumes 1981 level Canadian fisheries).
6. The most recent analysis of the long-term distribution of the "bright" catch shows a 14 percent reduction in the catch from British Columbia and a 35 percent reduction in the catch from Alaska. The reductions are the consequence of a smaller run size, but the greater magnitude of the Alaska reduction most certainly is a result of applying 1981 management measures in the simulation.



All of the above estimates result from application of the regulatory regime for a full brood cycle. The most recent analyses still rely on tag recoveries from the 1975 brood, which culminated in 1980, adjusted for the actual 1981 terminal run size and fishing seasons. Tag recoveries from the 1981 fisheries will not be available for comparison with this analysis until March.

I believe the report makes it very clear that if the 1981 interdam loss rate continues to occur and if Canada does not also reduce its catch of "brights", there is no level of reduction in the U.S. ocean fisheries that would achieve a return of "brights" to the Columbia river large enough to meet spawning escapement needs even without any inriver harvest.

Finally, the technical committee has listed a number of important qualifications concerning the use of the WDF computer model in developing these data. Although still perhaps the best information available, the model is extremely limited in its application to chinook stocks because it holds constant over the brood cycle several factors which normally can vary annually.

Sincerely,



Robert W. McVey  
Director, Alaska Region

Enclosure

# DRAFT



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
P.O. Box 1688  
Juneau, Alaska 99802

AGENDA E-1(a)  
January 1982

Date : December 29, 1981

Reply to 2471.01

To : F/MWR - H. A. Larkins  
F/AKR - Robert W. McVey

From : F/NMC2 - Ken Henry  
F/AKRII - Bill Robinson

Subject : Report of the Technical Committee  
Confederated Tribes v. Baldrige

On November 13, 1981, you instructed the technical committee to undertake the following assignment based upon the best available information to date:

"To evaluate the reductions needed from various ocean fisheries in order to achieve a return of (1) 80,000; and (2) 100,000 upriver 'bright' fall chinook salmon to the Columbia River."

We have completed the assignment based upon the latest Washington Department of Fisheries (WDF) model simulation of 1981 ocean fishery regulatory impacts on upper Columbia River "bright" fall chinook. The latest model simulation is still based upon the recoveries of 1975 brood upriver "brights" (culminating in 1980) and reflects 1981 estimated fishing intensities and regulations scaled to the actual 1981 terminal run size of 63,900 chinook salmon. Table 1 compares the long term distribution of the upriver "bright" catch and the estimated total stock size reported by the technical committee on October 17, 1981, with the most recent model simulation.



Table 1. Estimated long term distribution of the 1981 catch, terminal run size and total stock size for Columbia River upriver "bright" fall chinook salmon.

<u>Area/Catch</u>	<u>October 17, 1981</u>	<u>December 22, 1981</u>
Alaska	58,000	37,900
British Columbia	68,000	51,900
Washington-Oregon 1/	7,000	4,600
Terminal Run Size	69,400	63,900
Total Stock Size	194,400	158,300

The December 22, 1981, model simulation estimates a total 1981 stock size 19 percent less than the earlier estimate. Actual 1981 tag recoveries have not been analyzed yet for comparison with the model results, but is expected to be available by March.

The technical committee evaluation considers the following three categories of ocean fishery reductions for the desired terminal run size goals of 80,000 and 100,000 "brights":

- (1) Reductions confined to the Fishery Conservation Zone (FCZ);
- (2) Reductions confined to United States waters; and
- (3) Reductions including the British Columbia troll fishery.

#### RUN SIZE OF 100,000 "BRIGHTS"

The WDF harvest management staff has preliminarily estimated that a terminal run size of about 100,000 upriver "brights" is necessary to



achieve the minimum spawning escapement goal of 40,000 chinook at McNary Dam with no inriver harvest and based on the preliminary estimate of approximately a 40 percent survival rate for adult chinook between Bonneville and McNary Dams. To achieve a terminal run size of 100,000 "brights," the 1981 terminal run size of 63,900 "brights" would need to be increased by 36,100 "brights." We have previously estimated that a total closure of the FCZ off Washington-Oregon (north of Cape Falcon) and southeast Alaska would have increased the 1981 terminal run size by only 7,000-11,000 "brights" after a full brood cycle was exposed to the closure. The terminal run size actually experienced in 1981 was smaller than previous estimates resulting in the reduced estimated total stock size and distribution of catch to the various ocean fisheries expressed in the current analysis. Therefore, the savings from total closure of the FCZ north of Cape Falcon would most likely be less than the previous estimate.

Total closure of the United States ocean fisheries north of Cape Falcon in both state and federal waters would have increased the 1981 terminal run size by an estimated  $37,900 \times 0.63 + 4,500 = 28,500$  "brights" in the long term according to the current analysis. The maximum achievable run size, therefore, is estimated to be 92,400 (63,900 + 28,500) "brights," again insufficient to achieve the minimum conservation escapement goal. To achieve the objective of a 100,000 terminal run size, some modification of the Canadian ocean fisheries would also be required.

Table 2 shows two WDF computer model simulations based upon: (1) no troll fishery chinook retention allowed from Alaska to central British

Columbia and all other troll fisheries closed during June (assuming no effort shifts); and (2) the Alaskan and northern British Columbia troll fisheries completely closed (again no effort shift).

Table 2. Estimated distribution of Columbia upriver "bright" fall chinook salmon under two different sets of regulations.

<u>Area/Catch</u>	<u>(1) No Chinook Retention</u>	<u>(2) Alaska and Northern British Columbia Closed</u>
Alaska	0	0
British Columbia	19,000	31,100
Washington-Oregon	4,800	4,800
Terminal Run Size	106,000	106,000

In both alternatives, the minimum escapement goal would have barely been exceeded (by 6,000 "brights") in 1981 by total elimination of the Alaskan troll catch accompanied by substantial reductions in the British Columbia troll fishery maintained over a full brood cycle. The magnitude of the catch reductions just shown also approximates the magnitude of reductions that would be necessary to achieve 50-50 treaty Indian/non-Indian sharing, assuming the 40,000 fish escapement goal at McNary Dam is achieved.

RUN SIZE OF 80,000 "BRIGHTS"

Achievement of a terminal run size of 80,000 upriver "brights" in 1981 would have required an increase of 16,100 from the 1981 terminal run size of 63,900 "brights." As previously stated, total closure of the FCZ north of Cape Falcon would have increased the 1981 terminal run size

by something less than 7,000-11,000 "brights," and thus would be inadequate to achieve the 80,000 goal.

Two alternatives were considered that would have increased the 1981 terminal run size by an estimated 16,100 "brights." First, if no further troll fishery reductions occur off Washington-Oregon, then the necessary reduction in the Alaskan troll catch is estimated to be  $16,100 \div 0.53 = 37,900 = 67$  percent. Second, if no troll fishery is allowed off Washington-Oregon (north of Cape Falcon), the necessary reduction in the Alaskan troll catch is estimated to be  $16,100 - (0.7 \times 4,600) \div 0.53 = 37,900 = 54$  percent. These estimates assume no effort shifts and the savings off Alaska is distributed evenly throughout the season.

Achievement of the 80,000 "bright" goal could also be achieved through proportional reductions in both U.S. and Canadian troll fisheries. However, estimates involving proportional reductions from the fisheries of both countries that would have achieved an 80,000 terminal size in 1981 have not been made at this time. Based on the 1981 inter-dam loss rate, an 80,000 terminal run size would yield only a 32,000 fish escapement with no inriver harvest.

#### QUALIFICATIONS

All of the estimates presented here should be considered as preliminary. They are meant only to describe the general magnitude and distribution of catch reductions necessary to accomplish the stated goals. The WDF computer model simulation results are limited by the steady-state aspect

of the model. The model, by construction, holds constant such variables as stock size (as may be affected by ocean or freshwater survival), hooking mortality, natural mortality, fishing patterns and effort, and migration routes over the entire exposure of a brood to a particular regulatory regime. Annual variations in any of the above factors may result in returns to the river different from the model simulation. Therefore, extreme caution should be used in interpreting model results as applying to any single year. The model simulation is, however, the only available tool for use at this time and should be considered as the best available information. More precise analyses based on tag recoveries from the 1901 fisheries will be available in March and all analyses may be updated at that time.

cc:  
 Mike Stanley, GC/KK  
 Doug Ancona, GC/NNR  
 Ken Henry, F/NWC2  
 Mike Fraidenberg, WDF  
 Mel Seibel, ADF&G  
 George Utermohle, ADF&G  
 Jerry Pella, F/NWC9 (ABL)  
 Phil Rogers )- Columbia River Intertribal  
 Chip McConaha)- Fish Commission  
 Stacy Hall, PFKC  
 Jim Glock, NPFNC  
 F/AKRI2

## Chinook Salmon Studies in Southeast Alaska

Paul Kissner

Sport Fish Division

Juneau

The Chinook Salmon Research Project is responsible for determining the status of chinook salmon stocks native to Southeastern Alaska. Annual operations include escapement surveys in the major and medium producing systems, collection of biological information from spawners, i.e., age, length, and sex composition data, and microwire tagging of juveniles and smolts to determine ocean migration patterns, areas of harvest and other life history information.

The three major chinook systems are the Taku, Stikine, and Alsek Rivers. Alaska, British Columbia, and the Yukon Territory manage these chinook salmon stocks in their respective waters.

### Taku River

During 1981 a total of 9,786, 3 and 4-ocean chinook salmon were enumerated in the major spawning tributaries of the Taku River (Table 1) The Nakina River, which is the Taku's major clearwater spawning tributary, had the largest observed escapement since 1954. Similarly a record 2,945 chinook were enumerated in the Nahlin River, i.e., the Taku's other major clearwater chinook spawning tributary.

The April 16 - May 14 commercial trolling closure helped increase the escapements into both of these river systems. This was clearly demonstrated when six disc-tagged chinook salmon, which had been tagged by the Department during the closure, were observed or recovered from the spawning grounds.

The later portion of the run, which is bound for Trapper and Tatsamenie Lakes, did not appear to respond as well to the troll closure. The escapements were slightly below the 1980 level and no disc tags were observed or recovered.

Based on age sampling conducted at the Nakina carcass weir, it appears that returns to the Taku River will be weak in 1982 and 1983. Spawning ground returns to date indicate a weakness in the 1976\*, 1977, and 1978

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\*Three ocean return in 1981 from the 1976 brood was stronger than expected, probably because of the commercial troll closure during mid-April to mid-May, 1981.

Table 1. Peak aerial escapement counts of chinook salmon in the Taku River tributaries, 1951-1981.

Year	Nakina	Kowatua	Tatsamenie	Dudidontu	Tseta	Nahlin	Total
1951	5,000	...	...	400	100	1,000	6,500
1952	9,000	...	...	...	...	...	9,000
1953	7,500	...	...	...	...	...	7,500
1954	6,000	...	...	...	...	...	6,000
1955	3,000	...	...	...	...	...	3,000
1956	1,380	...	...	...	...	...	1,380
1957	1,500*	...	...	...	...	...	1,500
1958	2,500*	...	...	4,500	...	2,500	9,500
1959	4,000*	...	...	...	...	...	4,000
1960	Poor	...	...	...	...	...	Poor
1961	Poor	...	...	...	...	...	Poor
1962	...	...	...	25	81	216	322
1963	...	...	...	...	...	...	...
1964	...	...	...	...	...	...	...
1965	3,050	200 G	50 G	100	18	37	3,455
1966	...	14 G	150 G	267	150	300	881
1967	...	250 G	...	600	350	300	1,500
1968	...	1,100 E	800 E	640	230	450	3,220
1969	...	3,300 E	800 E	...	...	...	4,100
1970	...	1,200 E	530 E	10	25	26	1,791
1971	...	1,400 E	320 E	165	...	473	2,358
1972	1,000	130 G	170 G	103	80	280	1,763
1973	2,000	100 G	200 G	200	...	300	2,800
1974	1,800	235 G	120 G	20	4	900	3,079
1975	1,800	...	...	15	...	274	2,089
1976	3,000	341 G	620 E	40	...	725	4,726
1977	3,850	580 G	573 E	18	...	650	5,671
1978	1,620	490 G	550 E	...	21	624	3,305
1979	2,110	430 G	750 E	9	...	857	4,156
1980	4,500	450 G	905 E	158	...	1,531	7,544
1981	5,110	560 G	839 E	74	258	2,945	9,786

G = water glacial

E = water clear

\* = Counts of total river not conducted--comparison made from carcass weir enumeration

brood years. It is believed that the predicted weakness in the 1977 and 1978 brood years, which will return as 3 and 4-ocean adults in 1982 through 1984 is at least partially caused by the Inklin landslide in December 1978. Many of the productive mainstream rearing areas were silted-in and the densities of rearing juveniles were noted to be low during capturing operations for coded wire tagging.

Observations and juvenile trapping conducted during the last two fall seasons in the vicinity of King Salmon Flats indicated that the siltation problem has been greatly reduced and juvenile chinook are again utilizing the area in good numbers.

During the first three drift gillnet fishing periods in Taku Inlet the recorded harvest of mature 3 and 4-ocean chinook was 365. In addition, 115 mature jacks, 40 3 and 4-ocean feeders, and 450 small feeders were taken. Thus, a total of 970 chinook were caught during these three periods.

The Canadian commercial fishery at Tulsequah, British Columbia caught an additional 153 chinook.

#### Stikine River

The 1981 escapement of chinook into the Stikine River was excellent (Table 2). A record 3,334 chinook were enumerated in the Little Tahltan River. The mainstem Tahltan remained quite glacial throughout August but 1,852 chinook were enumerated on shallow riffles and many more were present. An additional 558 chinook were observed in Betty Creek, which is a tributary to the mainstem Tahltan.

Since the Stikine River chinook are predominately 6 years old when they return, the 1982 run should be weaker than those observed during the past 2-3 years, as the 1976 escapement of 400 was the lowest observed.

The Canadian commercial fishery harvested 582 chinook and another 740 chinook were taken for subsistence use.

#### Alsek River

Preliminary helicopter surveys of the major chinook spawning systems were conducted on August 10th. These systems will be monitored annually to establish escapement trends. Data from the Canadian Department of Fisheries and Oceans is presented in Table 3.

#### Escapement Other Areas

Escapement of chinook salmon into other rivers monitored annually is presented in Table 4. The chinook systems in southern Southeast Alaska

Table 2. Peak escapement counts of chinook salmon in the Tahltan and Little Tahltan Rivers.

Year	Date	Chinook	Remarks
LITTLE TAHLTAN RIVER			
1956	August 11	334 jacks 493 adults	Hyland Ranch to Tahltan River
1957	July 21	199	Too early--fish schooled
1958	August 6	790	3/4 mile below Hyland to 1 1/2 miles below Saloon
1959	August 7	198	Fish in poor condition--survey too late
1960	August 5	346	1/4 mile below Hyland Ranch to a mile or two below Saloon
1967		800	Canadian survey
1975	August 13	700	Many spawned-out
1976	August 7	400	Conditions fair
1977	July 30	800	Peak spawning
1978	July 26	632	Mostly schooled
1979	July 28 - August 1	1,166	Peak spawning
1980	July 29	2,137	Peak spawning
1981	July 28	3,334	Peak spawning
MAINSTEM TAHLTAN RIVER			
1975	August 13	2,908	Clear
1976	August 20	120	Late
1977	July 30 & August 18	0	Glacial
1978	August 8	756	Glacial
1979	August 10	2,118	Partly glacial
1980	July 29	960	Very glacial
1981	August 4	1,852	Partly glacial



Table 3. Peak escapement counts of chinook salmon in the Alsek River 1962 - 1981.

<u>Year</u>	<u>Village System</u>	<u>Mile 112 Creek</u>	<u>Kluckshu River</u>	<u>Kluckshu Lake</u>	<u>Blanchard System</u>	<u>Takhani River</u>	<u>Main Alsek Drainage</u>
1962			86				No Data
1963							
1964			20		1		
1965			50	50	100	250	
1966				1,000	100	200	
1967			<u>1/</u>	1,500	200	275	
1968			<u>1/</u>	1,700	425	225	
1969		72		700	250	250	
1970	100		<u>1/</u>	500	100	100	
1971	50	60	<u>1/</u>	300			
1972		32	<u>1/</u>	1,100		250	
1973						49	
1974	14	183	62		52	132	
1975	17		58		81	177	
1976				1,227 weir			
1977				3,200 weir			
1978				2,285 weir			
1979				2,561 weir			
1980				1,401 weir			
1981	0			2,112 weir	35		

1/ Kluckshu River and Lake counts combined.

Table 4. Peak escapement counts of chinook salmon in southeast Alaska rivers, 1981.

Year	Chinook	Method
<u>Unuk River</u>		
1961	673	Foot
1962	331	Air
1963	1,070	Air
1968	650	Air
1969	475	Air
1972	885	Air
1973	182	Air
1975	55	Helicopter
1976	198	Helicopter
1977	1,166	Helicopter, weir-foot
1978	1,765	Helicopter, weir-foot
1979	576	Helicopter, weir-foot
1980	1,052	Helicopter, weir-foot
1981	731	Helicopter, foot
<u>Chickamin River</u>		
1961	336	Ground
1962	775	Air
1963	450	Air
1969	345	Air
1972	860	Air
1973	229	Helicopter
1974	176	Helicopter
1975	351	Helicopter
1976	122	Helicopter
1977	235	Helicopter
1978	181	Helicopter
1979	140	Helicopter
1980	261	Helicopter
1981	275	Helicopter
<u>King Salmon River (Admiralty Island)</u>		
1957	200	Foot
1961	117	Foot
1971	94	Foot
1972	90	Foot
1973	211	Foot
1974	104	Foot
1975	42	Foot
1976	65	Foot, Helicopter
1977	134	Foot, Helicopter
1978	57	Foot, Helicopter
1979	88	Foot, Helicopter
1980	70	Foot, Helicopter
1981	101	Foot, Helicopter

Table 4. (Cont'd.) Peak escapement counts of chinook salmon in southeast Alaska rivers, 1981.

Year	Chinook	Method
<u>Blossom River</u>		
1961	68	Ground
1963	825	Air
1972	700	Air
1974	166	Helicopter
1975	153	Helicopter
1976	68	Helicopter
1977	112	Helicopter
1978	143	Helicopter
1979	54	Helicopter
1980	89	Helicopter
1981	159	Helicopter
<u>Keta River</u>		
1948	500	Foot
1950	210	Foot
1951	120	Foot
1952	462	Foot
1953	156	Foot
1954	300	Air
1955	1,000*	Air
1956	1,500*	Air
1957	500*	Air
1961	44	Ground
1975	203	Helicopter
1976	84	Helicopter
1977	230	Helicopter
1978	392	Helicopter
1979	426	Helicopter
1980	192	Helicopter
1981	329	Helicopter
<u>Chilkat River (Big Boulder Creek)</u>		
1960	316	Foot
1966	330	Foot
1967	150	Foot
1968	259	Foot
1970	176	Foot
1974	0	Foot
1975	21	Foot
1976	25	Foot, Helicopter
1977	25	Foot, Helicopter
1981	187	Foot, Helicopter

\*Probably some chum salmon

Table 4. (Cont'd.) Peak escapement counts of chinook salmon in southeast Alaska rivers, 1981.

Year	Chinook	Method
	<u>Situk River</u>	
1928	1,224	Weir
1929	3,559	Weir
1930	1,455	Weir
1931	2,967	Weir
1932	1,978	Weir
1933	...	...
1934	1,486	Weir
1935	638**	Weir
1936	816	Weir
1937	1,290**	Weir
1938	2,668**	Weir
1939	2,117	Weir
1940	903	Weir
1941	2,594	Weir
1942	2,543	Weir
1943	3,546**	Weir
1944	2,906	Weir
1945	1,458	Weir
1946	4,284	Weir
1947	5,077	Weir
1948	3,744	Weir
1949	1,978	Weir
1950	2,011	Weir
1951	2,780	Weir
1952	1,459	Weir
1953	1,040	Weir
1954	2,101	Weir
1955	1,571	Weir
1971	964	Weir
1972	400	Float
1973	510	Float
1974	702	Float
1975	1,180	Float
1976	1,933	Weir
1977	1,872	Weir
1978	1,103	Weir
1979	1,754	Weir
1980	1,125**	Weir
1981	807**	Weir

\*\* Weir out part of the time.

did not appear to respond to the early troll closure like the systems in northern Southeast.

#### Coded Wire Tagging and Recovery

Over 300,000 juvenile chinook salmon have been tagged in various tributaries of the Taku and Stikine Rivers during the last 5 years. Tag recoveries of Taku Chinook during 1981 showed a similar pattern to the 1980 recoveries, i.e., all commercial and sport recoveries were made in April - June (Map 1). A summary of the 1981 tag recoveries is presented in Table 5. It appears that Taku chinook must leave southeastern Alaska, rear somewhere beyond the present limits of the troll fishery and migrate back through the waters of southeastern Alaska only at maturity to return to their river of origin.

No recoveries of Stikine River chinook were recorded this year, probably because only the first tag group of 1,200 smolts tagged during the spring of 1978 has reached the minimum commercial size. A summary of the potential number of Taku and Stikine River coded wire tagged chinook salmon available, by year, is presented in Table 6.

Table 5. Coded wire tag recoveries of chinook salmon, 1981.

CWT. Code	Brood Year	Date Landed	Recovery	
			Area	Type
4- 5- 8	1975	6/13	109-50	commercial
4- 5- 8	1975	5/20	113-Deer Harbor	commercial
4- 5- 8	1975	5/10	Breadline	sport
4- 5- 8	1975	August	Nahlin River	escapement
4- 5- 8	1975	August	Nakina River	escapement
4- 5- 8	1975	August	Nakina River	escapement
4- 5- 8	1975	August	Nakina River	escapement
4- 5- 9	1975	5/20	Deer Harbor Scow	commercial
4- 5- 9	1975	5/10	Pt. Stephens	sport
4- 5- 9	1975	August	Nahlin River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4- 5- 9	1975	August	Nakina River	escapement
4-16-62	1977	August	Nakina River	escapement
4-16-62	1977	August	Nakina River	escapement
4-17- 9	1976	August	Nahlin River	escapement
4-17-11	1976	5/28	Elfin Cove Scow	commercial
4-17-11	1976	August	Nakina River	escapement
4-17-13	1976	6/05	Elfin Cove Scow	commercial
4-17-21	1976	5/21	Deer Harbor Scow	commercial
4-17-21	1976	5/27	113-Lisianski to Surge	commercial
4-17-21	1976	6/03	116-Icy Point	commercial
4-17-21	1976	August	Nakina River	escapement
4-17-22	1976	4/14	Homeshore	commercial
4-17-22	1976	6/04	Deer Harbor Scow	commercial
4-17-22	1976	5/02	Breadline	sport
4-17-28	1977	August	Nakina River	escapement
4-17-28	1977	August	Nakina River	escapement
4-17-28	1977	August	Nakina River	escapement
4-17-28	1977	August	Nakina River	escapement
4-19-59	1978	August	Nakina River	escapement
4-19-59	1978	August	Nakina River	escapement

\*Six chinook salmon recovered on the spawning ground were adipose fin clipped, indicating the presence of a CWT, but no tag was found in the fish's head or, in some cases, the head was gone.

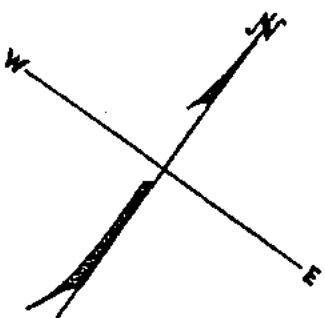
Table 6. Potential number of CWT chinook salmon available for recovery by river, by year.

	<u>Taku</u>	<u>Stikine</u>	<u>Total</u>
1981	49,825	1,284	51,109
1982	81,588	9,326	90,914
1983	63,600	32,206	95,806
1984	71,693	54,549	126,242
1985	99,758	70,385	170,143
1986	50,000	40,000	90,000

-157-  
Includes all  
Fairweather Grounds

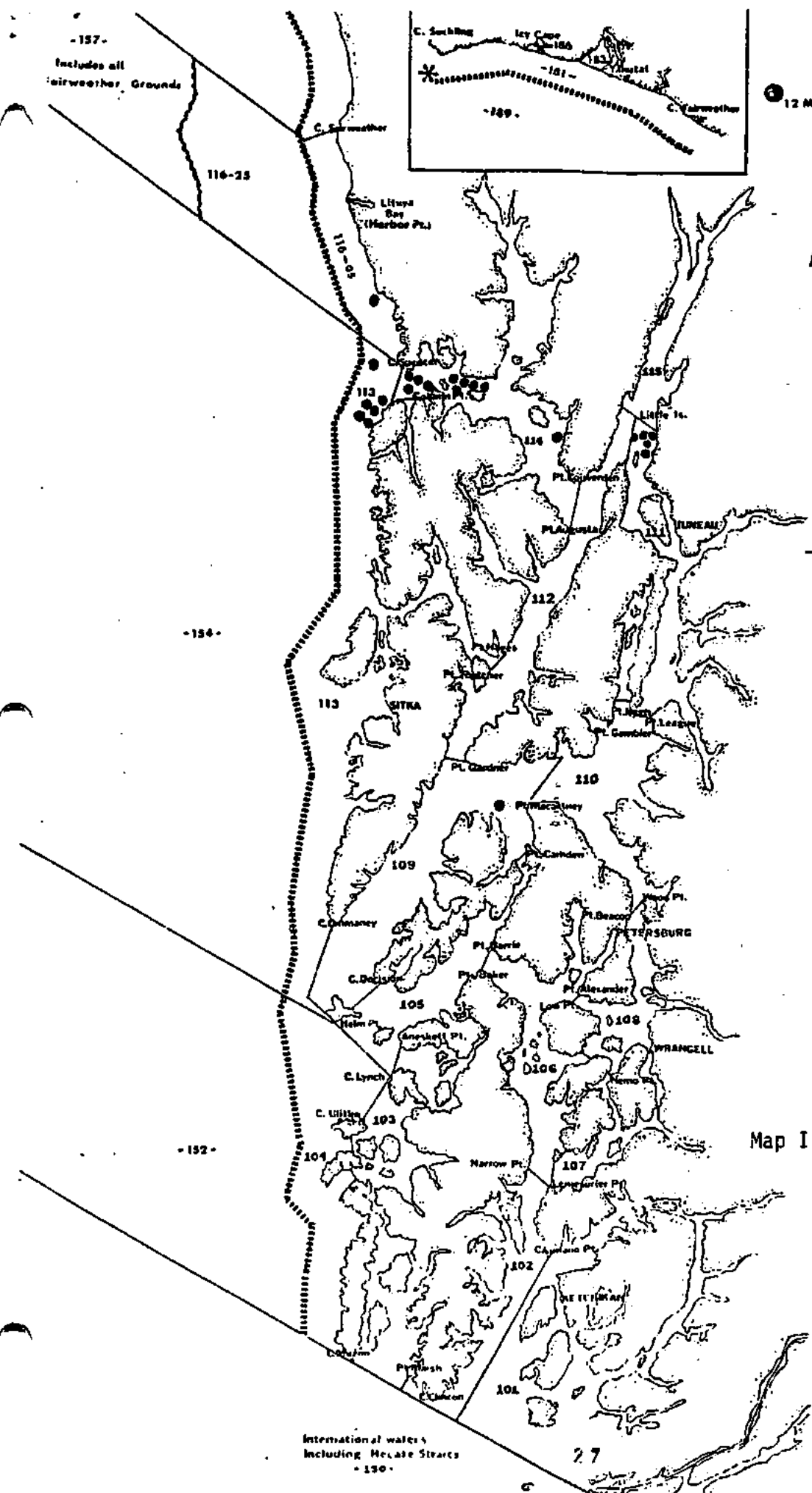


\* ALASKA "SMILE LIMIT" -----  
● 12 MILE DEMARCATION LINE ~~~~~



Spawning ground recoveries

1981 = 29 CWT's  
1980 = 15 CWT's



Map I. Location of sport and commercial caught coded-wire-tagged (CWT) chinook salmon in S.E. Alaska, 1981 and 1980.

International waters  
including Healy Straits  
-190-



1-5-81

REPORT TO THE BOARD OF FISHERIES

1981 SOUTHEAST ALASKA SALMON TROLL FISHERY

By:

Region I Staff

Southeast Region  
Alaska Department of Fish and Game  
Commercial Fisheries Division  
November 1981

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## INTRODUCTION

The troll fishery in Southeast Alaska occurs in State and Federal waters from Cape Suckling southeast to Dixon Entrance (figure 1). Target species are primarily chinook and coho salmon although an increasing number of fishermen also target on pink salmon. Catches of chinook for the period 1970-1980 have averaged 301,000. The 1981 chinook catch by the troll fishery was 247,000. Catches of coho for the period 1970-1980 averaged 619,000. The 1981 coho catch was 861,000. Catches of other species by the troll fishery in 1981 included 576,000 pinks, 9,000 chums and 7,600 sockeye. Annual salmon catches by the troll fishery since 1970 are shown in Table 1. Fishing periods and period catches of chinook and coho for the 1981 seasons are shown in Table 2.

Historically trollers fished coastal and inshore waters but in the last 20 years a trend of increased fishing effort in offshore and coastal waters has occurred. Seventy-two percent of the 1981 troll catch of chinook was taken in coastal State and offshore Federal waters with 26% of the catch reportedly taken in offshore Federal waters (FCZ) only.

Troll gear, which annually harvests approximately 95% of the total all-gear chinook catch and 65% of the all-gear coho catch, is separated into two gear types; power and hand troll gear. The Alaska Commercial Fisheries Entry Commission currently issues 973 power troll permits and 2,150 hand troll permits. Preliminary estimates of gear actually fished during the 1981 season include approximately 850 power troll and 1,150 hand troll units. Hand troll gear permit holders accounted for approximately 13% of the chinook troll catch and 21% of the coho troll catch in 1981.

In recent years, several changes have occurred in the troll fishery that have affected management decisions and consequently the conduct of the fishery.

First, chinook salmon production from Southeast Alaska river systems has remained depressed as a result of decreased spawning escapements. In spite of severe curtailment of terminal area net fisheries, inside troll fisheries and sport fisheries beginning in the mid-1970's, escapements did not initially increase as increased effort by the troll fishery apparently offset inside and terminal area fishery restrictions. In 1980 and 1981, when more restrictive regulations were also extended to the troll fishery, some improvement in escapements occurred although the improvement was generally limited to two major systems, the Taku and Stikine Rivers. Escapements to many of the non-Alaskan chinook systems contributing to the S.E. Alaska troll fishery are also currently below optimum levels.

Second, coho escapements and production have generally declined although not as severely as chinook.

Third, increases in troll fishing effort have occurred. Increased numbers of participants during the 1970's as well as increased actual fishing power due to vessel and gear improvement produced this overall increase in fishing effort.

Fourth, recent restrictions placed on fishing time, gear and areas have resulted in more intense fishing effort during open periods.

Fifth, fishing restrictions, which were initially applied to terminal and inshore areas for the purpose of increasing escapements, transferred more fishing effort to coastal and offshore areas. As more fishermen became aware of better availability of fish in outer coastal areas, this outward shift of effort increased further. This further compounded mixed stock management problems. Harvests remained high in these areas while catches in inside fisheries and escapements of chinook and coho declined.

#### 1981 Season Summary

Prior to the 1981 troll season, several regulatory changes were adopted by the Alaska Board of Fisheries and the North Pacific Fisheries Management Council. The two regulations that most influenced management strategy of the Department in 1981 were the reduction of the optimum yield or guideline harvest range for chinook and specification of the policy to curtail the outside coho catch to allow more fish to reach corridor and terminal areas.

The commercial chinook harvest guidelines established by the Board and Council for the 1981 season differed in that the range specified by the Board required approximately a 10% reduction over the 1980 range of 286,000 to 320,000 while the range specified by the Council required a 15% reduction. In numbers of fish, the Board's range was 272,000 to

285,000<sup>1/</sup> and the Council range was 243,000 to 272,000. Since both of these ranges were significantly below recent years' chinook troll catches, but applied to both net and troll gear, the harvest ceilings represented a major step toward rebuilding Alaska's chinook stocks through providing increased escapements.

Winter and summer seasons were established for purposes of maintaining the traditional winter troll fishery and to facilitate enumeration of catches. The winter troll season was established as October 1 through April 14. To provide maximum benefit to depressed Alaskan stocks of chinooks the Board also specified a closure of the troll fishery to occur from April 15 to May 14. The summer season was established as May 15 through September 20.

A major problem complicating effective coho troll fishery management is the magnitude of catch that occurs in outer areas prior to the time the stocks are segregated and run strength can be assessed. A progressively larger segment of the annual catch has been taken in recent years from coastal and offshore areas as the fish migrate from the offshore feeding areas to the terminal areas and spawning streams. This phenomenon has resulted in more restrictive measures imposed on all gears in the terminal areas to insure escapement which has in turn changed the historical allocation balance of coho salmon between user groups as shown

<sup>1/</sup> A harvest guideline of 272,000 to 288,000 initially considered by the Board at the January 1981 meeting, was shown in the 1981 Regulation booklet. However, the final harvest guideline established by the Board at the March 1981 meeting was 272,000 to 285,000.

in Figure 2 and Table 3. The Board adopted a policy in 1981 to return these inside district troll coho catches to pre-1978 levels by 1984, by specifying a 10-day troll closure to allow more coho to move further along their migration routes and to inside waters.

#### In-season Management Strategy

The 1981 troll fishery was managed to insure that the chinook salmon catch did not exceed the guideline harvest level established by the Board. The guideline harvest level of 285,000 fish included catches by all commercial gear types. This was the second year that a guideline harvest range was established to limit the total commercial harvest of chinook salmon in Southeast Alaska fisheries.

The Department's management plan included provisions for implementing a closure during the latter part of June, if necessary, to extend the chinook season through the end of August. This was to insure that the guideline harvest level was not achieved prior to mid-August, thereby increasing effort on coho stocks and a higher mortality on chinook hooked and released in the resulting coho only fishery. By June 15 it was apparent that the catch levels to that date were above 3 of the 4 most recent years' catches (Figure 3). This indicated that if recent years' catch patterns occurred throughout the rest of the season the harvest level would have been achieved by late July. The troll fishery was then closed for 9 days, June 26 through July 5.

The higher than normal early season catch level was due to a combination of several factors: (1) unusually good weather which allowed access to prime fishing grounds for all of the 42 days between May 15 and June 25, and (2) increased early season effort in numbers of vessels fishing due to predicted poor returns of chinook in Washington and Oregon and corresponding closures, and the reduction of the guideline harvest level in Alaska.

Following the reopening of the troll fishery on July 5, chinook and coho catches were monitored on a weekly basis. Catch projections based on fish ticket accounting systems and port sampling of deliveries were used to estimate fishery performance for chinook and coho.

A system was devised whereby normal fish ticket accounting and early landing reports from major ports were combined. This system provided weekly fishery performance estimates. These weekly estimates were then compared to the 77-80 fishery performance weekly averages and projections were made on chinook total catch and coho run strength.

By the first week of August it appeared that the chinook harvest was comparable to previous years and catch projections indicated that the chinook catch would probably reach the guideline harvest level by the first week of September. Coho returns to inside areas, as determined from inshore and terminal area catches, were poor and below the 10 year average while coho catches by the troll fishery in outer areas were relatively strong compared to recent years (Figure 4).



The troll fishery was closed again on August 10 for 10 days for the purpose of allowing more coho to reach inside areas. The National Marine Fisheries Service issued a similar regulation for the FCZ, but did not reopen the FCZ to trolling for the remainder of the 1981 season because of projections that the Council OY ceiling of 272,000 chinook would be met and significant mortality due to hook and release of chinook would occur during any coho directed fishery.

During the period from August 20 when the fishery reopened to September 3, catches of chinook and coho were monitored closely because catches appeared to be approaching the harvest ceiling for chinook and several districts continued to exhibit poor coho catches.

Historically, effort levels in numbers of vessels targeting on chinook in coastal waters have produced substantial catches during late August and early September. Numbers of vessels continuing to fish during this time period, in 1981, were greater than normal and the Department projected that the guideline harvest level would be achieved by the first week of September. The troll fishery was closed to the taking of chinook salmon in all areas and certain districts were also closed to trolling entirely for coho conservation on September 4. Districts closed to coho fishing to protect weak coho runs were 5, 6, 7, 8, 10, 15 and portions of 9 and 12.

Between September 4 and 10 concerted efforts were made to collect all fish tickets from remote buyers and landing ports to tabulate the chinook catch. By September 10 preliminary figures indicated that the catches of chinook were at the low end of the Board's guideline harvest range of 272,000-285,000. In order to prevent hooking and release mortality of chinook salmon during the ongoing coho fishery, the troll fishery was reopened to the taking of chinook in those areas opened to coho fishing. The fishery remained opened in those areas until the close of the summer season on September 20.

In addition to the foregoing description of actions taken by the Department during the 1981 troll season in Southeast Alaska, the following management measures were also taken.

The waters of District 9 in the near proximity to Little Port Walter and Big Port Walter were not closed on September 4 to allow harvest of coho returns resulting from a surplus of hatchery and lake stocking experiments.

In the Yakutat area, the weekly fishing period for trolling specified in the regulations was extended to seven days for the area between Dangerous River and Sitkagi Bluff in August when it appeared coho returns to the Situk River were near average and catches by troll gear were minimal. Following the opening of the area to 7 day per week fishing by troll gear a period of mild weather and reductions in fishing areas elsewhere in Southeast Alaska resulted in increased effort in the Yakutat area to more than triple from 6 to 20 power troll vessels and 18 hand troll vessels. Coho availability in the area was good and catches by power

troll vessels of 150-200 coho per day were reported. Trolling was returned to the weekly fishing period specified in the regulations on August 31 when the high effort levels and good catches began to affect inriver net fishery management before coho run strengths could be assessed.

#### Evaluation of In-season Management Strategy

The primary management goals in 1981 for the troll fishery were: (1) Increase chinook escapement and reverse the trend in declining production from systems in Southeast Alaska; (2) provide for a harvest of chinook by all gear types within the range established by the Board; and (3) reverse the trend of declining escapements of coho and increase the numbers of coho reaching inside areas while providing for a harvest level determined by in-season assessment of run strength.

Preliminary estimates of the total chinook catch by all gear, including that portion of the winter troll fishery from October 1 to December 31, 1980, indicate that a harvest of approximately 268,100 fish was achieved. This includes an estimated 19,500 fish taken incidentally in net and trap fisheries as shown in Table 4. It appears, therefore, that the final catch will probably be near the lower end of the Board harvest guideline range and the upper end of the Council range (Figure 5).

Based on catch projections made in late August and early September, a slightly larger total season chinook harvest near the mid to upper end of the Board range of 272,000 to 285,000 had been expected. The lower catch apparently occurred due to several factors, including differences between preliminary in-season catch estimates and final catches tabulated by computer from fish tickets, and lower than expected late season catch rates resulting from reduced availability of chinook combined with a shift of effort to the relatively strong coho runs in some areas. Other factors included the impact of the FCZ being closed from August 10 through the remaining part of the season and an apparent reduction in the number of boats holding and freezing fish during the season to be sold at the end of the season.

Chinook escapements to two of the three major river systems in Southeast Alaska were increased in 1981 (Table 5). The major Taku River tributaries, the Nakina River and the Nahlin River, showed substantial improvement. The major Stikine River tributaries, the Tahltan River and Little Tahltan River, also showed significant improvement. Escapements to several other lesser producing chinook salmon systems including the Chilkat River and the Farragut Bay streams appeared to have improved over recent years.

In the southern portion of Southeast Alaska, escapements to the medium sized streams in Behm Canal were mixed. The Blossom River and Keta River escapements were approximately twice the 1980 escapements, however, the Unuk River escapement was less than 1980 and the Chikamin River escapement showed little improvement. Escapements to the Behm Canal systems were all substantially below minimum escapement goals.

It appears that, for northern Southeast Alaska streams, the fishing restrictions between April 15 and May 14 contributed to the increased escapements. In the southern districts, which have slightly later run timing, the closure did not contribute significantly to increasing the escapements. The Department has submitted proposals to delay the fishing season opening in portions of District 1. These proposals, if adopted, should increase the chinook escapements to southern Southeast streams.

Coho escapements in 1981 appear to have generally improved over recent years, however, surveys are still being conducted and a more complete assessment will be provided at the Board meeting. Exceptions to these improvements were in the middle districts (5-10) where some systems declined in escapements. The northern and southern systems showed generally good escapements. Primary reasons for the increases in coho escapements were the August 10-20 troll closures and the late season net gear restrictions.

#### Special Problems

The periodic closures during the 1981 season reportedly caused some crowding of boats into certain areas. Many skippers reported that they could not move into distant areas because of the short time during openings. The result was concentrations of 100-200 vessels in several coastal areas. Additionally, problems were reported in landing of the catch when all of these boats came to port following a closure. Difficulties in unloading, re-icing and re-supplying were a direct result of

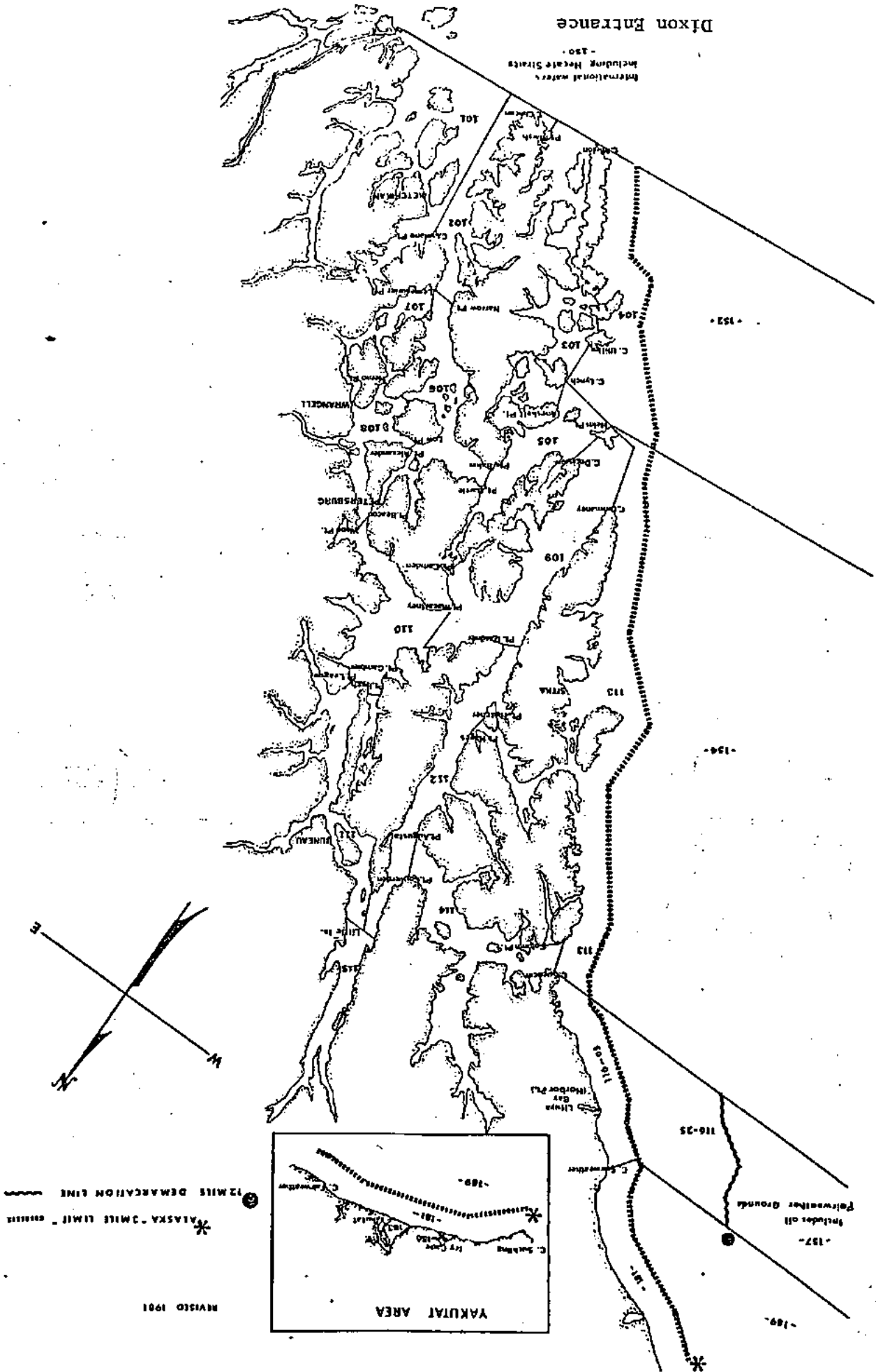
overcrowding. Processors reported difficulty in maintaining production quality when large volumes of fish were unloaded at the start of a closed period. Some problems also arose during the time beginning August 20 when the federally managed Fishery Conservative Zone remained closed to fishing while state waters were open. Many fishermen were confused regarding the exact delineation of boundaries for the FCZ area.

#### Observations on Marked or Scarred Fish



A number of chinook and coho caught in the 198 troll fishery were observed to be scarred. The Department will present a short report with visual aids on this subject at the Board and Council joint session in January.

The incidence of these external scars was about 1% for chinook and 3% for coho overall, although there were incidences as high as 10% for some deliveries sampled. The scars appear to be caused from encounters with predators and/or fishing gear, possibly nets, of unknown origin. The Department and National Marine Fisheries Service is continuing to investigate the possible sources of these scars.

Figure 1 . Southeast Alaska Troll Fishery Statistical Areas



REVISED 1981

\* ALASKA "3 MILE LIMIT"   12 MILE DEMARCATION LINE

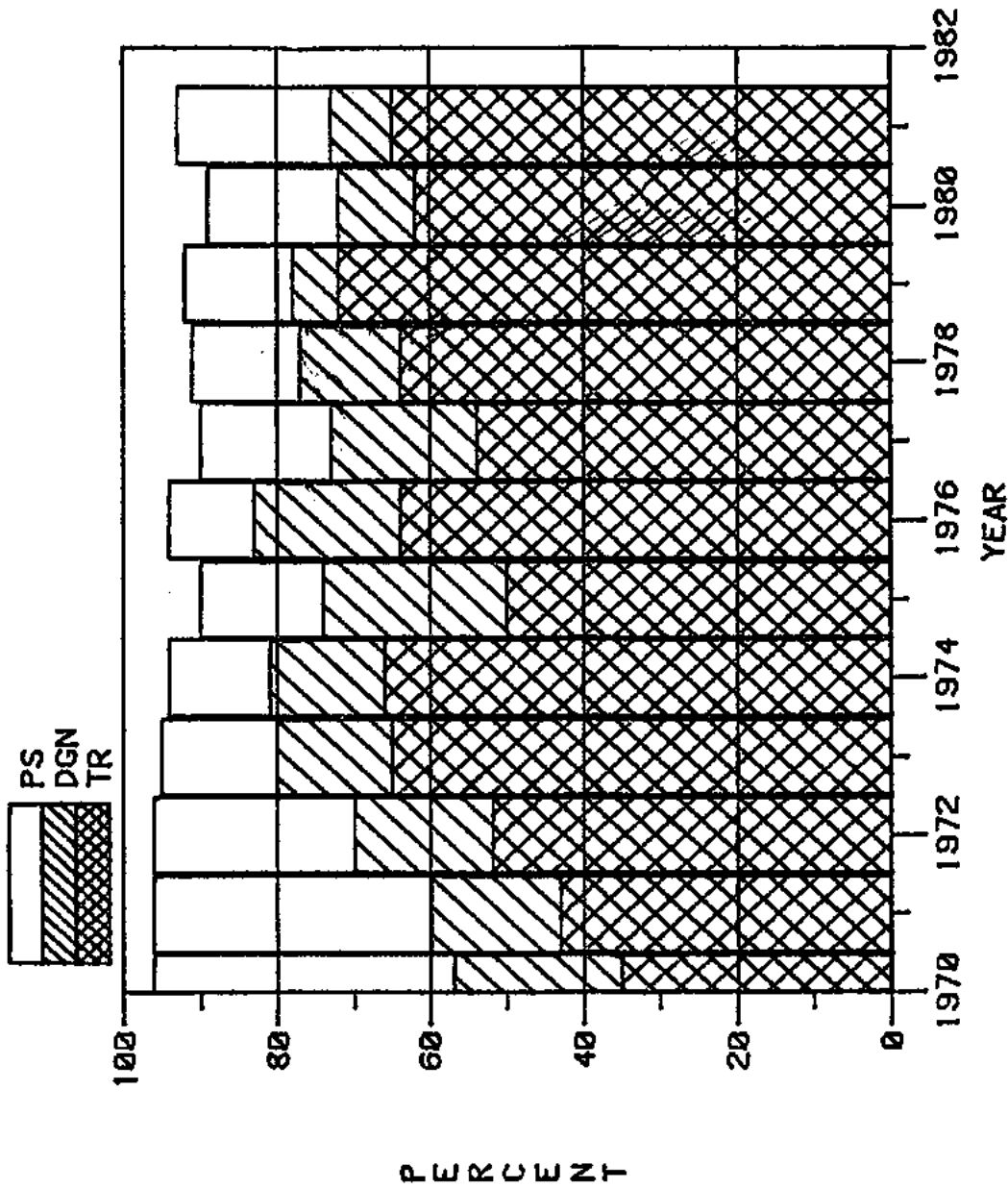


FIGURE 2. PERCENT OF TOTAL SOUTHEAST ALASKA REGION COHO SALMON HARVEST TAKEN BY PURSE SEINE(PS), DRIFT GILLNET(DGN) AND TROLL(CTR) GEAR, 1970-81 (ADF&G)



PREPARED 11/18/81

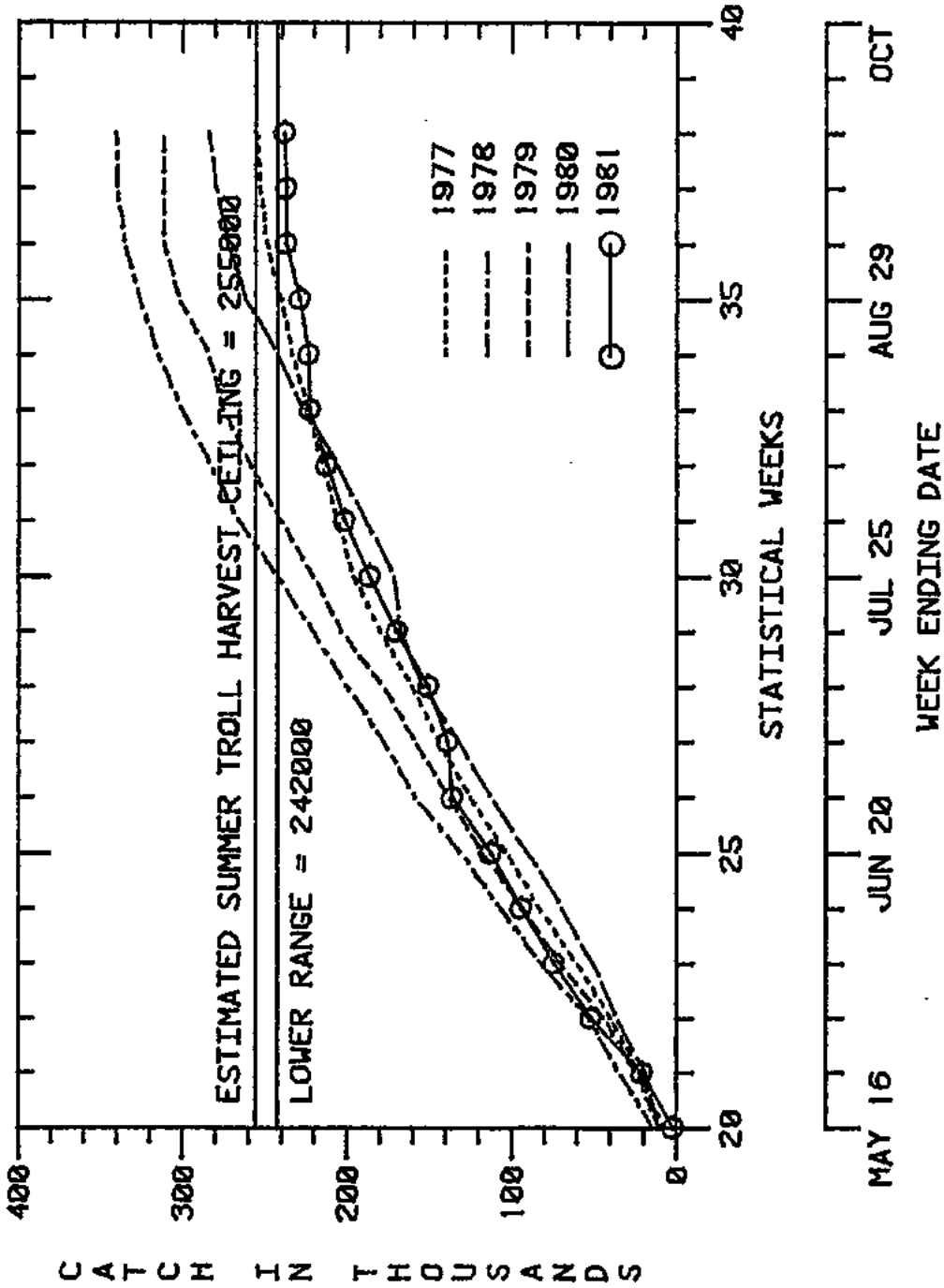


FIGURE 3 . SOUTHEAST ALASKA TROLL FISHERY CUMULATIVE CHINOOK SALMON HARVEST BY WEEK BEGINNING MID-MAY, 1977-81 (ADF&G). (1981 DATA PRELIMINARY)

PREPARED 11/18/81

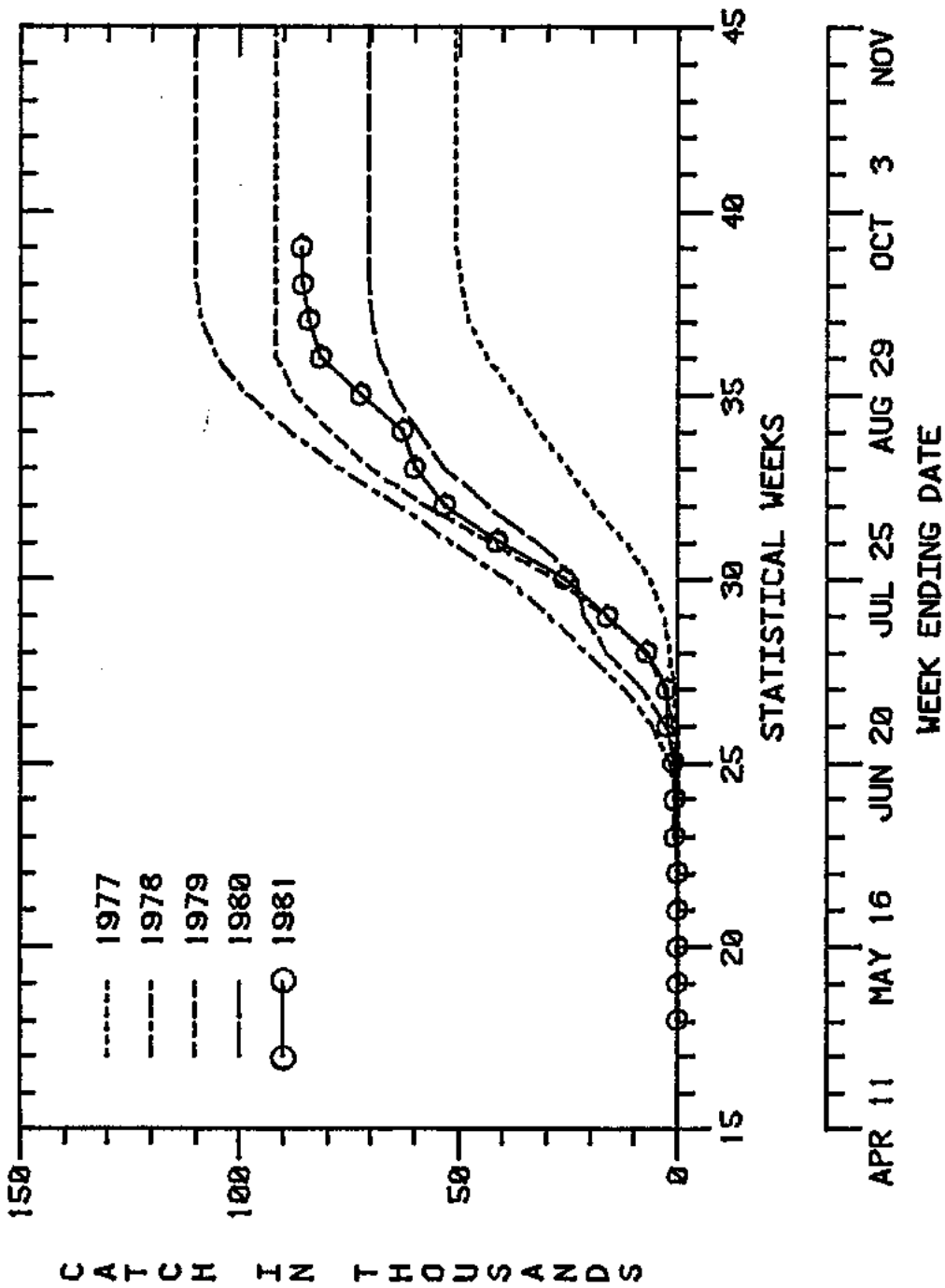


FIGURE 4 . SOUTHEAST ALASKA TROLL FISHERY CUMULATIVE COHO SALMON HARVEST BY WEEK BEGINNING MID-MAY, 1977-81 (ADFG). (1981 DATA PRELIMINARY)

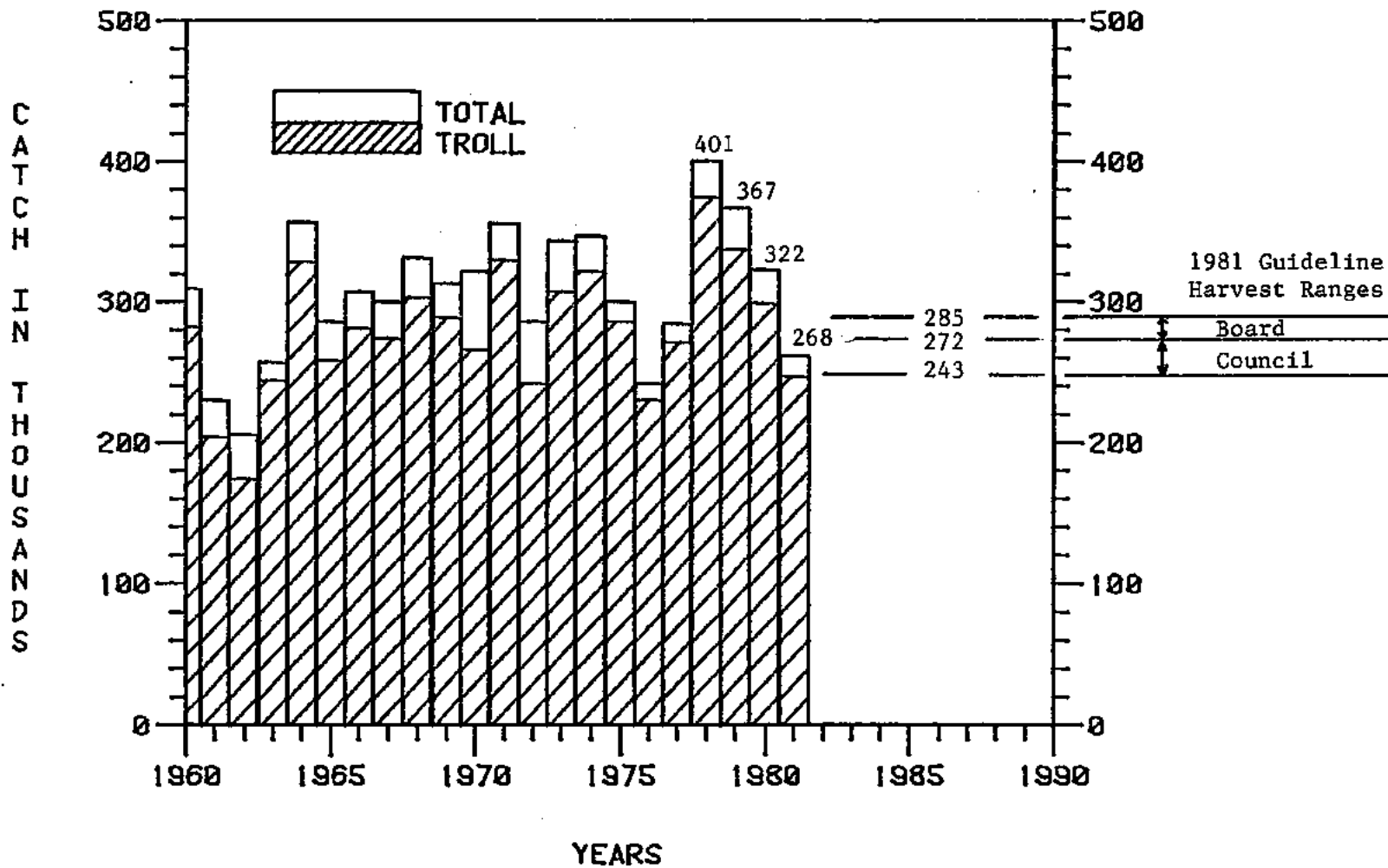


FIGURE 5. SOUTHEAST ALASKA COMMERCIAL CHINOOK SALMON CATCHES, 1960-81

Table 1 . Southeast Alaska region annual commercial salmon catches in numbers by species, 1970 to present (ADF&G 11/12/81).

Gear troll

Year	Chinook	Coho	Sockeye	Pink	Chum	Total
1970	305431	267763	477	70076	2804	646551
1971	333738	391569	936	104633	7672	838548
1972	242095	791668	1068	166853	11680	1213364
1973	307815	540104	1222	134585	10466	994192
1974	322208	846620	2606	263603	13819	1448856
1975	287348	214254	1103	77207	2825	582737
1976	231282	524992	1274	193777	4635	955960
1977	271777	506927	5701	281286	11617	1077308
1978	375624	1102066	2804	617817	26211	2124522
1979	338219	918596	6455	629192	24703	1917165
1980	299930	706521	2902	267465	12213	1289031
<hr/>						
Average 1970 to present	301406	619189	2413	255136	11695	1189839
1981(Prelim.)	247000	860900	7600	576000	9000	1700500

Footnotes: (1) Most recent years data should be considered preliminary.

Table 2 . Preliminary 1981 Southeast Alaska Troll Fishery  
Chinook and Coho Salmon Catches by Fishing Period  
(ADF&G 11/81)

<u>Closed Periods (Days)</u>	<u>Open Periods (Days)</u>	<u>Chinook</u>	<u>Coho</u>
<u>Winter Season</u>			
	Oct. 1 - Dec. 31, 1980	1,600	
	Jan. 1 - April 14, 1981	8,000	
Winter Season Subtotals		9,600	
<u>Summer Season</u>			
April 15 - May 14 (30)			
	May 15 - June 25 (41)	138,900	23,400
June 26 - July 4 (9)			
	July 5 - Aug. 9 (36)	83,400	577,500
Aug. 10 - 19 (10) <sup>1</sup>			
	Aug. 20 - Sept. 3 (15)	15,000	240,800
Sept. 4 - 12 (9) <sup>2</sup>			
	Sept. 13 - 20 (8)	1,700	19,200
Sept. 21 - 30 (10) <sup>3</sup>			
Summer Season Subtotals (68)	(100)	239,000	860,900
Season Totals <sup>3</sup>		248,600	860,900

Notes: <sup>1</sup> Federal FCZ waters remained closed to fishing after Aug. 10.

<sup>2</sup> The Sept. 4-12 closure included all districts for chinook salmon and districts 5-10, and portions of 12 and 15 for coho salmon. These coho closures remained in effect to the end of the coho season on Sept. 20.

<sup>3</sup> Troll fishery harvest of other species included 576,000 pinks, 9,000 chums, and 8,000 sockeye.

Table 3 . Southeast Alaska region annual commercial salmon catches by gear in numbers and (percent), 1970 to present (ADF&G 11/04/81).

Species Coho

Year	Seine	Drift Gillnet	Set Gillnet	Troll	Trap & Misc.	Total
1970	294624 (39)	166413 (22)	30279 ( 4)	267763 (35)	2510 ( 0)	761589 (100)
1971	326423 (36)	159240 (17)	37683 ( 4)	391569 (43)	12 ( 0)	914927 (100)
1972	390643 (26)	275527 (18)	46298 ( 3)	791668 (52)	4688 ( 0)	1508824 (100)
1973	129593 (15)	124369 (15)	41776 ( 5)	540104 (65)	557 ( 0)	836399 (100)
1974	166687 (13)	186583 (15)	77556 ( 6)	846620 (66)	1011 ( 0)	1278457 (100)
1975	70201 (16)	102237 (24)	37403 ( 9)	214254 (50)	3262 ( 1)	427357 (100)
1976	87613 (11)	156223 (19)	51744 ( 6)	524992 (64)	3089 ( 0)	823661 (100)
1977	160519 (17)	183702 (19)	92228 (10)	506927 (54)	1374 ( 0)	944750 (100)
1978	245074 (14)	223341 (13)	139500 ( 8)	1102066 (64)	4527 ( 0)	1714508 (100)
1979	177010 (14)	83214 ( 6)	95885 ( 7)	918596 (72)	9608 ( 1)	1284313 (100)
1980	194268 (17)	112608 (10)	119571 (11)	706521 (62)	2800 ( 0)	1135768 (100)
-----						
Average 1970 to present	203878 (19)	161223 (15)	69993 ( 7)	619189 (59)	3040 ( 0)	1057323
1981(Prelim.)	266000(20)	99700( 8)	91000( 7)	860900(65)	4200( 0)	1321800

Footnotes: (1) Average percent harvest by gear type calculated from average harvest in numbers by gear type.  
 (2) Percents may not sum exactly to 100 due to rounding.  
 (3) Seine and drift gillnet catches include salmon harvested by Annette Island Reserve fisheries.

Table 4 . Preliminary 1981 Southeast Alaska Commercial Chinook  
 Salmon Catches by Gear (ADF&G 11/81)

Fishery	Preliminary Catch
Troll Fishery	248,600 <sup>1/</sup>
Seine Fishery (incidental harvest)	9,700
Gillnet Fishery (incidental harvest)	8,800
Trap and miscellaneous	1,000
Est. Total Commercial Harvest	268,100

<sup>1/</sup> Includes approximately 1,600 fish harvested during that portion of the winter season from Oct. 1 through Dec. 31, 1980.

Table 5 . Preliminary estimates of 1981 chinook salmon escapements to selected Southeast Alaska systems (ADF&G 11/81).

Note: Over 30 chinook salmon producing systems exist in Southeast Alaska. However, due to poor surveying conditions in many systems only those included below are currently surveyed in a consistent manner each year to provide a relative measure or index of total chinook salmon escapements to Southeast Alaska systems.

<u>System - Tributary</u>	<u>Type of Survey<sup>1</sup></u>	<u>Escapements</u>			<u>Minimum Escapement Goal<sup>2</sup></u>
		<u>Ave. 1975-80</u>	<u>1980</u>	<u>1981</u>	
<u>Major Systems (3 Total)</u>					
Taku - Nakina	(1)	2,810	4,500	5,100	9,000
- Nahini	(1)	780	1,530	2,940	2,500
Taku Subtotal		3,590	6,030	8,040	11,500
Stikine - Little Tahltan	(1)	620	2,140	3,330	(2,100)
Alsek - Kluckshu'	(2)	2,130	1,400	2,110	3,200
<u>Medium Systems (8 Total)</u>					
Situk	(2)	1,490	1,120	810	(5,100)
<u>Behm Canal Systems</u>					
Keta	(1)	250	190	330	500
Blossum	(1)	100	90	160	800
Chickamin	(1)	220	260	280	900
Unuk	(1)	800	1,050	730	1,800
Behm Canal Subtotals		1,370	1,590	1,500	4,000
<u>Minor Systems (22 Total)</u>					
King Salmon	(1)	76	70	100	200

<sup>1</sup> Type of Survey Codes (1) - Helicopter peak spawning count (primary method).  
(2) - Weir total count.

<sup>2</sup> These minimum escapement goals, established in 1980, represent maximum escapements observed since the 1950's (except for the Situk) when Southeast Alaska chinook stocks were seriously depressed. Revision of goals for some systems, in particular the Situk and Stikine, is expected pending further data analysis.



## REPORT TO THE BOARD OF FISHERIES

## RESEARCH TROLL FISHERY

SPRING, 1981

By:  
Mike Bethers

## ABSTRACT

A troll research fishery was conducted in northern S.E. Alaskan waters from April 16 to May 11, 1981. During the study, 764 chinook salmon were tagged, eleven stocks of chinook salmon in the study area were identified, and a study of the efficiency and hook-induced mortality of single and treble fish hooks was conducted.

As of September 30, 1981, 45 disc tags with complete information had been recovered. Chinook salmon tagged in outside areas were recovered at nearly three times the rate of fish tagged in Inner Icy Strait; 12.8% as compared to 4.7%, respectively. The percentages of Alaskan and non-Alaskan recoveries of fish tagged in outer areas were 28.6% and 71.4%, respectively as compared to 80.6% and 19.4% respectively for fish tagged in inner Icy Strait. Overall, 29 (64.4%) tag recoveries were made in Alaskan waters and 16 (35.6%) were made in non-Alaskan waters.

Of the nine coded wire tagged chinook salmon caught, 6 had been released from hatcheries in S.E. Alaska, 1 from British Columbia and 2 from Oregon. No coded wire tagged wild Alaskan chinook salmon were caught.

Hook performance data suggests that the hooking rate for treble hooks is significantly higher than single hooks, and that treble hooks could be expected to produce an 18% higher catch. It is indicated that a lower hook injury rate occurs with treble hooks than for single hooks, however additional data would be required to determine whether the difference is statistically significant.

## RESEARCH TROLL FISHERY

SPRING 1981

Historically, the chinook salmon troll fishery in S.E. Alaskan coastal waters has been open to fishing from April 15 to October 31. In an attempt to conserve the depressed stocks of mature chinook salmon returning to S.E. Alaskan streams, the Alaska Board of Fisheries, in January, 1981, delayed the opening of the troll season until May 15th by closing all State waters to commercial trolling from April 15th to May 14, 1981. This action stimulated concern regarding potential loss of "in-fishery" recoveries from approximately 150,000 coded wire tagged Taku and Stikine River chinook currently at large in the ocean.

This research troll fishery stemmed from the Board's decision to close the April 15th to May 14th segment of the season and was conducted to:

- 1) Determine stock identification, run timing, migration routes, and transfer to other fisheries of chinook salmon passing through the Icy Strait-Cross Sound corridor areas.
- 2) Determine important juvenile chinook feeding areas and contribution of chinook stocks to the troll fishery by recovering coded wire tagged fish.
- 3) Evaluate the catch efficiency and hook-induced mortality of single and treble hooks on commercial chinook salmon troll gear.

Four power trollers fished under short term vessel charter for the Department during the study. Two boats fished at any one time; one in inner Icy Strait and one in the Cross Sound - outer coastal areas.

Vessels fished in their normal fashion, except that both single and treble hooks were used. Only one type of hook was used on a troll line at one time, so that individual hook type data could be collected. Hook types were switched among the vessels main lines, to prevent bias. A biologist from the Alaska Department of Fish and Game or the Alaska Troller's Association was aboard each vessel during the course of this study.

Hooked fish were retrieved to the side of the boat and were lead into an electrified landing basket, instead of being gaffed. Larger fish remained in the electrified basket in a state of electronarcosis during sampling and tagging. Chinook salmon under approximately 24 inches were lifted aboard, by the leader, and restrained by hand in a smooth plastic lined tagging trough for sampling and tagging.

The public was informed of the tagging program through articles in local newspapers, Fish and Game news releases and radio spots. The recovery of disc tags was accomplished primarily through voluntary angler returns. Each tag returned with catch date and location data was worth a \$2.00 reward to the angler. As an added incentive, one angler received a \$500.00 bonus via a lottery drawing of the tags turned in.

## RESULTS

Between April 16th and May 11, 1981, a total of 846 salmon were caught by the four trollers. A total of 764 chinook and one coho were tagged and released. Seventy nine chinook were retained, as they were either adipose fin clipped or mortally wounded. Fish were tagged in the Icy Strait-Cross Sound area and on the outer coast from Cape Cross to Icy Point (Fig. 1 & 2)).

As of September 30th, 1981, 45 disc tags with complete information had been returned to the Department. An additional eight disc tagged chinooks were known to have been observed, but usable data was not available. Of the 45 recoveries, 4 were made in Alaskan chinook river systems, 25 in Alaskan fisheries, 13 in British Columbia fisheries, 2 in Washington fisheries and 1 in Oregon fisheries. A total of 14 recoveries (12.8%) of the fish tagged in the outer areas were recovered, as compared to 31 (4.7%) of the fish tagged in inner Icy Strait. It is apparent that fish tagged in inner Icy Strait tended to be recovered in inside waters and fish tagged in outside areas tended to be recovered in outer areas. Only 19.4% of the recoveries of fish tagged in inner Icy Strait were made in non-Alaskan waters, as compared to 71.4% of the chinook tagged in outside waters. A comparison of recovery locations of chinook tagged in inside and outside waters is presented in Table 1.

A total of 12 adipose fin clipped chinook were caught during the study. Of these, 9 had coded wire tags. Of the 9, 6 were from Alaska, 1 was from British Columbia and 2 were from Oregon. All tagged fish were from hatchery releases. Of the 12 adipose clipped chinook caught, only 2 were of legal troll length (28 inches).

Of the 6 coded wire tagged Alaskan chinook recovered, 5 were recovered in inner Icy Strait and only 1 was recovered in the outer area. Of the 3 non-Alaskan tagged fish recovered, 2 were recovered in outer areas and 1 was recovered in inner Icy Strait.

Hook type data was collected on 829 chinook during the study. Of these, 443 (53%) were 28 inches or greater in total length (legal troll length) and 340 (47%) were sublegal.

The results of this study indicate that the hooking rate for treble hooks is significantly higher than for single hooks. Single hooks could be expected to catch 67 fish per 100 bites compared to 79 fish per 100 bites for treble hooks, i.e., an 18% higher catch rate.

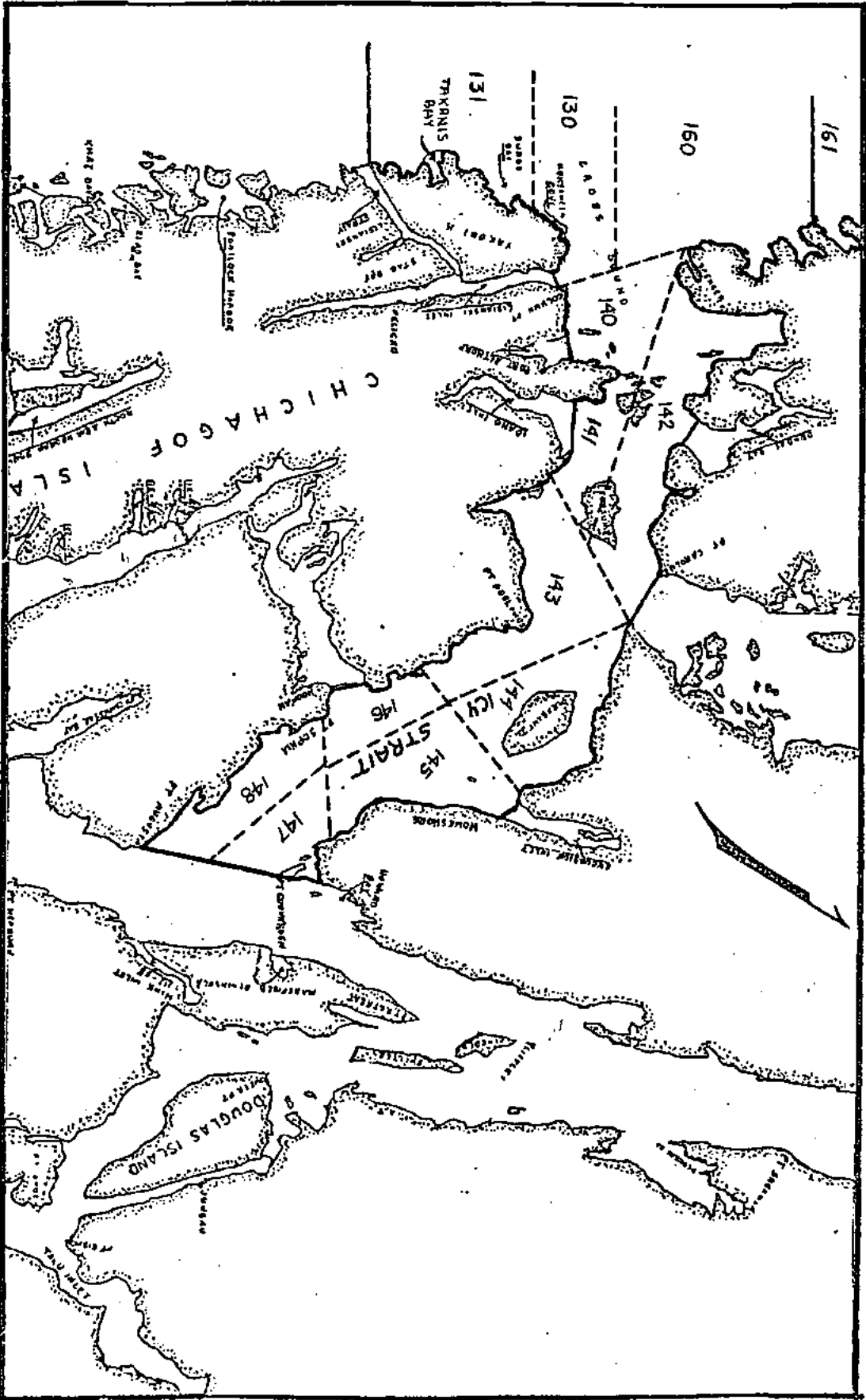


FIGURE 1. FISH TAGGING AREAS, CROSS SOUND - ICY STRAIT TEST TROLL FISHERY, 1981

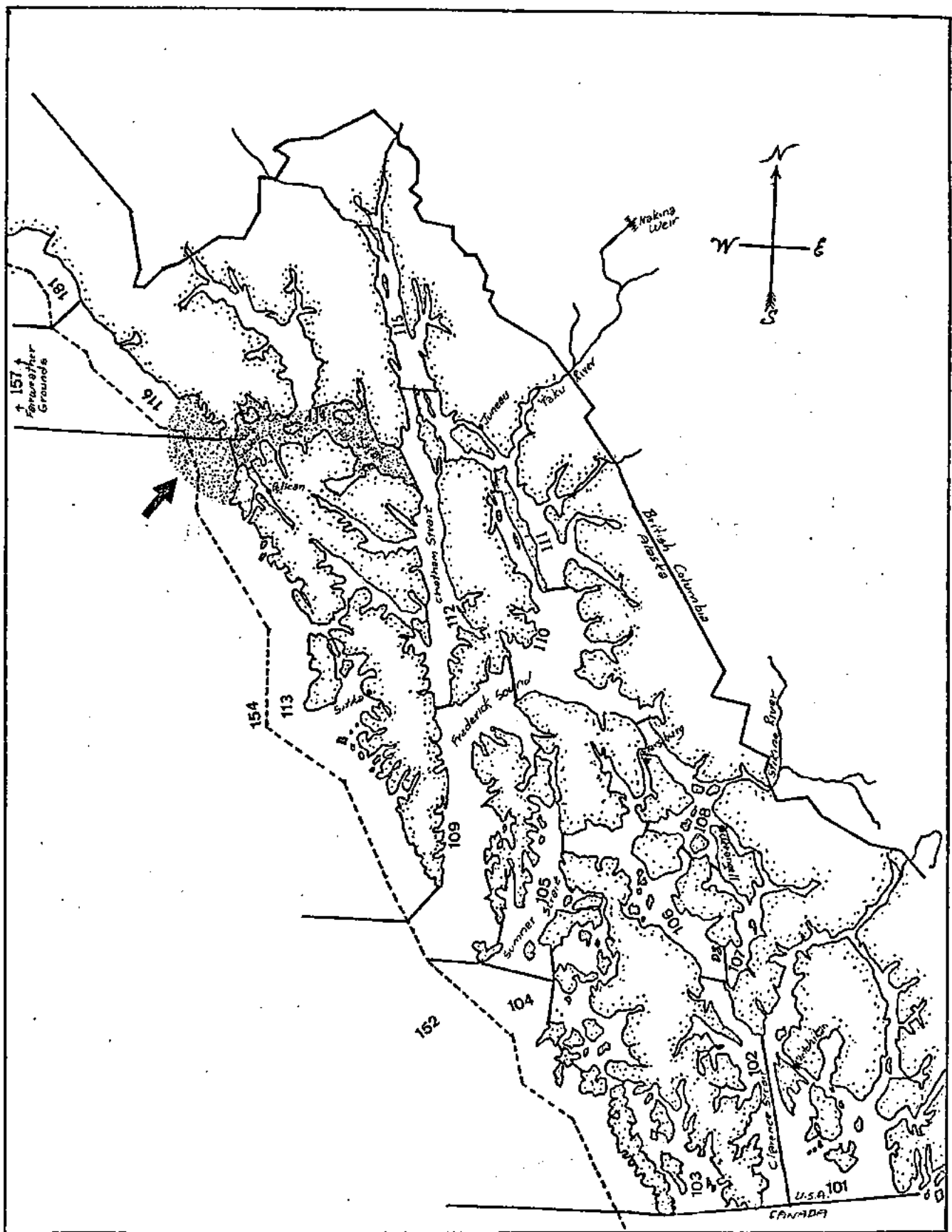


Figure 2. Study Area, 1981 Troll Research Fishery.

Table 1. A Comparison of Recovery Areas of Chinook Salmon Disc Tagged in Inner Icy Strait and Outside Coastal Areas.

<u>Recovery Area</u>	<u>Tagging Locations</u>		<u>Total</u>
	<u>Outer Areas</u> n (%)	<u>Inner Icy Strait</u> n (%)	
ALASKA:	<u>4 (28.6%)</u>	<u>25 (80.6%)</u>	<u>29 (64.4%)</u>
Milling (within 5 mi. of tagging location)	0 (00.0%)	6 (19.4%)	6
Inside waters of Alaska	0 (00.0%)	15 (48.3%)	15
Outside waters of Alaska	4 (28.6%)	0 (00.0%)	4
Alaskan Chinook systems	0 (00.0%)	4 (12.9%)	4*
NON-ALASKAN:	<u>10 (71.4%)</u>	<u>6 (19.4%)</u>	<u>16 (35.6%)</u>
A) British Columbia	7 (50.0%)	6 (19.4%)	13
B) Washington	2 (14.3%)	0 (00.0%)	2
C) Oregon	1 (07.1%)	0 (00.0%)	1
TOTAL	14/109 (12.8%)	31/656 (4.7%)	45/765 (5.8%)

\* 3 from Taku, 1 from Stikine River

An analysis of the data also indicates that a lower hooking injury rate occurs with treble hooks than with single hooks; however, additional data would be required to determine whether this difference is statistically significant.

It should be emphasized that great care was taken in removing hooks from the fish. Therefore, the results may not be representative of hook performance in the commercial troll fleet.

A comparison of recovery rates of disc tagged chinook caught on single and treble hooks is presented below.

<u>F.L. (mm)</u>	<u>Single Hooks</u>	<u>Treble Hooks</u>	<u>Total</u>
673mm+ (legal)	17	15	32
673mm- (sublegal)	<u>4</u>	<u>9</u>	<u>13</u>
No. recovered by hook type	21 (46.6%)	24 (53.3%)	45 (100%)
No. released by hook type	369 (48.5%)	391 (51.3%)	760 (100%)

Scale samples and length data collected during the study could not be analyzed in time for this report. When analyzed, this data may shed some light on the origins and ages of fish tagged in the study. From this, important juvenile feeding areas may be identified.

Eleven stocks of chinook salmon were identified by the use of coded wire tags and "in river" recoveries and observations of chinook salmon tagged in this study.

Following is a list of chinook salmon stocks identified by the recovery or observation of disc tagged fish in spawning systems.

Recovery Data		Tagging Data	
<u>Stock</u>	<u>Date</u>	<u>Location</u>	<u>Date</u>
(AK) Stikine	6 03/81	Excursion Inlet	4/28/81
(AK) Nakina (Taku)	1) 6/03/81	Homeshore	5/09/81
	2) 8/07/81	Homeshore	5/04/81
	3) 8/10/81	Homeshore	4/17/81
(AK) Chilkat	7/06/81	?	4/16-5/11/81
(AK) Nahlin (Taku)	1) 7/22/81	?	4/16-5/11/81
	2) 7/22/81	?	4/16-5/11/81
	3) 7/22/81	?	4/16-5/11/81
(WA) Quinault	9/22/81	P.D. Grounds	5/02/81
(OR) Nehalem	9/24/81	Soapstone	4/25/81

Stocks of chinook salmon identified by the recovery of coded wire tagged fish during the study are listed below.

Tagging Data			Recovery Data	
<u>Stock</u>	<u>Rel. Site</u>	<u>Date</u>	<u>Location</u>	<u>Date</u>
(AK) Unuk	L. P. Walter	1) 5/79	Excursion Inlet	4/27/81
		2) 5/80	Homeshore	5/09/81
		3) 4/79	Homeshore	5/11/81
		4) 4/79	Port Althorp	4/26/81
(AK) Andrews Creek	C. L. Hatchery	1) 6/77	Homeshore	5/04/79
		2) 5/78	Homeshore	5/05/81
(B.C.) Robertson Creek	R. Cr. Hatchery	5/77	Icy Point	5/02/81
(OR) Willamette	Below Falls	11/77	Homeshore	5/11/81
(OR) Nestucca	Nestucca River	11/79	Port Althorp	5/05/81



The number of tagged chinook recovered by area and gear type is presented below.

Recovery		Tagging Area		Total Per
<u>Area</u>	<u>Type</u>	<u>Outer Areas</u>	<u>Inner Icy Strait</u>	<u>Gear</u>
AK	Stream Survey	0	3	3
	Stream Sport	0	1	1
	Troll	5	8	13
	Gillnet	1	3	4
	Marine Sport	0	10	10
B.C.	Troll	3	2	5
	Gillnet	2	3	5
WA	Gillnet	2	0	2
OR	Stream Sport	<u>1</u>	<u>0</u>	<u>1</u>
	TOTALS	14	30	44

#### DISCUSSION

Of the 842 salmon caught during the study, 596 were taken at either Homeshore or Excursion Inlet in inner Icy Strait. This was due to both boats fishing inside at the beginning of the study because of bad weather on the outside coast. Also, the Homeshore - Excursion Inlet drag was fished continuously by one boat throughout the study as it is normally a reliable producer of chinook salmon during the early season. The large catch in inner Icy Strait provided substantial hook type catch data, however, it would have been more desirable to have used additional boats to spread the catch over more tagging locations.

Fish handling procedures used in this study worked well and the use of electricity to stun large salmon for handling is recommended for further study and use. Small chinook (under approximately 24 inches) were not suitably stunned by the electric landing basket. It is not known whether this was due to a possible difference in the voltage required to stun smaller fish, or to the design of the basket.

Even though this study was much smaller in scope than that conducted by Parker and Kirkness in the early 1950's, it is indicated that this project will show similar results.

Results of both tagging studies showed that:

- 1) Fish tagged in inner waters of S.E. Alaska tended to be recovered in inside Alaskan waters and fish tagged in outside areas were recovered in outside waters. Generally, there was little exchange of fish from outside to inside waters or vice versa.
- 2) Fish tagged on the outside coast tended to be recovered in southern non-Alaskan waters to a much greater degree than fish tagged in inside Alaskan waters.

In the Parker-Kirkness study, 5.2% of fish tagged from Cape Spencer to Cape Fairweather were recovered during the same year as tagging. In our study 12.8% of the fish tagged in outside areas were recovered during the year of tagging. This difference may be indicative of increased fishing pressure.

Of the 842 chinook caught, 12 (1.4%) were adipose fin-clipped. Nine of the fish retained coded wire tags. Seven of the 9 tagged fish were of sublegal length. The high number of adipose fin-clipped sublegal chinook caught, coupled with the usual 30% sample of the commercial catch may indicate that the Department is recovering only a small percentage of the potentially recoverable tagged chinook available. Even though the actual numbers of tagged sublegal chinook taken in the commercial fishery may be less than that observed in this test fishery, a regulatory proposal was submitted to the board of fisheries that would allow retention of sublegal chinook in the troll fishery. This proposal will allow recovery of young age classes of chinook in the troll fishery, which to date have not been legally available for recovery.

Treble hooks did catch a higher percentage of the fish hooked, as was predicted by many fishermen. It was also indicated that treble hooks did less damage, as they tended to hook the fish shallower than single hooks. It appeared as though chinook would get hooked on treble hooks usually on the first time the bait was mouthed and consequently would be hooked close to the lips. On single hooks it appeared as though the fish would mouth the bait longer and consequently would not actually get hooked until the hook was farther into the mouth.

Analysis of hook type data collected in this study indicates that there is no justification to continue the ban on treble hooks in the S. E. Alaskan troll fishery.

Appendix I. Description of condition codes and comparison of hooking and injury rate of single and treble hooks on commercial gear.

Fish caught were "graded" according to the amount of damage caused by hooking. The condition codes used in this study were:

"A" = Negligible injury, very slight.

"B" = Definite injury, however, complete recovery expected.

"C" = Severe injury, recovery doubtful.

"M" = Terminal injury, fish killed by hook.

Appendix I (Continued)

I. Comparison of Hooking Rates

Hook Type	Catches	Losses	Total Bites
Single - # %	408 67.1%	200 32.8%	608
Treble - # %	421 79.4%	109 20.6%	530
TOTAL	829	309	1,138

II. Comparison of Hooking Injury Rate

A. Sublegal Fish (less than 673 mm fork length)

Hook Type	Fish Condition (Condition Codes)		
	Good (A,B)	Poor (C,M)	Total fish
Single - # %	148 84.1%	28 15.9%	176
Treble - # %	192 91.4%	18 8.6%	210
TOTAL	340	46	386

III. Comparison of Hooking Injury Rates

B. Legal Fish (673 mm fork length and larger)

Hook Type	Fish Condition (Condition Codes)		
	Good (A,B)	Poor (C,M)	Total Fish
Single - # %	165 71.1%	67 28.9%	232
Treble - # %	175 82.9%	36 17.1%	211
TOTAL	340	103	443

## Appendix II

FISH TAGGING AREAS DESCRIBED,  
NUMBERS OF FISH TAGGED, MORTALITIES,  
ADIPOSE CLIPPED SALMON CAUGHT BY AREA,  
TROLL RESEARCH FISHERY, 1981

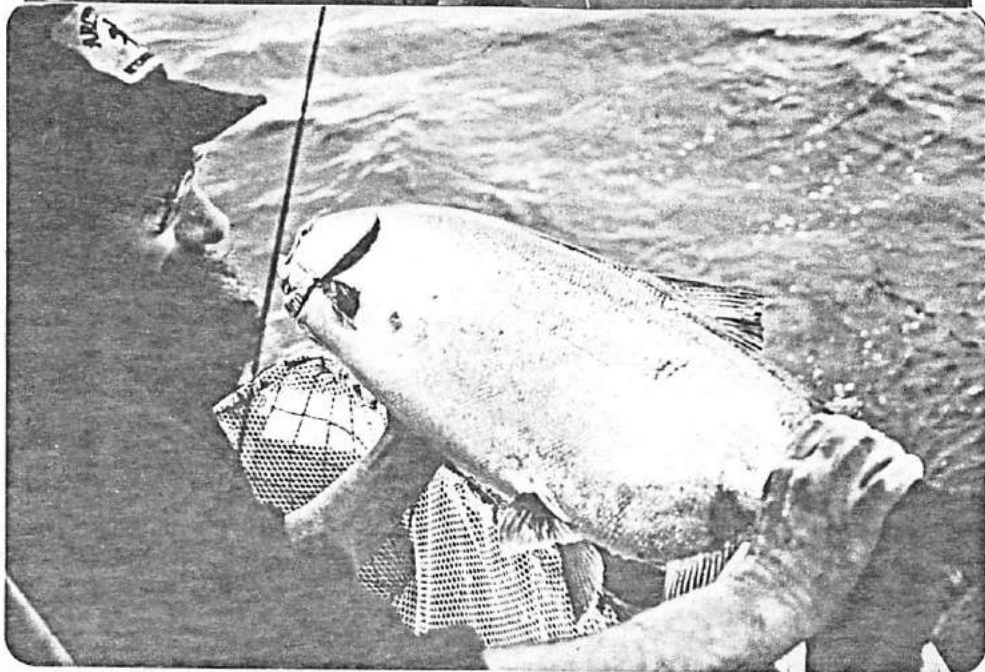
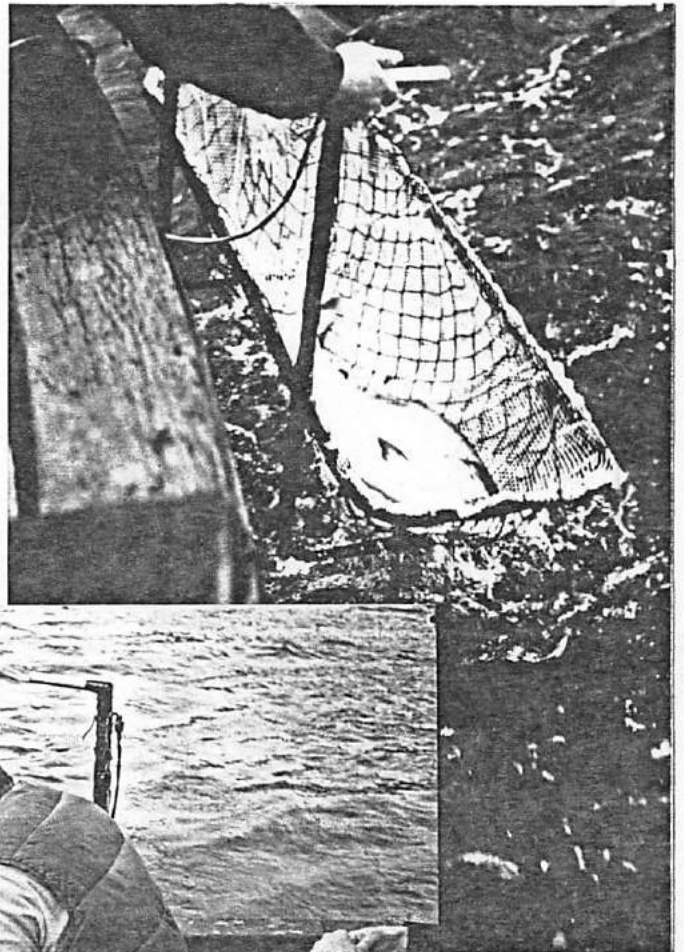
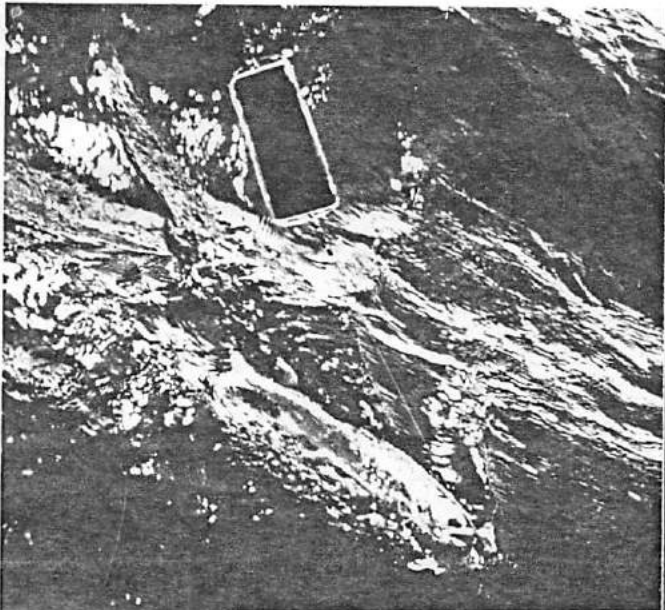
FISHING AREAS

<u>Number</u>	<u>Descriptive Area</u>	<u>Number tagged</u>	<u>Number Mortalities</u>	<u>Number Ad. Clips</u>
130	Soapstone Pt. (SS)	49	3	-
	Hoktaheen (HK)	4	-	-
131	Cape Cross (CC)	1	1	-
140	Port Althorp (AL)	47	1	2
	Three Hill Is. (3H)	2	-	-
	Cross Sound (CS)	2	-	-
141	Idaho Inlet (II)	1	-	-
142	Dundas Bay (DB)	1	-	-
143	Point Adolphus (PA)	-	2	-
	Pinta Cove (PC)	3	-	-
	Eagle Point (EP)	-	-	-
144	Pleasant Island (PI)	-	-	-
145	Homeshore (HS)	477	45	6
	Excursion Inlet (XI)	120	11	2
146	Point Sophia (PS)	-	-	-
147	Point Couverden (PC)	3	-	-
148	Spasski-Whitestone (SW)	-	-	-
160	Cape Spencer (CS)	2	-	-
	Graves Harbor (GH)	20	3	-
	Dixon Can (DC)	4	-	-
	Torch Bay (TB)	4	-	-
	Libby Island (LI)	1	-	-
	Polka Rock (PR)	-	1	-
161	Dixon Harbor (DH)	2	-	-
	Sugarloaf Island (SI)	1	-	-
	P. D. Grounds (PD)	1	-	-
	Astrolabe Point (AS)	6	1	-
	Bousole Bay (BB)	5	1	-
	Palma Bay (PB)	2	-	-
	Icy Point (IP)	7	-	2
TOTALS		765	69	12

Appendix III. A Summary of Adipose Fin Clipped Chinook Caught in the Research  
Troll Fishery, 1981.

<u>Recovery Data</u>			<u>Tag and Release Data</u>		
<u>Location</u>	<u>Date</u>	<u>F.L.</u>	<u>Location</u>	<u>Date</u>	<u>Tag Code</u>
Excursion Inlet (145)	4/27	470mm.	Little Port Walter, AK	5/79	3-16-36
Homeshore (145)	5/04	820	Crystal Lake Hatchery, AK	6/77	4-16-16
Homeshore (145)	5/05	610	Crystal Lake Hatchery, AK	5/78	4-18-36
Homeshore (145)	5/09	415	Little Port Walter, AK	5/80	3-17-4
Homeshore (145)	5/11	530	Little Port Walter, AK	4/79	3-16-33
Homeshore (145)	5/11	580	Willamette River, OR	11/77	9-16-31
Port Althorp (140)	4/26	620	Little Port Walter, AK	4/79	3-16-31
Port Althorp (140)	5/05	490	Nestucca River, OR	11/79	7-18-51
Icy Point (161)	5/02	680	Robertson Cr., B.C., CANADA	5/77	2-16-35
Homeshore (145)	4/21	620	Adipose Only - No C.W.T.		
Excursion Inlet (145)	4/22	468	Adipose Only - No C.W.T.		
Icy Point (161)	5/02	630	Adipose Only - No C.W.T.		

Appendix IV. Landing and Tagging of Chinook in Electric Basket.



ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF COMMERCIAL FISHERIES  
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ALASKA BOARD OF FISHERIES

COMMERCIAL AND SUBSISTENCE FISHING

AND PRIVATE NONPROFIT SALMON HATCHERY PROPOSED REGULATORY CHANGES

TO BE CONSIDERED AT THE BOARD OF FISHERIES MEETING IN ANCHORAGE,

ALASKA FROM APPROXIMATELY DECEMBER 4, 1981 THROUGH DECEMBER 20, 1981

AND IN JUNEAU, ALASKA FROM JANUARY 4, 1982 TO APPROXIMATELY

JANUARY 18, 1982

The Board of Fisheries will meet at the Anchorage-Westward Hilton Hotel in Anchorage, Alaska to consider proposed changes in regulations from about December 4, 1981 through December 20, 1981 and at the Baranof Hotel in Juneau, Alaska from January 4, 1982 to approximately January 18, 1982. A public hearing on all proposed regulatory changes will start approximately the morning of December 5 for those who cannot remain for the entire meeting. Additional public hearings will be held throughout the meeting just prior to the consideration and adoption of proposed changes in the regulations of the various regulatory areas. Staff reports will be given on each area fishery prior to the public hearing for that area. A tentative meeting schedule is on the following page. A more concise meeting schedule will be available from local offices of the Department of Fish and Game by mid-November.

Attached is a compilation of proposed changes which have been submitted by the public, staff and Board of Fisheries. The Board may adopt or reject these proposed changes or may develop alternatives on the subject matter contained in the proposals. The Board may also consider any additional subject matter set forth in the legal notice published in compliance with the Administrative Procedure Act. Copies of the legal notice may be obtained from offices of the Department of Fish and Game.

In most instances the attached proposals are drafted so that new or amended wording being added to the existing regulation appears underlined and wording being deleted appears fully capitalized and enclosed in brackets. The new material precedes the omitted material. The above procedure, however, has not been followed if the change is lengthy or complex.

Public comment is invited on the proposed changes. At the public hearing, comments may be offered orally or in writing. Oral testimony will be limited to 10 minutes for individuals and 20 minutes for representatives of groups. Persons giving oral testimony will be required to pre-register for the public hearing. Written comments may be submitted in advance of the hearing and should be sent to the Board of Fisheries, Support Building, Juneau, Alaska 99801 early enough to allow receipt by November 18, 1981. Adherence to the November 18 deadline will assure Board members of more time for study and, therefore, fuller consideration of comments submitted by the public. The Board urges those persons whose interests may be affected by the proposed changes to offer comments.

ALASKA BOARD OF FISHERIES

Jim Beaton, Juneau  
Chris Goll, Anchorage  
Jimmy Huntington, Galena  
Nick Szabo, Kodiak

Griffin Quinton, Anchorage  
Herman Schroeder, Dillingham  
Harry Sundberg, Wrangell

TENTATIVE AGENDA

ALASKA BOARD OF FISHERIES MEETING  
ANCHORAGE WESTWARD HILTON - ANCHORAGE, ALASKA  
DECEMBER 4 - DECEMBER 20, 1981

Call to order: 9:00a.m., December 4, 1981

I. Introductory Business

II. Finfish

- a. Department Reports
- b. General Public Hearing, December 5, 1981
- c. Cook Inlet Area
- d. A-Y-K Area
- e. Bering Sea Herring
- f. Bristol Bay Area
- g. Westward Area

RECONVENE IN JUNEAU, JANUARY 4, 1981

- h. Southeastern-Yakutat Area
- i. Prince William Sound Area
- j. Statewide

III. Other Business

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SECURITY COVE, ETOLIN STRAIT AREA  
HERRING

①

5 AAC 27.020 (a) (3) (4) (5) REGISTRATION. (regulations page 95). Establish an exclusive registration area in the Security Cove and Goodnews Bay districts.

The proposed regulation reads as follows:

5 AAC 27.020. REGISTRATION. (a) All registration areas are nonexclusive registration areas except as specified in (a) (2) and (3) of this section. A vessel may be registered for any or all of the registration areas during a registration year, except as follows:

(3) Vessels registered for statistical areas A, D, E, H, K, L, M, N, T, or Q at any time between February 1 through June 30 may not be used to take herring in statistical area W during that period; vessels registered for statistical area W during the period February 1 through June 30 may not be used to take herring in statistical areas K, E, H, K, L, M, N, T, or Q; vessels must register for statistical area W before May 1.

(4) Any herring interim-use or entry permit holder who commercially fishes for herring in statistical areas A, D, E, H, K, L, M, N, T, or Q at any time during the period February 1 through June 30 may not commercially fish for herring in statistical area W at any time during that period, and any herring interim use or entry permit holder who commercially fishes for herring in statistical area W at any time during the period February 1 through June 30 may not commercially fish for herring in statistical areas A, D, E, H, K, L, M, N, T, or Q at any time during that period.

(5) Any herring interim-use or entry permit holder who participates on any herring fishing vessel as defined in A.S. 16.05.475 in statistical areas A, D, E, H, K, L, M, N, T, or Q during the period February 1 through June 30 may not participate on any herring fishing vessel as defined in A.S. 16.05.475 in statistical area W during the period February 1 through June 30, and any herring interim-use or entry permit holder who participates on any herring fishing vessel as defined in A.S. 16.05.475 in statistical area W during the period February 1 through June 30 may not participate on any herring fishing vessel as defined in A.S. 16.05.475 in statistical areas A, D, E, H, K, L, M, N, T, or Q during the period February 1 through June 30.

Justification:

Last year the Security Cove/Goodnews Bay fishery looked like a city. The numerous outside boats forced the smaller local boats out of the fishery. Exclusive registration should give the local fishermen a greater chance to participate in the fishery. Also, due to the large numbers of boats in the fishery last year much illegal fishing occurred (especially violating the maximum number of shackles allowed) and enforcement was nearly impossible.

SECURITY COVE  
HERRING

Exclusive registration should decrease the number of fishermen in the area, make enforcement easier, and thereby decrease illegal fishing. Decreasing the number of fishermen would also be beneficial for the resource as the guideline harvest level should be caught over a larger period of time instead of concentrating on just a few runs.

Proposed by: Central Bering Sea Advisory Committee (12)  
People of Goodnews Bay (16)

②

5 AAC 27.875(c). DESCRIPTION OF DISTRICTS AND 885. GEAR. (Regulation page 123). Open the Nunivak Island area and allow the use of seines.

The proposed regulation reads as follows:

5 AAC 27.875. DESCRIPTION OF DISTRICTS.

(c) The Nunivak Island district includes all waters with three miles of Nunivak Island.

5 AAC 27.885. GEAR. Herring may be taken with set gill nets in all districts. Herring may be taken with purse seines only in the Nunivak Island district.

Justification: Nunivak has been surveyed for the past two years and harvestable amounts of herring have been observed each year. We feel there should be some commercial utilization of this particular resource.

Proposed by: Lloyd Cannon (197)

BERING SEA, KOTZEBUE AREA  
HERRING

③

5AAC 27.020. (a) (3) (4) (5) REGISTRATION. (Regulation page 95) Establish an exclusive registration area in the Cape Romanzof district.

The proposed regulation reads as follows:

5 AAC 27.020. REGISTRATION (a) All registration areas are non-exclusive registration area except as specified in (a) (2) and (a) (3) of this section. A vessel may be registered for any or all of the registration areas during a registration year, except as follows:

(3) During the period February 1 through June 30, the registration area in the Cape Romanzof district, as defined in 5 AAC 27.905(a), is an exclusive registration area. Vessels registered for the Cape Romanzof district between February 1 and June 30 may not be used to take herring in any other statistical area as described in 5 AAC 27.005; vessels registered for any of the statistical areas described in 5 AAC 27.005 other than the Cape Romanzof district may not be used to take herring in the Cape Romanzof district.

(4) Any herring interim-use or entry permit holder who commercially fishes for herring in a statistical area other than the Cape Romanzof district at any time during the period February 1 through June 30 may not

BERING SEA, KOTZEBUE AREA  
HERRING

commercially fish for herring in the Cape Romanzof district, and any herring interim-use or entry permit holder who commercially fishes for herring in the Cape Romanzof district may not commercially fish for herring in any other statistical area.

(5) Any herring interim-use or entry permit holder who participates on any herring fishing vessel as defined in A.S. 16.05.475 in statistical areas other than the Cape Romanzof district during the period February 1 through June 30 may not participate on herring fishing vessel as defined in A.S. 16.05.475 in the Cape Romanzof district during the period February 1 through June 30, any herring interim-use or entry permit holder who participates on any herring fishing vessel as defined in A.S. 16.05.475 in the Cape Romanzof district during the period February 1 through June 30 may not participate in any herring fishing vessel as defined in A.S. 16.05.475 in any other statistical area during the period February 1 through June 30.

Justification:

(1) Fishermen of Stoknavik Cooperative (residents of Chevak, Hooper Bay, and Scammon Bay) have proven that they are capable of taking the entire guideline harvest level in the Cape Romanzof herring fishery. In 1981 local fishermen took 392 metric tons (the guideline harvest is 350). Also, passage of this proposal should decrease the number of fishermen in the district, making enforcement of regulatory restrictions, such as limits on shackles, easier.

Proposed by: Lower Yukon Advisory and G.A.S.H. Advisory Committee (21)

④

5 AAC 27.905.(a) DESCRIPTION OF DISTRICTS AND SUBDISTRICTS. (Regulation page 125). Redescribe the boundaries of the Cape Romanzof district.

The proposed regulation reads as follows:

5 AAC 27.905. DESCRIPTION OF DISTRICTS AND SUBDISTRICTS.

(a) the Cape Romanzof district consists of all waters of Alaska in Kokechik Bay, consisting of the area to the east of Panowat Spit and Aniktun Island. [BETWEEN THE LATITUDE OF DALL POINT AND 62° N. LAT.]

Justification: During the 1980 season boats outside of Kokechik Bay were fishing more than the maximum shackles permitted. ADF&G personnel were unable to enforce the shackle regulations outside the bay because their boats were too small. Forcing everyone to fish inside the bay will make enforcement easier.

Proposed by: Lower Yukon and GASH Advisory Committees (20,177)

⑤

5 AAC 27.910. (a)(1) FISHING SEASONS. (Regulation page 125) Establish weekly fishing period openings and closures by emergency order in the Cape Romanzof district.

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HERRING

The proposed regulation reads as follows:

5 AAC 27.910. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(a) In the Cape Romanzof and Norton Sound districts, herring may be taken only from April 15 through July 31.

(1) In the Cape Romanzof district, herring may be taken only during periods established by emergency order.

Justification: The Cape Romanzof district is a comparatively small area with a relatively small herring population (350 m.t. guideline harvest level). The large and expanding fishery has the capability to take the allowable harvest in a relatively short time. Emergency order openings and closures of fishing periods will afford greater management control and allow for stock assessment. This proposal will promote the conservation and development of the herring resource by allowing for a more orderly harvest and to insure adequate spawning which should result in a more stable fishery in the long term. This proposal does not affect the subsistence fishery.

Proposed by: Staff (III- )

⑥

5 AAC 27.931.(a) GILL NET SPECIFICATIONS AND OPERATION. (Regulation page 126). Specify that not more than 100 fathoms of herring gill net may be operated from any licensed fishing vessel in the Cape Romanzof district.

The proposed regulation reads as follows:

5 AAC 27.931. GILL NET SPECIFICATIONS AND OPERATION.

(a) No more than 150 fathoms of herring gill net may be operated from any commercially licensed herring fishing vessel and no single herring gill net may exceed 150 fathoms in length. The aggregate length of gill net in use by a herring interim-use or permit holder may not exceed 150 fathoms except that in the Cape Romanzof district not more than 100 fathoms may be operated from any licensed vessel.

Justification: When the herring are running strong 150 fathoms are too much net. The nets are too heavy with fish. Reduce the number of shackles to two should decrease the waste.

Proposed by: Lower Yukon and GASH Advisory Committee (19,179)

⑦

5 AAC 27.020. (a) (3) REGISTRATION. (Regulation page 94) Establish an exclusive registration area in the Norton Sound district.

The proposed regulation reads as follows:

5 AAC 27.020. REGISTRATION.

(a) All registration areas are non-exclusive registration areas except as specified in (a) (2) and (3) of this section. A vessel may be registered for any or all of the registration areas during a registration year, except as follows:

BERING SEA, KOTZEBUE AREA  
HERRING

(3) During the period April 15 through July 31, the Registration area in statistical area Q, specifically the Norton Sound District, is an exclusive registration area. Vessels, captains, and helpers registered for the Norton Sound District may not fish for herring in any other registration area during that period and vessels, captains, and helpers fishing for herring in other registration area during April 15 through July 31 may not fish herring in the Norton Sound District exclusive registration area during that period.

Justification:

(1) New fishery with little experience - ADF&G staff will manage the resource more closely in view of emergency openings and closures. Avoid clustering of vessels and therefore guarantee a higher roe content. This will enable fishermen to seek and gather high roe content fish more efficiently during the entire season.

Proposed by: Southern Norton Sound Advisory Committee (34)

⑧

5 AAC 27.941 (new section) VESSEL SPECIFICATIONS AND OPERATION. (Regulation page 126). Establish a maximum length of 30 feet for herring gill net vessels in the Norton Sound district.

The proposed regulation reads as follows:

5 AAC 27.941. VESSEL SPECIFICATIONS AND OPERATION. No vessel registered for herring gill net fishing in the Norton Sound district may be more than 30 feet in overall length.

Justification: The herring fisheries are realistically only two years old in Norton Sound, so most herring fishermen do not have the five years required fishing experience to apply for most fishing loans.

Proposed by: Southern Norton Sound Advisory Committee (35)

⑨

5 AAC 27.950.(g) WATERS CLOSED TO HERRING FISHING. (Regulation page 127). Extend the area closed to the taking of herring spawn on kelp from Wood Point to Golsovia River in the Norton Sound district.

The proposed regulation reads as follows:

5 AAC 27.950. WATERS CLOSED TO HERRING FISHING.

(g) In the Norton Sound district, the area from the northernmost tip of Wood Point to the terminus of Golsovia River [WAGON BOX CREEK] extending 500 yards seaward from mean [HIGHER] high tide is closed to the taking of herring spawn on kelp.

Justification: In 1981, 7 tons of herring spawn on kelp were harvested from the Black Point area. Department field biologists monitoring the kelp fishery noted that even this small harvest practically denuded the area of vegetation. Any additional harvest, in this already heavily harvested area, would eliminate valuable spawning substrate. Therefore the area around Black Point should be closed to the commercial taking of spawn on kelp to provide for the conservation of the herring stocks. This proposal does not affect the subsistence fishery and will not adversely affect the development of the commercial fishery.

Proposed by: Staff (III- )



BERING SEA, KOTZEBUE AREA  
HERRING

⑩

5 AAC 27.960.(b) GUIDELINE HARVEST LEVELS. (Regulation page 127)  
Increase the herring guideline harvest range to 3,000 metric tons in the Norton Sound district.

The proposed regulation reads as follows:

5 AAC 27.960. GUIDELINE HARVEST LEVELS.

(b) The guideline harvest level for taking herring in the Norton Sound district is 3,000 [1,000] metric tons.

Justification: Aerial survey data compiled since 1978 has shown a steady increase in herring abundance in the Norton Sound District, with last year's biomass estimated at 22,000 metric tons on the fishing grounds. Scale analysis of commercial catch and Department test net samples shows that 4, 5, 6 and 8 year old age classes will be present in the 1982 commercial fishery, with the 5 year old class being dominate. Considering the projected age class structure of the 1982 herring population no major change in biomass is expected. A harvest guideline of 3,000 metric tons is the best available estimate of what can be expected to be harvested in the Norton Sound district. This proposal will not adversely affect the subsistence fishery, the conservation of herring resource, or the development of the commercial fishery.

Proposed by: Staff (III- )

⑪

5 AAC 27.960.(f) GUIDELINE HARVEST LEVELS. (Regulation page 127) Establish a 30 metric ton guideline harvest level for taking herring spawn on kelp in the area from Canal Point Light to Wood Point in the Norton Sound district.

The proposed regulation reads as follows:

5 AAC 27.960. GUIDELINE HARVEST LEVELS.

(f) In The Norton Sound district, the guideline harvest level for taking herring spawn on kelp in the area from Canal Point Light to Wood Point is 30 metric tons.

Justification: During the 1981 season, Department biologists monitored the harvest of 30 metric tons of spawn on kelp in the open waters between Wood Point and Canal Point Light. It was observed that this harvest was not concentrated in any one specific area and no area was denuded of vegetation. An additional harvest of 30 metric tons of spawn on kelp during the 1982 season would not lead to the denuding of spawning substrate, as long as the effort does not concentrate in one area. This proposal would provide for the conservation of the resource by preventing excessive removal of spawning substrate and would not adversely affect subsistence users or the development of the commercial fishery.

Proposed by: Staff (III- )

KUSKOKWIM  
SUBSISTENCE

12

5 AAC 01.260.(d) FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 23). Specify that salmon may not be taken 24 hours before, during and 6 hours after any open fishing period in districts 4 and 5.

The proposed regulation reads as follows:

5 AAC 01.260. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(d) In districts 4 and 5 salmon may be taken at any time except that between June 1 and September 8 salmon may not be taken for 24 hours before, during and 6 hours after any open [WEEKLY] commercial salmon fishing period in each district.

Justification: The commercial openings during this period are all by emergency announcements and normally are daily openings, seldom if ever weekly openings. Deletion of the reference to nonexistent "weekly" openings would clarify when subsistence fishing may be done and thus improve enforcement ability.

Proposed by: Fish and Wildlife Protection, Region III. (98)

13

5 AAC 01.290. (NEW SECTION) MARKING OF SUBSISTENCE TAKEN SALMON. (Regulation page 25). Specify that the head must be removed from subsistence caught salmon in district 5.

The proposed regulation reads as follows:

5 AAC 01.290. MARKING OF SUBSISTENCE TAKEN SALMON. No person may possess salmon for subsistence purposes in District 5 unless the head has been immediately removed from the salmon. It is unlawful to sell or purchase salmon from which the head has been removed.

Justification: We continue to annually have a problem with the Goodnews River fishermen going up the river and taking subsistence fish and selling them. Due to weather, river access and proximity to the village we have been generally unsuccessful in stopping this illegal activity, therefore we are proposing this marking system in hopes we have the same results as Togiak. The difference in the two is that the illegal Goodnews fishing lasts all summer long with all species.

Proposed by: Fish and Wildlife Protection, Region III (100)

KUSKOKWIM  
SALMON

14

5 AAC 07.200(c). FISHING DISTRICTS. (Regulation page 34). Redescribe the boundaries of district 4.

The proposed regulation reads as follows:

5 AAC 07.200. FISHING DISTRICTS.

(c) District 4 consists of Kuskokwim Bay and its drainages between ADF&G regulatory markers placed at the westernmost edge of the mouth of Oyak Creek and at the southernmost edge of the mouth of the Arolik River.

KUSKOKWIM  
SALMON

Justification: Would include Kanektok River and other freshwater drainages into Kuskokwim Bay now commonly fished for subsistence but not described in any district.

Proposed by: Fish and Wildlife Protection, Region III. (102)

(15)

5 AAC 07.200.(d). FISHING DISTRICTS. (Regulation page 34). Redescribe the boundaries of district 5.

The proposed regulation reads as follows:

5 AAC 07.200. FISHING DISTRICTS.

(d) District 5 consists of that portion of Kuskokwim Bay [GOODNEWS BAY INSIDE A LINE] between Department of Fish and Game regulatory markers placed 3 miles along the coast from the tip of North Spit extending 3 miles south along the coast from the tip of South Spit and that portion of Goodnews Bay inside [NEAR THE BAY ENTRANCE AND] a line between Department of Fish and Game regulatory markers placed near the mouth of the Ufigag River and on the opposite shore near the mouth of the Tunulik River.

(d) District 5 consists of that portion of Goodnews Bay and its drainages inside a line between Department of Fish and Game markers placed near the bay entrance. [AND A LINE BETWEEN DEPARTMENT OF FISH AND GAME MARKERS PLACED NEAR THE MOUTH OF THE UFIGAG RIVER AND ON THE OPPOSITE SHORE NEAR THE MOUTH OF THE TUNULIK RIVER].

Justification:

- (1) Effort has increased and during low water (tide) there is not enough fishing room. At low tide boats at times are able to block the whole channel and not able to drift. Other boats do not have a way of going around.

Proposed by: 49 commercial fishermen of Goodnews Bay (9)  
David I. Walters (17)  
Central Bering Sea Advisory Committee (14)

- (2) Would include Goodnews River and other freshwater drainages of Goodnews Bay now commonly fished for subsistence but not described in any district.

Proposed by: Fish and Wildlife Protection, Region III. (101)

(16)

5 AAC 07.310.(2)(3) FISHING SEASONS. (Regulation page 35). Extend the season closing date to September 25 in district 5.

The proposed regulation reads as follows:

5 AAC 07.310. FISHING SEASONS.

(2) district 4 [AND 5] will close on September 8.

(3) district 5 will close on September 25.

KUSKOKWIM  
SALMON

Justification: (none given).

Proposed by: Central Bering Sea Advisory Committee and 30 Goodnews fishermen (15)

17

5 AAC 07.320. (1)(A),(2) WEEKLY FISHING PERIODS. (Regulation page 35). Establish 12 hour weekly fishing periods after July 31 in districts 1 and 2.

The proposed regulation reads as follows:

5 AAC 07.320. WEEKLY FISHING PERIODS.

(1) district 1:

(A) June 1 through June 25 [AND AFTER JULY 31,] fishing periods will be opened and closed by emergency order. After July 31 fishing periods will be of 12 hour duration.

(2) district 2: fishing periods will be opened and closed by emergency order. After July 31 fishing periods will be of 12 hour duration.

Justification: People in villages don't do harvesting on silvers because it rains and storms and they can't dry good because of poor times of the season. So the fishermen would like to catch more for commercial.

Proposed by: Joseph Chimegarea (28)

18

5 AAC 07.334.(a) IDENTIFICATION OF GEAR. (Regulation page 36). Require drift gill nets to be marked with the fisherman's five digit CFEC permit number.

The proposed regulation reads as follows:

5 AAC 07.334. IDENTIFICATION OF GEAR.

(a) Each drift gill net in operation must have at one end a red keg, buoy or cluster of floats plainly and legibly marked with the fisherman's five digit CFEC permit serial number. [PERMANENT VESSEL LICENSE PLATE (ADF&G) NUMBER OF THE VESSEL OPERATING THE GEAR].

Justification: Present regulations require different types of identification for set and drift gillnets. Kuskokwim area fishermen are issued a single CFEC gillnet permit for either set or drift gillnets. Many fishermen commonly use the same piece of gear interchangeably during the season as either a set or drift gill net. Requiring different types of identification for set and drift gill nets is an inconvenience to the fishermen and serves no management purpose. This proposal does not affect the subsistence fishery.

Proposed by: Staff (III- )

KUSKOKWIM  
SALMON

19

5 AAC 07.350.(2) CLOSED WATERS. (Regulation page 36). Delete closed water area during June 26 through July 31 in that portion of district 1 upstream of Bethel.

The proposed regulation reads as follows:

5 AAC 07.350. CLOSED WATERS.

[(2) FROM JUNE 26 THROUGH JULY 31, DISTRICT 1 UPSTREAM FROM A LINE CROSSING THE KUSKOKWIM RIVER AT DEPARTMENT REGULATORY MARKERS LOCATED NEAR THE TOWN OF BETHEL;]

Justification: The reason for this boundary extension to Tuluksak: so fishermen from District 2 go to District 1 is long way from home and the fishermen are crowded in one area and travel to Bethel cost lots.

Proposed by: Joseph Chimegalrea (29)

YUKON  
SUBSISTENCE

20

5 AAC 01.210.(c)(1) FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 17). Eliminate two day a week subsistence fishing closure during June 10 to August 20 when commercial salmon fishing season is closed in districts 1, 2 and 3.

The proposed regulation reads as follows:

5 AAC 01.210. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(c) During any commercial salmon fishing season closure of greater than five days in duration, salmon may not be taken during the following periods in the following districts:

[(1) FROM JUNE 10 TO AUGUST 20 IN DISTRICTS 1, 2 AND 3 FROM 6:00 P.M. MONDAY UNTIL 6:00 P.M. WEDNESDAY].

Justification: Present regulations force subsistence fishermen to spread their fishing activities over several weeks. This prevents them from participating in other subsistence activities such as seal hunting, berry picking, firewood gathering and other needs for winter use.

Proposed by: GASH and Lower Yukon Advisory Committee (23,176)

21

5 AAC 01.210.(f) FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 18). Establish subsistence weekly fishing periods of four consecutive days through August 1 in subdistrict 4-A and through August 15 in subdistrict 4-B.

The proposed regulation reads as follows:

5 AAC 01.210. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(f) In subdistrict 4-A, from June 15 through August 1 salmon may be taken from 3:00 P.M. Sunday until 3:00 P.M. Thursday. In subdistrict 4-B from June 15 through August 15, salmon may be taken from 3:00 P.M. Sunday until 3:00 P.M. Thursday.

YUKON  
SUBSISTENCE

Justification: Elderly fishermen, especially women, have difficulty pulling nets as often as required under present regulations.

Proposed by: Galena Fish and Game Advisory Committee (104)

(22)

5 AAC 01.220.(e)(1) LAWFUL GEAR AND GEAR SPECIFICATIONS. (Regulation page 18). Allow the use of drift gill nets for the taking of king salmon from June 24 to July 7 in subdistrict 4-A.

The proposed regulation reads as follows:

5 AAC 01.220. LAWFUL GEAR AND GEAR SPECIFICATIONS.

(e)(1) in subdistrict 4-A, king salmon may be taken by drift gill nets from June 24 [5] through July 7 [June 14];

Justification: Drift gillnetting for king salmon before commercial season was unproductive. A later fishing period when the kings are running will provide for adequate subsistence needs.

Proposed by: Galena Fish and Game Advisory Committee (103).

(23)

5 AAC 05.200.(f)(3). FISHING DISTRICTS AND SUBDISTRICTS. (Regulation page 21). Redefine the boundaries of subdistrict 6-C.

The proposed regulation reads as follows:

5 AAC 05.200. FISHING DISTRICTS AND SUBDISTRICTS.

(f)(3) subdistrict 6-C consists of that portion of the Tanana River drainage from the eastern edge of the mouth of the Kantishna River upstream to the eastern edge of the mouth of the Salcha [CHENA] River and includes the Salcha [CHENA] River drainage.

Justification: This proposal moves the upper boundary of subdistrict 6-C upstream to the mouth of the Salcha River. This change in the commercial fishing subdistrict boundary will close a loophole in the subsistence fishery regulation. Approximately 300 fishermen subsistence fish in subdistrict 6-C however substantial numbers of fishermen also fish for subsistence upstream from the Chena River. Moving the boundary upriver will provide for uniformity in management procedures and facilitate enforcement. This proposal does not adversely affect the subsistence fishery and will promote the conservation and development of the fishery resources by allowing for sustained yield management and maintaining adequate escapement levels.

Proposed by: Staff (III- )

(24)

5 AAC 05.320(1)(A),(2)(A) WEEKLY FISHING PERIODS. (Regulation page 22) Establish weekly fishing periods by emergency order during June 5 through July 15 in districts 1 and 2.

YUKON  
SALMON

The proposed regulation reads as follows:

5 AAC 05.320. WEEKLY FISHING PERIODS. Weekly fishing periods are as follows:

(1) district 1:

(A) June 5 [10] through July 15, fishing periods will be opened and closed by emergency order; [SALMON MAY BE TAKEN FROM 6:00 P.M. MONDAY UNTIL 6:00 P.M. TUESDAY AND FROM 6:00 P.M. THURSDAY UNTIL 6:00 A.M. SATURDAY].

(2) district 2:

(A) June 5 [10] through July 15, fishing periods will be opened and closed by emergency order; [SALMON MAY BE TAKEN FROM 6:00 P.M. SUNDAY UNTIL 6:00 P.M. MONDAY AND FROM 6:00 P.M. WEDNESDAY UNTIL 6:00 A.M. FRIDAY].

Justification: The present fishing schedule has been frequently adjusted by emergency order in recent years due to variabilities in run timing and abundance. Also fishing time has been changed by emergency order to prevent overharvest of stocks because of increased efficiency and the rapid development of the commercial fishery. This proposal will aid in the conservation and development of the salmon resource by providing for more flexible management to insure that adequate escapements are maintained which in turn will result in a more stable fishery. It is the Department's intent to begin with two-24 hour weekly fishing periods and then make further adjustments to fishing time based on indicated run strength. The subsistence fishery will not be adversely affected since management strategy will remain unchanged.

Proposed by: Staff (III- )

(25)  
5 AAC 05.310(2)(D) FISHING SEASONS. (Regulation page 22). Establish June 22 opening in subdistrict 4-A.

The proposed regulation reads as follows:

5 AAC 05.310. FISHING SEASONS.

(2) in districts 4, 5 and 6 from June 15 through September 30;

(D) section 4-A June 22 [15] through September 30.

Justification: The summer chums usually don't arrive until on or about the 22nd. The kings are usually running at that period and this would allow time for subsistence drifting for king salmon.

Proposed by: Galena Fish and Game Advisory Committee (105)

(26)  
5 AAC 05.320.(4)(B)(C) WEEKLY FISHING PERIODS. (Regulation page 22). Establish 3:00 P.M. opening and closing times after August 15 in subdistricts 4-8 and 4-C.

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SALMON

The proposed regulation reads as follows:

5 AAC 05.320. WEEKLY FISHING PERIODS.

(4) district 4:

(B) in subdistricts 4-B and 4-C from June 15 through September 30, [AUGUST 15] salmon may be taken from 3:00 P.M. Sunday until 3:00 P.M. Tuesday and from 3:00 P.M. Wednesday until 3:00 P.M. Friday;

[(C) IN SUBDISTRICT 4-B AFTER AUGUST 15 SALMON MAY BE TAKEN FROM 6:00 P.M. SUNDAY UNTIL 6:00 P.M. TUESDAY AND FROM 6:00 P.M. WEDNESDAY UNTIL 6:00 P.M. FRIDAY;]

Justification: This proposal establishes a uniform fishing schedule in that portion of district 4 upstream of Cone Point (subdistricts 4-B and 4-C) throughout the entire fishing season. The Board adopted a public proposal at its Dec 1980 meeting changing the opening and closing times from 6:00 P.M. to 3:00 P.M. through August 15 but retained the 6:00 P.M. hourly schedule after August 15. This proposal will correct that oversight. Total amount of allowable fishing time remains unchanged. This proposal does not affect the subsistence fishery.

Proposed by: Staff (III- )

(27)

5 AAC 05.320. (4)(C) WEEKLY FISHING PERIODS. (Regulation page 22). Increase fishing time to 5 days a week after August 15 in subdistrict 4-B.

The proposed regulation reads as follows:

5 AAC 05.320. WEEKLY FISHING PERIODS.

(4) district 4

(C) in subdistrict 4-B after August 15, salmon may be taken from 6:00 P.M. Sunday until 6:00 P.M. Friday [TUESDAY AND FROM 6:00 P.M. WEDNESDAY UNTIL 6:00 P.M. FRIDAY];

Justification: The fall chum don't hit the beaches heavy in subdistrict 4-B, therefore the catch is small. In districts 1, 2 and 3 they use drift nets and have no trouble catching the 100,000 quota. In district 5 the fishwheel is successful as the current of the river is swifter making the salmon go to the beach. Therefore 86,000 caught in district 5; 340,000 in the lower Yukon and only 19,000 caught in subdistrict 4-B.

Proposed by: Jimmy Huntington (76)

(28)

5 AAC 05.320.(4)(D) WEEKLY FISHING PERIODS. (Regulation page 22) Establish a five consecutive day fishing period in subdistrict 4-C.

The proposed regulation reads as follows:

5 AAC 05.320. WEEKLY FISHING PERIODS.



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SALMON

(4) district 4;

(D) in subdistrict 4-C from June 15 through September 30, salmon may be taken five consecutive days a week.

Justification: Due to the fishing sites being less productive in this subunit, than other upper Yukon management units, the fishermen are at a decided disadvantage in attracting buyers. Thus to create a viable commercial market it is felt necessary to extend the fishing period to five days a week. Considering the small number of fishermen in this district, along with their less productive catches, the influence on the fish stocks and upriver catch would be insignificant. It should also be noted that the stocks being presently utilized by the fishermen in this subunit are considered the most stable Yukon stocks.

Proposed by: Ruby Advisory Committee (L-4)

(29)

5AAC 05.320. (4) (D) WEEKLY FISHING PERIODS. (Regulation page 22)  
Establish a four consecutive day fishing period in subdistrict 4-C.

The proposed regulation reads as follows:

5AAC 05.320. WEEKLY FISHING PERIODS.

(4) district 4:

(D) in subdistrict 4-C from June 15 through September 30  
salmon may be taken from 3:00 p.m. Sunday until 3:00 p.m. Thursday

Justifications:

(1) The present upriver catch is larger than ours. We can put our nets in once and take them out once. A change in lifestyle, we can do more on those days off.

Proposed by: Ruby Advisory Committee (L-5)

(30)

5 AAC 05.331.(b) GILLNET SPECIFICATIONS AND OPERATION. (Regulation page 23).  
Allow the use of gillnets of unrestricted mesh size after July 25 in districts 1 and 2.

The proposed regulation reads as follows:

5 AAC 05.331. GILLNET SPECIFICATIONS AND OPERATION.

(b) In districts 1 and 2, salmon may be taken only with gillnets of six inch or smaller mesh after a date specified by emergency order issued between June 27 and July 5. After July 25 gillnets of any mesh size may be operated in districts 1 and 2.

Justification: The purpose of the present regulation is presumably to prevent the overharvest of late running large kings during the chum run. Summer chums can be efficiently caught using 6" or smaller mesh, but most kings escape. However, the king run after July 25 is negligible, so the restriction has no

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merit then. Furthermore, fall chums might be more efficiently taken using mesh larger than 6". The fishermen should be granted this freedom if the 6" restriction is unnecessary in late summer.

Proposed by: Clifford Cantor (111)

31

5 AAC 05.334.(a) IDENTIFICATION OF GEAR. (Regulation page 23) Require drift gill nets to be identified with the last 5 digits of the CFEC permit number.

The proposed regulation reads as follows:

5 AAC 05.334. IDENTIFICATION OF GEAR.

(a) Each drift gill net in operation must have at one end a red keg, buoy or cluster of floats plainly and legibly marked with the fisherman's five digit CFEC permit serial number. [PERMANENT VESSEL LICENSE PLATE (ADF&G) NUMBER OF THE VESSEL OPERATING THE GEAR].

Justification: Present regulations require different numbering systems to identify set and drift gill nets in the lower Yukon area. CFEC gillnet permits allow fishermen to operate both set and drift gill nets. Many fishermen operate the same piece of gear as either or set or drift gillnet during the season. This regulation is an inconvenience to the fishermen and serves no management purpose. This proposal does not affect the subsistence fishery.

Proposed by: Staff (III - )

32

5 AAC 05.335.(c) MINIMUM DISTANCE BETWEEN UNITS OF GEAR. (Regulation page 24). Eliminate the 200 feet minimum distance requirement between fishwheels in the area from Old Paradise Village to 4 miles upstream of Anvik in subdistrict 4-A.

The proposed regulation reads as follows:

5 AAC 05.335. MINIMUM DISTANCE BETWEEN UNITS OF GEAR.

(c) In districts 4, 5 and 6: no person may set commercial fishing gear within 200 feet of other operating commercial or subsistence fishing gear, except in the area from Old Paradise Village to 4 miles upstream of Anvik the distance between fishwheels will not be limited to any distance by regulation but set accordingly as in past years where fishermen honor their traditional site and on a first come basis.

Justification: Two hundred feet has no effect on number of fish caught. Most fishwheels are 6-8' wide catching a small percentage of the run. Anvik's bluff use to accomodate 9 wheels. With the limit of 200' only 4 wheels can operate due to current changes and shallow water.

Proposed by: GASH Advisory Committee (151)

33

5 AAC 05.360. (b)(1) GUIDELINE HARVEST RANGES. (Regulation page 25). Increase chum salmon guideline harvest range to 120,000-300,000 in districts 1, 2 and 3.

The proposed regulation reads as follows:

YUKON  
SALMON

5 AAC 05.360. GUIDELINE HARVEST RANGES.

(b) the following are guideline harvest ranges for the districts, subdistricts and time periods specified:

(1) district 1 after July 15, district 2 after July 18, and district 3 after July 21: 120,000 to 300,000 [220,000] chum salmon from the areas;

Justification: Fish processors say that the early runs in the chum season contain between 20-30% summer chums. These summer chums are now being counted toward part of the fall chum guideline harvest level. If summer chums are going to be counted as part of the fall chum guideline harvest level should be increased. Also when strong fall chum runs occur, as in 1981, the upper limit of the guideline harvest level should be raised. In 1981 Y1, Y-2 and Y-3 fishermen harvested 342,370 fall chums.

Proposed by: Lower Yukon and GASH Advisory Committees (24,175)

(34)

5 AAC 05.360.(b)(2). GUIDELINE HARVEST RANGES. (Regulation page 25). Establish guideline harvest range of 1,800 to 4,000 king salmon in district 3.

The proposed regulation reads as follows:

5 AAC 05.360. GUIDELINE HARVEST RANGES.

(b) The following are guideline harvest ranges for the districts, subdistricts and time periods specified:

(2) district 3: 1,800 to 4,000 [2,200] king salmon;

Justification: The king salmon runs have been strong and increasing since 1975. The harvest guideline has remained the same. This proposal will upgrade the harvest guideline on a more equitable basis.

Proposed by: GASH Advisory Committee (22,27,180)  
Lower Yukon Advisory Committee (22,27,180)

(35)

5 AAC 05.370.(i) REGISTRATION AND REREGISTRATION. (Regulation page 26). Specify that permit holders registered in district 4 may fish in only one subdistrict.

The proposed regulation reads as follows:

5 AAC 05.370. REGISTRATION AND REREGISTRATION.

(i) A salmon interim-use or entry permit holder whose vessel is registered to fish in district 4 may fish in only one subdistrict.

Justification: The lower fishery subdistrict (4A) closes before upriver (4B), and lower river fishermen are not able to compete with upriver fishermen who has the advantage to fish in both subdistricts.

Proposed by: Galena Fish and Game Advisory Committee (174)

YUKON  
SALMON

36

5 AAC 39.280.(a) IDENTIFICATION OF STATIONARY FISHING GEAR. (Regulation page 174). Specify that the Department registration number be required for identification of stationary gear.

The proposed regulation reads as follows:

5 AAC 39.280. IDENTIFICATION OF STATIONARY FISHING GEAR.

(a) The owner or operator of a set gill net or fishwheel in operation shall place in a conspicuous place on or near the set gill net or fishwheel the name of the fisherman operating it, together with the fisherman's permanently assigned department registration number [FIVE DIGIT CFEC PERMIT SERIAL NUMBER.] Numbers must be at least six inches in height with lines at least one inch wide and of a color contrasting with the background. The identification name and numbers for fishwheels must be placed on the side of the fishwheel facing midstream of the river.

Justification: After years of operating with an assigned department registration number (Y#) many fishermen feel it is unpractical to use the CFEC number.

Proposed by: Tanana Fish and Game Advisory Committee (106)

NORTON SOUND-PORT CLARENCE AREA  
SALMON

37

5 AAC 04.200.(6) FISHING DISTRICTS AND SUBDISTRICTS. (Regulation page 17). Redescribe the southern boundary of subdistrict 6.

The proposed regulation reads as follows:

5 AAC 04.200. FISHING DISTRICTS AND SUBDISTRICTS.

(6) subdistrict 6 consists of waters from the terminus of Junction Creek located seven miles north of Egavik to Wagon Box Creek or to the tip of Klikitarik [TIP OF BLACK POINT];

Justification:

- (1) This will enable fishermen to utilize the natural cove for fishing and shelter.

Proposed by: Southern Norton Sound Advisory Committee (38)

- (2) A natural cove provides shelter and safety at Klikitarik. The number of Unalakleet fishermen has increased in two years and warrants an extension of the southern boundary.

Proposed by: Southern Norton Sound Advisory Committee (39)

38

5 AAC 04.330. GEAR AND 5 AAC 04.331.(c) GILL NET SPECIFICATIONS AND OPERATION. (Regulation page 18). Allow the use of drift gill nets with four and one-half mesh or smaller as specified by emergency order in the Norton Sound district.

NORTON SOUND-PORT CLARENCE AREA  
SALMON

The proposed regulation reads as follows:

5 AAC 04.330. GEAR. Set gill nets may be operated. In the Norton Sound district drift gill nets may be operated as specified under 5 AAC 04.331.

5 AAC 04.331. GILL NET SPECIFICATIONS AND OPERATION.

(c) In the Norton Sound district, salmon may be taken only with drift and set gillnets of four and one-half inch mesh or smaller during periods and locations specified by emergency order.

Justification: Enable fishermen to harvest more efficiently the large expected run of pink salmon. Allowing drifting will enable our fishermen to deliver a fresher product.

Proposed by: Southern Norton Sound Advisory Committee (37)

(39)

5 AAC 04.350. (2) CLOSED WATERS. (Regulation page 19) Open the area to commercial fishing between the Kwik River and Kuiuktulik River in the Norton Sound district.

The proposed regulation reads as follows:

5 AAC 04.350. CLOSED WATERS.

(2) all waters of the Norton Sound - Port Clarence area except those waters described in sec. 200 of this chapter and except the area from the terminus of the Kwik River to the terminus of the Kuiuktulik in the Norton Sound district.

Justification:

(1) With the other area closed between Cape Denbigh and Island Point does not leave much good open area to set a net. Approximately 97% of the area is open in Norton Bay is mud flat.

Proposed by: Roy Otton of Koyuk ( )

BRISTOL BAY  
SUBSISTENCE

(40)

5 AAC 01.325(a). WATERS CLOSED TO SUBSISTENCE FISHING. (Regulation page 26). Open the mouth of the Newhalen River.

The proposed regulation reads as follows:

5 AAC 01.325. WATERS CLOSED TO SUBSISTENCE FISHING. (a) waters within 300 feet of a stream mouth, except for the western shore of the Newhalen River, utilized by salmon are closed to all subsistence fishing.

Justification: This would make legal an area traditionally fished and verbally approved by ADF&G for the past four years.

Proposed by: Fish and Wildlife Protection (99)

BRISTOL BAY  
SUBSISTENCE

(41)

5 AAC 01.325(b). WATERS CLOSED TO SUBSISTENCE FISHING. (Regulation page 26). Prohibit the use of gill nets in a portion of the Naknek River.

The proposed regulation reads as follows:

5 AAC 01.325. WATERS CLOSED TO SUBSISTENCE FISHING.

(b) Gill nets may not be used [SALMON MAY NOT BE TAKEN] in that portion of the Naknek River upstream from Savonaski;

Justification: The present regulation addresses salmon only. There are rainbow trout, grayling, and char populations upriver which could be eliminated by a gill net fishery.

Proposed by: Staff

(42)

5 AAC 01.330(d). SUBSISTENCE FISHING PERMITS. (Regulation page 26). Allow those with past participation in the Naknek River subsistence salmon fishery to receive permits or repeal the present restrictions.

The proposed regulation reads as follows:

5 AAC 01.330. SUBSISTENCE FISHING PERMITS.

(d) Subsistence salmon fishing permits for the Naknek River drainage will be issued to those persons domiciled in the Naknek and Kvichak River drainages or have participated in the fishery any three seasons during the period 1970 to 1980 or repealed 4/ /82.

Justification: (Past participation) The present regulation prohibits former Bristol Bay residents from continuing their life style. The wording of the present regulation forces non-local subsistence fishermen to surrounding areas creating an extreme hardship on them both logistically and financially. The indicated modification would allow former residents to continue their life style while restricting growth of the fishery to only the new residents of the bay area.

Proposed by: Jim Ford (41)

Justification: This regulation was implemented during the Board of Fisheries spring 1981 meeting in opposition to Section 16.05.251 (B) regulations of the Board of Fisheries. Those regulations state "...subsistence use shall be the priority use." while in fact Board action restricted subsistence use of Naknek River salmon without first restricting other uses of the resource, specifically commercial and sport fishermen. Biologically there was no justification for the elimination of non-domiciled residents since the Naknek River has achieved its escapement goals annually since 1975 and the subsistence fishery occurs prior to the ADF&G counting towers from which escapement is determined. During discussions with residents of the Naknek area they stated the regulations are necessary to protect the king salmon stocks. From 1978 thru 1980 the Naknek River subsistence harvest of king salmon increased from 1,093 hto 1,419 while the commercial harvest of these popular salmon jumped from 4,561 to 7,317. The sport fishing harvest during the same period remained at approximately 2,500 fish. If it is indeed felt some form of protection of king salmon is required a restriction of the commercial harvest would better comply with State Statutes and guidelines established for the Board of Fisheries.

Proposed by: Karen Steen (40)

BRISTOL BAY  
SUBSISTENCE

43

5 AAC 01.330(e). SUBSISTENCE FISHING PERMITS. (New subsection) (Regulation page 26). Restrict the issuance of Iliamna-Lake Clark subsistence salmon fishing permit to only those persons domiciled in the area.

The proposed regulation reads as follows:

5 AAC 01.330. SUBSISTENCE FISHING PERMITS. (e) Subsistence salmon fishing permits for the Iliamna - Lake Clark drainages will be issued only to those persons domiciled in the Iliamna - Lake Clark drainages.

Justification: In 1981 over 60% of the permits issued for the Iliamna - Lake Clark drainage were to persons domiciled outside the area. Individual spawning areas in this system do not always receive large amounts of spawners. Limiting subsistence use to customary and traditional users would allow adequate chance for harvest and help protect those areas that may have low escapements. If and when allocation problems occur and/or permits are limited in any way, local residents should have priority over others, as they are directly dependent on these resources.

Proposed by: Iliamna Adv Cmte (110, 127)

HERRING

44

5 AAC 27.052. BERING SEA TRAWL FISHERY. (New Section) (Regulation page 97). Allow a high seas trawl fishery in the Bering Sea.

The proposed regulation reads as follows:

5 AAC 27.052. BERING SEA TRAWL FISHERY. Notwithstanding the provisions of 5 AAC 27.710, 730, 810, 830, 880, 885, 910 and 930, herring may be taken with trawls from January 1 through March 31 in waters of the Bering Sea bound on the north by 62° N. lat., on the south by 54° N. lat, on the east by 162° w. long. and on the east by the International Date Line.

Justification:

The Alaska Department of Fish and Game (ADF&G) in its preliminary report for 1981 on Pacific herring in the eastern Bering Sea recognizes that the abundance of herring in all areas appears to be much greater in 1981 than in the previous year. When data generated by ADF&G abundance estimates for 1981 and the 1981 sac roe fishery are used in the formula set out in the North Pacific Council's Bering-Chukchi Sea Herring Management Plan (a plan developed in cooperation with ADF&G and the Board), a 14% exploitation rate is appropriate for these stocks. Consequently, about 5,000 tons of herring are biologically available for harvest before the 1982 sac roe fishery begins.

Domestic fishermen believe that a viable offshore fishery for herring--which will offer economic alternatives to the very intensive, single-market sac roe fishery--can be developed. The Board's endorsement of this fishery will facilitate its development and provide resource managers with more (and much needed) information on herring behavior, abundance and interactions with other fishery resources.

Proposed by: North Pacific Fishing Vessel Owners Assoc. (181)

BRISTOL BAY  
HERRING

45

5 AAC 27.831.(b). GEAR SPECIFICATIONS AND OPERATION. (Regulation page 121). Reduce the length of gillnet that can be operated from a vessel.

The proposed regulation reads as follows:

5 AAC 27.831. GEAR SPECIFICATIONS AND OPERATION.

(b) No more than 150 [300] fathoms of herring gill net may be operated from any commercially licensed herring fishery vessel.

Justification: Presently, the legal limit of gear for Bristol Bay is double all of the other areas of the State and with the emergency order openings, a 32 ft. vessel cannot handle that much gear during heavy fishing. By reducing the amount of net per vessel, it will minimize the chances of waste due to lost gear during bad weather, and eliminate the large enforcement problem that developed during the 1981 season.

Proposed by: Nushagak Adv. Cmte. (33)

46

5 AAC 27.865(b)(1),(2),(3) and (4). BRISTOL BAY HERRING MANAGEMENT PLAN. (New Subsections)(Regulation page 122). Divide the harvest between gillnetters and seiners, set a gillnet test fishery and allow longer fishing periods for gillnetters.

The proposed regulations reads as follows:

5 ACC 27.865. BRISTOL BAY HERRING MANAGEMENT PLAN.

(b)(1) When the total reported harvest reaches 5,000 [20,000] metric tons and at intervals of 5,000 metric ton up to the total guideline harvest level, the department shall determine the reported tonnage for gillnet and seine (purse and hand purse) gear;

(2) If the harvest for gillnetters [EITHER GEAR] has not reached 30% or 50% of the total catch per interval of 5,000 metric tons [EITHER GEAR], the fishery for the gear with the higher reported catch shall be closed for 24 hours.

(3) If aerial observation cannot substantiate herring biomass movement due to bad weather, herring gillnetters will be allowed to test fish for six to 12 hours to assess herring stocks, spawning activity maturity and other biological parameters.

(4) For opening of the herring fishery, gillnetters will be allowed to fish six hours longer than the seiners.

Justification:

The gillnetters are capable of harvesting 30% of the total harvest. The gillnetters need to be protected to make an economic entry into the fishery. Most of the Bristol Bay residents participating in the fishery are gillnetters.

Poor Weather conditions will continue to hamper survey coverage for a substantial part of the herring season. To offset this, gillnetters should be allowed to test fish on a limited basis. Gillnetters will not harvest huge quantities of herring in a short time endangering the



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stocks. Economically this will help the gillnetters, and at the same time help the Department of Fish and Game keep continual stock assessment studies going.

An additional six hours will help offset the economic disadvantage gillnetters face in competition with the seiner gear users. Gillnetters will be able to make at least one more delivery per boat. This should not be detrimental to the ability of seiners to harvest fish, but put gillnetters to a more equal advantage.

Proposed by: Bristol Bay Herring Marketing Co-op. (168,169,171)

(For 50%) The short eight to 12 hour periods imposed by the emergency order system of management allows purse seines: to harvest over 80% of the total herring caught in a short period of time while gillnetters have a hard time setting, locating, shaking and pulling nets within the specified time period. The present system is discriminatory against gillnetters.

Proposed by: Naknek-Kvichak Advisory Committee. (108)

(47)

5 AAC 39.198(e). COMMERCIAL FISHING AND RELATED OPERATIONS BY ALIENS NOT LAWFULLY ADMITTED TO THE UNITED STATES. (Regulation page 171). Provide for constructive ports for the Bristol Bay herring fishery.

The proposed regulation reads as follows:

5 AAC 39.198. COMMERCIAL FISHING AND RELATED OPERATIONS BY ALIENS NOT LAWFULLY ADMITTED TO THE UNITED STATES.

(e) Constructive ports for the Bristol Bay herring fishery are Kulukak, Nunavarchak and Togiak Bays and Hagemister Strait. With respect to paragraph (d) on this section, the commissioner may recognize and designate constructive ports provided:

Justification:

Additional constructive ports would allow greater mobility for the Alaska Herring Corporation to effectively provide tendering service to gillnetters of the Bristol Bay Herring Marketing Co-op.

Proposed by: Bristol Bay Herring Marketing Co-op. (170)

(48)

SALMON

5 AAC 06.200(a),(b) and (c). FISHING DISTRICTS, SUBDISTRICTS AND SECTIONS. (Regulation pages 27 and 28). Change the district, subdistrict and section boundaries.

The proposed regulation reads as follows:

5 AAC 06.200. FISHING DISTRICTS, SUBDISTRICTS AND SECTIONS.(a) Hushagak district: all waters of Hushagak Bay north of a line from an ADF&G marker at Protection Point (58° 29' 36" N. lat., 158° 41' 42" W. long.) to the bellbouy located off Etolin Point in the entrance of Hushagak Bay (58° 33' 42" N. lat., 158° 24' 12" W. long., Loran C position 45452 and 32563) to a marker located near Etolin Point (58° 39' 24" N. lat., 158° 19' 12" W. long);

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(1) Igushik section: all waters of Nushagak Bay bounded by a line bearing  $69^{\circ}$  true from an ADF&G marker at Nichols Hills, ( $58^{\circ} 33' 48''$  N. lat.,  $158^{\circ} 47' 12''$  W. long.) to a buoy at  $58^{\circ} 36' 18''$  N. lat.,  $158^{\circ} 34' 36''$  W. long. (Loran C position 45520 and 32564) then bearing  $338^{\circ}$  true to a buoy at  $58^{\circ} 44' 54''$  N. lat.,  $158^{\circ} 41' 24''$  W. long. (Loran C position 32520 and 45570) then bearing  $276^{\circ}$  true to an ADF&G marker at  $58^{\circ} 45' 48''$  N. lat.  $158^{\circ} 46' 36''$  W. long.;

(2) Snake River section: all waters within a line bearing  $173^{\circ}$  true [SOUTH] from an ADF&G marker at  $58^{\circ} 52' 25''$  N. lat.,  $158^{\circ} 43' 10''$  W. long. to a buoy marking the northeast corner of the Igushik section ( $58^{\circ} 44' 54''$  N. lat.,  $158^{\circ} 41' 24''$  W. long. (Loran C position 32520 and 45570) then bearing  $354^{\circ}$  true [DUE WEST] to an ADF&G marker at  $58^{\circ} 52' 25''$  [ $45' 48''$ ] N. lat.,  $158^{\circ} 43' 10''$  [ $46' 36''$ ] W. long.;

(3) Nushagak section: all waters of Nushagak Bay inside a line bearing  $249^{\circ}$  true [EXTENDING SOUTHWESTERLY] from an ADF&G marker at Etolin Point ( $58^{\circ} 39' 24''$  N. lat.,  $158^{\circ} 19' 12''$  W. long.) to an ADF&G marker at [6-1/2 MILES OFFSHORE OF] Nichols Hills ( $58^{\circ} 33' 48''$  N. lat.,  $158^{\circ} 47' 12''$  W. long.) then bearing  $338^{\circ}$  true [ $334^{\circ}$ ] from a buoy at  $58^{\circ} 36' 18''$  N. lat.,  $158^{\circ} 34' 36''$  W. long. (Loran C position 45520 and 32564) to a buoy marking the northeast corner of the Igushik section ( $58^{\circ} 44' 54''$  N. lat.,  $158^{\circ} 41' 24''$  W. long. (Loran C. position 32520 and 45570) then bearing  $354^{\circ}$  true [NORTH] to an ADF&G marker at  $58^{\circ} 52' 25''$  N. lat.,  $158^{\circ} 43' 10''$  W. long.

(b) Option I. Naknek-Kvichak district: all waters of Kvichak Bay north and east of Loran C line 9990-Y-32430 [A LINE] extending in a northwesterly direction from a point [MARKER] on the southeast shore approximately 0.5 miles southwest [NEAR THE MOUTH] of Johnston Hill Creek at  $58^{\circ} 36' 48''$  [ $37' 09''$ ] N. lat.,  $157^{\circ} 15' 36''$  [ $18''$ ] W. long. to a point [MARKER] on the northwest [OPPOSITE] shore at [OF]  $58^{\circ} 43' 48''$  [KVICHAK BAY] [ $43''$ ] N. Lat.,  $157^{\circ} 42' 42''$  [ $36''$ ] W. long.;

Option II. Naknek - Kvichak district: Kvichak Bay north of Loran C line 32430;

(1) Option I. Kvichak Section: all waters of Kvichak Bay north and east of Loran C [INSIDE A] line 9990-Y-32430 extending from its junction with Loran C line 9990-Z-45070 [IN A SOUTHEASTERLY DIRECTION FROM MARKER] at  $58^{\circ} 38' 30''$  [ $43' 43''$ ] N. Lat.,  $157^{\circ} 22' 14''$  [ $42' 36''$ ] W. Long. and north and west of a line extending [TO A BUOY APPROXIMATELY 3-1/2 NAUTICAL MILES OFFSHORE FROM A MARKER NEAR THE MOUTH OF JOHNSTON HILL CREEK THEN] in a northwesterly direction approximately 7.8 miles from  $58^{\circ} 38' 30''$  N. lat.,  $157^{\circ} 22' 14''$  W. long. [TO A MARKER NEAR THE MOUTH OF JOHNSTON HILL CREEK THEN A NORTHEASTERLY DIRECTION] to the outer end of the Libbyville Dock, then along the dock to the shore.

Option II. Kvichak section: Kvichak Bay inside a line north of the 32430 Loran C line and west of a line from the confluence of 32430 and 45060, thence in a northeasterly direction to the outer edge of the Libbyville dock, then along the dock to the shore;

(2) Option I. Naknek section: all waters of Kvichak Bay north and east of Loran C [INSIDE A] line 9990-Y-32430 extending [IN A NORTHWESTERLY DIRECTION] from [A MARKER NEAR THE MOUTH OF JOHNSTON HILL CREEK AT]  $58^{\circ} 36' 48''$  [ $37' 09''$ ] N. lat.,  $157^{\circ} 15' 36''$  [ $42' 36''$ ] W. long. to its junction with Loran C line 9990-Z-45070 at  $58^{\circ} 38' 30''$  N. lat.  $157^{\circ} 22' 14''$  W. long. and east of a line extending from  $58^{\circ} 38' 30''$  N. lat.,  $157^{\circ} 22' 14''$  W. long. [A BUOY APPROXIMATELY 3-1/2 NAUTICAL MILES

BRISTOL BAY

OFFSHORE THEN] in a northeasterly direction for approximately 7.8 miles to the outer end of the Libbyville Dock at 58° 46' 38" N. lat., 157° 03' 26" W. long. then along the dock to shore.

Option II. Naknek section: Kvichak Bay inside a line north of the 32430 Loran C line and east of a line from the confluence of 32430 and 45060, thence in a northeasterly direction to the outer end of the Libbyville dock, then along the dock to the shore.

(c) Egegik District: all waters north of 58° 09' 30" N. lat., south of 58° 18' 09" N. lat. and east of 157° 42' 06" W. long. [DELETE ENTIRE PRESENT WORDING] or

Egegik District: all waters east of Loran C line 9990-Z-45150 and north of 58° 09' 30" N. lat. and south of 58° 18' 09" N. lat.

Justification: Options No. I present boundary descriptions are incorrect and difficult to identify and maintain for all participants involved in these fisheries.

Proposed by: Fish and Wildlife Protection (89-96)

Justification: Option II. The present system of describing and marking this line is confusing both to fishermen and enforcement personnel. With the advent of relatively inexpensive Loran C equipment there would exist no doubt as to where the line was located and where a particular fisherman was at any one point in time.

Proposed by: Naknek-Kvichak Adv. Committee (107, 140)

(49)

5 AAC 06.350(b)(1). CLOSED WATERS. (Regulations page 31). Change the closed waters for Kvichak Bay.

The proposed regulation reads as follows:

5 AAC 06.350. CLOSED WATERS.

(b)(1) OPTION I: north and east [NORTHEAST] of a line from Graveyard Point light at 58° 52'06" N. Lat. [53'22"] N. Lat. 157° 00'42" [04'16"] W. Long. to a point on the opposite shore at 58°, 53'22" N. Lat., 157° 05'16" W. Long.;

OPTION II: north and east [NORTHEAST] of Loran C line 9990-Y-32310 from 58° 52'42" N. Lat., 157° 00'30" W. Long. on the southeast [OPPOSITE] shore to [AT] 58° 33'28" N. Lat., [22"] 157° 03'54" W. Long. [04'16"] on the northwest shore;

OPTION III: northeast of the 3 2310 Loran C line;

Justification:

Options I & II. Present boundary descriptions are incorrect and difficult to identify by all participants involved in these fisheries.

Proposed by: Fish and Wildlife Protection. (88)

Option III. The present description and marking of the inside district line is confusing. The Loran C line is a defined line and with the

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SALMON

advent of inexpensive Loran C equipment fishermen will know exactly where they are and where the line is.

Proposed by: Naknek-Kvichak Advisory Committee. (109,139)

(50)

5 AAC 06.350(f). CLOSED WATERS. (Regulation page 31). Relax the boundary of the Naknek-Kvichak district after escapement goals have been obtained.

The proposed regulation reads as follows:

5 AAC 06.350. CLOSED WATERS.

All waters of the Bristol Bay area except the districts described in 5 AAC 06.200 are closed to salmon fishing; however, once the department announces that the escapement level desired for both the Kvichak and Naknek drainages has been obtained the line described in 5 AAC 06.200(b) will not be in effect for the balance of the sock-eye salmon fishery or until July 24th, whichever occurs earlier.

Justification:

Each year enforcement efforts on the Johnston Hill line apprehend many vessels fishing in closed waters and numerous fishermen are penalized in court. Enforcement is effective only as long as most of the fishermen believe in the law or a strong deterrent is present. Once escapements are reached in the Naknek and Kvichak systems our enforcement efforts and equipment are shifted elsewhere and the fishing vessels then ignore the Johnston Hill line en masse. There seems to be no biological justification for continued restriction of fishing area in Kvichak Bay other than the Naknek Pt. and Graveyard lines. It merely creates an enforcement problem and promotes general disrespect for abiding with still valid laws and regulations. The continued existence of the Johnston Hill line after escapement goals are reached causes our division to receive many complaints of fishing across the line, all of which take many hours to investigate and respond to, hours that could be better spent enforcing fishing regulations in other fisheries of Bristol Bay that still demand our joint attention.

Proposed by: Fish and Wildlife Protection. (97)

K, L, M AND N  
HERRING

(51)

5 AAC 27.020. REGISTRATION (f) (g) (h) (Regulation page 95) Eliminate the herring registration requirements in areas K, L, M and N.

The proposed regulation reads as follows:

5 AAC 27.020. REGISTRATION.

(f) The provisions of this section do not apply to set gill net and beach seine herring fishing, or to the Bristol Bay area as described in 5 AAC 27.800. or to statistical areas K, L, M or N.

K, L, M AND N  
HERRING

[(G) ALL VESSELS USED TO TAKE HERRING IN STATISTICAL AREAS K, L,  
M OR N

(1) DURING THE HERRING SAC ROE SEASON MUST BE REGISTERED  
BEFORE APRIL 1;

(2) DURING THE HERRING FOOD AND BAIT SEASON MUST BE REGISTERED  
BEFORE TAKING HERRING;

(H) THE REGISTRATIONS IN (G) (1) AND (2) OF THIS SECTION BECOME  
INVALID AT THE CLOSE OF THE SPECIFIC SEASON; VESSELS USED TO TAKE HERRING  
DURING A SUBSEQUENT SEASON MUST BE REREGISTERED FOR THAT SEASON.]

Justification:

During the 1981 season the Department had better contact with buyers and  
tender operators and thus had better information on the fleet than in the past.  
Registration and transfer requirements are difficult to enforce and comply with  
and the staff feels that the fishery can be managed without these regulations  
during the sac roe fishery. This proposal would not jeopardize the conservation  
of the resource nor would it affect the subsistence fishery.

Proposed by: Staff (IV - 4)

(52)

5 AAC 27.095. GENERAL RESTRICTIONS. (Regulation page 99) Eliminate the  
restriction on registered herring vessels during the salmon season as it  
presently reads, but require a permit to take herring during the salmon  
season and during the food and bait season in areas K, L, M and N.

The proposed regulation reads as follows:

5 AAC 27.095. GENERAL RESTRICTIONS. A permit must be obtained from the  
Department prior to fishing for herring from June 15 through February 28 in  
areas K, L, M and N. [ANY VESSEL AND ANY HERRING INTERIM-USE OR ENTRY PERMIT  
HOLDER REGISTERED TO TAKE HERRING IN STATISTICAL AREAS K, L, M OR N MAY NOT  
TAKE HERRING FOR 24 HOURS BEFORE, DURING AND FOR 12 HOURS AFTER ANY OPEN  
COMMERCIAL SALMON FISHING PERIOD DURING WHICH THAT HERRING INTERIM-USE OR  
ENTRY PERMIT HOLDER OR VESSEL TAKES SALMON].

Justification: The requirement to obtain a herring permit during the salmon  
season should help distinguish which vessels are fishing for salmon and which  
vessels are fishing for herring. The restrictions eliminated above would be  
spelled out on the permit. The Department needs to have good information on  
effort in the developing food and bait fishery. This proposal would not jeo-  
pardize the conservation of the resource nor would it affect the subsistence  
fishery.

Proposed by: Staff (IV - 5)

KODIAK  
HERRING

(53)

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) (Regulation  
Page 113) Open the herring season on April 15.

The proposed regulation reads as follows:

KODIAK  
HERRING

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) Herring may be taken from April 15 [MAY 1] through June 30 (sac roe season) and from August 15 through February 28 (food and bait season).

Justification:

On some years herring will appear, and in some cases spawn, much earlier than the present opening date. In some areas it has been necessary to open the season earlier by emergency order. This is not desirable from the standpoint of all participants being ready or getting the notice. The April 15 opening date will allow a slower entry into the fishery. The earlier opening would not jeopardize the conservation of the herring resource nor would it affect the subsistence fishery.

Proposed by: Staff (IV - 6)

NOTE: Passage of this proposal would require changes from May 1 to April 15 on the following pages: 113, 114(4), 115.

(54)

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) (b) (Regulation page 113). Open the herring season on April 15 and allow gillnets to fish on odd numbered days, seines on even numbered days.

The proposed regulation reads as follows:

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) Herring may be taken from April 15 [MAY 1] through June 30 (sac roe season) and from August 15 through February 28 (food and bait season).

(b) Herring may be taken on odd numbered days by gillnet and on even numbered days by seine starting April 15 and continuing through June 30. [HERRING MAY BE TAKEN ONLY DURING PERIODS ESTABLISHED BY EMERGENCY ORDER]

Justification:

Allowing for separation of gear type and an early opening date would help prevent build-up openings on the herring stocks.

Proposed by: Frank SodenKamp (191)

(55)

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS. (c) (New Section) Establish separate openings for seine and gillnet gear.

The proposed regulation reads as follows:

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(c) The sac roe herring gillnet fishery shall open at 12:00 noon on odd numbered days of the month and close at 12:00 noon on even numbered days of the month. The sac roe herring seine fishery shall open at 12:00 noon on even numbered days of the month and close at 12:00 noon on odd numbered days of the month. Emergency order openings and closures shall be made separately for the two gear types and neither gear type shall be excluded from such openings.

Justification:

The differential catch rates of the two gear types precludes equitable

KODIAK  
HERRING

fishing time for each user group when they are managed as one. This would also eliminate the acute gear conflict in areas fished by both groups.

Proposed by: C.W. Threinen, Jr. (193)

(56)

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS. (c) (New Section) Establish fishing periods of 48 hours open and 24 hours closed.

The proposed regulation reads as follows:

5 AAC 27.510. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(c) Fishing periods shall be 48 hours open and 24 hours closed.

Justification:

Twenty-four hours isn't time enough for a gillnetter to find the fish and have any time for fishing. By the time the fish are found the opening closes, then by the time it opens again, the fish have moved on or out. The 48 hour opening gives us time to find the fish and be able to concentrate on a school before they move on.

Proposed by: Lou Cox (195)

(57)

5 AAC 27.515. GEAR (a) (Regulation page 113) Allow gillnetting only in Women's and Ugak bays.

The proposed regulation reads as follows:

5 AAC 27.515. GEAR. (a) Herring may be taken only by seines, gill nets and trawls with the following exceptions: [EXCEPT THAT] (1) beach seines and trawls may not be used to take herring from May 1 through June 30. (2) Herring may be taken by gillnets only in Women's Bay inside of a line from the tip of Nyman's Peninsula to a point on the opposite shore at 57°42'36" N. lat., 152°30'12" W. long., and in North and South Arms of Ugak Bay inside 152°30'12" W. long.

Justification:

Ugat and Women's bays are traditionally known to be late and spotty, with fish sometimes coming in small groups not large enough for a seiner to take older stocks without taking a greater amount of younger or immature stocks, which the gillnetter would not be taking.

Proposed by: Lou Cox (195)

(58)

5 AAC 27.520. GILLNET SPECIFICATIONS AND OPERATIONS. (d) (Regulation page 114) Allow herring gillnets to remain in the water one hour after an emergency order closure if that closure is announced by the Department less than four hours before the closure time.

The proposed regulation reads as follows:

5 AAC 27.520. GILLNET SPECIFICATIONS AND OPERATIONS. (d) herring gillnets may remain in the water two [ONE] hours after any commercial fishery closure. [AFTER AN EMERGENCY ORDER CLOSURE IF THAT CLOSURE IS ANNOUNCED BY

KODIAK  
HERRING

THE DEPARTMENT LESS THAN FOUR HOURS BEFORE THE CLOSURE TIME]

Justification:

In order for gillnets to be out of the water by scheduled closures gillnetters must stop fishing one and one half to two hours prior to those closures. With the proposed two hour allowance gillnetters would be able to participate in all openings for the duration of the openings without being in violation of regulations.

Proposed by: Don Nekeferoff (190)

(59)

5 AAC 27.520. GILL NET SPECIFICATIONS AND OPERATIONS. (d) (Regulation page 114) Allow herring gillnetters extra time in order to be able to pull their nets.

The proposed regulation reads as follows:

5 AAC 27.520. GILL NET SPECIFICATIONS AND OPERATIONS.

(d) Herring gillnets may remain in the water 2 hours after the announced closing time on any announced opening of 3 hours or less total fishing time. No herring gillnet may be reset after any announced closing time. [HERRING GILL NETS MAY REMAIN IN THE WATER ONE HOUR AFTER AN EMERGENCY ORDER CLOSURE IF THAT CLOSURE IS ANNOUNCED BY THE DEPARTMENT LESS THAN FOUR HOURS BEFORE THE CLOSURE TIME.]

Justification:

Last year the gillnetters submitted a proposal to get 3 hours extra to pick their gear after a closure. The Advisory Board changed it to one hour; and only on an emergency closure. The Board of Fisheries passed the Advisory Board's one-hour version. After a season's experience it is obvious that one hour is not enough and two hours is a compromise.

Last spring there was a bitter clash between the herring seiners and gillnetters when the ADF&G announced one hour openings in the bays where the herring were concentrated. With one hour openings the gillnetters were effectively kept out of those bays. If this proposal is passed there will be no more controversy when short openings are necessary to protect the stocks from overharvest.

Proposed by: Barbara Monkiewich (194)

(60)

5 AAC 27.525. SEINE SPECIFICATIONS AND OPERATIONS. (b) (Regulation page 114) Eliminate the provision which disallows the use of aircraft directing the operation of seine gear for herring.

The proposed regulation reads as follows:

5 AAC 27.525. SEINE SPECIFICATIONS AND OPERATIONS.

[(b) HERRING MAY NOT BE TAKEN WITH THE ASSISTANCE OF AN AIRCRAFT DIRECTING THE OPERATION OF THE SEINE GEAR]

Justification:



KODIAK  
HERRING

This regulation is totally unenforceable. This is verified by enforcement officers in Kodiak.

Proposed by: Erling Kvasnikoff (192)

(61)

5 AAC 27.530. WATERS CLOSED TO HERRING FISHING (b)(2). (Regulation page 115). Correct an error in the latitude for Women's Bay.

The proposed regulation reads as follows:

5 AAC 27.530. WATERS CLOSED TO HERRING FISHING. (b)

(2) Women's Bay: all waters enclosed by a line from Shannon's Point (~~57°[58°]~~ 43'48" N. lat., 152°31'36" W. long.) to Nymans Peninsula (~~57°[58°]~~ 43'18" N. lat., 152°31'24" W. long.).

Justification:

This merely corrects an error in the latitude descriptions for the Women's Bay closure.

Proposed by: Staff (IV - 7)

(62)

5 AAC 27.535. GUIDELINE HARVEST LEVELS. (a) (Regulation page 115) Establish separate and equal quotas for seiners and gillnetters.

The proposed regulation reads as follows:

5 AAC 27.535. GUIDELINE HARVEST LEVELS. (a) The annual guideline harvest level for herring is 3,400 tons.

(b) From May 1 to June 30, the guideline harvest levels for herring are as follows:

(1) Sturgeon River, Karluk, Uyak Bay, Uganik Bay and Afognak districts: [800 TONS;] 400 tons for seine gear and 400 tons for gillnet gear;

(2) General, Alitak Bay and Red River districts: [800 TONS;] 400 tons for seine gear and 400 tons for gillnet gear;

(3) Kukak section of the Mainland district: [400 TONS;] 200 tons for seine gear and 200 tons for gillnet gear;

(4) Wide Bay, Cape Igvak, Alinchak and Dakavak sections of the Mainland district: [400 TONS;] 200 tons for seine gear and 200 tons for gillnet gear.

Justification:

This would give each group equal share of the quota of a particular area.

Proposed by: Lou Cox (196)

CHIGNIK  
HERRING

(63)

5 AAC 27.560(a). FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 116). Change the season.

The proposed regulation reads as follows:

5 AAC 27.560. FISHING SEASONS AND WEEKLY FISHING PERIODS.(a) Herring may be taken from April 15 [MAY 1] through June 15 [30] (sac roe season) and from August 15 through February 28 (food and bait season).

Justification: In the past, the herring have appeared prior to the time the season was open. This proposal will authorize fishing to occur at the time when fish are available and the chances of acquiring a marketable product are greatest.

Proposed by: Chignik Advisory Committee (154)

(64)

5 AAC 27.560. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) (Regulation page 116) Open the herring season on April 15.

The proposed regulation reads as follows:

5 AAC 27.560. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) Herring may be taken from April 15 [MAY 1] through July 15 (sac roe season) and from August 15 through February 28 (food and bait season).

Justification:

On some years herring will appear, and in some cases spawn, much earlier than the present opening date. In some areas it has been necessary to open the season earlier by emergency order. This is not desirable from the standpoint of all participants being ready or getting the notice. The April 15 opening date will allow a slower entry into the fishery. The earlier opening would not jeopardize the conservation of the herring resource nor would it affect the subsistence fishery.

Proposed by: Staff (IV - 3)

NOTE: Passage of this proposal would require changes from May 1 to April 15 on page 116 (2).

(65)

5 AAC 27.575. SEINE SPECIFICATIONS AND OPERATION. (Regulation page 116). Change the seine length.

The proposed regulation reads as follows:

5 AAC 27.575. SEINE SPECIFICATIONS AND OPERATION. No purse seine may be more than 1,000 meshes in depth or more than 150 [100] fathoms in length.

Justification: None given.

Proposed by: Chignik Advisory Committee (152)

SOUTH PENINSULA-ALEUTIANS AND NORTH PENINSULA  
HERRING

(66)

5 AAC 27.050(c). GEAR FOR HERRING. (Regulation page 97). Permit the use of larger mesh gillnet in areas M and N.

SOUTH PENINSULA, ALEUTIAN ISLANDS  
HERRING

The proposed regulation reads as follows:

5 AAC 27.050 (c) The mesh size of a herring gillnet may not be less than 2-1/8 inches nor more than 2-1/2 inches, except that in registration areas M, N, T, W, and Q the maximum mesh size may not exceed three inches.

Justification: Our local herring are exceptionally large. (In the 1930's some locals employed mesh up to 3-1/2 inches to provide top quality gipped fish). Adding areas M and N to the existing areas allowing 3 inch mesh is merely correcting a regulatory oversight.

Proposed by: Bob Storrs (143)

(67)

5 AAC 27.610. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) (Regulation page 117) Open the herring season on April 15, and eliminate the closure from July 15 through August 14 in the Unimak, Akutan, Unalaska, Umnak and Adak districts.

The proposed regulation reads as follows:

5 AAC 27.610. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) Herring may be taken from April 15 [MAY 1] through July 15 (sac roe season) and from August 15 through February 28 (food and bait season), except that in the Unimak, Akutan, Unalaska, Umnak and Adak districts herring may be taken from April 15 through February 28.

Justification:

On some years herring will appear, and in some cases spawn, much earlier than the present opening date. In some areas it has been necessary to open the season earlier by emergency order. This is not desirable from the standpoint of all participants being ready or getting the notice. The April 15 opening date will allow a slower entry into the fishery.

The elimination of the closed period in the Aleutian Islands will help facilitate the development of a food and bait fishery. Observations during 1981 indicate that the present closed period is the best time to harvest food herring. There has been no sac roe harvest in the area and the extension would not jeopardize the conservation of the resource. This proposal would not affect any subsistence fishery.

Proposed by: Staff (IV - 2)

NOTE: Passage of this proposal would require changes from May 1 to April 15 on the following pages: 117 (3), 118 (2).

(68)

5 AAC 27.610. FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 117). Set a year around open herring season.

The proposed regulation reads as follows:

5 AAC 27.610. (a) Herring may be taken at any time [FROM MAY 1 THROUGH JULY 15 (SAC ROE SEASON) AND FROM AUGUST 15 THROUGH FEBRUARY 28 (FOOD AND BAIT SEASON)].

SOUTH PENINSULA-ALEUTIANS  
HERRING

[(b) HERRING MAY BE TAKEN ONLY DURING PERIODS ESTABLISHED BY  
EMERGENCY ORDER].

Justification: There is insufficient data to determine at this point when Area M herring should be considered roe or otherwise. This year an emergency order was necessary to permit timely start-up of the food fishery. Fishermen and biologists should have maximum flexibility in developing and acting upon a new data base.

Proposed by: Bob Storrs (142)

NORTH PENINSULA  
HERRING

(69)

5 AAC 27.710. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) (Regulation page 119) Open the herring season on April 15, and eliminate the closure from July 15 through August 14 west of Cape Mordvinof.

The proposed regulation reads as follows:

5 AAC 27.710. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) Herring may be taken from April 15 [MAY 1] through July 15 (sac roe season) and from August 15 through February 28 (food and bait season), except that west of Cape Mordvinof herring may be taken from April 15 through February 28.

Justification:

On some years herring will appear, and in some cases spawn, much earlier than the present opening date. In some areas it has been necessary to open the season earlier by emergency order. This is not desirable from the standpoint of all participants being ready or getting the notice. The April 15 opening date will allow a slower entry into the fishery.

The elimination of the closed period west of Cape Mordvinof will allow development of a food and bait fishery in an area where there appears to be a good concentration of herring at that time. No sac roe fishery has taken place in this area. This proposal would not affect any subsistence fishery.

Proposed by: Staff (IV - 1)

NOTE: Passage of this proposal would require changes from May 1 to April 15 on page 119 (4).

KODIAK  
SALMON

(70)

5 AAC 18.330(c)(new subsection) GEAR (Regulation page 61) Open the Kodiak area to commercial troll fishing.

The proposed regulation reads as follows:

5 AAC 18.330. GEAR.

(c) Salmon may be taken by trolling gear in all districts and sections.

Justification:

KODIAK  
SALMON

The three most controllable forces impacting the mixed salmon stock fishery are the foreign fleet, hydroelectric facilities, and the domestic troll fleet. Of these, the troll fleet is the least significant. Increasing the allowable area of this limited fleet insures a minimum impact of this industry on critical stocks.

Proposed by: Bob Lesher (128)

(71)

5 AAC 18.332(g) SEINE SPECIFICATIONS AND OPERATION and 5 ACC 39.120 (c)(5) REGISTRATION OF COMMERCIAL FISHING VESSELS. (Regulation pages 63,164). Prohibit a purse seine fisherman from operating more than one fishing vessel.

The proposed regulation reads as follows:

5 AAC 18.332. SEINE SPECIFICATIONS AND OPERATION.

(g) During the period from June 14 through October 31, a salmon purse seine interim-use or entry permit holder may operate only one salmon fishing vessel and that vessel must have the same permanent vessel license (ADF&G) number that appears on the operator's CFEC permit card. A person may obtain permission from a local representative of the department to replace a salmon fishing vessel if that vessel is sunk, destroyed or incapable of taking salmon during the period from June 14 through October 31.

5 AAC 39.120. REGISTRATION OF COMMERCIAL FISHING VESSELS.

(b)(5) repealed 4/ /82.

Justification:

The Board in January 1981 adopted 5 AAC 39.120(b)(5). Which was intended to prohibit purse seine fishermen from utilizing both a large seine vessel and a smaller "jitny" type seiner during the salmon season. The regulation as adopted was unenforceable because both seine vessels and seine skiffs must be licensed, which automatically registers them; thus a seiner could not legally operate a conventional two boat operation. The department proposes the above regulation as an enforceable alternative, but does not support or oppose the concept.

Proposed by: Staff

ALASKA PENINSULA  
BOTTOMFISH

(72)

5 AAC 09.430. GEAR. (New section) (Regulation page 50). Prohibit the use of trawls.

The proposed regulation reads as follows:

5 AAC 09.430. GEAR. The use of trawls is prohibited in that portion of the area bound on the east by the longitude of Kupreanof Point and on the west by the longitude of Scotch Cap light.

Justification: In the Faroe Islands, they allowed dragging inside of the three (3) mile and have almost wiped out the bottom fish. In Norway, they do not allow dragging inside of four (4) miles. We would like to protect our existing fisheries.

Proposed by: Sand Point Adv. Cmte. (69)

COOK INLET  
SUBSISTENCE

73

5 AAC 01.597. CHARACTERISTICS OF SUBSISTENCE FISHERIES. (New Section). Describe characteristics of Cook Inlet subsistence fisheries.

The proposed regulation reads as follows:

5 AAC 01.597. CHARACTERISTICS OF SUBSISTENCE FISHERIES. The Board of Fisheries finds that certain customary and traditional practices and procedures associated with the utilization of fish in the Cook Inlet Area can be used to identify subsistence uses. Based on testimony to the board, the following characteristics are those that should be evaluated in the identification of subsistence fisheries:

(1) a long-term, stable, reliable pattern of use and dependency, excluding interruption generated by outside circumstances, e.g., regulatory action or fluctuations in resource abundance;

(2) a use pattern established by an identified community, subcommunity, or group having preponderant concentrations of persons showing past use;

(3) a use pattern associated with specific stocks and seasons;

(4) a use pattern based on the most efficient and productive gear and economical use of time, energy, and money;

(5) a use pattern occurring in reasonable geographic proximity to the primary residence of the community, group, or individual;

(6) a use pattern occurring in locations with easiest and most direct access to the resources;

(7) a use pattern which includes a history of traditional modes of handling, preparing, and storing the product (without precluding recent technological advances);

(8) a use pattern which includes the intergenerational transmission of activities and skills;

(9) a use pattern in which the effort and products are distributed on a community and family basis (including trade, bartering, sharing, and gift-giving); and

(10) a use pattern which includes reliance on subsistence taking of a range of wild resources in proximity to the community or primary residency.

Justification: After public notice and opportunity to comment, the board during its April 1981 meeting adopted the above criteria as characteristics that they would use to assist in the identification of subsistence fisheries in Cook Inlet. Because it was limited in application the list was not codified. General adoption of the list will allow it to be considered in all subsistence deliberations. Codification will provide ready accessibility to the public. The board also invites the public to comment on the list and suggest additions.

Proposed by: Board of Fisheries

COOK INLET  
SUBSISTENCE

(74)

5 AAC 01.560. (a) (4) WATERS CLOSED TO SUBSISTENCE FISHING. (Regulation page 33). Open the Outer and Eastern districts.

The proposed regulation reads as follows:

5 AAC 01.575. WATERS CLOSED TO SUBSISTENCE FISHING.

(a) The taking of salmon is prohibited in the following waters:

(4) The Central, Kamishak and Barren Island [OUTER AND EASTERN] districts.

Justification:

(1) The Constitution of the State of Alaska reserves fish and wildlife for it's citizens common use. This would include all species of salmon, See Article VIII.

(2) The Board of Fisheries has been directed by the Legislature and the Governors Office to adopt subsistence fisheries regulations. These regulations shall give preference over other uses of the resources. There have been no such regulations adopted in this district of the Cook Inlet Area.

(3) This places myself or any other person who lawfully desires to take salmon for subsistence use subject to arrest under existing regulation.

(4) The salmon resource in this district has become increasingly healthy. Take note of emergency openings for commercial fishing in Resurrection Bay druing 1980 and 1981. Also note the very generous sport fishing limit of six fish per day with no bag limit.

Proposed by: Glen Washburn (L-24)

(75)

5 AAC 01.560(b)(2). FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 31). Provide for a subsistence salmon fishery in the vicinity of Knik Village.

The proposed regulation reads as follows:

5 AAC 01.560. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(b) salmon may be taken for subsistence purposes only as follows:

(2) in the vicinity of the villages of Knik and Eklutna.

Editors note: no season or other requirements were set out in the proposals)

Justification: The residents of the village of Knik as well as Tyonek, English Bay and Port Graham meet the ten characteristics currently used to identify subsistence users.

Proposed by: Paul Theodore (172)

Justification: The members of the historic village of Knik have relied upon salmon for generations as part of their diet as well as a traditional practice of their culture. This skill was passed on through the years and survives today, as does other subs. activities (collecting berries, plants, wood and other fish and game). But elimination of subs. use (?) has made it difficult to take salmon. Because they meet the 10 points set forth by the Board of Fisheries the people of the historic village of Knik want to continue fishing.

Proposed by: Knik Village Members (164)

COOK INLET  
SUBSISTENCE

76

5 AAC 01.560. FISHING SEASONS AND WEEKLY FISHING PERIODS. (c) (Regulation page 29) Change the seasons and periods for the Southern district.

The proposed regulation reads as follows:

5 AAC 01.560. FISHING SEASONS AND WEEKLY FISHING PERIODS.

Option 1

(c) In the Southern district salmon may be taken only from 6:00 a.m. May 15 until 12:00 p.m. September 30 in conformance with weekly subsistence fishing periods.

Option 2

(c) Commencing 6:00 a.m. May 15 there is established a subsistence fishing season in the Southern district for Alaska residents over 65 years of age.

Justification: Option 1. To lessen the fishing pressure on the limited number of subsistence fish sites. There is no reason to restrict subsistence fishing in the previous manner. To allow the traditional and customary use of all species of fish for subsistence uses. Present season conflicts, for some, with other subsistence pursuits such as coaling, garden harvesting and preserving, berrying, etc.

Proposed by: Kachemak Bay Subsistence Group

Justification: Option 2. If old-timers are permitted to take red salmon in an early season the most convenient sites will be theirs without competition.

Proposed by: Kachemak Bay Subsistence Group

77

5 AAC 21.200. FISHING DISTRICTS, SUBDISTRICTS AND SECTIONS. (b) (Regulation page 70). Redefines the Central district and add a new subdistrict.

The proposed regulation reads as follows:

5 AAC 21.200. FISHING DISTRICTS, SUBDISTRICTS AND SECTIONS.

(b) Central district: between a line extending from Boulder Point at 60° 46' 23" N. lat to Platform Baker then to Platform King Salmon, then to a point on the west shore at 60° 54' N. lat., 151° 43' 32" W. long. [SHELL PLATFORM C THEN TO A POINT ON THE WEST SHORE AT 60° 46' 23" N. lat.] and the latitude of Anchor Point light.

(7) Trading Bay subdistrict: all waters between a line extending from Boulder Point at 60° 46' 23" N. lat., to Shell Platform C, then to a point on the west shore at 60° 46' 23" N. lat. and the northern boundary of the Central district.

Justification: This will make the northern line lie East-West through four distinguishable points, providing for more accurate location and enforcement of the line. It also allows for a more precise harvest of specific stocks without impacting other stocks when used by emergency order.

Proposed by: United Cook Inlet Drift Assoc. (114)



COOK INLET  
SALMON

78

5 AAC 21.200. FISHING DISTRICTS, SUBDISTRICTS AND SECTIONS (b) Change the Central district boundary to facilitate a more manageable situation for drift gill netters as well as enforcement officers.

The proposed regulation reads as follows:

5 AAC 21.200. FISHING DISTRICTS, SUBDISTRICTS AND SECTIONS.

(b) Central district; between a line extending from Boulder point at 60°46'23" N. lat., to platform Baker, through to platform King Salmon, then to a point on the west shore at 60°54' N. lat. [TO SHELL PLATFORM C, THEN TO A POINT ON THE WEST SHORE AT 60°46'23" N. LAT.,] and the latitude of Anchor Point light.

Justification:

(1) The existing boundary lies at awkward angles across the most violent tidal flow in Cook Inlet. The new boundary would cross the tidal flow at a right angle, would cross over two oil platforms, would run close to east/west magnetically and would run at right angles to the shores and thereby offer great navigational advantages, enforcement officers would have the advantage of relating any boats position to two platforms instead of one. The tide in the additional area runs considerably slower and thereby reduces the risk for drift gillnetters of flooding into closed waters.

Proposed by: Tor Holmboe (31)

79

5 AAC 21.310. FISHING SEASONS. (Regulation page 73) Repeal all opening and closing dates for fishing seasons.

The proposed regulation reads as follows:

5 AAC 21.310. FISHING SEASONS.

Fishing seasons for salmon in all districts will be opened and closed by emergency order.

- (1) Repealed (Eff. )
- (2) Repealed (Eff. )
- (3) Repealed (Eff. )
- (4) Repealed (Eff. )
- (5) Repealed (Eff. )
- (6) Repealed (Eff. )

Justification:

As seen by the 1981 fishing season, there are various runs of salmon that are not adequately harvested using the present regulatory dates for opening or closing. Many other areas, go on biological openings and closings and we feel we are justified in asking for this in Cook Inlet.

Proposed by: Central Peninsula Fish and Game Advisory Committee. (L-1)

80

5 AAC 21.310. FISHING SEASONS(1)(2) (Regulation page 73) Establish new starting and ending dates for the Central and Northern Districts fishing season.

COOK INLET  
SALMON

The proposed regulation reads as follows:

5 AAC 21.310. FISHING SEASONS. Salmon maybe taken only as follows:

(1) Northern District from July 1 until August 15: [JUNE 25 UNTIL CLOSED BY EMERGENCY ORDER] except that when July 1 [JUNE 25] falls within a closed weekly period, the season will open the next following open weekly period;

(2) Central District from July 1 until August 15, except that when July 1 falls within a closed weekly period, the season will open the next following opening period.

(A) Repealed ( ) [WESTERN SUBDISTRICT FOR SET GILLNETS FROM JUNE 16 UNTIL CLOSED BY EMERGENCY ORDER, EXCEPT THAT WHEN JUNE 16 FALLS WITHIN A CLOSED WEEKLY PERIOD, THE SEASON WILL OPEN THE NEXT FOLLOWING OPENING PERIOD;]

(B) Repealed ( ) [UPPER, LOWER, KALGIN ISLAND, KUSTATAN AND CHINITNA BAY SUBDISTRICTS AND FOR DRIFT GILLNETS IN THE WESTERN SUBDISTRICT FROM JUNE 25 UNTIL CLOSED BY EMERGENCY ORDER WITH THE FOLLOWING EXCEPTIONS:

(i) WHEN JUNE 25 FALLS WITHIN A CLOSED WEEKLY PERIOD, THE SEASON WILL OPEN THE NEXT FOLLOWING OPEN WEEKLY PERIOD:

(ii) FOR SET GILLNET IN THE UPPER SUBDISTRICT AND FOR DRIFT GILLNETS WITHIN FIVE MILES OF THE EASTERN SHORE OF THE UPPER AND LOWER SUBDISTRICTS, THE SEASON CLOSES AUGUST 15;]

Justification:

To provide a reasonable allocation to salmon to sport fishermen.

Proposed by: Izaak Walton League (182)

81

5 AAC 21.310. FISHING SEASONS. (1) (Regulation page 73) Open a commercial fishery for king salmon by set gill nets in the Northern District.

The proposed regulation reads as follows:

5 AAC 21.320. FISHING SEASONS. Salmon maybe taken as follows:

(1) Northern District from June 7 [JUNE 25] until closed by emergency order; except that when June 7 [JUNE 25] falls within a closed weekly period, the season will open the next following open weekly period;

Justification:

(1) The early runs of king salmon bound for spawning in Northern Cook Inlet have appeared healthy and strong for the past 6 seasons indicating a surplus of king salmon over escapement needs to allow a commercial harvest of this resource. This proposal would allow a commercial harvest on these stocks as a secondary use pursuant to the Board's Cook Inlet management Plan.

Proposed by: Arthur Robinson (163)

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82

5 AAC 21.310. FISHING SEASONS. (2) (A) (Regulation page 73) Open the Kustatan subdistrict along with the Western subdistrict.

The proposed regulation reads as follows:

5 AAC 21.310. FISHING SEASONS. Salmon may be taken only as follows:

(2) Central district:

(A) Western subdistrict and Kustatan subdistrict for set gill nets from June 16 until closed by emergency order, except that when June 16 falls within a closed weekly period, the season will open the next following open period;

(B) Upper, Lower, Kalgin Island [KUSTATAN] and Chinitna Bay subdistricts and for drift gill nets in the Western subdistrict from June 25 until closed by emergency order with the following exceptions:

Justification:

(1) 36,000 sockeye salmon in the Big River Lakes system this year and strong chinook returns (some incidental kings will be caught while fishing for reds) justify an earlier opening at Kustatan. This is the smallest subdistrict (6 operations) in the Inlet.

Proposed by: Ken Castner (188)

83

5 AAC 21.310. FISHING SEASONS (2)(B). (Regulation page 73) Provide for the opening and closing of 5 subdistricts by emergency order.

The proposed regulation reads as follows:

5 AAC 21.310. FISHING SEASONS. Salmon may be taken only as follows.

(2)(B) Trading Bay, Upper, Lower, Kalgin Island, Kustatan and Chinitna Bay subdistricts and for drift gill nets in the Western subdistrict from June 25 or by emergency order until closed by emergency order with the following exceptions:

Justification: To allow for greater flexibility for the department to maximize harvest levels and aid in achieving escapement goals.

Proposed by: United Cook Inlet Drift Assoc. (112)

84

5 AAC 21.320. WEEKLY FISHING PERIODS. (a) (1) (Regulation page 74) Allows for the commercial harvest of king salmon by set gill nets in the Northern District.

The proposed regulation reads as follows:

5 AAC 21.320. WEEKLY FISHING PERIODS.

(a) In the set gill net fishery

(1) Salmon may be taken in the Northern district from 6:00 a.m. Monday until 6:00 p.m. Monday from June 7 until June 21. After June 21, Salmon may be taken from 6:00 a.m. Monday until 6:00 p.m. Monday and from 6:00 a.m. Friday until 6:00 p.m. Friday;

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Justification:

(1) For the past 6 salmon seasons the runs of early king salmon into the Northern areas of Cook Inlet have been strong and healthy. There is good cause to believe that the 1982 run of Northern Cook Inlet early kings will be strong and will provide a surplus over escapement needs to allow a commercial harvest on these stock as a secondary use pursuant to the Board's Cook Inlet management plan.

Proposed by: Arthur Robinson (162)

85

5 AAC 21.320. WEEKLY FISHING PERIODS. (b) (1) (2) (Regulation page 74) Set weekly fishing periods for the Central and Northern Districts.

The proposed regulation reads as follows:

5 AAC 21.320. WEEKLY FISHING PERIODS.

(b) In the drift gill net fishery

(1) Salmon may be taken in the Central and Northern districts from 6:00 A.M. Monday until 6:00 P.M. Monday and from 6:00 A.M. Friday until 6:00 P.M. Friday:

(2) The fishing periods and districts set forth in (1) of this subsection may be modified by emergency order.

Justification: To allow for more flexible management, and precise harvest of separate stocks as deemed necessary by Fish and Game management. To provide more accurate information to establish data base for future projects and enhancement programs.

Proposed by: United Cook Inlet Drift Assoc. (115)

86

5 AAC 21.330 (a) and (c) GEAR. (Regulation pages 75 and 77). Close the Chinitna Bay subdistrict of the Central District to fishing with seines and drift gillnets.

The proposed regulation reads as follows:

5 AAC 21.330 GEAR.

(a) Hand purse seines and beach seines may be used in the Southern, Kamishak Bay, Outer, and Eastern districts. [AND IN THE CHINITNA BAY SUBDISTRICT EAST OF A LINE FROM THE CRANE ON THE SOUTH SHORE TO THE LARGEST BOULDER OF THE LANDWARD END OF GLACIER SPIT].

(c) Drift gill nets may be used only in the Central District, however, in the Chinitna Bay subdistrict drift gill nets may not be used. [BE USED ONLY EAST OF A LINE FROM THE CRANE ON THE SOUTH SHORE AT 59°50'04" N. LAT., 153°05'06" W. LONG., TO THE DEPARTMENT OF FISH AND GAME REGULATORY MARKER ON GLACIER SPIT AT 59°51'43" N. LAT., 153°7'50" W. LONG.]

Justification:

(1) Chinitna Bay escapement has been depleted because of the effectiveness of the stationary drift set nets and seines. Loop hole in regulations leaves these stationary drift set nets set beaches and channels in front

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of spawning creeks. Regulations don't even prohibit the use of these nets setting parallel to the beaches or using large hook in the end which forms very effective fish trap. These nets have become too effective to be fished any longer in the Chinitna Bay Subdistrict if the needed escapement is to get up the spawning creeks.

Proposed by: Robert Haeg family (165)

87

5 AAC 21.330(a)(c) GEAR. (Regulation pages 75 and 77). Close the Chinitna Bay Subdistrict of the Central District to fishing with seines and drift gillnets.

The proposed regulation reads as follows:

5 AAC 21.330 GEAR.

(a) Hand purse seines and beach seines may be used in the Southern, Kamishak Bay, Outer, and Eastern Districts. [AND IN THE CHINITNA BAY SUBDISTRICT EAST OF A LINE FROM THE CRANE ON THE SOUTH SHORE TO THE LARGEST BOULDER OF THE LANDWARD END OF GLACIER SPIT].

(c) Drift gillnets may be used only in the Central District, except that drift gillnets may not be used in the Chinitna Bay Subdistrict. [BE USED ONLY EAST OF A LINE FROM THE CRANE ON THE SOUTH SHORE AT 59° 50'04" N. LAT., 153° 05'06" W. LONG., TO THE DEPARTMENT OF FISH AND GAME REGULATORY MARKER ON GLACIER SPIT AT 59° 51'43" N. LAT., 153° 7'50" W. LONG.]

Justification:

Escapement goals for chum salmon into Chinitna Bay streams have not been met in eight of the ten years they have been monitored, despite increasingly prolonged closures. The tendency of chum salmon to mill in Chinitna Bay for long periods of time and repeatedly enter and back out of stream mouths coupled with the extremely shallow water of Chinitna Bay greatly enhances their vulnerability to overharvesting. This proposal will promote the conservation and development of the fishery by removing the most effective gear types from Chinitna Bay and restricting harvest to the less effective set gillnets, thereby allowing for greater levels of escapements and for the more orderly harvest of the existing resource. This proposal will have no effect on any existing subsistence fishery.

Proposed by: Staff (II- )

88

5 AAC 21.330. GEAR (3)(A)(vi) (Regulation Page 76) Open an area to the use of set gill nets, from the latitude of Chisic Island light to Illiamna Point.

The proposed regulation reads as follows:

5 AAC 21.330. GEAR.

(3) Central district : set gill nets be used only in the following areas:

(A) waters along the west coast

(vi) from 60° 16' 11" N. lat., 152° 29' 54" W. long., to 60° 14' 14" N. lat., 152° 32' 37" W. long. and from 60° 13' 25" N. lat. 152° 34'

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39" W. long [TO THE LATITUDE OF CHISIK ISLAND LIGHT;] to 60° 2' 15" N. lat., 152° 34' 50" W. long. (Tliamna Point).

Justification: Because this area was never closed to the taking of salmon with set net gear, it was just never opened to the use of set net gear. It was once open to the taking of salmon with fish traps, but the traps were outlawed or illegal, and the area was just never opened again.

Proposed by: David L. Sanders (8)

(89)

5 AAC 21.330. GEAR. (b) (1) (D) (Regulation page 75) Open the eastshore of Seldovia Bay to set gill net fishing.

The proposed regulation reads as follows:

5 AAC 21.330. GEAR.

(b)

(1)

(D) The west shore of Seldovia Bay from Point Nashowhak to a point at the latitude of Powder Island at 59°25'30" N. lat., 151°44'15" W. long., and along the eastshore from the latitude of Powder Island at 59°25'30" N. lat., south to a point at the latitude of 59°24'30" N. lat.

Justification:

(1) At present, there is no portion of the East shore of Seldovia Bay open to set gill nets. Set nets on the East shore within or adjacent to the City limits of Seldovia could interfere with the use of the Seldovia harbor, but set nets South of the Seldovia City boundary would not cause any interference.

Proposed by: Theodore Pease, Jr. (173)

(90)

5 AAC 21.330. GEAR (f) (g) (Regulation page 77) Redefine the subsection related to operation of gear.

The proposed regulation reads as follows:

5 AAC 21.330 GEAR

(f) Repealed (Eff. ) [THE PERSON WHO HOLDS THE VALID INTERIM-USE OR ENTRY PERMIT CARD FOR ANY SALMON NET GEAR SHALL BE PHYSICALLY PRESENT DURING THE OPERATION OF THE GEAR]

(g) Each salmon net interim-use or entry permit card holder shall personally operate or assist in the operation of the gear. "Personally operate or assist in the operation" means being physically present at the boat or fish camp [GEAR SITE] and operating gear or assisting or supervising some portion of the general [IMMEDIATE] fishing operation, or engaging in support activities.

(1) Set net entry permit card holders shall be physically present at the gear site and operate or assist in operating the gear during setting and pulling operations.

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Justification:

(1) The present wording is unnecessarily restrictive. This proposal would permit more flexibility and efficiency in the operation of set net gear without changing the basic requirement that the card holders really fish their gear. For example: four of the nine nets operated out of our camp are on opposite sides of the bay. My son's three sites are thus far apart. It would be much more efficient if we could rotate picking crews. Set netting has in the past been recognized by the Attorney General as a family enterprise. At present, if I have to repair an outboard for one of the kids, my nets can not be picked. (f) is redundant. It is not possible to comply with (g) without complying with (f).

Proposed by: Sera Baxter (183)

(91)

5 AAC 21.330(i) GEAR. (Regulation page 77) (New Section.) Prohibit the use of aircraft and/or any person flying in an aircraft from assisting a salmon seine vessel in locating fish and/or making a set on fish during the period 3 hours prior to and during any open fishing period.

The proposed regulation reads as follows:

5 AAC 21.330 GEAR.

(i) No helicopter rotor craft or fixed wing aircraft or their occupants may assist a salmon seining vessel in taking salmon during an open fishing period and for a period of 3 hours prior to an opening by means of radio communications, personal verbal communication or physical movements of an aircraft which would locate salmon for a fishing vessel.

Justifications:

A potentially dangerous situation is increasing every year with the increased use of aircraft for spotting salmon and assisting seine vessels in making sets. The fishery is continuing to get more and more competitive each year due to increased gear and vessel efficiency, OJT and the cost of newly purchased permits. This has resulted in more planes being used each year for spotting salmon.

Unlike herring, the planes are not necessary to adequately harvest the resource in a timely manner, but merely give a certain select group of fishermen an edge over the rest of the fleet. The other fishermen will be forced to go to aerial spotting in the future out of necessity and instead of 5-6 planes over a narrow bay or lagoon, there will be 30-40. Numerous reports have been made to the Department of pilots circling or buzzing a deep water set which will make fish sound out of a net allowing the vessel the plane is working for to catch the fish.

The resource is already being harvested to the maximum without the use of aircraft; in fact, in certain instances the conservation of the resource is being jeopardized. With the use of aircraft, if fish being protected for escapement purposes back out from behind areas closed to fishing, vessels are on them immediately. In the past, there has been a definite buffer in the management of the fisheries because boats were not able to locate all of the fish in the short time span that certain tide or weather conditions may have made them available. This buffer is no longer there and future escapements may be in danger.

Proposed by: Alfred E. Cabana, Jeffrey J. Cabana, Larry Cabana, Leroy Cabana, Kenneth Halpin, Tim Malchaff, Walter Maganack, Ephim Moonin, Chris Moss. (126)

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92

5 AAC 21.331. GILLNET SPECIFICATIONS AND OPERATION. (New section)(Regulation page 77) Restrict the distance from shore that set nets can be fished.

The proposed regulation reads as follows:

5 AAC 21.331. GILLNET SPECIFICATIONS AND OPERATIONS.

(f) In the Central and Northern districts fishing with set gill nets is restricted to beach areas that at mean low water are connected by exposed land to the shore or places not covered by high tide. No part of a set gill net may be more than 2,500 feet from the 16 foot high tide mark.

Justification:

(1) To establish an adequate distance off-shore to existing set net sites, and prevent navigational hazards to existing marine traffic. Also to establish harmonious and functional balance between gear types in a common ground fishery.

Proposed by: United Cook Inlet Draft Assoc. (113)

93

5 AAC 21.332 SEINE SPECIFICATIONS AND OPERATION. (Regulation page 78) Allow more than one legal limit of hand purse seine gear to be carried aboard a salmon fishing vessel or any boat towed by it.

The proposed regulation reads as follows:

5 AAC 21.332. SEINE SPECIFICATIONS AND OPERATION.

Hand purse seines and beach seines may not be less than 90 fathoms in length and 100 meshes in depth and may not be more than 250 fathoms in length and 300 meshes in depth. Detachable or loose leads are not permitted. A hand purse seine vessel may have more than one legal limit of hand purse seine gear on board it or any boat towed by it, but may not operate more than one legal limit of gear.

Justifications:

In recent years, many fishermen have built shallow draft vessel to use in certain fishing conditions to compliment their larger vessels. Additionally, some family operations where two or more permits are possessed often tow one seine vessel to save on fuel. While section 5 AAC 39.240(a) prohibits more than one legal limit of gear being on board a salmon vessel or any boat towed by it, it really serves no purpose biologically. As long as no vessel may "operate" more than one legal limit of gear, there is really no biological reason to limit the amount of gear transported. This proposal would promote development of the commercial fishery without having any effects on the conservation of the resource or the subsistence.

Proposed by: Staff

94

5 AAC 21.335. MINIMUM DISTANCE BETWEEN UNITS OF GEAR (c)(Regulation page 78.) Restrict the distance between different gear types.

The proposed regulation reads as follows:



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5 AAC 21.335. MINIMUM DISTANCE BETWEEN UNITS OF GEAR

(c) [IN THE CHINITNA BAY SUBDISTRICT] No part of a hand purse seine or beach seine may be placed or operated within 600 feet of a drift or set gillnet.

Justification:

(1) The regulations currently provide protection to set gear from encroachment by mobil gear in other parts of the Inlet. This change would extend the same protection to all set gillnets. The "A" and "B" sets of pictures show seiners fishing and waiting their turn to fish in front of one of my nets. The net was blocked off and did not catch fish during this activity. The two net sites pictured are 600' apart. This seining took place between them.

Proposed by: Sera Baxter (183)

95

5 AAC 21.350(a) CLOSED WATERS. (Regulation pages 78-79). Redescribe the Crescent River closed area.

The proposed regulation reads as follows:

5 AAC 21.350. CLOSED WATERS.

(a) Salmon may not be taken within one statute mile of the terminus of any of the following salmon streams: Kenai River, Kasilof River, Ninilchik River, Swanson Creek, Bishop Creek, Deep Creek, Stariski Creek, Anchor River, Three-mile Creek, Chuit River, Nikolai Creek, McArthur River, Kustatan River, Katnu River, Drift River, Kalgin Island Stream on the east coast of Kalgin Island, and salmon may not be taken near the Crescent River south of the latitude of an ADF&G marker located approximately one mile north of the mouth of the Crescent River ( ), north of the latitude of point located 2,500 feet north of the northernmost tip of Chisik Island at mean low water ( ), east of a line from an ADF&G marker located approximately one mile west of the mouth of the Crescent River ( ), to a point 2,500 feet north of the northernmost tip of Chisik Island at mean low water ( ), and west of the seaward boundary of the Western Subdistrict. [NEAR THE GRECIAN RIVER INSIDE A LINE COMMENCING AT THE DEPARTMENT OF FISH AND GAME MARKER ONE MILE NORTH OF GRECIAN RIVER AT 60° 14'06" N. LAT., 152° 32'45" W. LONG., EAST TO A DEPARTMENT OF FISH AND GAME BUOY LOCATED ONE MILE OFFSHORE, THEN SOUTH 2.6 MILES TO A DEPARTMENT OF FISH AND GAME BUOY AT 60° 11'30" N. LAT., 152° 30'30" W. LONG., THEN WEST 1.6 MILES TO A DEPARTMENT OF FISH AND GAME BUOY AT 60° 11'30" N. LAT., 152° 34'10" W. LONG., THEN NORTH TO THE DEPARTMENT OF FISH AND GAME MARKER LOCATED ONE MILE WEST OF GRECIAN RIVER AT 60° 13'25" N. LAT., 152° 34'10" W. LONG.]

Justification:

This proposal redescribes the closed area around the Crescent River Bar in a manner that will not require the placing of buoys by the Department. Buoys have proved ineffective as they are subject to covert movement or removal. The above description will allow fishermen to orient themselves to the closed area by means of readily visible geographic points. This proposal will promote the conservation and development of the fishery by permanently marking the Crescent River closed area allowing for more effective enforcement. This proposal will not affect any existing subsistence fishery.

Proposed by: Staff (II- )

COOK INLET  
SALMON

96

5 AAC 21.350. CLOSED WATERS (a) (Regulation page 78) Prohibit salmon fishing within one mile of the terminus of the Grecian River.

The proposed regulation reads as follows:

5 AAC 21.350. CLOSED WATERS.

(a) Salmon may not be taken within one statute mile of the terminus of any of the following salmon streams: Kenai River, Kasilof River, Ninilchik River, Swanson Creek, Bishop Creek, Deep Creek, Stariski Creek, Anchor River, Three-Mile Creek, Chuit River, Nikolai Creek, McArthru River, Kustatan River, Katnu River, Drift River, Kalgin Island Stream on the east coast of Kalgin Island, the Grecian River AND SALMON MAY NOT BE TAKEN NEAR THE GRECIAN RIVER INSIDE A LINE COMMENCING AT THE DEPARTMENT OF FISH AND GAME MARKER ONE MILE NORTH OF GRECIAN RIVER AT 60°14'06" N. LAT., 152°32'45" W. LONG., EAST TO A DEPARTMENT OF FISH AND GAME BOUY LOCATED ONE MILE OFFSHORE, THEN SOUTH 2.6 MILES TO A DEPARTMENT OF FISH AND GAME BOUY AT 60° 11'30" N. LAT., 152°30'30" W. LONG., THEN WEST 1.6 MILES TO A DEPARTMENT OF FISH AND GAME BOUY AT 60°11'30" N. LAT., 152°34'10" W. LONG. THEN NORTH TO THE DEPARTMENT OF FISH AND GAME MARKER LOCATED ONE MILE WEST OF GRECIAN RIVER AT 60°13'25" N. LAT., 152°34'10" W. LONG.]

Justification:

(1) This was the historical rule and the amended rule has exercised extreme hardship on the local fishermen any apparent justification.

Proposed by: Robert Merle Cowan (L-10)

97

5 AAC 21.350(d)(5) CLOSED WATERS. (Regulation page 79). Move the Tutka Bay closure to the southern end of the bay.

The proposed regulation reads as follows:

5 AAC 21.350. CLOSED WATERS.

(d)(5) Waters of Tutka Bay southeast of 59° 25'30" N. lat. [THE HOMER ELECTRIC ASSOCIATION POWER LINE];

Justification:

Due to the repeated strength of Tutka Hatchery pink salmon returns, the closure of Tutka Bay at the HEA power line is no longer needed. However some limited closed waters protection is needed for wild pink and chum salmon stocks bound for streams at the head of the Tutka Bay. This proposal will continue conservation of those wild stocks while enabling full development and utilization of Tutka Hatchery surpluses. It will have no effect on any existing subsistence fishery.

Proposed by: Staff.

PRINCE WILLIAM SOUND  
SUBSISTENCE FISHING

98

5 AAC 01.625 and 630. WATERS CLOSED TO SUBSISTENCE FISHING and SUBSISTENCE FISHING PERMITS. (Regulation page 36). Clarify what areas are closed to subsistence salmon fishery for the Copper River and require a permit for all freshwater fish.

PRINCE WILLIAM SOUND  
SUBSISTENCE

The proposed regulation reads as follows:

5 AAC 01.625. WATERS CLOSED TO SUBSISTENCE FISHING.

(a) All tributaries of the Copper River and the main Copper River upstream of the Slana River confluence and downstream of an east-west line crossing the Copper River at the confluence of the unnamed stream located approximately 1-1/4 mile below the U.S.G.S. gauging cable across the Copper River as designated by Department of Fish and Game regulatory markers are closed to subsistence salmon fishing.

5 AAC 01.630. SUBSISTENCE FISHING PERMITS.

(a) Except as provided in this section, fish other than salmon and [WHITEFISH] freshwater fish species may be taken for subsistence purposes without a subsistence fishing permit.

(b) Salmon and Freshwater fish species [WHITEFISH] may be taken only under the authority of a subsistence fishery permit. (remaining existing language stays intact)

Justifications:

(1) Current regulation unclear in that area closed is to protect salmon resources and does not require closure for other species. Note: By adopting the companion proposal to require permits for all freshwater fishing for subsistence purposes this proposal more accurately represents the need to protect salmon in the area described.

(2) Present regulations do not cover the taking of freshwater species for subsistence (other than salmon), and this adjustment will do so. Permitting will allow some assessment of the quantity of fish taken and provide documentation of the subsistence fishing effort. Other areas have some coverage for the taking of freshwater species. Adoption of this proposal will control development and promote conservation of the resource, thus providing for continued subsistence fishery.

Proposed by: Staff (II - )

99

5 AAC 01.630 (b) (2) (A) (ii). SUBSISTENCE FISHING PERMITS. Regulation page 34) Change the salmon annual possession limit for two person households using fishwheels.

The proposed regulation reads as follows:

5 AAC 01.630. SUBSISTENCE FISHING PERMITS.

(b) (2) Fishwheels: Glennallen subdistrict;

(a) if the gross family income for the previous year is more than \$12,000;

(ii) 100 [30] salmon for the household with two persons;

Justification:

30 salmon is not enough salmon for a family. This area is mainly made up of Native population which historically have a diet consisting of fish and game.

Proposed by: Copper Basin Advosry Comm. (167)

PRINCE WILLIAM SOUND  
SALMON

100

5 AAC 24.330(d)(new subsection) GEAR (Regulation page 86) Allow the use of salmon troll gear in all or parts of the Eshamy, Montague, South-eastern, Copper River, and Bering River districts of Prince William Sound.

The proposed regulation reads as follows:

Option 1:

5 AAC 24.330. GEAR.

(d) Troll gear may be used in the Eshamy, Montague, and South-eastern districts.

Option 2:

5 AAC 24.330. GEAR.

(d) Troll gear may be used in locations within the Prince William Sound area, including Middleton Island, Wessel's Reef, Cape Clear, and Cape St. Elias.

Justification:

Option 1: The three most controllable forces impacting the mixed salmon stock fishery are foreign fleets, hydroelectric facilities, and the domestic trollers. Of these, the troll fleet is the least significant. Increasing the allowable area of this limited fleet insures a minimal impact of this industry on critical stocks.

Proposed by: Bob Leshner (129)

Option 2: Trollers have traditionally fished areas to the west of Cape Suckling; only recently have they found their fishing areas restricted to Southeastern Alaska. Present state and federal management measures have resulted in cuts in the optimum yield of chinook salmon in an attempt to reallocate the fish to Washington State. Pending litigation concerning Indian treaty rights will result in additional burdens on the Southeast Alaska troll fleet. ATA believes that the burden of reallocating chinook stocks to the "lower 48" should be borne equally by all Alaskans, including those presently fishing stocks to the west.

Proposed by: Alaska Trollers's Association (79)

101

HERRING

5 AAC 27.330 (c) GEAR, 333. KELP HARVEST SPECIFICATIONS AND OPERATIONS, 360 (c) GUIDELINE HARVEST LEVELS AND 380 (b) and (c) PERMITS. (Regulation pages 106,107) Change the location for herring pounds; specify harvest requirements for kelp to be used in herring pounds; change the herring pound guideline harvest level and set permit conditions for herring pounds.

The proposed regulation reads as follows:

5 AAC 27.330. GEAR

(c) The location of herring pounds are subject to [MAY BE USED ONLY NORTH AND EAST OF A LINE FROM PORCUPINE POINT TO POINT FREEMANTLE] permit conditions specified in 5 AAC 27.380.

PRINCE WILLIAM SOUND

5 AAC 27.333. KELP HARVEST SPECIFICATIONS AND OPERATIONS. Herring spawn on kelp may be taken only by hand held unpowered blade cutting device. Kelp plant blades must be cut at least four inches above the stipe (stem). Kelp used in herring pounds are subject to harvesting requirements specified in permits issued under the authority of 5 AAC 27.380.

5 AAC 27.360. GUIDELINE HARVEST LEVELS.

(c) The guideline harvest level for herring spawn on kelp in herring pounds is a percentage of a subdistricts herring stocks [16 tons of herring spawn and kelp.] The commissioner or his authorized designee shall initially divide the guideline harvest level equally among those persons fishing permits issued under sec. 380 (b) of this chapter.

5 AAC 27.380. PERMITS (b) and (c) No suggested wording in the proposal. Proposer requests Board review and discussion of the permit conditions.

Justifications:

After Board review and consideration in December 1981, area specific references may be altered.

Kelp in herring pounds need to be kept in a prime growing condition and the kelp hold fasts are used to attach the plants strung within the pounds.

The guideline harvest level of 16 tons may be out of proportion if herring pounding is permitted in other subdistricts.

Several conditions during 1980 were either not discussed at prior Board meetings or were unclear and open to various interpretations. A special committee of the Board to review the issues is suggested.

Proposed by: Pete Islieb (184-187)

YAKUTAT  
KING AND TANNER CRAB

(143)

5 AAC 34.125(c) and 5 AAC 35.125(d). LAWFUL GEAR. (New subsections) (Regulation pages 57 and 82) Prohibit the use of sidelading king and tanner crab pots in the Yakutat area.

The proposed regulation reads as follows:

5 AAC 34.125. LAWFUL GEAR.

(c) In those districts described in 5 AAC 30.200 king crab may not be taken with pots which have tunnel eye openings located on the vertical plane of the pot.

5 AAC 35.125. LAWFUL GEAR.

(d) In those districts described in 5 AAC 30.200 tanner crab may not be taken with pots which have tunnel eye openings located on the vertical plane of the pot.

Justification: The proposed regulations should help reduce the incidental catch of halibut by crab pots.

Proposed by: Yakutat Adv. Cmte., resubmitted by request of the Board of Fisheries.

YAKUTAT  
SALMON

(144)

5 AAC 30.310(a)(2)(B) FISHING SEASONS (Regulation page 129) Delay the opening for the Manby Shore fishery to the fourth Monday in June.

The proposed regulation reads as follows:

5 AAC 30.310. FISHING SEASONS (a)(2)

(B) Yakutat Bay south of 59°40'00" north latitude, from the second Monday of June until a closing date to be made by emergency order;

Justification:

Effort and catches have been increasing the past two years in the Manby Shore fishery. Manby Shore red salmon streams do not contribute to the Manby fishery until late June. Catches prior to the fourth Monday of June are primarily stocks destined to the Yakutat foreland systems. The Yakutat Bay Fishery is an interceptive fishery but it is an old fishery that occurs on the southeast shore of Yakutat Bay, whereas the Manby Shore Fishery is a more recent development and is a growing interceptive fishery. The Manby Shore red salmon stocks can be adequately harvested with an opening date on the fourth Monday of June.

This proposal would curtail the development of this expanding fishery, but at the same time promote conservation of earlier Yakutat red salmon systems. The subsistence utilization of the resource would not be affected.

Proposed by: Staff (I-6)

(145)

5 AAC 30.310(b)(1) and (4)(new subsection) FISHING SEASONS (Regulation page 129) Increase the time or restrict the area in which trollers may fish north of the Dangerous River.

The proposed regulation reads as follows:

Option 1:

5 AAC 30.310. FISHING SEASONS.

(b) Salmon may be taken by troll gear seven days a week with the following exceptions:

(1) in those waters east of a line from the terminus of the Dangerous River (59°20'50" N. lat., 139°18'30" W. long.) to 59°20'50" N. lat., 139°24'30" W. long. to Sitagi Bluffs (59°42'30" N. lat., 140°40' W. long.) during the period from August 1 through September 20, the total weekly fishing hours [PERIODS] for trolling are the same as for gill netting in the Situk River;

Option 2:

5 AAC 30.310. FISHING SEASONS.

(b) Salmon may be taken by troll gear seven days a week with the following exceptions:

(1) in those waters west of the longitude of the Dangerous River (139°18'30") and east of the longitude of the Coast Guard station

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(139°47'50") salmon may not be taken by troll gear from August 1 through September 20 [IN THE THOSE WATERS EAST OF A LINE FROM THE TERMINUS OF THE DANGEROUS RIVER (59°20'50" N. LAT., 139°18'30" W. LONG.) TO 59°20'50" N. LAT., 139°24'30" W. LONG. TO SITAGI BLUFFS (59°42'30" N. LAT., 140°40' W. LONG.) DURING THE PERIOD FROM AUGUST 1 THROUGH SEPTEMBER 20 THE WEEKLY FISHING PERIODS FOR TROLLING ARE THE SAME AS FOR GILL NETTING IN THE SITUK RIVER];

(4) In those waters west of the longitude of the Coast Guard station (139°47'50") and east of the longitude of Sitagi Bluffs (140°40'00") during the period from August 1 through September 20, the weekly fishing periods for trolling are the same as for gill netting in the Situk River.

Justification:

Option 1: This is a traditional trolling area. The existing regulations are unfairly discriminatory against trollers. Trollers fish day light hours only while gill netters fish around the clock.

Proposed by: Pelican Advisory Committee (51)

Option 2: Heavy troll pressure on milling coho stocks outside the Situk-Lost River mouth, in conjunction with poor or nonexisting catch reporting of the troll fleet, gives the management an erroneous picture of run strength, especially during low abundance years. Escapement will be in jeopardy since both historical set net fishery and ever increasing sport fishery plan to harvest those stocks.

Proposed by: Yakutat Advisory Committee (36)

147

5 AAC 30.310(b)(3) FISHING SEASONS (Regulation page 129) Establish an earlier opening date of the chinook salmon season.

The proposed regulation reads as follows:

5 AAC 30.310. FISHING SEASONS.

(b) Salmon may be taken by troll gear seven days a week with the following exceptions:

(3) king salmon may be taken only from May 1 [15] through September 20, except that there is no closed season for the taking of king salmon in those waters of Yakutat Bay east of a line from the easternmost tip of Ocean Cape to the southernmost tip of Point Manby.

Justification:

The present delayed opening of the salmon season was initiated to allow increased spawning escapement into depressed Alaskan systems. By May 1st the bulk of returning Alaskan fish have reached inside areas where closures already exist. These existing closures and other possible short closures in terminal areas should prove sufficient to allow adequate escapement of our native spawners.

The troll fishery is facing the possibility of extensive federal closures to permit the transit of Columbia River fish. Additional fishing time is necessary to allow the catch of our optimum yield.

Proposed by: Alaska Trollers Association (86)

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(148)

5 AAC 30.331(a)(1)(E) GILL NET SPECIFICATIONS AND OPERATION (Regulation page 130) Reduce the length of gear in the Akwe River to 15 fathoms.

The proposed regulation reads as follows:

5 AAC 30.331. GILL NET SPECIFICATIONS AND OPERATION

(a)(1) in the Yakutat district

(E) Akwe River [INLET], two nets not to exceed 15 [20] fathoms each; the aggregate length not to exceed 30 [40] fathoms;

Justification:

The Akwe River is a relatively shallow river. The present 20 fathom maximum net length allows one net to stretch across 2/3 of the river and in some cases entirely block the portion of the river channel used by migrating salmon. This proposal would promote the sustained yield of the Akwe River salmon stocks and would not adversely affect the subsistence utilization of these resources.

Proposed by: Staff (I-7)

(149)

5 AAC 30.331(a)(1)(I)(i). GILL NET SPECIFICATIONS AND OPERATION and 5 AAC 30.350(a)(9). CLOSED WATERS (Regulation page 130 and 132) Reduce the allowable gear in the Alsek River to two nets, the aggregate not to exceed 25 fathoms in length and to close the surf fishery south of the Dangerous River.

The proposed regulation reads as follows:

5 AAC 30.331. GILL NET SPECIFICATIONS AND OPERATION. (a)(1)

(I) in the Alsek River no set gill net may be less than 10 fathoms or more than 25 fathoms in length;

(i) before the third Monday in July, no salmon interim-use or entry permit holder may operate more than two [THREE] set gill nets and the aggregate length of set gill nets may not exceed 25 [50] fathoms in length.

5 AAC 30.350. CLOSED WATERS. (a)

(9) salmon may not be taken with set gill nets in those waters of the Yakutat district south of the latitude of the Dangerous River (59°20'50" N. lat.) that are seaward of mean higher high tide except as indicated as open to commercial salmon fishing by ADF&G regulatory markers;

Justification:

During an Alaska Board of Fisheries hearing last spring in Yakutat, considerable discussion arose concerning the Alsek and East Rivers. Board members at the hearing wanted additional public comment and asked that the above regulations be submitted for consideration at the fall 1981 meeting.

It was argued at the meeting that during times of high effort the open Alsek River fishing area does not provide an adequate number of sites to



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place a net at the current level of allowable gear when the surf area is closed.

As a result of this hearing, the Board directed the staff to reopen the surf fishery on the East River by emergency order during the peak fishing weeks if and when effort levels became too high to confine all fishermen within the river and conduct an orderly fishery.

Proposed by: Alaska Board of Fisheries

(150)

5 AAC 30.335 MINIMUM DISTANCE BETWEEN UNITS OF GEAR and 5 AAC 30.350(a)(5) CLOSED WATERS (Regulation page 131) Reduce the minimum distance between units of gear and increase the closed water area in the East River.

The proposed regulation reads as follows:

5 AAC 30.335. MINIMUM DISTANCE BETWEEN UNITS OF GEAR. No part of a set gill net may be set or operated within 100 yards of any part of another set gill net, except that in the Tsiu and East Rivers, no part of a set gill net may be set or operated within 75 yards of any part of another set gill net.

5 AAC 30.350. CLOSED WATERS. (a) Salmon may not be taken in the following waters:

(5) East River: those waters upstream from ADF&G regulatory markers located approximately 3 [3-1/2] miles upstream from the terminus of the river;

Justification:

The fishing area had to be reduced this past season when it became obvious that the ripening red salmon were becoming available at the upper river line during high water flows. This additional closed water area should be maintained to prevent harvesting the escapement. More fishing area could be made available by reducing the minimum distance between nets without jeopardizing the conservation of the resource or development of the fishery. The subsistence fishing would not be affected by this proposal.

Proposed by: Staff (I-9)

(151)

5 AAC 30.350(a)(1) CLOSED WATERS (Regulation page 131) Close the upstream portion of the Alsek River to commercial fishing during the month of June.

The proposed regulation reads as follows:

5 AAC 30.350. CLOSED WATERS. (a) Salmon may not be taken in the following waters:

(1) Alsek River: upstream starting at three miles below the southern end of "basin", except during June when the closed area shall be upstream of a line between a point at 59°11'25" N. lat., 138°25'00" W. long. and a point at 59°11'30" N. lat., 138°25'25" W. long.;

Justification:

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The early red salmon run on some cycles is very depressed. The proposed regulation will allow the front end of these runs to rebuild and will show Canada our intention toward their subsistence fishery. The proposed regulation may also eliminate the future necessity for total closure of the Alsek River.

Proposed by: Yakutat Fish and Game Advisory Committee  
City of Yakutat  
Yak-Tat-Kwann Inc. (5)

(152)

5 AAC 30.350(a)(9) CLOSED WATERS (Regulatory page 132) Provide for a surf fishery on the Alsek River when the upper Alsek River is open to fishing.

The proposed regulation reads as follows:

5 AAC 30.350. CLOSED WATERS (a)

(9) salmon may not be taken with set gill nets in those waters of the Yakutat district south of the latitude of the Dangerous River (59°20'50" N. lat.) that are seaward of mean higher high tide except as indicated as open to commercial salmon fishing by ADF&G regulatory markers and except in the surf within a radius of one-half mile from the terminus of the Alsek River mouth when the upper portions of the Alsek River are open;

Justification:

This will allow escapement of the early portion of the red salmon run when combined with upriver closure. The proposed regulation will demonstrate to Canada that we are taking positive steps toward establishing a sustained yield.

Proposed by: Yakutat Fish and Game Advisory Committee  
City of Yakutat  
Yak-Tat-Kwann Inc. (6)

SOUTHEAST  
SUBSISTENCE FINFISH

(153)

5 AAC 01.700. DESCRIPTION OF THE SOUTHEASTERN ALASKA AREA, 5 AAC 01.700. DESCRIPTION OF THE DISTRICTS AND SECTIONS, 5 AAC 01.710.(a)-(d). FISHING SEASONS., 5 AAC 01.720 (a)-(c). LAWFUL GEAR AND SPECIFICATION., 5 AAC 01.725 (1)-(3). WATERS CLOSED TO SUBSISTENCE FISHING., 5 AAC 01.730 (a) and (b). SUBSISTENCE FISHING PERMITS., 5 AAC 01.740. MARKING OF SUBSISTENCE TAKEN SALMON., 5 AAC 01.745 (a) and (b). SUBSISTENCE BAG AND POSSESSION LIMITS and 5 AAC 01.747 (a)-(c). SUBSISTENCE POLICY FOR THE JUNEAU, PETERSBURG, WRANGELL, SITKA AND KETCHIKAN ROAD SYSTEMS. (Regulation pages 43-45). Provide for subsistence finfish open and closed areas, seasons, weekly fishing periods, gear, method of issuance of permits and bag and possession limits.

The proposed regulation reads as follows:

ARTICLE 14.  
SOUTHEASTERN ALASKA AREA.

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5 AAC 01.700. DESCRIPTION OF THE SOUTHEASTERN ALASKA AREA. The Southeastern Alaska area includes all waters [EAST OF THE LONGITUDE OF] between a line projecting southwest from the westernmost tip of Cape Fairweather and [NORTH OF THE INTERNATIONAL BOUNDARY AT] Dixon Entrance.

5 AAC 01.705. DESCRIPTION OF DISTRICTS AND SECTIONS. Districts and sections are described in 5 AAC 33.200.

5 AAC 01.710. FISHING SEASONS. (a) Unless restricted in this section and 5 AAC 01. [SEC] 725 [OF THIS CHAPTER] or under the terms of a subsistence fishing permit, fish may be taken in the Southeastern Alaska area at any time.

(b) Halibut may be taken only from March 1 through October 31.

(c) Herring may be taken at any time except that commercially licensed herring vessels may not be used to take herring for personal use during the period starting 72 hours before an opening until 72 hours after the closure of any commercial herring fishing season. [FROM MARCH 15 THROUGH JUNE 15 IN THOSE LOCATIONS SET FORTH IN 5 AAC 27.110(b)].

(d) Salmon may be taken only as follows:

(1) pink and chum salmon may be taken only from July 1 through October 31;

(2) sockeye salmon may be taken only in the following locations and only from June 1 through July 31 unless otherwise stated in this paragraph:

(A) District 1:

(i) Yes Bay;

(ii) Hugh Smith Lake outlet stream from June 1 through July 15;

(B) District 2: Karta River, Dolomi Creek and Kegan Creek from June 1 through July 15;

(C) District 3: Hetta Lake, Eek Lake, Klawock River, Klaklas Lake and Deweyville;

(D) District 5: Shipley Bay;

(E) District 6: Salmon Bay, Hatchery Creek and Sweetwater Creek;

(F) District 7: Thoms Place and Mill Creek;

(G) District 9: Alecks Creek, Kutlaku Creek in Pillar Bay, Falls Creek and Gut Bay;

(H) District 12: Basket Bay and Kanalku Lake;

(I) District 13;

(J) District 15: from June 1 through September 30;

(3) coho salmon may be taken only as follows:

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(A)[d] [COHO SALMON MAY BE TAKEN] from Salt Lake above the falls at the head of Mitchell Bay from August 1 until an annual harvest limit of 500 coho salmon has been taken or through October 31 if the annual harvest has not been taken;

(B) in the Chilkat River adjacent to the Klukwan Reservation from August 1 through October 31;

(4) king salmon may be taken only in the Chilkat River adjacent to the Klukwan Reservation from June 1 through August 15;

5 AAC 01.720. LAWFUL GEAR AND SPECIFICATIONS. (a) fish other than salmon and halibut may be taken by gear listed in 5 AAC 01.010 (a) except as may be restricted under the terms of a subsistence fishing permit.

(b)[3] Halibut may be taken only by a single handheld line with no more than two hooks attached to it.

(c) Salmon may be taken only as follows:

(1) beach seines, hand purse seines and dip nets may be used in any area open to subsistence fishing;

(2) [THE USE OF] set gillnet gear [TO TAKE SALMON IS PROHIBITED EXCEPT] may be used only in the mainstream of the Chilkat River north of the latitude of Zimovia Point;

(3) spears and gaffs may be used only in the following areas:

(A) District 9: Port Camden, Keku Strait and Security Bay;

(B) District 12: south of Parker Point;

(C) District 13;

(D) District 14: Port Frederick;

[(4) BEACH SEINES AND GAFFS ONLY MAY BE USED TO TAKE COHO SALMON DURING THE SEASON AND IN THE AREA DESCRIBED IN 5 AAC 01.710 (d)(3) (A)[D]] repealed effective 4/ /82;

(5)[1] In district 13: Redoubt Bay, gillnet or seine gear may not be used to take salmon in any waters of the Bay closed to commercial salmon fishing;

(6) purse seine gear may be used only under the terms of a type B permit;

(7) drift gillnet gear may not exceed 10 fathoms in length and may only be used in the following areas and except as provided for under the terms of a type B permit;

(A) District 5: Shipley Bay;

(B) District 6: Salmon Bay and Whale Pass;

(C) District 7: Snake Creek, Kuday Creek, Thoms Place and Mill Creek;

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(D) District 9: section 9-A and only Alecks Creek and Kutlaku Creek in section 9-B;

(E) District 10: Dry Bay;

(F) District 12: Basket Bay;

(G) District 13;

(H) District 15: section 15-A except that in the saltwater portions of the section 15-A only during the open commercial drift gillnet periods for the district;

(8) commercial drift gillnet gear operated by persons holding a valid Southeast Alaska drift gillnet entry permits may only be used under the terms of a type B permit;

5 AAC 01.725. WATERS CLOSED TO SUBSISTENCE FISHING. The following waters are closed to the subsistence taking of salmon [FISHING]:

(1) district 1;

[(A) KETCHIKAN CREEK AND THOMAS BASIN] repealed 4/ /82;

(A)[B] Mahoney Creek in George Inlet;

(B)[C] Naka Bay, Roosevelt Lagoon and within one statute mile of the falls at the outlet of Roosevelt Lagoon;

(C) Fish Creek in Hyder;

(2) district 11;

[(A) AUKE BAY AND TRIBUTARY STREAMS INSIDE A STRAIGHT LINE FROM POINT LOUISA THROUGH COGHLAN AND SPHUN ISLANDS TO THE SOUTHERN TIP OF MENDENHALL PENINSULA:] repealed effective 4/ /82;

[(B) CREEKS AND RIVERS TRIBUTARY TO GASTINEAU CHANNEL] repealed 4/ /82;

[C] The Taku River drainage;

(3) district 15: waters of the Chilkoot River drainage upstream from the terminus of the river at mean low tide in Lutak Inlet;

[(3) IN DISTRICT 15: LYNN CANAL INCLUDING CHILKAT, CHILKOOT AND LUTAK INLETS, DURING THE CLOSED PERIODS OF THE COMMERCIAL SALMON NET FISHERY IN THE DISTRICT.] Repealed 4/ /82.

5 AAC 01.730. SUBSISTENCE FISHING PERMITS (a)[SALMON] trout, char and herring spawn on kelp may only be taken under authority of a subsistence fishing permit.

(b) Salmon may be taken only under the authority of a general subsistence salmon fishing permit (type A) or a special subsistence salmon fishing permit (type B);

(1) a type A permit is required when taking salmon as provided for in 5 AAC 01.710--747 unless a type B special subsistence salmon fishing permit is required;

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(2) a type B permit is required when taking salmon as provided in 5 AAC 01.747 (c) and for holders of valid Southeastern Alaska salmon purse and salmon drift gillnet entry permits when using commercial gear to take salmon for subsistence purposes; type B permits will be issued as follows:

(A) a holder of a valid Southeast Alaska salmon purse seine entry permit may use commercial purse seine gear as an authorized agent to take salmon for applicants of a type A permit if the applicant is unable to personally take salmon due to the unavailability of salmon near the applicants residence;

(B) salmon purse seine and drift gillnet gear will be restricted to fishing in areas specified on the permit; the areas specified will be terminal type fishing areas;

(C) salmon may not be taken during the period starting 48 hours before and until 24 hours after the closure of any commercial salmon net fishing season unless otherwise specified on the permit;

(3)[C] in the Chilkat River north of the latitude of Zimovia Point, the subsistence fishing permit holder must be present at the net while it is fishing;

[(b) PERMITS WILL NOT BE ISSUED FOR TAKING KING OR COHO SALMON, EXCEPT FOR COHO SALMON IN THE CHILKAT RIVER ADJACENT TO KLUKWAN RESERVATION AND AS PROVIDED FOR IN 5 AAC 01.710 (d) repealed 4/ /82;

(4)[D] subsistence salmon fishing permits for the fishery provided for in 5 AAC 01.710 (d)(3)(A)[D] will be issued only to those persons domiciled in Angoon and only one permit will be issued for a household. The number of coho salmon that may be taken on a permit will be specified by the department after it has assessed the level of effort that will be involved in that fishery;

(5) all subsistence fishermen shall keep a record of the number of subsistence fish taken each year; the number of subsistence fish taken shall be recorded on the reverse side of the permit; the record must be completed immediately upon landing subsistence caught fish and must be returned to a local representative of the department by November 30 of the year that the permit was issued;

(6) the subsistence fishing permit holder must closely attend his gear while fishing.

5 AAC 01.740. MARKING OF SUBSISTENCE TAKEN SALMON. Subsistence fishermen shall immediately remove the head of all salmon [COHO SALMON] when taken [AS PROVIDED FOR IN 5 AAC 01.710 (D)].

5 AAC 01.745. SUBSISTENCE BAG AND POSSESSION LIMITS. (a) The daily bag and possession limit for halibut is two. No person may possess sport taken and subsistence taken halibut on the same day.

(b) The number of salmon that may be taken annually by any subsistence permit holder is as follows:

(1) pink salmon x per person or x per permit;

(2) chum salmon x per person or x per permit;

(3) sockeye salmon x per person or x per permit;

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(4) coho salmon x per person or x per permit only in the Chilkat River adjacent to the Klukwan Reservation and except as provided for in 5 AAC 01.710 (d)(3)(A);

(5) king salmon x per person or x per permit only in Chilkat River adjacent to the Klukwan Reservation;

5 AAC 01.747. SUBSISTENCE FISHING POLICY FOR THE JUNEAU, PETERSBURG, WRANGELL, SITKA AND KETCHIKAN ROAD SYSTEMS. (a) Salmon streams flowing across or adjacent to the road systems of the larger Southeastern Alaska communities of Juneau, Petersburg, Wrangell, Sitka and Ketchikan [WITHIN THE CONFINES OF THE CITY AND BOROUGH OF JUNEAU] support only limited runs of salmon. Harvestable numbers of salmon in excess to the spawning escapement needs for those streams are normally of such a small magnitude that these numbers alone are not sufficient to support the potential subsistence demands of these communities [THE JUNEAU AREA POPULATION]. Therefore, subsistence salmon fishing permits should not generally be issued for the streams along the road systems of these communities [JUNEAU ROAD SYSTEM].

(b) It is assumed that traditional subsistence requirements may be met through existing commercial and sport fishing regulations or [AND] through public use of surplus salmon returning to public operated salmon enhancement projects. If traditional subsistence use and dependency levels are shown by investigation to be unmet through these methods within the road system area; the department will inform the public in what locations and by what methods current subsistence needs may be met in the larger streams in the vicinity of these larger Southeastern Alaska communities [STEPHENS PASSAGE AREA].

(c) When salmon return in numbers sufficient to meet use and dependency levels as shown by investigation to some of the streams along the road systems of these major Southeast Alaska communities the department may issue type B permits as provided for in 5 AAC 01.730(b)(2) to allow a harvest of salmon that are in excess of escapement needs.

JUSTIFICATION:

This proposal is being submitted to allow a review of the subsistence salmon fishing regulations and policies currently employed in issuing subsistence fishing permits in Southeast Alaska. The Department of Law, after reviewing the current policies, recommended that the staff submit proposals to allow the Board of Fisheries the opportunity to review Southeast salmon subsistence with respect to customary and traditional aspects of species, numbers, time, area and gear. The proposal consists of the complete existing Southeast Alaska finfish subsistence regulations and includes new regulations that account for the policies currently used in issuing subsistence salmon permits. A new permit system is proposed that would streamline the existing permit issuing system and make it easy for subsistence users to obtain the necessary permits needed to harvest fish. Specific seasonal harvest limits are not presented in the proposal; however, the current allowable numbers employed in various areas will be made available at the Board meeting to assist in determining individual subsistence harvest levels. Hopefully, public testimony will assist in determining appropriate harvest levels.

Proposed by: Staff (1-4)

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102

5 AAC 33.310(a), (b) and (c) FISHING SEASONS AND WEEKLY FISHING PERIODS (Regulation pages 137-139) Provide for a September 1 closure for all commercial salmon fishing.

The proposed regulation reads as follows:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (a) In the purse seine fishery, salmon may be taken in the following districts with the opening and closing dates to be made by emergency orders and with weekly fishing periods from 6:00 a.m. Sunday through 6:00 p.m. Wednesday, except as otherwise provided in this section except that after September 1 fishing will only be allowed in fall chum areas:

(b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 1 [20] (summer season) except as provided in 5 AAC 33.350 and as follows:

(c) In the drift gill net fishery, salmon may be taken only in open waters of the districts and sections listed in this subsection with the closing date to be made by emergency order and with weekly fishing periods from 12:01 p.m. Monday through 12:00 noon Thursday except that after September 1 fishing will only be allowed in fall chum salmon areas and except as follows:

Justification:

This would allow the coho salmon which have reached inside waters, to enter their streams and spawn, increase escapement, and contribute to rebuilding the coho runs.

Proposed by: Barry R. McClelland (26)

103

5 AAC 33.310(b)(1) FISHING SEASONS AND WEEKLY FISHING PERIODS (Regulation page 137) Establish a later opening date for the coho salmon troll season.

The proposed regulation reads as follows:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows:

(1) coho salmon may be taken only from July 10 [JUNE 15] through September 20;

Justification:

The coho salmon management plan will be much enhanced by a delay in the opening date. The coho salmon will be larger, and more valuable to fishermen. The strength of the runs will be determined to a more precise degree. A later opening is to everyones advantage, fishermen and managers alike.

Proposed by: Sitka Handtrollers Association (118)



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(104)

5 AAC 33.310 (b)(2) and (12) FISHING SEASONS AND WEEKLY FISHING PERIODS (Regulation pages 137-138) Establish an earlier opening date for the summer trolling season.

The proposed regulation reads as follows:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 1 [15] through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows:

(2) in district 16 and those waters west and south of the surf line, king salmon may be taken only from May 1 [15] through September 20;

(12) from May 1 [15] through September 20 salmon may be taken in the following locations only during the periods set forth in (D) of this paragraph;

Justification:

The present delayed opening of the salmon season was initiated to allow increased spawning escapement into depressed Alaskan systems. By May 1st the bulk of returning Alaskan fish have reached inside areas where closures already exist. These existing closures and other possible short closures in terminal areas should prove sufficient to allow adequate escapement of our native spawners.

The troll fishery is facing the possibility of extensive federal closures to permit the transit of Columbia River fish. Additional fishing time is necessary to allow the catch of our optimum yield.

Proposed by: Alaska Trollers Association (86)

(105)

5 AAC 33.310(b)(4) FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 137) Increase the area closed to trolling in district 1 during the early portion of the summer trolling season.

The proposed regulation reads as follows:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows:

(4) in section 1-E and that portion of section 1-F north of the latitude of Foggy Pt. (54°55'32" N. lat.) [EAST OF A LINE FROM THE NORTHERNMOST TIP OF KIRK POINT TO MARY ISLAND LIGHT TO THE SOUTHERNMOST TIP OF CONE ISLAND] salmon may be taken only from October 1 through April 14 and from July 13 through September 20;

Justification:

In spite of the region wide troll fishery closure from April 15 through May 14 in 1981 designed to increase escapements to S.E. Alaska chinook systems, escapements to chinook salmon systems in Behm Canal showed little improvement compared to the Taku and Stikine Rivers in the north-

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ern portion of the region. Run timing to the Behm Canal chinook systems is generally about one month later than for the larger northern systems. Delaying the opening of the summer fishery in the approach area in section 1-F should provide additional protection to these spawning runs. This proposal would promote the conservation of the Southeastern Alaska chinook salmon stocks and provide increased yield for all user groups.

Proposed by: Staff (I-2)

(106)

5 AAC 33.310.(b)(4) FISHING SEASONS AND WEEKLY FISHING PERIODS (Regulation page 137) Expand the spring salmon troll closure in district 1 and 2.

The proposed regulation reads as follows:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b)

(4) in section 1-E and that portion of section 1-F east of a line from the northernmost tip of Kirk Point to Mary Island light to the southernmost tip of Cone Island, salmon may be taken only from October 1 through April 14 and from July 13 through September 20; and in section 1-E, that portion of section 1-F north of a line from Foggy Point to Duke Point to Point White then due west to the district 1 boundary and in district 2 within 500 yards of the Cleveland Peninsula shoreline from mean low tide north of the latitude of Caamano Point and south of the latitude 500 yards north of Ship Island salmon may be taken only from October 1 through April 14 and from June 15 through September 20 except as provided for in 5 AAC 33.310.(b)(5);

Justification:

This year's troll season opened right at the peak of the Unuk/Chickaman River's king salmon migration. Data collected by ADF&G personnel from May 15 to June 15, 1981, showed that a large percentage of fish taken during this collection period were mature spawners - fish needed for replacement stocks.

District 1 stream escapement levels desired by ADF&G have not been attained. Replacement stocks from this past parent year will again give us lower-than adequate yield in the future.

Proposed by: Al Turner & Gerald F. Engleman (3, late)  
William F. Krone (145)  
Dennis Parker (144)  
Stephen P. Neitzke (117)  
John A. Marshall (116)  
James M. Wainglon (19, late)

(107)

5 AAC 33.310(b)(12)(A) through (D) FISHING SEASONS AND WEEKLY FISHING PERIODS (Regulation page 138) Reopen trolling to 7 days a week in all areas or in a portion of the area that is now on the 8 days on - 6 days off fishing schedule.

The proposed regulation reads as follows:

Option 1:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b)

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(12) repealed 4/ /82 [FROM MAY 15 THROUGH SEPTEMBER 20 SALMON MAY BE TAKEN IN THE FOLLOWING LOCATIONS ONLY DURING THE PERIODS SET FORTH IN (D) OF THIS PARAGRAPH];

Option 2:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b)

(12) from May 15 through September 20 Salmon may be taken in the following location only during the periods set forth in (D) of this paragraph;

(B) repealed 4/ /82 [DISTRICT 14, EXCEPT FOR THAT PORTION OF THE DISTRICT WEST OF A LINE FROM THE SOUTHERNMOST TIP OF POINT DUNDAS TO THE NORTHERNMOST TIP OF SWANSON POINT, THOSE WATERS OF GLACIER BAY NORTH OF 58°27'54" N. LAT. AND DURING THE PERIOD MAY 15 THROUGH JULY 31 FOR THOSE WATERS OF PORT FREDERICK DESCRIBED IN 5 AAC 33.350(o)(5)];

Option 3:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS. (b)

(12) from May 15 through September 20 salmon may be taken in the following location only during the periods set forth in (D) of this paragraph;

(A) repealed 4/ /82 [IN THAT PORTION OF DISTRICT 12 NORTH OF THE LATITUDE OF THE WESTERNMOST TIP OF POINT HEPBURN];

(B) repealed 4/ /82 [DISTRICT 14, EXCEPT FOR THAT PORTION OF THE DISTRICT WEST OF A LINE FROM THE SOUTHERNMOST TIP OF POINT DUNDAS TO THE NORTHERNMOST TIP OF SWANSON POINT, THOSE WATERS OF GLACIER BAY NORTH OF 58°27'54" N. LAT. AND DURING THE PERIOD MAY 15 THROUGH JULY 31 FOR THOSE WATERS OF PORT FREDERICK DESCRIBED IN 5 AAC 33.350(o)(5)];

Justification:

Option 1: With the advent of limited entry on the hand troll fishery, the 8 and 6 is no longer necessary as there will be lesser number of vessels. Additionally, the 10-day closure is already available to the Department, as is emergency order authority for season or area adjustments.

Proposed by: Alaska Native Brotherhood, Grand Camp (133)

Option 2: The Fish and Game are not testing the fish caught whether mixed stock or not. They should publicize as to which way fish are going.

Proposed by: Hoonah Advisory Committee (73)

Option 3: There is no data on the 8 and 6 as to whether it is working or not. We do not fish enough to pay our bills because of the closures.

Proposed by: Hoonah Advisory Committee (74)

Since the inception of the 6 and 8 plan, periodic closures have been developed to provide for the adequate escapement of salmon stocks. The desired decrease in the Icy Straits troll effort has already been achieved

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through the creation of the Hand Troll Permit System on a reduced number basis and the opening of Cross Sound and the 3-mile zone to the hand troll fleet.

Proposed by: Alessandro T. Hill  
Icy Straits Trollers Assoc. (137)

(108)

5 AAC 33.310(b)(12)(E)(new subsection). FISHING SEASONS AND WEEKLY FISHING PERIODS. (Regulation page 138) Open Section 15-B to trolling by emergency order.

The proposed regulation reads as follows:

5 AAC 33.310. FISHING SEASONS AND WEEKLY FISHING PERIODS.

(b) Salmon may be taken by hand and power troll gear from October 1 through April 14 (winter season) and from May 15 through September 20 (summer season) except as provided in 5 AAC 33.350 and as follows:

(12) from May 15 through September 20 salmon may be taken in the following locations only during the periods set forth in (D) of this paragraph;

(E) section 15-B, which will be open by emergency order.

Justification:

Many times the area is too rough to fish 15-C, but you can fish just inside the boundary. Also, it should be noted that the gillnet fishery is operating the same as this proposal in 15-B.

Proposed by: Chuck Porter (158)

(109)

5 AAC 33.365(b)(1)-(3) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. (Regulation page 154) Provide for an increase in the chinook salmon guideline harvest level commensurate with production from Southeast Alaska hatcheries, clarify the meaning of the chinook salmon guideline harvest range and change the time period specified for the 10 day troll closure during the coho season.

The proposed regulation reads as follows:

5 AAC 33.365 SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b) The board recognizes that changes in size and timing of the chinook and coho salmon runs and changes in the distribution of fishing effort by the hand and power troll fleet may require inseason adjustments to salmon fishing seasons, periods and areas to allow chinook and coho salmon to escape the coastal and offshore fisheries and move into the inshore terminal fishing areas. The department shall make inseason adjustments to 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 272,000 TO 288,000 FISH. (HARVEST CALCULATIONS WILL START WITH THE OPENING OF THE WINTER SEASON DESCRIBED IN 5 AAC 33.310(b))]~~ as follows:

243,000

243,000

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(1) to limit the total commercial king salmon harvest by all gear types in the Southeastern and Yakutat areas to a guideline harvest range of 272,000 to 288,000 (plus the estimated annual Alaska hatchery production of harvestable king salmon) fish, the department will manage the troll fisheries inseason to limit the chinook harvest to approximately the midpoint of the guideline harvest range;

(2) the harvest calculations for determining the guideline harvest range will start with the opening of the winter season described in 5 AAC 33.310(b);

(3) during the [EARLY PORTION OF THE] commercial coho fishing season the department shall evaluate the size and distribution of the coho salmon run and shall close the Southeastern and Yakutat Areas' salmon troll fishery for approximately 10 days, unless the department determines that the coho salmon run is larger than the last 10 year average and that acceptable numbers of coho salmon are moving into the inshore salmon fishing areas;

Justification:

Public and private hatcheries in S.E. Alaska are beginning to contribute an increasing number of chinook salmon available for harvest. The original chinook guideline harvest range was based on an allowable harvest of S.E. Alaska natural stocks and a historical harvest of non-Alaska natural and hatchery stocks. This proposal would provide for adjusting the allowable harvest range to include harvest of chinook salmon produced by recently developed S.E. Alaska hatcheries.

The second part of this proposal clarifies that the Department will manage the chinook salmon fisheries inseason with the objective of limiting the harvest to the midpoint of the specified range. This clarification is needed because of frequent interpretations that the inseason goal is the upper point of the range which does not allow for the variability inherent in the management process of estimating actual harvest inseason prior to a closure actually going into effect.

The third part of the proposal would change the wording describing the 10 day coho closure to allow more flexibility in establishing the timing of the closure.

Proposed by: Staff (I-3)

(110)  
5 AAC 33.365(a) and (b)(3)-(7)(new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. and 5 AAC 39.270(a)(5)(new subsection) TROLL SPECIFICATION AND OPERATION (Regulation pages 154-155 and 173) Require king and coho salmon conservation to be shared by all user groups, eliminate the coho salmon allocation policy, and require hand trollers to fish only gurdies or sport rods.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. (a) The management of the Southeastern Alaska Area and Yakutat Area chinook and coho salmon troll fisheries is complex because of mixing of the salmon stocks and fishing effort placed upon those salmon stocks by the subsistence, commercial and recreational user groups. It is recognized that the troll fleet's target species is the king and coho salmon. Any reduction required in the conservation of these runs will be born equally among all user groups. Such reduction shall be split proportionately, using historical averages. [THE BOARD OF

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FISHERIES IS CONCERNED THAT SOME USER GROUPS, PARTICULARLY THOSE WHO TRADITIONALLY FISH THE FINAL INTERCEPTION AREAS FOR SPAWNING KING AND COHO SALMON AND THE INSHORE AREAS MAY BE RECEIVING REDUCED OPPORTUNITIES TO TAKE CHINOOK AND COHO SALMON BECAUSE OF INCREASING FISHING EFFORT BY THE SALMON POWER TROLL FLEET ON MIXED STOCKS OF THOSE SPECIES OF SALMON IN THE COASTAL AND OFFSHORE SALMON FISHING AREAS AS DESCRIBED IN 5 AAC 33.312(a)(4) AND (5). THE BOARD IS ALSO CONCERNED THAT CONTINUED INCREASES IN FISHING EFFORT ON MIXED CHINOOK AND COHO SALMON STOCKS MAY RESULT IN OVERHARVEST OF INDIVIDUAL SALMON STOCKS AND THAT INDIVIDUAL STOCK ESCAPEMENTS TO SPECIFIC STREAMS IN THIS CASE MAY NOT BE OF A SUFFICIENT LEVEL TO MAINTAIN A SUSTAINED YIELD OF THOSE STOCKS. BECAUSE OF THE ABOVE CONCERNS THE BOARD HAS ADOPTED REGULATIONS THAT CONTROL THE TIME, AREA OF OPERATION AND EFFICIENCY OF THE SALMON POWER AND HAND TROLL FISHERIES.]

(b)(3) repealed 4/ /82;

(4) repealed 4/ /82;

(5) repealed 4/ /82;

(6) repealed 4/ /82;

(7) repealed 4/ /82;

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION. (a) The maximum number of trolling lines that may be operated from any salmon troll vessel is as follows:

(5) holders of valid hand troll limited entry or interim use permits may fish only hand troll gurdies or fishing rods and shall indicate to the department prior to fishing during the 1982 season which gear they will be using.

Justification:

Specifically, with the myriad of regulations, closed and open areas, closed periods, gear restrictions, the O.Y. and you name it, the troll fleet en total is battered and bruised to the point of exhaustion. With the implementation of the stabilization measures above, the following will be accomplished:

1. The 80/20 allocation headache for the staff, the Board, and the trollers will be gone.
2. 5 AAC 39.105 TYPES OF LEGAL GEAR. There would no longer be a need to spell this out; thus the protection problems are gone.
3. 5 AAC 39.120(D) 1 & 2 TROLL REGISTRATION. This will no longer be needed.
4. 5 AAC 39.240 GENERAL GEAR SPECIFICATIONS. This would no longer be an enforcement problem.
5. 5 AAC 39.270 Para (A) 4a 7 b, GEAR DEFINITION. This will no longer be needed. Para (C) & (D): There would no longer be a need for vessel identification, thus there would be less of a protection problem. Para (F): There would no longer be a need to prohibit power trollers from hand trolling, which would again reduce the protections' problems.

Proposed by: Chuck Porter (161)

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(111)

5 AAC 33.365(b) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN. (Regulation page 154) Eliminate, increase or stabilize the chinook salmon guideline harvest level.

The proposed regulation reads as follows:

Option 1:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b) The board recognized that changes in size and timing of the chinook and coho salmon runs and changes in the distribution of fishing effort by the hand and power troll fleet may require inseason adjustments to salmon fishing seasons, periods and areas to allow chinook and coho salmon to escape the coastal and offshore fisheries and move into the inshore and terminal fishing areas. The department shall make inseason adjustments to salmon fishing seasons, periods and areas for conservation purposes only. The status of the king stocks for that season will determine inseason closures [AND TO LIMIT THE TOTAL COMMERCIAL KING SALMON HARVEST BY ALL GEAR TYPES TO A RANGE OF 272,000 TO 288,000 FISH (HARVEST CALCULATIONS WILL START WITH THE OPENING OF THE WINTER SEASON DESCRIBED IN 5 AAC 33.310(b)) AND AS FOLLOWS:].

Option 2:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b) The board recognized that changes in size and timing of the chinook and coho salmon runs and changes in the distribution of fishing effort by the hand and power troll fleet may require inseason adjustments to salmon fishing seasons, periods and areas to allow chinook and coho salmon to escape the coastal and offshore fisheries and move into the inshore and terminal fishing areas. The department shall make inseason adjustments to salmon fishing seasons, periods and areas for conservation purposes and to limit the total commercial king salmon harvest by all gear types to 325,000 [A RANGE OF 272,000 TO 288,000] fish (harvest calculations will start with the opening of the winter season as described in 5 AAC 33.310(b)) and as follows:

Option 3:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b) The board recognized that changes in size and timing of the chinook and coho salmon runs and changes in the distribution of fishing effort by the hand and power troll fleet may require inseason adjustments to salmon fishing seasons, periods and areas to allow chinook and coho salmon to escape the coastal and offshore fisheries and move into the inshore and terminal fishing areas. The department shall make inseason adjustments to 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 278,000 to 372,000 [272,000 to 288,000] fish (harvest calculations will start with the opening of the winter season described in 5 AAC 33.310(b)) and as follows:

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Option 4:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b) The board recognizes that changes in size and timing of the chinook and coho salmon runs and changes in the distribution of fishing effort by the hand and power troll fleet may require inseason adjustments to salmon fishing seasons, periods and areas to allow chinook and coho salmon to escape the coastal and offshore fisheries and move into the inshore terminal fishing areas. The department shall make inseason adjustments to 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 272,000 TO 288,000 FISH (HARVEST CALCULATIONS WILL START WITH THE OPENING OF THE WINTER SEASON DESCRIBED IN 5 AAC 33.310(b))] as follows:

(1) to limit the total commercial king salmon harvest by all gear types in the Southeastern and Yakutat areas to a guideline harvest range of 272,000 to 288,000 (plus the estimated annual Alaska hatchery production of harvestable king salmon) fish;

(2) the harvest calculations for determining the guideline harvest range will start with the opening of the winter season described in 5 AAC 33.310(b);

Option 5:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(8) the commercial king salmon harvest of 272,000 to 288,000 will remain in effect until at least the 1987 season. Permanent reductions in the king salmon harvest because of reallocation or political purposes may only be considered at that time and at five year intervals thereafter. Increases in the king salmon harvest level may, however, be considered and instituted at any time.

Justification:

Option 1: By establishing a quota, the fact that yearly stocks may be very abundant or in an extremely depressed state is not taken into consideration. Some years trollers may be allowed to take more than the present quota and some fewer depending on the status of the years Southeast Alaska king population.

Proposed by: Jim Canary (63)

Option 2: This figure of 325,000 fish is the average commercial harvest of king salmon over the past ten years. The troll fleet has accepted severe cutbacks in the name of conservation of Alaskan king stocks. Namely: 1) 30 day closure April 15 - May 15, 2) 8 days on 6 days off in Icy Straits, 3) 4 lines only south of Cape Spencer, 4) 28" size limit, and numerous other inseason time and area closures. These restrictions coupled with the harvest of only an average number of fish will result in adequate escapement in Alaskan river systems.



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Proposed by: Elfin Cove Advisory Committee (46)

Option 3: The current O.Y. range was selected to equal the Southeast Alaska 1971-1977 mean chinook catch plus or minus one standard error. This results in an extremely narrow range, 290,000 - 320,000; so narrow in fact, that only one of the seven base years fell within it. This is understandable since a standard error does not measure the variability of the catches, but rather that of the mean of the catches.

First, we recommend that the mean catch be bracketed by one standard deviation instead of one standard error. This would provide a more meaningful O.Y. with a wider catch range more reflective of typical year-to-year variation. This allows management to respond within the O.Y. range to years in which there are low or high availability of fish.

Secondly, since the O.Y. is to be based solely on historic catches, the O.Y. must be periodically recalculated with recent catch data, both to conform with the legal requirements of the FCMA and to reflect changes in abundance of chinooks off Alaska. We suggest using the base years 1971-1977 plus recent historical data of 1978-80. The year 1981 would be excluded due to the artificial nature of the allocative reduction in the O.Y.

Using these suggested changes, an approximate O.Y. range would be 278,000 to 372,000.

Proposed by: Alaska Trollers Association (78)

Option 4: Millions of dollars, a portion of which comes from the 3% assessment to fishermen, have been spent on enhancement programs in Alaska. The first returns of chinook salmon will be seen during the 1982 season. These fish were not part of any stocks considered when optimum yield ranges were established and, hence, they should not be incorporated at this time. If these fish are grouped into the optimum yield, they will be subject to management reductions for interstate allocative purposes. ATA's view is that Alaskan fish should be totally returned to the Alaskan fishery.

Proposed by: Alaska Trollers Association (81)

Option 5: The establishment of a quota or optimum yield of 286,000 to 320,000 on the king salmon harvest in 1980 based on the 1971-1978 seasons was instituted by the Alaska Board of Fisheries in conjunction with the North Pacific Fisheries Management Council. This was further reduced by ten to fifteen percent in 1981 because of reallocation and political pressures. Commercial fishermen are nothing but small businesses. As in any small business, our capital assets such as vessels and permits are purchased and usually financed through a local bank or through the State of Alaska and its lending institutions. In order for a lending institution to grant a loan for this or any purpose, the anticipated revenue from this business must be analyzed and computed for the length of the amortization period of the loan or loans requested. By making unchecked reductions in quotas or optimum yields on a yearly basis as has happened in 1980 and 1981, the lending institutions have made it increasingly difficult for fishermen to procure necessary loans. An optimum yield or quota is something which, after being initially instituted, should only be adjusted on an emergency basis due to extreme biological conditions, and not, for any reason, on a yearly basis because of reallocation problems or political pressures as happened in 1981. This would free the Alaska Board of Fisheries from a most taxing problem which

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takes up a considerable portion of their fall and winter meetings. Above all, this would take a step in the right direction toward restoring some stabilization in the fishery at a time when we, as fishermen and small businessmen, have seen our investments in our vessels and permits plummet due to uncertainty and confusion in the troll fishery.

Proposed by: David R. Carlson (135)

(112)

5 AAC 33.365(b)(3) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation page 155) Establishes a more flexible management system for coho salmon runs by allowing specific areas that show adequate run strength to remain open.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(3) During the early portion of the commercial coho fishing season, the Department shall evaluate the size and distribution of the coho salmon run and shall close specific sections of the Southeastern and Yakutat areas' salmon troll fishery for approximately ten days, unless the Department determines that the coho salmon run is larger than the last ten-year average and that acceptable numbers of coho salmon are moving into the inshore salmon fishing areas; areas that show adequate run strength shall remain open during this closure.

Justification:

This amendment would promote a flexible management system accounting for varied run strength and timing throughout the affected areas. Data indicates that all area coho runs do not coincide; this measure would allow fishing of the outside stocks while permitting specific area closures to allow escapement of fish bound for inside rivers.

Proposed by: Alaska Trollers Association (85)

(113)

5 AAC 33.365(b)(3) and (5) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation page 155) Remove all trolling closures in July and August from the plan.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(3) repealed 4/ /82 [DURING THE EARLY PORTION OF THE COMMERCIAL COHO FISHING SEASON THE DEPARTMENT SHALL EVALUATE THE SIZE AND DISTRIBUTION OF THE COHO SALMON RUN AND SHALL CLOSE THE SOUTHEASTERN AND YAKUTAT AREAS' SALMON TROLL FISHERY FOR APPROXIMATELY 10 DAYS, UNLESS THE DEPARTMENT DETERMINES THAT THE COHO SALMON RUN IS LARGER THAN THE LAST 10 YEAR AVERAGE AND THAT ACCEPTABLE NUMBERS OF COHO SALMON ARE MOVING INTO THE INSHORE SALMON FISHING AREAS];

(5) repealed 4/ /82 [ADDITIONAL CLOSURES OF THE SALMON HAND AND POWER TROLL FISHING SEASONS, PERIODS AND AREAS MAY BE REQUIRED IF THE DEPARTMENT DETERMINES THAT THE STRENGTH OF THE COHO SALMON RUN IN THE INSHORE AND TERMINAL SALMON FISHING AREAS IS LESS THAN REQUIRED TO PROVIDE A SPAWNING ESCAPEMENT THAT WILL MAINTAIN THE RUNS ON A SUSTAINED YIELD BASIS].

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Justification:

There is no data to warrant the closures.

Proposed by: Hoonah Advisory Committee (71)

(114)

5 AAC 33.365(b)(8) (new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation page 155)  
Allocate chinook salmon harvest between power and hand trollers.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(8) It is the policy of the Board of Fisheries to regulate the troll fishery in a manner that will result in 89%-91% of the troll caught chinook salmon being taken by power troll gear and 9%-11% by hand troll gear; the Department shall evaluate the power and hand troll chinook salmon catches throughout the season and impose time and area closures as required to achieve this goal.

Justification:

At the time the Board of Fisheries determined the 80/20 split on allocation of coho, they neglected to allocate levels for king salmon harvest for hand trollers. The rapid growth of the hand troll fleet has caused a reallocation of the chinook take from 10% in 1975 to 18% and 17% in 1979 and 1980. With management's decision in 1981 to allow hand trollers into outside waters, we may experience an even greater reallocation of chinook salmon takes. ATA feels that a chinook allocation should also be imposed using the same criteria used to determine the 80/20 split.

Proposed by: Alaska Trollers Association (87)

(115)

5 AAC 33.365(b)(8)(new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation page 155)  
Allocate 15% to 30% of the chinook salmon O.Y. to the winter troll fishery.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(8) a minimum of 15% and a maximum of 30% of the chinook salmon guideline harvest level will be allocated to the winter troll fishery.

Justification:

At present only 10,000 king salmon are allocated for the winter fishery. This is less than 5% of the 272,000 fish O.Y. Since increasing numbers of fishermen are finding it necessary to fish during the winter season to make a living and since more than 50% of Alaska Power Permit holders are actual state residents, it is only just that more fish be allocated for their use during winter months.

Proposed by: Barry McClelland (25)

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(116)

5 AAC 33.365(b)(8)(new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation pages 154 and 155) Provide a chinook salmon harvest allocation between hand and power trollers.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(8) recognizing that the hand troll fleet retains a large potential for expansion in efficiency the Board established a policy to regulate the troll fishery in a manner that will result in 90% of the troll caught chinook salmon being taken by power troll gear and 10% by hand troll gear. Inseason adjustments of regulations to achieve this goal will not be made.

Justification:

There is a great potential for expansion in efficiency of the hand troll fleet.

Proposed by: Pelican ADF&G Advisory Committee (48)

(117)

5 AAC 33.365(b)(8)(new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation page 155) Chinook and coho salmon taken in authorized derbies will not be added into the commercial harvest totals.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(8) chinook and coho taken in authorized salmon derbies will not be counted as commercial harvest.

Justification:

There are a number of salmon derbies that are authorized. The take of salmon in these derbies should not count against the total catch of commercial operations (troll caught) in the management plan. Derby fishermen or the sponsor are not classed as commercial operators, yet the take is charged against commercial operations. Derby rules generally comply with sport fishing regulations.

Proposed by: Alaska Native Brotherhood, Grand Camp (132)

(118)

5 AAC 33.365(b)(8)(new subsection) SOUTHEAST ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation pages 154-155) Establish a Board of Fisheries policy to prevent net fisheries from targeting on coho salmon during coho salmon troll fisheries closures.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

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(b)(8) It is a policy of the Board of Fisheries to prevent the net fisheries from targeting on coho salmon during troll coho closures; the department will issue orders adjusting the time and areas of net fishing together with its announcements of troll closures.

Justification:

Data from this past season indicates that significant net catches of coho salmon occurred during troll closures in areas that would have otherwise been fished by trollers. Net fishing of cohos in these outside and corridor areas runs contrary to the stated Board policy of providing fish for the inside harvest and spawning escapement. A continuation of the present system represents a reallocation of fish, to which ATA strongly objects.

Proposed by: Alaska Trollers Association (82)

(119)

5 AAC 33.365(b)(8)(new subsection) SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN (Regulation pages 154-155) Require a troll test fishery during coho salmon troll closures.

The proposed regulation reads as follows:

5 AAC 33.365. SOUTHEASTERN ALASKA-YAKUTAT CHINOOK AND COHO SALMON TROLL FISHERIES MANAGEMENT PLAN.

(b)(8) the department shall conduct a troll test fishery during coho salmon troll closures that will allow a tagging and sampling effort to start to accrue data on transit pathways and stock strength and origin.

Justification:

The ATA feels that acquisition of troll fishing data is sorely needed to build a data base to aid in coho in-season management.

Proposed by: Alaska Trollers Association (80)

(120)

5 AAC 39.240(f)(new subsection) GENERAL GEAR SPECIFICATIONS AND OPERATION (Regulation page 172) Allows salmon trollers to have more than one legal limit of gear on board.

The proposed regulation reads as follows:

5 AAC 39.240. GENERAL GEAR SPECIFICATIONS AND OPERATION.

(f) This section does not apply to troll gear.

Justification:

This regulation was intended to prohibit net fishermen from having more than one legal limit aboard, thus not having to worry about their ability to fish more than the legal length. Troll gear requires spare parts to replace lost or broken gear. The existing regulation has caused protection to arrest people for having spare rod/reel aboard, or having them aboard when fishing with gurdies, even though it is legal for a hand troller to use them (to troll with gurdies and use a rod at the same time is not a compatible way to go). The same applies to a power

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troller -- under existing regulations, it would be illegal to have rods aboard.

Proposed by: Chuck Porter (157)

(121)

5 AAC 39.270(a)(1) TROLL SPECIFICATIONS AND OPERATION (Regulation page 173) Allow only four gurdies on salmon power troll vessels.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION. (a) The maximum number of trolling lines that may be operated from any salmon troll vessel is as follows:

(1) from power troll vessels: four lines [EXCEPT THAT NO MORE THAN SIX LINES MAY BE OPERATED IN THAT PORTION OF THE SEAWARD BIOLOGICAL INFLUENCE ZONE NORTH OF THE LATITUDE OF THE SOUTHERNMOST TIP OF CAPE SPENCER];

Justification:

The regulation allowing six gurdies North and West of Cape Spencer is no longer justified with the advent of severe restrictions on the king salmon harvest through the quotas adopted for the 1980 season and subsequently reduced for the 1981 season. The reduction in allowable gurdies from six to four would reduce the harvest of king salmon in this area which could possibly permit a longer troll season areawide.

Proposed by: David R. Carlson (136)

(122)

5 AAC 39.270(a)(3) and (e) TROLL SPECIFICATIONS AND OPERATION (Regulation page 173) Allow the use of 4 lines on hand troll vessels.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION.

(a) The maximum number of trolling lines that may be operated from any salmon troll vessel is as follows:

(3) a total of 4 lines consisting of up to 4 hand troll gurdies or 4 fishing rods or in combination [AN AGGREGATE OF FOUR FISHING RODS OR AN AGGREGATE OF TWO HAND TROLL GURDIES] may be operated from a hand troll vessel.

(e) No more than six troll gurdies may be mounted on board any salmon power troll vessel. No more than four [TWO] troll gurdies and [OR] four fishing rods may be on board any salmon hand troll vessel. A troll gurdy is a spool type device around which a troll line can be wrapped and includes devices commonly called "down riggers".

Justification:

Hand trollers are under limited entry, and restrictions that waste time, fuel, and money are unreasonable. We fish with both gear types depending upon weather, area and time of season. It is an unnecessary hardship to have to run miles back and forth just to comply with unreasonable regulations.

Proposed by: Angoon Advisory Committee (25 late)

SOUTHEAST  
SALMON

(123)

5 AAC 39.270(b) TROLL SPECIFICATIONS AND OPERATION (Regulation page 173) Allow the possession of an extra sportsfishing rod aboard a hand troll vessel or allow a sports rod aboard a power troll vessel.

The proposed regulation reads as follows:

Option 1:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION.

(b) A trolling vessel may have, or use for taking bait, a fishing rod equipped exclusively for taking bait, and/or a gill net of a mesh not more than 2 1/2 inches and made of not greater than number 20 gill net thread.

Option 2:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION.

(b) A trolling vessel may have, or use for taking bait, gill net of a mesh not more than 2 1/2 inches and made of not greater than number 20 gill net thread and a power troll vessel may have on board a fishing rod equipped exclusively for taking bait which may not be used for commercial troll fishing;

Justification:

Option 1: In the rural communities, in particular, there are little or no frozen bait. The prohibition of having dual gear causes problems. This would enable trollers to have one extra rod for taking bait. It will be clear that there is still the prohibition of use of dual gear for salmon troll.

Proposed by: Alaska Native Brotherhood, Grand Camp (130)

Option 2: The wording in the present regulation has resulted in interpretation by enforcement officials that no sports rods of any type are allowed on commercial power troll vessels. Sports rods have traditionally been utilized by the power troll fleet for the "jigging" of herring and retrieving broken tag lines, etc. The potential use of a sport rod for commercial purposes in conjunction with the four or six allowable troll gurdies is not a practical reality as it would just result in a large tangle with the trolling wire. In addition, the use of a sport rod for the taking of herring is often preferable to the use of a gill net because there is no loss of scales and the quantity of herring needed does not justify the use of a gill net where the amount of herring is not easily controllable.

Proposed by: David R. Carlson (134)

(124)

5 AAC 39.270(d) TROLL SPECIFICATIONS AND OPERATION (Regulation page 173) Increase the size of the letters HT on registered hand troll vessels.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION.

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SALMON

(d) Each registered hand troll vessel must display the letters HT in permanent block letters. Each letter must be painted on both sides of the vessel hull or cabin in a color contrasting with the background, at least eight [FOUR] inches in height, at least one half inch in width, plainly visible and unobscured at all times. The letters must be displayed at all times until the end of the calendar year. No hand troll vessel may display its permanent vessel plate number (ADF&G number) in any location other than on the vessel license plate.

Justification:

Four inch high letters are not visible enough and are all too easily hidden. Larger letters will make enforcement of troll regulations easier.

Proposed by: Sitka Handtrollers Association (119)

(125)

5 AAC 39.270(e) TROLL SPECIFICATIONS AND OPERATION (Regulation page 174) Allow the use of "down riggers" by salmon hand troll vessels.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION.

(e) No more than six troll gurdies may be mounted on board any salmon power troll vessel. No more than two troll gurdies or four fishing rods may be on board any salmon hand troll vessel. A troll gurdie is a spool type device around which a troll line can be wrapped [AND INCLUDES THOSE DEVICES COMMONLY CALLED "DOWN RIGGERS"].

Justification:

This has placed an undue hardship and expense on hand trollers using rods. In lieu of down riggers, they have gone to 20 ounce balls which do the same thing as down riggers, but losses of gear and fish occur much more frequently because of the weight.

Proposed by: Chuck Porter (159)

(126)

5 AAC 39.270(f) TROLL SPECIFICATIONS AND OPERATION (Regulation page 174) Allow the use of fishing rods on power troll vessels.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATIONS.

(f) A [NO] salmon power troll vessel may be used to take salmon with hand troll gear once that vessel has been licensed and marked as required in (c) of this subsection, provided such salmon are sold on the power troll permit.

Justification:

The present regulation is discriminatory in that it applies to power troll only. Statistics show as many and more other gear types holding hand troll licenses. Also, this regulation serves no biological or conservatory purpose for two reasons:



SOUTHEAST  
SALMON

(1) You are forcing a power troller to use 20+ hooks when he could substitute rod and reel and use only four (4) hooks.

(2) Most importantly -- if the power troller cannot use his hand troll license, he will sell it to a full time hand troller, thus defeating your conservation/allocation efforts.

Proposed by: Chuck Porter (160)

(127)

5 AAC 39.270(g) TROLL SPECIFICATIONS AND OPERATION (Regulation page 174) Allow the use of treble hooks by salmon troll vessels.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATIONS AND OPERATION.

(g) Repealed 4/ /82 [NO TREBLE HOOKS MAY BE ON BOARD ANY SALMON TROLL VESSEL OR USED IN TAKING OF SALMON].

Justification:

Results of the ATA-ADF&G joint troll test fishery this past spring indicate a significant difference between injury rates of sublegal chinook salmon caught on single and treble hooks. Under test conditions it was found that single hooks caused a higher rate of significant injury on sublegal fish. Treble hooks caused a more superficial wound and small fish were seldom hooked back in the oral cavity. We are aware that these results occurred under controlled test conditions, but we feel that most professional fishermen are aware and capable of similar low-mortality releasing of sublegal fish. Furthermore, assumed lower mortality under test conditions may be neutralized by a greater degree of physical damage due to onboard handling during tagging experiments.

The only other published studies between single and treble hooks were conducted using sport fishing gear where higher mortality may occur due to a blood lactate build-up during "playing" of the fish. Both these studies showed no significant difference in mortality rates between single- or treble-hooked salmon.

Proposed by: Alaska Trollers Association (77)  
Elfin Cove Advisory Committee (75)  
Ketchikan Advisory Committee (66)  
Pelican Advisory Committee (49)

(128)

5 AAC 39.270(h)(new subsection) TROLL SPECIFICATION AND OPERATION (Regulation page 173) Allow the use of troll gear in all state waters.

The proposed regulation reads as follows:

5 AAC 39.270. TROLL SPECIFICATION AND OPERATION.

(h) Troll gear may be used in all waters of the State.

Justification:

(1) A statewide troll fishery will provide for a reduced concentration of effort and harvest by the troll fleet on specific salmon stocks.

Proposed by: Alessandro T. Hill (138)

SOUTHEAST  
SALMON

(2) Troll caught fish are a quality product having a greater dollar value than fish caught by other means. The Alaska troll fishery uses a large and extensive network of support and supply businesses. The Alaska troll limited entry permits are issued as statewide permits. Expansion of the troll fishery would give the fishing industry an option of diversifying in the event of poor cycle years thus alleviating heavy pressure on specific stocks. Areas of maximum utilization of the resource could still be protected by area/time closures as is done in Southeast. Many Alaskans living to westward would utilize troll permits to augment their present fishing incomes. The percentage of Alaskans (as compared to non-residents) owning and fishing Alaska troll permits would probably increase. Improvement of local economics of westward communities would result with increases in incomes and profits of the local user groups. The economic incentive for processors to invest in westward Alaskan plants would increase.

Proposed by: Pelican ADF&G Advisory Committee (47)  
Richard W. Lundahl, Chairman

(3) Commercial salmon trolling has traditionally taken place in many areas west of Cape Suckling. Until only recently commercial salmon trollers were allowed to fish statewide. The increased troll pressure on Yakutat and Southeastern stocks resulting from time and area closures on trollers would be relieved by reopening of the traditional troll fishing grounds west of Cape Suckling.

Proposed by: Elfin Cove Advisory Committee (45)

(129)

5 AAC 33.350(b)(30) CLOSED WATERS (Regulation page 143) Reopen Clover Passage in District 1 to trolling.

The proposed regulation reads as follows:

5 AAC 33.350. CLOSED WATERS.

(b)(30) Clover Passage: north of a line from the easternmost tip of Survey Point to the southernmost tip of Betton Island and south of the latitude of the southernmost tip of Hump Island, except by trolling.

Justification:

The Ketchikan Advisory Committee feels that this change in regulation resulted from a mistake in administration. Our proposal last year concerned only closing seining in front of the Clover Pass Resort. There is no conservation reason for this area closure to trolling.

Proposed by: Ketchikan Advisory Committee (67)

(130)

5 AAC 30.392 and 5 AAC 33.392 SIZE LIMIT AND LANDING OF KING SALMON. (Regulation page 132 and 155) Allow the retention of tagged or adipose clipped sub-legal size king salmon taken by troll gear provided that tags or heads of adipose clipped fish are submitted to the Department of Fish and Game.

The proposed regulation reads as follows:

5 AAC 30.392. SIZE LIMIT AND LANDING OF KING SALMON. King salmon taken must measure at least 28 inches from tip of snout to tip of tail (in its natural open position) or 23 inches from the midpoint of the

SOUTHEAST  
SALMON

clethral arch to the tip of the tail. The heads of all fin clipped king salmon must remain attached to the fish until sold. Under sized king salmon which are taken must be returned to the water without injury, except fish having a tag attached or a fully healed, clipped adipose fin. Tags and heads of undersize adipose fin clipped king salmon must be submitted, along with the date and location of taking, to the department Troll caught king salmon under 28 inches may not be sold. The size restrictions in this section do not apply to gill net and purse seine fishing. No king salmon may be mutilated or otherwise disfigured in any manner which prevents determining the minimum size set forth in this paragraph. No salmon troll vessel may be used to take salmon when king salmon are aboard in an area closed to the taking of king salmon by troll gear.

5 AAC 33.392. SIZE LIMIT AND LANDING OF KING SALMON. King salmon taken must measure at least 28 inches from tip of snout to tip of tail (in its natural open position) or 23 inches from the midpoint of the clethral arch to the tip of the tail. The heads of all fin clipped king salmon must remain attached to the fish until sold. Under sized king salmon which are taken must be returned to the water without injury, except fish having a tag attached or a fully healed, clipped adipose fin. Tags and heads of undersize adipose fin clipped king salmon must be submitted, along with the date and location of taking, to the department Troll caught king salmon under 28 inches may not be sold. The size restrictions in this section do not apply to gill net and purse seine fishing. No king salmon may be mutilated or otherwise disfigured in any manner which prevents determining the minimum size set forth in this paragraph. No salmon troll vessel may be used to take salmon when king salmon are aboard in an area closed to the taking of king salmon by troll gear.

Justification:

King salmon of any size may be retained in all commercial fisheries in Southeast except in the troll fishery. Thus, in areas of net fisheries, the Department is able to collect, via tag recovery, life history data on all life stages of king salmon. In areas open only to the troll fishery there is no recovery data on rearing/juvenile life stages as the 28" minimum legal troll length prevents retention of such fish. Collection of tag recovery/life history information on kings in all waters of Southeast is required for effective management and conservation of Alaskan King stocks.

Proposed by: Staff (I-1)

(131)

5 AAC 39.120(g)(1), (2), (3), (4) and (5) REGISTRATION OF COMMERCIAL FISHING VESSELS (Regulation page 165) Repeal the registration requirement for salmon troll vessels.

The proposed regulation reads as follows:

5 AAC 39.120. REGISTRATION OF COMMERCIAL FISHING VESSELS.

(g) Repealed 4/ /82 [REGISTRATION REQUIREMENTS FOR SALMON TROLL FISHING VESSELS ARE AS FOLLOWS:].

Justification:

SOUTHEAST  
SALMON

Registration of troll vessels is not required to provide effective in-season management of the troll fishery. The continuation of the registration system will cost approximately \$5,000 - \$10,000 each year.

Proposed by: Staff (1-10)

(132)

5 AAC 39.120(g)(2) REGISTRATION OF COMMERCIAL FISHING VESSELS (Regulation page 165) Allows a troll vessel to be registered for both power and hand troll gear.

The proposed regulation reads as follows:

5 AAC 39.120. REGISTRATION OF COMMERCIAL FISHING VESSELS.

(g) Registration requirements for salmon troll fishing vessels are as follows:

(2) repealed 4/ /82 [NO FISHING VESSEL MAY BE REGISTERED AS BOTH A HAND TROLL AND A POWER TROLL VESSEL];

Justification:

With limited entry into hand troll, there is no longer a need to worry about power troll selling fish on hand troll (need to adopt my proposal on 39.270(f) which allows a power troller to use a rod and reel). Allowing a power troller to fish both permits means a less efficient effort. If you do not allow him to fish his hand troll permit, it probably will wind up being used full time in the hand troll fishery.

Proposed by: Chuck Porter (156)

(133)

5 AAC 33.312(d)(new subsection) APPLICATION OF COASTAL TROLLING REGULATIONS (regulation page 140) Define the boundaries of state and federal waters.

The proposed regulation reads as follows:

5 AAC 33.312. APPLICATION OF COASTAL TROLLING REGULATIONS.

(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.

Justification:

During the recent troll closure (August 1981) the NPFMC closed the FCZ to trolling. Vessels were kept within 3 miles of Alaska land by the Coast Guard. Areas that have traditionally been thought of as "inside" waters off Duke Island were suddenly put into the FCZ. This will cause a lot of problems if a new "limited entry" program for FCZ. We believe this was not the intention of NPFMC.

Proposed by: Jim Canary  
Ketchikan Advisory Committee (68)

SOUTHEAST  
SALMON

(134)

5 AAC 33.394 SALMON FISHERY CLOSURES (new section) Close all commercial salmon fishing when trolling is closed.

The proposed regulation reads as follows:

5 AAC 33.394. SALMON FISHERY CLOSURES. When a salmon troll fishery is closed for protection of salmon stocks all commercial salmon fishing should be closed.

Justification:

Closures for the purpose of conservation should apply across the board. All seiner, gillnetting and trolling should close at the same time. It seems self defeating to close trolling for conservation and yet allow another gear type to harvest that same salmon you wish to protect.

Proposed by: Angoon Advisory Committee (late 27)

(135)

5 AAC 48.090(1) SPORT FISHING FROM A COMMERCIAL SALMON TROLL VESSEL (Regulation page 24) Allow sport fishing from a troll vessel only in areas open to commercial trolling.

The proposed regulation reads as follows:

5 AAC 48.090. SPORT FISHING FROM A COMMERCIAL SALMON TROLL VESSEL. No person may sport fish from a salmon hand troll or power troll vessel in areas closed to commercial trolling, as those vessels are identified by the marking requirements of 5 AAC 39.270(c) and (d), in any area except that this prohibition does not apply

Justification:

Many troll fishermen own only one boat and under the current regulations it is impossible to take family members sport fishing without going to the expense of purchasing a second vessel.

Proposed by: Bill Stokes

(136)

5 AAC 39.381(c)(new subsection) GEAR FOR HALIBUT (Regulation page 175) Allow for the incidental taking of halibut by the trolling fleet during the open troll season.

The proposed regulation reads as follows:

Option 1:

5 AAC 39.381. GEAR FOR HALIBUT.

(c) Commercial trolling vessels may take up to 15% of total catch (by weight) of legal sized halibut during the open troll season.

Option 2:

5 AAC 39.381. GEAR FOR HALIBUT.

(c) Commercial trolling vessels may take two legal sized halibut per boat per day during the open troll season.

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SALMON

Justification:

Option 1: This was a traditional fishery up to a few years ago. The population is so abundant now in the Ketchikan area that the halibut is becoming an annoying scrap fish. This small number of fish would help supplement a fishery that is becoming depressed due to over regulation.

Proposed by: Ketchikan Advisory Committee (65)

Option 2: This would supply year round fresh halibut to villages, towns and cities of Alaska. Last year the quota was reached in only one week as the big boats hogged all the fish. This supplies inferior frozen halibut for 11 1/2 months per year. Historically and traditionally the troll fishery harvested halibut all during the troll season. This must be reinstated to the troll fishery by historic, traditional and customary use in the past, which in turn will provide fresh halibut on the market for the people of Alaska and lower 48. These people have been deprived of this product as a fresh item, and have had the inferior frozen product forced on them.

Proposed by: Ketchikan Advisory Committee (121)

SOUTHEAST  
GROUNDFISH

(137)

5 AAC 33.415(a) GUIDELINE HARVEST LEVELS. (Regulation page 156)  
Reduce the lower end of the northern area sablefish harvest range.

The proposed regulation reads as follows:

5 AAC 33.415. GUIDELINE HARVEST LEVELS.

(a) In the northern area as described in Sec. 410(a)(1) of this chapter, the guideline harvest range for sablefish is 300,000 [500,000] to 900,000 pounds (136 [227] to 408 m.t.).

Justifications:

Indexing conducted in 1981 and port sampling conducted in 1979-81 by ADF&G indicate the percentage of large sablefish and CPUE have declined the past three seasons. If this trend continues, harvests below 500,000 may be necessary to promote stock conservation. Historic catch data indicates that a harvest of 300,000 pounds can normally be sustained even at low levels of stock abundance. This proposal will not affect the subsistence utilization of sablefish.

Proposed by: Staff (I-5)

(138)

5 AAC 33.420(b) and (c). REGISTRATION (Regulation page 156) Eliminate the need to unload sablefish prior to entering or leaving the northern area.

The proposed regulation reads as follows:

5 AAC 33.420. REGISTRATION.

(b) Repealed 1/ /82. [OPERATORS OF SABLEFISH FISHING VESSELS REGISTERED TO TAKE SABLEFISH IN THE NORTHERN AREA SHALL UNLOAD ALL

SOUTHEAST  
GROUND FISH

SABLEFISH TAKEN IN THE NORTHERN AREA AND NOTIFY A LOCAL REPRESENTATIVE OF THE DEPARTMENT BEFORE TAKING SABLEFISH IN ANOTHER AREA.]

(c) Repealed 1/ /82. [OPERATORS OF SABLEFISH FISHING VESSELS MAY NOT REGISTER TO TAKE SABLEFISH IN THE NORTHERN AREA WHEN SABLEFISH THAT WERE TAKEN FROM ANOTHER AREA ARE ON BOARD.]

Justification:

To not have to cut a trip short by running to port to clear for another area. Grounds in lower Chatham Strait are adjacent to outside grounds and are easily accessible during big tides which are not feasible to fish in lower Chatham.

Proposed by: Charles Christensen, Petersburg Vessel Owners Assoc. (61)

139

5 AAC 33.430(a). GEAR (Regulation page 156) Prohibit the use of sablefish pots in all or parts of S.E. Alaska.

The proposed regulation reads as follows:

Option 1:

5 AAC 33.430. GEAR. (a) Sablefish may be taken with longlines only [AND POTS].

Option 2:

5 AAC 33.430. GEAR. (a) Sablefish may be taken with longlines and pots except in the following areas which may be fished with longline gear only:

- (1) area described in 5 AAC 33.410(a) FISHING SEASONS;
- (2) District 4 north of the latitude of Cape Barthalamue;
- (3) Sections 13-A and 13-B;
- (4) District 16.

Justifications:

Option 1:

1. Commercial value of the resource.
2. Gear types not compatible and limited grounds.
3. Lost gear problems causing grounds preemption and management difficulties.

Proposed by: Orrie Bell (62)

Option 2:

To eliminate gear conflicts between longline and pot fishermen in an historically longline area. Loss of pots in these areas causes a hazard and loss of gear to longline fishermen. Pots and longline are not compatible making it impossible to longline near or around pots which utilize more ground and have a smaller catch record.

Proposed by: Charles Christensen (60)

SOUTHEASTERN  
PNP SALMON HATCHERIES

(140)

5 AAC 40.044. BURRO CREEK FARMS SPECIAL HARVEST AREA - TAIYA INLET (New Section) Establish a special harvest area near the Burro Creek Hatchery and set season, gear and other harvest requirements.

The proposed regulation reads as follows:

5 AAC 40.044. BURRO CREEK FARMS SPECIAL HARVEST AREA - TAIYA INLET.

(a) There is established the Burro Creek Farms Special Harvest Area consisting of all waters of Taiya Inlet within a one mile radius of the terminus of Burro Creek.

(b) A hatchery permit holder harvesting salmon within the special harvest area is exempt from the provisions of 5 AAC 33.310. Fishing periods for the hatchery permit holder will be established by emergency order by gear type.

(c) Notwithstanding 5 AAC 33.330, legal gear for the hatchery permit holder in the special harvest area are beach seine, purse seine and gillnet.

Justification:

Burro Creek Special Harvest Area is needed to provide for an orderly and effective harvest of hatchery returns for broodstock and cost recovery.

Proposed by: Burro Creek Farms, Incorporated. (123)

(141)

5 AAC 40.042. NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION SPECIAL HARVEST AREA - SALMON CREEK (New Section). Establish a special harvest area near the Salmon Creek Hatchery and set season, gear and other harvest requirements.

The proposed regulation reads as follows:

5 AAC 40.042. NORTHERN SOUTHEASTERN REGIONAL AQUACULTURE ASSOCIATION SPECIAL HARVEST AREA - SALMON CREEK.

(a) There is established the Salmon Creek Special Harvest Area consisting of all waters of Gastineau Channel north of a line from Norway Point to Gold Point and south of a line from End Point to Doug Point, including all waters within mean high tide. Only species produced at the hatchery may be harvested in this area.

(b) A hatchery permit holder harvesting salmon within the special harvest area is exempt from the provision of 5 AAC 33.310. Fishing periods for the hatchery permit holder will be established by emergency order by gear type.

(c) Notwithstanding 5 AAC 33.330, legal gear for the hatchery permit holder in the special harvest area are gillnet, purse seine, beach seine, hook and line, dip net, weir, fyke net and pound net.

Justification:

Salmon Creek Hatchery needs a special harvest area to provide for an orderly and effective harvest of hatchery returns for broodstock and cost recovery.



SOUTHEASTERN  
PNP SALMON HATCHERIES

Editors Note: Pound net is not defined under legal gear and should be if that gear is allowed to be used.

Proposed by: NSRAA. (122)

(142)

5 AAC 40.033. DOUGLAS ISLAND PINK AND CHUM SPECIAL HARVEST AREA - SHEEP CREEK. Establish a special harvest area near the Sheep Creek Hatchery and set season, gear and other harvest requirements.

The proposed regulation reads as follows:

5 AAC 40.033. DOUGLAS ISLAND PINK AND CHUM SPECIAL HARVEST AREA - SHEEP CREEK.

(a) There is established the Sheep Creek Hatchery Special Harvest Area consisting of all waters of Gastineau Channel within a 300 yard radius of the terminus of Sheep Creek.

(b) A hatchery permit holder harvesting salmon within the special harvest area is exempt from the provisions of 5 AAC 33.310 except as may be specifically provided by emergency order. The hatchery permit holder may take salmon within the special harvest area only during periods established by emergency order.

(c) Notwithstanding 5 AAC 33.330, legal gear for the hatchery permit holder in the special harvest area are beach seine, purse seine and gillnet.

Justifications:

It is ADF&G policy to establish Special Harvest Area boundary and gear prior to the first return. The first return is expected in 1982 to Sheep Creek Hatchery.

Proposed by: Douglas Island Pink and Chum. (124)

STATEWIDE  
HERRING

(154)

5 AAC 27.020. REGISTRATION, and associated regulations. (Regulation page 94) Repeal the herring vessel and gear registration requirements and make corrections to related regulations.

The proposed regulation reads as follows:

5 AAC 27.020. REGISTRATION. (a) Repealed 6/ /82.

(b) Repealed 6/ /82.

(c) Repealed 6/ /82.

(d) Repealed 6/ /82.

(e) Repealed 6/ /82.

(f) Repealed 6/ /82.

(g) Repealed 6/ /82.

(h) Repealed 6/ /82.

STATEWIDE  
GENERAL PROVISIONS

5 AAC 27.030. LANDING REQUIREMENTS. (a) Except as provided in (b) of this section, each person [VESSEL] must land all herring within the statistical area in which the herring were taken [IT IS REGISTERED AT THE TIME].

(b) A person [A HERRING SEINE, TRAWL OR DRIFT GILL NET VESSEL REGISTERED FOR AN AREA WHICH] who desires to land herring in a statistical area other than the one from which the herring were taken [IN ANOTHER REGISTRATION AREA] shall contact in person or by radio a local representative of the department before leaving the statistical area in which the herring were taken and shall submit to a vessel inspection at a location designated by the local representative. A person [VESSEL] acting pursuant to this authorization shall at the time of landing his catch have on board an amount of herring no greater than was on board at the time of the inspection.

(d) Repealed 6/ /82.

(e) Repealed 6/ /82.

5 AAC 27.035. CLOSURE OF REGISTRATION AREAS.

(e) 24 hours after the closure of a statistical area no person may possess herring on board a commercial fishing vessel unless;

(1) repealed 6/ /82;

(2) the person [VESSEL] is in compliance with [SEC. 020] 5 AAC 27.030.

5 AAC 27.070. REGISTRATION AND INSPECTION DOCUMENTS. (a) Repealed 6/ /82.

(b) Repealed 6/ /82.

5 AAC 27.090. UNLAWFUL POSSESSION OF HERRING OR HERRING GEAR. (a) It is unlawful for any person to possess unprocessed herring aboard a vessel licensed as a commercial fishing vessel within any statistical [REGISTRATION] area unless [THE VESSEL IS REGISTERED FOR THE AREA (EXCEPT ON VESSELS USED WITH BEACH SEINES AND SET GILL NETS) AND] the season is open, or unless the person is acting under the authorization of 5 AAC 27.030(b). This prohibition does not apply to herring possessed for subsistence or personal bait purposes if otherwise consistent with applicable regulations.

(b) It is unlawful for any person to possess aboard a vessel licensed as a commercial fishing vessel within any statistical [REGISTRATION] area any herring or any gear used in the taking of herring, if the herring or herring gear are prohibited by other regulations in 5 AAC 27 governing the area, unless the vessel is acting under the authorization of 5 AAC 27.030(b) [THE VESSEL IS GOVERNED BY THE REGULATIONS OF THE AREA FOR WHICH IT IS REGISTERED AT THE TIME].

PRINCE WILLIAM SOUND

5 AAC 27.331. GILL NET SPECIFICATIONS AND OPERATION. (a) From September 15 through January 31, herring gill nets operated from a [REGISTERED] herring fishing vessel may not be greater than 150 fathoms in aggregate length.

(b) From March 1 through June 30, herring gill nets operated from a [REGISTERED] herring fishing vessel may not be greater than 100 fathoms in aggregate length.

STATEWIDE  
GENERAL PROVISIONS

5 AAC 27.370. GENERAL RESTRICTIONS. A vessel used to take herring in statistical area E during the period July 1 through February 28 may not be used to take herring in another statistical area during that period and a vessel used to take herring in any other statistical area during the period July 1 through February 28 may not be used to take herring in statistical area E during that period.

COOK INLET

5 AAC 27.434. IDENTIFICATION OF GEAR. Set gill nets used to take herring must have a keg or buoy at one end and must be plainly and legibly marked with the fisherman's five digit CFEC permit serial [PERMANENT DEPARTMENT REGISTRATION] number and his initials.

BRISTOL BAY

5 AAC 27.831. GEAR SPECIFICATIONS AND OPERATIONS.

(b) No more than 300 fathoms of herring gill net may be operated from any [REGISTERED] herring fishing vessel.

Justification: The department no longer needs the registration system to provide it with pre- and inseason assessment of effort levels. The adoption of this proposal will not have a negative effect on the conservation or development of the resource or affect the subsistence fishery.

Proposed by: Staff (HQ-1)

(155)

5 AAC 39.110 (d) CREWMEMBER FISHING LICENSE REQUIREMENTS. (Regulation page 162) Prohibit all salmon entry permit holders from crewing in salmon fisheries in other areas or allow all salmon entry permit holders to crew in all salmon fishery areas.

The proposed regulation reads as follows:

5 AAC 39.110. CREWMEMBER FISHING LICENSE REQUIREMENTS.

(d) A valid interim-use or entry permit card holder may crew in any fishery, except that a salmon [net] permit holder may not crew in any salmon fishery for which he does not hold a permit. [crew in salmon net fisheries only in that salmon net registration area for which he holds a valid salmon net permit card.]

or

(d) A valid interim-use or entry permit card holder may crew in any fishery [EXCEPT THAT A SALMON NET PERMIT HOLDER MAY CREW IN SALMON NET FISHERIES ONLY IN THAT SALMON NET REGISTRATION AREA FOR WHICH HE HOLDS A VALID SALMON NET PERMIT CARD].

Justification:

Under present law, salmon permit holders are not treated equitably. Salmon troll permit holders may crew in any salmon net registration area. The regulations allow crew participation by the salmon net permit card holder within the area of registration, but not in other areas. In some areas there are no alternative salmon net fisheries (e.g. AYK districts), while in other salmon net areas there are a total of three salmon net fisheries

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(e.g. Alaska Peninsula - Aluetians). No apparent conservation or allocation purpose exists for such unequal treatment. Therefore, the regulations should either allow no crew participation in salmon fisheries by salmon permit holders, or allow salmon permit holders to crew in any fishery.

As between these alternatives, it would seem fairest to allow salmon permit holders to crew in other salmon fisheries. This would allow presently legal activities to continue (e.g. Bristol Bay set net permittee could still be a crewman in the Bristol Bay drift net fishery), would not increase harvesting pressure (since the crewman could only fish with an existing salmon permit holder), may decrease harvesting pressure in certain cases (if the salmon permit holder leaves to crew another fishery, it removes a unit of gear from the fishery in which the permit is held) and would allow all salmon permit holders to crew in any other salmon fishery (as any troll permit holder or Bering Sea king crab permit holder now can)

Proposed by: John Garner (L-13)

(156)

5 AAC 39.120. REGISTRATION OF COMMERCIAL FISHING VESSELS. (g) (New subsection) Set criteria for issuance of late registration.

The proposed regulation reads as follows:

5 AAC 39.120. REGISTRATION OF COMMERCIAL FISHING VESSELS.

(g) To qualify for an extension of registration deadlines set forth in 5 AAC 01--5 AAC 39 a person shall

- (1) have participated during the previous season in the fishery for which he is requesting an extension;
- (2) have applied, before the registration deadline, for an interim-use or entry permit and vessel license for the fishery for which he is requesting an extension; and
- (3) provide written documentation that will substantiate the reasons that registration was not completed by the deadline.

Justification: Regulations require that fishermen register their vessels for Southeastern Alaska and Yakutat salmon troll, Prince William Sound Tanner crab, Cook Inlet king crab, Tanner crab and shrimp and Westward herring fisheries before a particular date. The Commissioner may grant extensions to the registration deadlines when "excusable neglect" can be shown. This proposal sets forth the type of documentation a person must have to show he had intent to participate in the fishery before the deadline. The adoption of this proposal will aid in the enforcement of registration deadlines which have been adopted to enhance the conservation of the respective fisheries by providing the managers with a pre-season measure of fishing effort. This proposal does not affect subsistence fisheries.

Proposed by: Staff (HQ-3)

(157)

5 AAC 39.160. MAXIMUM LENGTH OF SALMON SEINE VESSEL. (Regulation page 168.) Repeal the salmon seine vessel length restriction.

The proposed regulation reads as follows:

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5 AAC 39.160. MAXIMUM LENGTH OF SALMON SEINE VESSEL. Repealed 4/  
/82.

Justification:

This regulation was originally instated to prevent the large out-of-state purse seiners from entry and dominating the Alaska fishery. Since then limited entry has provided for a limit on the number of purse seine vessels in all Alaskan seine fisheries. The 58 ft. limit now is forcing the use and continued construction of boats which are inefficient and not adequate for year around multi species. If the board doesn't want to eliminate the regulation Statewide they should at least eliminate it in Southeastern.

Proposed by Edwin Fugluog. (155)

(158)

5 AAC 39.195(b)(new subsection) ANNOUNCEMENT OF EMERGENCY OPENING AND CLOSURES (Regulation page 170) Establish an informal appeal process within Fish and Game for management actions taken under emergency orders.

The proposed regulation reads as follows:

5 AAC 39.195. ANNOUNCEMENT OF EMERGENCY OPENING AND CLOSURES.

(b) An emergency order is subject to an informal appeal process between user group(s) and the Department of Fish and Game as described below:

(1) the department would notify affected gear groups finalizing an emergency order;

(2) the affected group would then meet with the department, hearing the reasons for the actions and discussing it; if unsatisfied the gear group would then be able to request an appeal;

(3) as soon as possible a meeting would be set up between the area managers, the gear group, and the Director of Commercial Fisheries and either the Commissioner or the Deputy Commissioner;

(4) both management and the fishermen's representatives would present their cases for consideration, and the decision of the commissioner or his alternate would be final;

(5) an exception to this process could be incorporated where a true emergency situation existed.

Justification:

Emergency orders, especially today, have wide-ranging economic consequences to the fishermen involved, and it seems only fair that they at least have a chance to discuss these decisions with area-level managers before they are final. Frequently fishermen, with their intimate experience with the fishery involved, can offer a different perspective or explanation for problems perceived by management. Appeal to the Commissioner will be option reserved for those situations where the fishermen's groups disagree either with management's data or reasoning.

Proposed by: Alaska Trollers Association (84)

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5 AAC 39.198 POLICY ON REGULATORY AUTHORITY FOR WATERS OF ALASKA (new section) Establish a Board of Fisheries policy for the regulation of fisheries in waters of Alaska.

The proposed regulation reads as follows:

5 AAC 39.198. POLICY ON REGULATORY AUTHORITY FOR WATERS OF ALASKA. The provisions of this chapter shall apply to "waters of Alaska" as defined in 5 AAC 39.975(13)(A), (B) and (C).

Justification:

At present, the Federal Fishery Conservation Zone (FCZ) includes large areas which were previously "waters of Alaska"; sizeable portions of state regulatory districts are now under federal management jurisdiction. This action prevents fishing in what has historically been state-regulated waters during federal closures, such as those experienced during the 1981 season. Additionally, the usefulness of past catch data is diminished by this reduction of fishing area in various state reporting districts. We at ATA favor the single management and data collection system, historically employed in these areas.

Proposed by: Alaska Trollers Association (83)

160

5 AAC 39.240. GENERAL GEAR SPECIFICATIONS AND OPERATION. (a) (Regulation page 172). Define aggregate.

The proposed regulation reads as follows:

5 AAC 39.240. GENERAL GEAR SPECIFICATIONS AND OPERATION. (a) A salmon fishing vessel shall operate, assist in operating, or have aboard it or any boat towed by it, only one legal limit of salmon fishing gear in operating condition (1) [THE AGGREGATE] the aggregate except as otherwise provided in this title. (or 2) Gear will not be included in the aggregate if a major component such as spreads, wire, gurdies or leads which will incapacitate the workability of the gear is not on board.

Justification Option 1: The existing law makes it illegal to transport not only troll and gill net gear at the beginning and end of the season, but also extra gear beyond the legal limit in a single type. The law is unclear as to tenders carrying gear. Some standard of reasonableness needs to be applied so that we can conduct our business in an efficient and reasonable manner.

Proposed by: Pat Martin (44)

Justification Option 2: To provide law abiding fishermen the information necessary to comply with this regulation and guidelines for enforcement personnel as well as equal interpretation and/or enforcement.

Proposed by: George Lamm (7)

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(161)

5 AAC 39.398 DEADLINE FOR REGULATORY PROPOSALS (new section) Establish a regulatory deadline for submission of proposals to the Board of Fisheries.

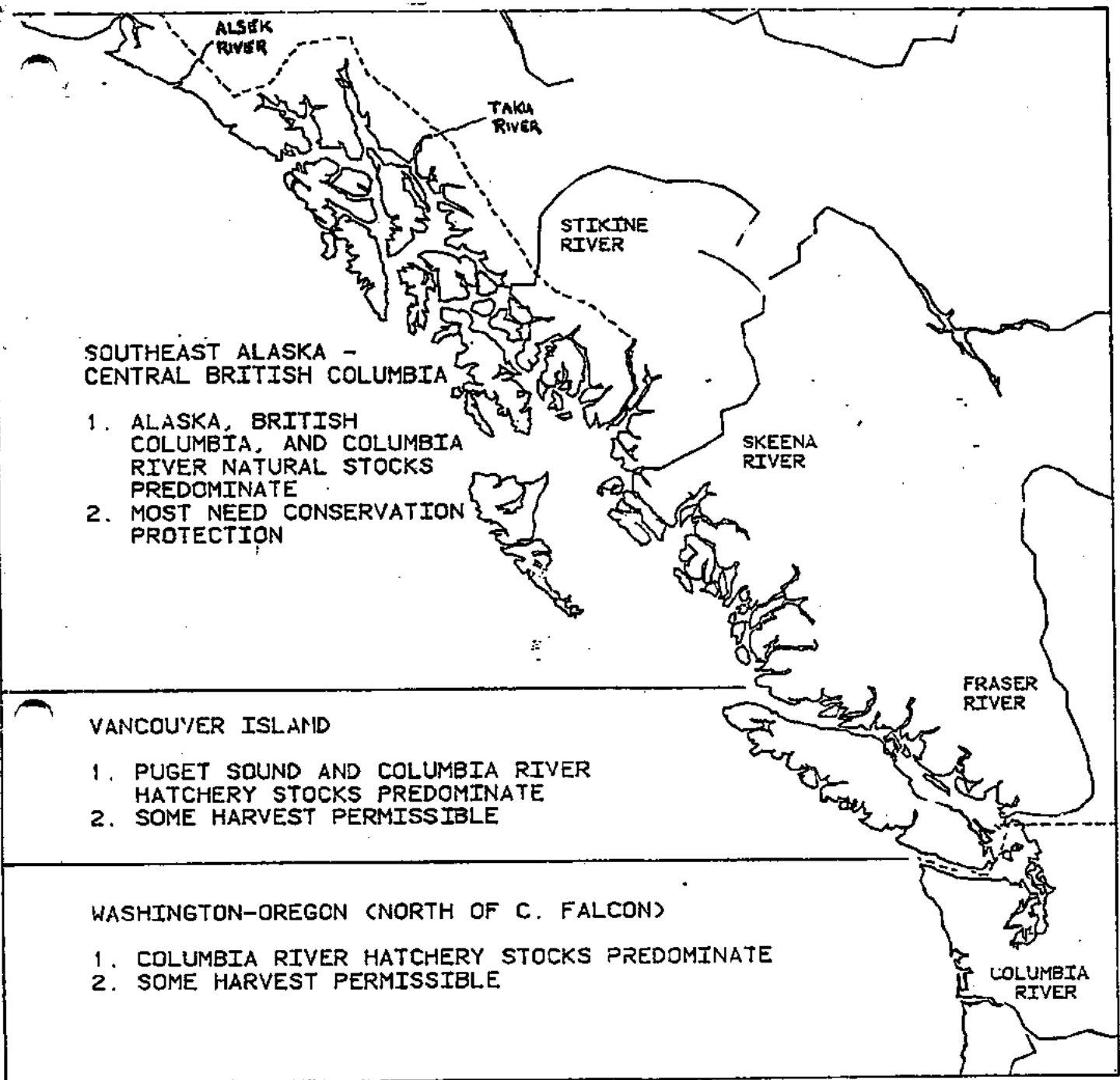
The proposed regulation reads as follows:

5 AAC 39.398. DEADLINE FOR REGULATORY PROPOSALS. The deadline for receipt of regulatory proposals that are considered by the Board of Fisheries at its annual fall meeting is 4:30 p.m. October 1 at the Juneau office of the Board.

Justification:

In order to provide the fishermen with an opportunity to participate in the process of submitting and commenting on proposals through the advisory committees, the fishing season has to have been completed. We certainly cannot expect the fishermen to be cutting out the best fishing time to attend meetings, and the October 1 deadline seems to accomodate the fishermen's needs.

Proposed by: Angoon Advisory Committee (late 26)



GENERALIZED CHINOOK STOCK MANAGEMENT CONCERNS

Results of a joint technical staff meeting on  
1981 chinook salmon resource status from Oregon to Southeast Alaska

December 22, 1981

Seattle, Washington



## INTRODUCTION

A variety of formal working groups on the Pacific coast were given assignments in late 1981 dealing with coastwide chinook salmon management concerns. These groups include:

1. U.S.-Canada chinook working group.
2. North Pacific Fishery Management Council Salmon Team.
3. Pacific Fishery Management Council Salmon Team.
4. Technical Committee; Confederated Tribes of the Columbia River v. Secretary of Commerce M. Baldrige.
5. Internal assignments within Canadian, U.S. and tribal fishery management agencies.

The timing for output from these groups was generally in accord with the common request for: first, general stock and management information by approximately mid-December for decision points occurring in January, 1982 and second; refinements to this information for decision points in March, 1982. Much of the work assigned to each group was also common to more than one of these groups. For this reason a joint technical staff meeting was undertaken on December 22, 1981 at the Northwest and Alaska Fisheries Center (NMFS), Seattle, Washington, to address these common technical issues on a coordinated, coastwide basis. The list of participants is presented in Appendix I.

A variety of detailed material dealing with chinook stock status in the broad geographic zone from Oregon to Southeast Alaska was presented (Appendix II). Additionally, information on the 1981 fishery status and 1981 regulatory impact was presented (Appendix II). Expectations for the 1982 season in

terms of both expected run sizes and management regimes will generally be presented at various regulatory meetings to be held in January through March.

#### OVERVIEW

It was generally felt that the overall condition of hatchery stocks was not a conservation problem. Cases of underescaped hatchery stocks were noted as were a number of depressed runs but generally speaking most are producing harvestable surpluses at this time. Thus, harvest opportunity in both ocean and inside fisheries exists while still meeting egg take escapement needs. The condition of natural stocks, particularly for several major producers, is by-in-large severely depressed coastwide and, consequently, harvest opportunity is also severely limited if optimum spawning escapements are to be achieved.

It should be noted that positive chinook management measures have been implemented in various Pacific coast jurisdictions in recent years. Each terminal area management entity has responded to these natural chinook problems with nearly complete elimination of directed terminal fisheries within their own jurisdictions. Puget Sound and some Columbia River runs, where hatchery stocks predominate, are the only major exceptions where significant terminal fisheries exists and some of these have been severely restricted to minimize incidental harvest of depressed natural stocks. In addition, varying levels of restrictive ocean management have also been implemented.

A general consensus was reached that major natural chinook stocks, on a coastwide basis (Columbia River to Cape Suckling, Alaska) are still viable but are currently achieving escapements which are far below optimum or even minimum goals. In some cases escapements are continuing to decline while in

others escapements have stabilized at very depressed levels. Improving escapements are the rare exception rather than the rule. Overall exploitation rates on these depressed and declining stocks are currently much too high and to date severe restrictions on terminal area harvest (most frequently complete closures of directed harvest) have been inadequate by themselves to provide sufficient protection. Coastwide 1981 ocean fishery management measures in addition to these terminal area measures have proved insufficient to reverse the trend of declining natural run sizes in most areas (a small number of Southeast Alaska, Washington coastal stocks, and Puget Sound stocks appear to be the only exceptions). Fishery managers have few options to rebuild these important stocks. Major infusions of money for new hatchery production are unlikely and may not be desirable. The only effective action available is to further reduce total harvest rate.

#### SPECIFIC AREA STOCK STATUS REPORTS

Oregon coastal stocks: Escapement estimates are unavailable, indexes are available, however. Fall chinook stocks are generally in a favorable status as indicated by spawning ground index counts. Hatchery returns in 1981, however, appear to be less than adequate for many coastal stations.

Columbia River stocks: Upriver spring and summer stocks remain in a severely depressed state. Runs of both were at record low levels in 1979, 1980, and 1981. Upriver fall stocks: The hatchery stock is depressed but still producing harvestable surpluses; the natural stock is severely depressed realizing a record low return in 1981. Lower river fall stocks: are predominantly hatchery fish and returned at below average levels in 1981 but a harvest opportunity was available. Lower river spring stocks: are predominantly

hatchery stocks and returned in 1981 in sufficient numbers to allow a harvest opportunity and still achieve desired hatchery egg take requirements.

Washington coastal stocks: Hatchery fall chinook stocks are providing limited harvest opportunity and this condition is expected to continue.

Natural spring, summer, and fall stocks on the north Washington coast are generally returning at levels which have and should continue to produce small harvest surpluses and still meet spawning escapement requirements. Grays Harbor natural spring and fall chinook are returning well below escapement goals and target harvest opportunity will probably not exist in the near future.

Puget Sound stocks: Summer/fall stocks, which comprise approximately 98% of Puget Sound chinook, remained at a stable, healthy abundance level in 1981. Run size is currently estimated to be the same as the 1975-1980 mean. Egg take at Puget Sound hatcheries was 80 million. Run size estimates for spring chinook in 1981 are not available, but escapement was presumed to be less than desired, as has been the pattern in recent years.

Canadian stocks: Natural stocks remain the predominant production unit and almost all are experiencing a greatly depressed stock condition. River returns of virtually all the 350 British Columbia chinook stocks (approximate number) are remaining very depressed or continuing to decline despite elimination of all directed terminal area fisheries. Overall, natural escapements are now at about 35% of the optimum escapement goals.

Southeast Alaska stocks: Natural stocks remain the predominant production unit and almost all are depressed below minimum escapement levels. It appears the decline in some of these stocks, in particular those originating in the Taku and Stikine Rivers has been reversed due to elimination of all directed terminal area fisheries and 1981 ocean harvest restrictions designed to begin

rebuilding consistent with a management plan currently in progress.

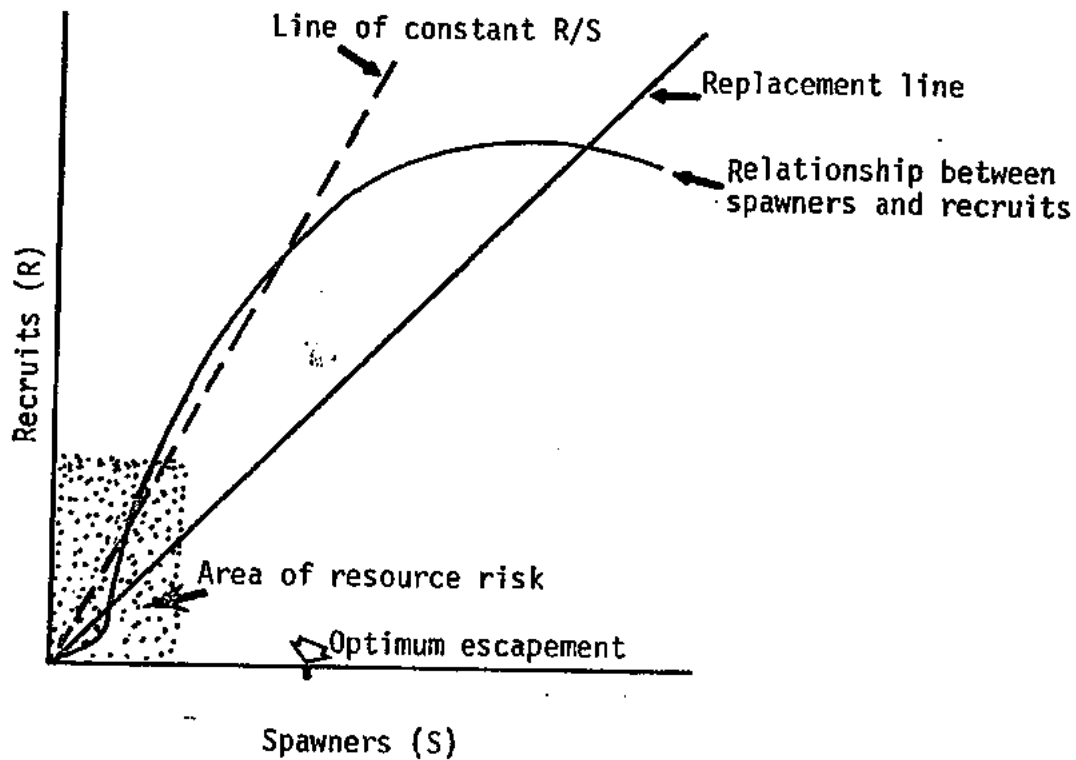
#### BENEFITS TO BE DERIVED FROM ACHIEVING ESCAPEMENT GOALS

The obvious purpose or objective for rebuilding depressed chinook salmon runs is to remove the risk that stocks or sub-stocks will be depressed below a viability or the biological extinction point and to obtain future benefits in the form of increased catches from present levels. Return to "healthy" population sizes will automatically ensure stock viability thus providing a base for fishery stability and the opportunity for increasing commercial fishery revenues, recreational harvest opportunity, and economic returns to support industries.

Long-term benefits can be realized only at the cost of reduced catches in the short or near term, however, long-term benefits will exceed short-term costs in total. It is recognized that short-term costs and long-term benefits may accrue unevenly to present and future participants in the fisheries.

Order of magnitude estimates of additional benefits expected from rebuilding chinook runs from current depressed levels can be made to provide some perspective on these long-term benefits. These can be derived by applying average recruits per spawner (R/S) production rates to present escapement levels and to current escapement goals. Then, by examining the differences in allowable catches at each escapement level, some idea of annual harvest loss resulting from underescapement can be generated.

While average R/S production rates will vary over different escapement levels, a relatively constant rate would be expected over the range of escapements corresponding to the ascending portion of a R/S curve between low and current escapement goals.



Selection of an appropriate average R/S ratio must be inferred at this time. Existence of substantial and fluctuating ocean fisheries makes a definitive determination impossible. Experience with other species, not substantially harvested in ocean areas, indicates an adult R/S ratio of 4 or 5 adults per spawner is reasonable. Additionally, some natural chinook river return information is available from Washington river systems (Table 1).

Table 1. River return per spawner ratios for some Washington and Columbia River natural chinook salmon runs.

Brood Year	River Return Per Spawner					
	Quillayute <sup>1/</sup>	Hoh <sup>1/</sup>		Queets <sup>1/</sup>		Columbia River <sup>2/</sup>
	Fall	Spring-Summer	Fall	Spring-Summer	Fall	Brights
1961						4.7
1962						1.4
1963						6.4
1964						1.9
1965						4.0
1966						2.3
1967					2.3	3.5
1968	1.7	2.2	6.0	2.0	1.9	2.2
1969	2.4	0.7	1.7	1.5	1.7	1.8
1970	3.5	1.0	1.5	0.9	1.0	4.1
1971	1.8	1.0	1.7	0.7	1.7	1.8
1972	1.7	1.0	3.7	1.0	1.6	2.3
1973	1.3	3.3	0.9	2.0	1.0	2.5
1974	1.9	2.8	3.3	3.4	3.0	3.1
1975	3.8	2.6	3.5	2.1	2.6	3.8
1976						1.4 <sup>3/</sup>
Mean	2.3	1.8	2.8	1.7	1.9	3.0

<sup>1/</sup> Quinault tribe analysis.

<sup>2/</sup> Washington Department of Fisheries data base.

<sup>3/</sup> Preliminary.

Experience with chinook coded-wire tag experiments indicates that ocean harvest rates of approximately 66% (WDF March, 1981 report to the NPFMC) are not unreasonable. Thus, 2-3 R/S to the river represents approximately 1/3 of the total production. River R/S ratios can be expanded by another 66% to infer that overall R/S ratios might currently lie within the range of 6-9 fish per spawner in cases where there is substantial immature harvest in the ocean. A high R/S ratio such as this may represent overfishing and therefore, sustainable ratios would be lower.

For our purposes we have chosen to evaluate benefits to be derived from achieving escapement goals at R/S ratios of 4:1 and 5:1 (Table 2). These are in accord with experiences with other species, observed Washington river returns (even with high ocean harvests) and considering coded-wire tag results. The lower ratio would be conservative and the higher one would reflect, in a very approximate fashion, affects of immature harvests in the ocean.

It appears that an approximate 1.3 to 1.7 million fish harvest opportunity is being lost each year due to current underescapements of chinook salmon from the Columbia River to Cape Suckling, Alaska.

#### MANAGEMENT NEEDS

A general consensus was reached that, due to the severe conservation challenge confronting us with natural stocks significant catch reductions in ocean fisheries will be required to even halt the decline in chinook spawning escapements, much less begin the rebuilding process. These management measures will be needed throughout the oceanic range of these depressed stocks. The management principles of:

- a) providing first for spawning escapement needs,



b) equitable distribution of the conservation measures across all users, and

c) extending restrictive management measures outside of terminal areas would ensure rebuilding and eventual resource health as well as a fair distribution of the conservation-management burden.

Table 2. Annual benefits to be derived from achieving current chinook salmon escapement goals from the Columbia River to Southeast Alaska (number of fish x 1,000).

Production Unit <sup>1</sup>	Base Period	3:1 C/S <sup>2</sup>			4:1 C/S <sup>2</sup>		
		Base Period	Catch at:		Base Period	Catch at:	
			Goal	Change from base		Goal	Change from base
Southeast Alaska <sup>3</sup>	77-80	90	219	129	120	292	172
British Columbia							
Northern	1981	340	584	244	453	778	325
Southern	1981	68	165	97	90	220	130
Georgia St.	1981	186	417	231	248	556	308
Fraser	1981	210	465	255	280	620	340
B.C. Subtotal		804	1,631	827	1,071	2,174	1,103
Washington Coastal <sup>4</sup>	1981	97	131	35	129	175	46
Columbia River <sup>5</sup>	1981	371	653	282	495	871	376
Oregon Coastal <sup>6</sup>		-	-	-	-	-	-
Washington/Oregon Subtotals		468	784	317	624	1,046	422
Total		1,362	2,634	1,273	1,815	3,512	1,697

<sup>1</sup> Production unit (spawner base) not harvest area.

<sup>2</sup> C/S = catch/spawner = R/S - 1

<sup>3</sup> Source: Proposed Management Plan for Southeast Alaska Chinook Salmon Runs in 1981. ADF&G. January, 1981. An average counting rate for aerial peak escapement surveys of 62.5% is assumed.

<sup>4</sup> 1981 data preliminary; calculations for natural stocks omitted for areas managed for hatchery stocks; calculations omitted for areas with unidentified escapement goals; WDF goals used where differences of opinion between the state and tribes exist; Quinault River data omitted because data were not available; 1981 Grays Harbor spring chinook escapement estimate not available, therefore, used 1980.

<sup>5</sup> 1981 data preliminary; calculations for natural stocks omitted for areas managed for hatchery stocks; calculations omitted for areas with unidentified escapement goals; for upriver stocks optimum production benefits assume resolution of both overfishing and environmental problems.

<sup>6</sup> Escapement goals not presently available, therefore, Oregon coastal stocks omitted.

APPENDIX I

List of Participants

Name	Affiliation	Address
Mike Fraidenburg	Washington Department of Fisheries	115 General Admin. Bldg. Olympia, WA 98504
A. Dennis Austin	Washington Department of Fisheries	115 General Admin. Bldg. Olympia, WA 98504
Wayne Bowers	Oregon Dept. of Fish & Wildlife	17330 S.E. Evelyn St. Clackamas, OR
Bob Garrison	Oregon Dept. of Fish & Wildlife	303 Ext. Hall, OSU, Corvallis, OR
George Utermohle	Alaska Dept. of Fish & Game	Box 3-2000 Juneau, AK 99802
Mel Seibel	Alaska Dept. of Fish & Game	230 South Franklin Juneau, AK 99801
Ralph S. Boomer	U.S. Fish & Wildlife	2625 Parkmont Ln. Olympia, WA 98502
Terry E. Wright	N.W. Indian Fish. Comm.	2625 Parkmont Lane Olympia, WA 98502
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Bill Robinson	NMFS, Juneau	P.O. Box 1668 Juneau, AK 99802
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Walt Ambrogett	U.S. Fish & Wildlife Service	9317 Highway 99, Suite I Vancouver, WA 98665
Tim W. Roth	U.S. Fish & Wildlife Service	9317 Highway 99, Suite I Vancouver, WA 98665

Name	Affiliation	Address
Ken Henry	National Marine Fisheries Service	2725 Montlake Blvd. East Seattle, WA 98112
Kurt Reidinger	Washington Dept. Fisheries	115 Gen. Admin. Bldg. Olympia, WA 98504
Phil Roger	Col. R. Intertribal Fish Comm.	Suite 320, 8383 NE Sandy Blvd. Portland, OR 97220
Duane Phinney	Washington Dept. of Fisheries	115 Gen. Admin. Bldg. Olympia, WA 98504

APPENDIX II

Detailed Technical Material Presented

## Oregon Coastal Chinook Stocks

Oregon coastal chinook stocks primarily contribute to the ocean fisheries off Oregon, Washington, British Columbia and Southeastern Alaska. Portions of some runs are also harvested off northern California.

### Oregon Coastal Fall Chinook

These stocks remain in a generally favorable status showing recent upward trends in spawning escapement. Preliminary spawning survey counts for 1981 indicate a continuing stable trend in these stocks even though hatchery returns at this time are less than adequate for fall chinook at many coastal stations.

Elk River fall chinook contribute to Alaskan fisheries in small numbers (2-22% of mark recoveries have occurred in Alaskan fisheries).

Trask River fall chinook contribute substantial numbers to the Alaskan catch (28 to 44% of marks recovered were from Alaskan fisheries).

Observed 1980 catches of 1976-brood Salmon River fall chinook also suggest a substantial catch in Alaskan and British Columbian waters.

Groups of 1977 or 78 brood Nestucca, Salmon, Yaquina, Alsea, Siuslaw, Coos, Rogue, Elk and Chetco fall chinook stocks are tagged and were recovered in the ocean fisheries during 1981.

### Oregon Coastal Spring Chinook

Oregon coastal spring chinook contribute low numbers to the Alaskan catch. Generally less than 3% of the Umpqua and 1% of the Rogue spring chinook marks reported have been from Alaska.

## Columbia River Chinook Stocks

Columbia River chinook are the predominate chinook stocks found north of Cape Falcon.

### Upriver Spring - Summer Chinook

Upriver stocks of spring and summer chinook remain in a depressed state. Runs of both stocks were at record low levels in 1979, 1980, and 1981.

### Lower River Spring Chinook

The major lower river Oregon run of spring chinook originates in the Willamette river system. From 6 to 35% of the total Willamette spring chinook marks reported caught in the ocean fisheries from various marked groups were recovered in Alaska.

Brood Year	Species	Stock	Release Location	Mark or CWT #	Release			Est. % Recovered Through 1978 Catch				
					Date	Size #/lb	Number	AK	BC	Wasn.	Ore. Col.	Calif
<u>Oregon Coast</u>												
70	CHF	Trask	Trask	PK-YW	11-15-71	9.0	51,385	42	46	12	0	0
70	CHF	Trask	Big. Cr.	PK-Rd	11-15-71	7.3	51,800	43	44	13	0	0
71	CHF	Trask	Big Cr.	PK-Bu	11-20-72	6.1	42,325	30	60	10	0	0
73	CHF	Trask	Trask	7-10-10	11-1-74	8.4	36,519	24	59	17	0	0
73	CHF	Trask	Alsea	7-10-11	10-31-74	11.6	38,533	23	61	12	4	0
74	CHF	Trask	Trask	7-11-13	10-22-75	10.1	38,232	44	48	8	0	0
74	CHF	Trask	Alsea	7-11-14	10-21-75	9.8	25,578	38	41	13	8	0
71	CHF	Elk	Elk	D-LP	11-3-72	6.6	105,397	2	26	24	43	5
73	CHF	Elk	Elk	7-10-13	11-1-74	10.0	39,660	3	38	16	41	1
73	CHF	Elk	Alsea	7-10-12	10-31-74	9.9	38,030	9	59	15	17	0
73	CHF	Elk	Wright Cr.	7-10-14	4-23-75	7.1	13,000	14	33	28	25	0
74	CHF	Elk	Elk	7-10-15	10-20-75	10.9	24,541	7	28	13	52	0
74	CHF	Elk	Elk	7-12-9	10-20-75	11.5	35,825	12	35	5	48	0
74	CHF	Elk	Alsea	7-11-15	10-21-75	10.1	32,538	22	49	22	7	0
74	CHF	Elk	Coos	7-11-9	10-21-75	11.2	26,307	8	65	8	19	0
71	CHS	Umpqua	Umpqua	Ad-LV-RV	3-1-73	5.0	69,022	3	5	29	41	22
<u>Willamette System</u>												
70	CHS	Eagle Cr.	Eagle Cr.	PK-GN	5-10-72	7.0	25,303	49	12	39	0	0
71	CHS	Clackamas	Clackamas	D-LV-RV	5- -73	10"	99,803	7	19	33	41	0
70	CHS	Santiam	Santiam	D-LP	11-17-71	7.2	20,781	6	12	82	0	0
70	CHS	Willamette	Willamette	D-RP	4- -72	8.0	120,317	9	50	18	23	0
70	CHS	Willamette	Willamette	D-LV	4- -72	----	286,258	35	32	30	3	0
71	CHS	Willamette	Willamette	D-LV	3- -73	----	101,858	12	51	25	9	3
71	CHS	Willamette	Willamette	D-RV	3- -73	5.9	290,045	13	63	15	9	0



**WASHINGTON COASTAL STOCKS  
MAKING FAR NORTHERLY MIGRATIONS**

**Prepared by:**

**Salmon Harvest Management Division  
Washington State Department of Fisheries**

## INTRODUCTION

Commercial net and river sport fisheries historically occur in Willapa Bay, Grays Harbor and several north Washington coastal rivers. No treaty Indian fishig rights have been established in Willapa Bay, where only non-Indian sport and commercial net fisheries exist, but stocks originating from the region are subject to equal opportunity criteria when present in tribal, usual and accustomed fishing areas. The Willapa Bay salmon harvest is managed exclusively by the Washington Department of Fisheries (WDF).

A treaty Indian net fishery occurs in Grays Harbor along with non-Indian commercial net and recreational fisheries based upon conservation and U.S. District Court sharing principles. In addition an on-reservation Indian net fishery operates on the Chehalis River (Grays Harbor tributary).

The north Washington coastal net fisheries are currently treaty Indian fisheries. Non-Indian recreational fisheries occur on most river systems. Management of salmon harvest in Grays Harbor and north Washington coastal rivers is shared by WDF and tribal governments, depending upon the specific fishery, participating fishermen, and location. Proposals on fishery schedules, allowable harvest, and escapement needs are presented to the U.S. District Courts Fishery Advisory Board (FAB) and agreed to by all parties, wherever possible, prior to commencement of each fishery.

The catch statistics presented here are necessarily preliminary. In some cases, the fisheries were ongoing at the time of compilation of the statistics and may change significantly by seasons end. Historical catch figures reflect WDF catch records for these fisheries. Where possible, these statistics have been reconciled with tribal records.

### Stock Status

Willapa Bay - The summer season for sturgeon and non-local chinook started July 6 and continued through August 20. A total of 4,600 chinook were taken during this period.

Fishing for local salmon stocks began August 24 and continued through November 30. Preliminary catches for this local season are 12,250 chinook. Catches for 1971-1981 are shown in Table 1. Catch of local chinook was 32% above the 1971-1975 average and similar to 1979 and 1980.

Grays Harbor - The early season gillnet fishery for sturgeon and non-local chinook began July 6 and continued through August 14 for non-Indian fishermen and until August 26 for treaty Indian fishermen. A total catch of 1,450 chinook by non-Indian fishermen and 150 chinook by treaty Indian fishermen was made during this time period.

Preseason predictions indicated no harvestable local chinook would be available in 1981 so no directed fisheries on local chinook stocks were allowed. A total of 4,100 chinook (Table 2) were taken incidental to coho and chum fisheries. Total tribal catches were 3,500 chinook, non-Indian catches totalled 600 chinook.

Sport fishing in Grays Harbor and its tributaries was severely restricted in 1981. With the exception of later season openings in the Humptulips and Satsop Rivers designed to harvest extra hatchery fish, all other sport fishing was limited to fish less than 24" total length to meet allocation and conservation concerns.

Chehalis River (Grays Harbor Tributary) - An Indian gillnet fishery is conducted by the Chehalis Tribe on their reservation near Oakville on the Chehalis River. Spring/summer chinook fishing was severely restricted in 1981 to improve declining escapements, although catch of this run was similar to 1980. Catches of fall chinook will likely be below average (Table 3).

#### Quinault

Spring/summer stocks - Quinault spring summer/chinook are managed to achieve natural escapement goals. The Quinault tribe has established an escapement goal of 850 for spring/summer chinook.

The tribe has identified July as the primary spring/summer chinook management period. The fishery operated five days per week during this period. Season catch was 148 chinook. Escapement for this stock in 1981 is unknown.

Fall stocks - Quinault fall chinook are managed on the basis of hatchery production, while providing adequate natural escapement to utilize the natural rearing environment. The fall fishery yielded a season catch of 5,462 chinook.

#### Queets River

Spring/summer stocks - The spring/summer chinook stocks are managed for natural production. A three day per week evaluation fishery commenced June 1, continuing for three days per week for four weeks. The in-season estimator showed a run size of 1,343. A dispute between the State and the tribe about the appropriate escapement goal for this stock resulted in a ruling by the FAB chairman for an escapement goal of 1,050 for 1981. The tribe harvested the balance of the catch in brief fisheries during July and August. Final season catch was 299.

Fall stocks - Queets fall chinook are managed for natural production. The tribe operated a fall stock fishery for five days per week beginning September 1. The five days per week evaluation fishery commenced on September 28 and continued for two weeks. The in-season estimators showed a strong chinook run and a poorer than expected coho run. The tribe conducted brief fisheries in October with large mesh gear, targeting on chinook. Small numbers of coho and chum were also taken. The season catch was 4,398 chinook, 3,951 coho, and 151 chum.

#### Hoh

Spring/summer stocks - Hoh spring/summer chinook are managed for natural production. The tribe initiated a three day per week evaluation

fishery on June 1 continuing through June. This fishery yielded an estimated run size of 1,919. The disputed escapement goal was resolved by a ruling from the FAB chairman, who set the 1981 goal at 1,500. The additional chinook made available for harvest by this decision were taken in three weeks of fishing time during July. Final season catch was 428.

Fall stocks - The fall chinook and coho fishing season commenced on September 1, ranging from three to five days per week through September 25. The major objective of this fishery was to harvest hatchery coho, which have a somewhat earlier run timing than natural coho.

The evaluation fishery commenced September 28 for two weeks. The in-season estimator showed run sizes of 2,200 chinook.

### Quillayute

Spring/summer stocks - Spring/summer chinook are managed for natural production in this river. The spring chinook fishery commenced May 3 and continued through June at 5 days per week. Because of an expected poor run size of summer chinook the fishery was reduced from five to 2-4 days per week during July and early August. The tribe commenced a fishery targeted on coho on August 9. For the season 962 spring/summer chinook were taken. Soleduck hatchery achieved 76% of its broodstock requirements for spring/summer chinook.

Fall stocks - The management season for fall chinook began September 1. The fall coho management period began September 20. Chinook were taken along with summer coho in a five day per week fishery through September 18. A three day fishery was conducted during the week of September 20.

The evaluation fishery began on September 28. In-season run size estimates were 16,000 coho and nearly 5,000 chinook. The fishery closed on October 12 because of the need to protect fall chinook. A subsequent fishery scheduled for September 18-21 was terminated due to excessive chinook catches. Season catch was 1,282 fall chinook.

### Evaluation of 1981 Management

Willapa Bay - Willapa chinook are managed based on hatchery run strength. Escapements, even with additional restrictions in 1981, will not meet the needs of the hatchery program. Terminal run size information for 1973-1980 is presented in Table 4.

Grays Harbor - Grays Harbor chinook are managed based on natural run strength. It does not appear that the escapement goal will be met, nor will hatchery requirements for eggs take needs. Terminal run size information for 1973-1980 is presented in Table 5.

North Washington Coast - Natural spring/summer chinook and fall chinook have shown encouraging upward trends in terminal run size in recent years. This trend is primarily a response to increased escapements, commencing with the 1977 brood. Reductions in marine fisheries have also contributed. The escapement goal of

1,500 for spring chinook in the Hoh was achieved, while escapement in the Queets was at the 1981 goal of 1,050. However, it should be stated that these were interim goals set by FAB ruling. Preliminary in-season estimates of fall chinook escapement indicated that the goals would not be achieved in the three systems managed for natural fall chinook production. However, it is expected that post-season escapement estimates will be above the preliminary figures. The Quinault is managed for hatchery production and estimates of natural escapement are not available. Historical terminal run size information is presented in Tables 6-8.

#### 1982 Washington Coastal Chinook Outlook

Willapa Bay - Hatchery releases of 1978 brood chinook, which will make up the bulk of the 1982 return to Willapa Bay, were 3.23 million, down from the 4.32 million 1977 brood releases though still above the recent 5-year average. The 1979 brood releases, which will contribute as 3-year-olds in 1982, were 3.4 million. Based on these releases, the 1982 run is not expected to be as good as 1981.

Grays Harbor - The 1982 chinook returns to Grays Harbor will result primarily from the wild escapements in 1978 and 1979. Both these years were well below the desired escapement level, though the 1979 escapement was the best since 1979 which may provide some optimism. Based on this, an improved natural run of chinook is expected in 1982, but it will still not be sufficient to provide a directed chinook fishery. Hatchery returns will likely continue to provide no substantial harvest, as they will be needed to develop hatchery brood stock programs.

#### North Coast

Chinook - Natural chinook stocks on the north coast are expected to return to the terminal areas in above-average strength for 1982, as indicated by juvenile abundance indices. Returns of hatchery chinook should be comparable to 1981 returns.

Table 1. Willapa Bay chinook catches in numbers of fish by gill net gear, 1971-1980.

Year	Early season <sup>a/</sup>	Regular fall season
1971	2,059	7,830
1972	2,376	8,562
1973	27,857	12,586
1974	4,997	8,727
1975 <sup>b/</sup>	6,791	8,620
1971-75 average	8,816	9,265
1976 <sup>b/</sup>	15,678	13,340
1977 <sup>b/</sup>	21,934	9,420
1978	3,781	7,599
1979 <sup>c/</sup>	5,482	12,696
1980 <sup>c/</sup>	11,850	12,900
1981 <sup>c/</sup>	4,600	12,250

<sup>a/</sup> Prior to August 26.

<sup>b/</sup> Includes Indian catches although no treaty rights have been adjudicated in this area.

<sup>c/</sup> Preliminary (subject to change).

Table 2. Grays Harbor treaty Indian and non-Indian commercial chinook catches in number of fish by gill net gear, 1971-1981.

Year	Early season <sup>a/</sup>	Fall Season		
		Non-Indian	Indian	Total
1971	449	8,880	-	8,880
1972	440	10,113	-	10,113
1973	6,054	10,476	-	10,476
1974	1,735	7,941	70	8,011
1975	401	7,013	1,294	8,307
1971-75 average	1,816	8,885	-	9,157
1976	5,280	2,874	3,086	5,960
1977	13,536	1,840	4,006	5,846
1978	901	703	2,674	3,377
1979 <sup>b/</sup>	881	0	95	95
1980 <sup>b/</sup>	1,550	3,508	5,652	9,160
1981 <sup>b/</sup>	1,600 <sup>c/</sup>	600	3,500	4,100

<sup>a/</sup> Prior to August 16.

<sup>b/</sup> Preliminary (subject to change).

<sup>c/</sup> Includes 1,450 non-treaty and 150 treaty chinook.

Table 3. Chehalis Indian Reservation catch, 1971-1981.

Year	Spring chinook	Fall chinook
1971	609	487
1972	855	1,652
1973	799	2,236
1974	275	511
1975	149	578
1971-75 average	537	1,093
1976	388	386
1977	864	1,317
1978	616	1,069
1979 <sup>a/</sup>	764	1,413
1980 <sup>a/</sup>	301	1,229
1981 <sup>b/</sup>	250	650

<sup>a/</sup> Preliminary.

<sup>b/</sup> Through November 22, 1981.



Table 4. Estimated terminal run size, catch, and escapement for Willapa Bay chinook, 1973-1980.

Year	Catch		Escapement		Total
	Gill net	River sport <sup>a/</sup>	Natural	Hatchery	
1973	12,600	N.A. <sup>b/</sup>	2,500	5,500	20,600
1974	8,700	300	2,700	5,400	17,100
1975	8,600	200	800	4,000	13,600
1976	13,300	300	3,400	2,900	19,900
1977	9,400	500	3,000	5,800	18,700
1978	7,600	600	6,700	3,700	18,600
1979	12,700	N.A. <sup>b/</sup>	5,000	3,900	21,600
1980	12,900	300	4,900	4,100	22,200

<sup>a/</sup> Adult fish only; no jacks included.

<sup>b/</sup> Sport catch data in 1973 and 1979 cannot be separated by species and area. Total run size estimates for these 2 years are minimum values.

Table 5. Estimated terminal run size, catch, and escapement for Grays Harbor chinook, 1973-1980.

Stock	Year	Catch		Escapement		Total
		Gill net	River sport <sup>a/</sup>	Natural	Hatchery	
Fall	1973	12,700	N.A. <sup>b/</sup>	7,200	0	19,900
	1974	8,500	1,100	4,200	0	13,800
	1975	8,900	700	4,300	0	13,900
	1976	6,300	800	1,800	0	8,900
	1977	7,200	1,000	5,200	200	13,600
	1978	4,400	2,000	4,600	200	11,200
	1979	1,500	N.A. <sup>b/</sup>	9,400	100	11,000
	1980	10,300	800	11,700	1,100	23,900
Spring	1973	800	0 <sup>c/</sup>	250		1,050
	1974	300	0	350		650
	1975	150	0	450		600
	1976	400	0	650		1,050
	1977	850	0	850		1,700
	1978	600	0	1,050		1,650
	1979	750	0	350		1,100
	1980	300	0	250		550

<sup>a/</sup> Adults only; jacks not included.

<sup>b/</sup> Sport catch data in 1973 and 1979 cannot be separated by species and area. Total run size estimates for these 2 years are minimum values.

<sup>c/</sup> Less than 50 fish per year.

Table 6. Estimated in-river run size, catch, and escapement of Queets River chinook stocks, 1973-1981.

Stock	Year	Catch <sup>a/</sup>			Escapement		Terminal run size		
		Gill net	Ceremonial and subsistence	River sport <sup>b/</sup>	Natural	Hatchery	Natural	Hatchery	Total
Spring/summer	1973	459	NA	80	NA	-	NA	-	NA
	1974	381	NA	82	NA	-	NA	-	NA
	1975	345	NA	122	NA	-	NA	-	NA
	1976	148	NA	144	NA	-	NA	-	NA
	1977	364	NA	151	732	-	1,247	-	1,247
	1978	229	NA	85	1,110	-	1,424	-	1,424
	1979	479	31	150	989	-	1,649	-	1,649
	1980	108	9	149	1,138	-	1,404	-	1,404
	1981 <sup>c/</sup>	299	NA	75	969	-	1,343	-	1,343
Fall	1973	3,629	NA	88	3,541	-	7,258	-	7,258
	1974	3,063	NA	109	1,540	-	4,712	-	4,712
	1975	2,052	NA	115	2,393	-	4,560	-	4,560
	1976	1,274	NA	107	1,167	-	2,548	-	2,548
	1977	1,935	NA	128	3,422	-	5,485	-	5,485
	1978	901	NA	135	2,063	-	3,099	-	3,099
	1979	860	113	160	5,653	-	6,786	-	6,786
	1980	2,621	NA	100	3,841	-	6,562	-	6,562
	1981 <sup>c/</sup>	3,797	NA	300	4,179	-	8,276	-	8,276

<sup>a/</sup> Gill net and ceremonial/subsistence catch from tribal records.

<sup>b/</sup> Predominantly jacks.

<sup>c/</sup> Preliminary.

Table 7. Estimated in-river run size, catch, and escapement of Hoh River chinook stocks, 1973-1981.

Stock	Year	Catch <sup>a/</sup>			Escapement		Terminal run size		
		Gill net	Ceremonial and subsistence	River sport <sup>b/</sup>	Natural	Hatchery	Natural	Hatchery	Total
Spring/summer	1973	717	50	371	NA	-	NA	-	NA
	1974	623	50	261	NA	-	NA	-	NA
	1975	495	75	522	546	-	1,638	-	1,638
	1976	484	50	229	621	-	1,384	-	1,384
	1977	871	30	118	1,015	-	2,034	-	2,034
	1978	937	90	111	1,351	-	2,489	-	2,489
	1979	653	115	264	1,442	-	2,474	-	2,474
	1980	115	44	154	842	-	1,155	-	1,155
	1981 <sup>c/</sup>	386	42	200	1,520	-	2,086	62	2,148
Fall	1973	2,187	75	226	1,966	-	4,454	-	4,454
	1974	820	75	208	563	-	1,666	-	1,666
	1975	677	150	267	400	-	1,494	-	1,494
	1976	483	25	215	469	-	1,192	-	1,192
	1977	1,619	30	193	-1,191	-	3,033	-	3,033
	1978	788	55	111	797	-	1,751	-	1,751
	1979	445	35	313	1,750	-	2,543	-	2,543
	1980	481	35	382	2,127	-	3,025	-	3,025
	1981 <sup>c/</sup>	801	40	150	2,000	-	2,991	-	2,991

<sup>a/</sup> Gill net catches and ceremonial/subsistence catch from tribal records.

<sup>b/</sup> Predominantly jacks.

<sup>c/</sup> Preliminary.

Table 8. Estimated in-river run size, catch, and escapement of Quillayute River stocks, 1973-1981.

Stock	Year	Catch			Escapement		Terminal run size		Total
		Gill net	Ceremonial and subsistence	River sport <sup>a/</sup>	Natural <sup>b/</sup>	Hatchery	Natural	Hatchery <sup>c/</sup>	
Spring/summer	1973	292	NA	1,465	NA	20	NA	NA	NA
	1974	117	NA	375	NA	-	NA	NA	NA
	1975	2,256	35	900	1,064	1,420	1,013	4,662	5,675
	1976	2,513	40	1,523	1,120	1,767	2,491	4,472	6,963
	1977	2,595	40	590	2,492	926	1,213	5,430	6,643
	1978	3,201	50	340	2,195	666	3,244	3,208	6,452
	1979	2,473	40	238	1,958	228	3,908	1,029	4,937
	1980	1,000	15	154	948	448	1,742	823	2,565
	1981 <sup>d/</sup>	965	10	100	830	305	1,668	542	2,210
Fall	1973	5,035	NA	346	4,690	-	10,071	-	10,071
	1974	3,849	NA	259	2,307	-	6,415	-	6,415
	1975	2,290	25	707	2,072	20	4,565	549	5,114
	1976	2,246	20	643	2,083	19	4,598	413	5,011
	1977	5,297	50	316	2,973	242	7,260	1,618	8,878
	1978	1,357	15	506	4,607	251	6,385	351	6,736
	1979	2,610	25	353	4,610	81	7,459	245	7,704
	1980	1,415	22	472	6,631	41	7,842	739	8,581
	1981 <sup>d/</sup>	1,295	20	227	5,200	118	6,467	393	6,860

<sup>a/</sup> Predominantly jacks.

<sup>b/</sup> Includes hatchery strays.

<sup>c/</sup> Excludes hatchery strays.

<sup>d/</sup> Preliminary.

COLUMBIA RIVER STOCKS

prepared by:

Columbia River Technical Advisory Committee

December 14, 1981

INSIDE FISHERIES

Columbia River

(Oregon and Wash)

Restrictive regulations placed upon the in-river recreational and commercial fisheries in 1981 essentially eliminated any non-treaty targeted harvest of chinook salmon originating above Bonneville Dam due to need to protect spawning escapement and provide for allocation as set forth in the "Management Plan" adopted by the U.S. District Court in February, 1977.

The most restrictive commercial season ever adopted for the treaty-Indian fishery also occurred in 1981. Although all in-river runs originating below Bonneville Dam were of sufficient size to allow harvest, the only upriver origin in-river run with harvestable numbers was the Bonneville Pool Hatchery origin fall chinook "Tule" stock.

For management purposes, the various Columbia River salmon runs are separated by seasons which reflect run timing through the standard treaty and non-treaty fishing zones, both above and below Bonneville Dam.

Table II-37 shows the current status of each of the major salmonid runs.

Table II-37. Estimate of runs into Columbia River of adult salmon and steelhead destined to migrate above Bonneville Dam (in thousands of fish), 1971-81.

Year	Spring Chinook	Summer Chinook	Socketeye <sup>a/</sup>	Fall Chinook	Coho <sup>b/</sup>	Steelhead
1971	146.5	66.3	150.5	244.8	76.0	224.6
1972	269.5	63.6	123.3	188.6	65.9	225.6
1973	223.8	35.3	61.3	249.3	54.6	187.8
1974	99.8	39.0	43.9	176.9	61.0	144.8

(cont.)

Table (cont.)

1975	97.9	33.0	58.2	311.6	58.3	84.1
1971-75						
Average	167.5	47.4	87.4	234.2	63.2	173.4
1976	63.9	43.8	43.7	260.4	51.9	122.4
1977	138.4	34.1	99.8	199.0	19.4	196.1
1978 <sup>c/</sup>	127.0	39.7	18.4	183.8	52.6	105.0
1979 <sup>c/</sup>	48.6	27.7	52.6	172.4	45.3	114.2
1980 <sup>c/</sup>	61.0	27.0	59.4	174.9 <sup>d/</sup>	21.7	129.8
1981 <sup>c/</sup>	65.0	27.0	56.0	158.0 <sup>d/</sup>	29.5	159.0

<sup>a/</sup> Includes adult and jack salmon.

<sup>b/</sup> Bonneville Dam count only.

<sup>c/</sup> Preliminary.

<sup>d/</sup> Includes Bonneville Dam count and estimated catches of upriver fish in September fisheries below Bonneville based on mark recoveries for 1980 and 1981 only.

Winter Season (Jan-March). The "Management Plan" does not set forth that catch sharing will occur during the "winter season". This is essentially due to the fact that the lower river fishery is designed to primarily harvest the early arriving segments of spring chinook salmon destined for several lower river tributaries, with Willamette River fish predominating. The 1981 lower river commercial "winter" season was not as short as the record 1980 1-day season but was significantly below the more than 12-day average season allowed through the early 1970's. In 1981, 6 days were allowed downstream of the mouth of the Willamette River during which 7,300 spring chinook were caught. The 1981 Treaty Indian "winter" season was from Feb. 1 to April 1. Unlike 1980, a treaty Indian commercial fishery above Bonneville Dam was allowed during the last two weeks of March, catching 1,500 spring chinook. The lower river sport harvest through March was an estimated 3,700 fish, essentially of lower river stock origin. Table II-38 denotes 1971-1981 "winter" season catches of spring chinook during Feb-March below Bonneville Dam.



Table II-38. Columbia River winter season chinook landings (in thousands), 1971-81. Zone 1-5 only.<sup>b/</sup>

Year	Commercial		Sport
	Numbers	Pounds	Numbers
1971	13.4	278.0	6.5
1972	15.8	331.0	0.2
1973	17.2	337.5	7.4
1974	13.3	277.0	2.2
1975	9.1	184.8	2.3
1971-75 Average	13.8	281.7	3.7
1976	4.7	96.1	3.2
1977	6.8	132.5	3.1
1978 <sup>a/</sup>	13.5	264.7	5.0
1979 <sup>a/</sup>	5.5	111.8	1.7
1980 <sup>a/</sup>	0.4	7.6	0.8
1981 <sup>a/</sup>	7.3	141.4	3.7

<sup>a/</sup> Preliminary.

<sup>b/</sup> A portion of catches shown for Non-Treaty fishery are of upriver origin.

Spring Season (April-May). The 1981 upriver spring chinook run to the Columbia River showed some improvement over the near record low return experienced in 1980 although it was still significantly below the escapement objective as defined in the "Management Plan". The run was not of sufficient size to allow a targeted harvest by treaty Indian or non-treaty fishermen.

Both commercial and recreational seasons were eliminated during April & May. In addition, significant steelhead sport fisheries in the mainstem Columbia River were also curtailed due to the impact from the incidental catch and handling of spring chinook which would unavoidably occur.

Although no Spring Season harvests as such occurred in 1981, Table II-39 denotes historical harvests since 1971 for reference purposes. Included within this table are the Feb.- May above Bonneville Dam treaty Indian commercial catches and April-May below Bonneville Dam commercial

catches. As set forth in the "Management Plan" the ceremonial & subsistence catches by Treaty Indians was limited to a maximum of 2000 fish due to low run size. Table II-39 does not include ceremonial & subsistence catches.

Table II-39. Columbia River upriver spring chinook landings (in thousands), 1971-81.<sup>b/</sup>

Year	Non-Treaty			Treaty	
	Commercial		Sport	Commercial	
	Numbers	Pounds	Numbers	Numbers	Pounds
1971	22.6	363.3	19.9	12.7	162.5
1972	69.9	1,076.5	24.4	42.8	637.9
1973	60.5	928.5	30.3	34.2	533.9
1974	8.4	135.1	14.0	17.5	270.8
1975	0	0	0	0	0
1971-75 Average	32.3	500.7	17.7	21.4	321.0
1976	0	0	0	0.4	7.2
1977	9.3	123.8	14.8	17.2	234.6
1978 <sup>a/</sup>	0	0	0.1	2.6	55.4
1979 <sup>a/</sup>	0	0	0	0.5	10.8
1980 <sup>a/</sup>	0	0	0	0	0
1981 <sup>a/</sup>	0	0	0	1.5	22.3

<sup>a/</sup> Preliminary.

<sup>b/</sup> A portion of catches shown for Non-Treaty fishery are of lower river origin. Table also does not include portion of upriver origin spring chinook caught during lower river Winter Season.

Summer Season (June-July). No recreational fisheries or treaty and non-treaty commercial net fisheries were allowed to target on summer migrating salmon runs, either chinook or sockeye in 1981. In accordance with the "Management Plan" the treaty Indian ceremonial & subsistence catches were limited to 2000 chinook & 2000 sockeye salmon. The 1981 summer chinook run was 27,000 adults (Table II-37). The 1981 sockeye run was 56,000 fish (Table (II-37)).

Fall Chinook Seasons Above and Below Bonneville. The upriver adult fall chinook run totaled approximately 158,000 adult fish (205,500 including jacks) in 1981. This was near the preseason forecast of 163,500 adult fish entering the river and one of the smallest runs ever recorded. With only lower river incidental catches and passage losses at Bonneville Dam, it was projected that the run entering the upriver fishery would be 150,000 adult fish. The upriver bright component of this upriver fall chinook run was a new record low 63,900 adult fish (1980 previous record) and only slightly above the preseason forecast of 63,500 adult fish at the river mouth.

The new data base established for in-river fall chinook management in 1980 was again used successfully in 1981. This new data base reflected revised stock timing data made available from recent micro-tagging experiments, ability to differentiate the Bonneville passage count into the two major run components and the ability to estimate harvest by stock of origin, again through use of micro-tag data obtained from the fishery. As occurred in 1980, the objectives of the 1981 fall chinook management was to achieve the 40,000 adult escapement goal over McNary Dam by maximizing harvest opportunity for Bonneville Pool Hatchery origin fall chinook "Tule" stocks while minimizing harvest of upriver origin fall chinook "bright" stocks. It was also the objective of in-river management to reduce as much as possible the share deficit owed the treaty tribes while minimizing impact on the depressed upriver "bright" run component.

Table II-40. Columbia River commercial catch of upriver origin fall chinook (in thousands, including jacks), 1971-81.

Year	Non-treaty		Treaty	
	Numbers	Pounds	Numbers	Pounds
1971	93.8	2,044.7	56.5	953.6
1972	96.3	2,177.5	42.9	634.5
1973	105.4	2,350.9	67.9	1,148.3
1974	52.2	1,225.6	54.9	980.1
1975	95.9	2,257.8	140.6	2,665.6
1971-75 Average	88.7	2,011.3	72.6	1,276.4
1976	33.4	746.3	135.0	2,555.0
1977	69.2	1,509.6	55.2	941.8
1978	39.7	939.4	61.6	1,173.7
1979 <sup>a/</sup>	28.4	636.3	62.4	1,183.5
1980 <sup>a/</sup> <sup>b/</sup>	38.5	N/A	35.2	N/A
1981 <sup>a/</sup> <sup>b/</sup>	4.1	69.7	53.0	915.3

<sup>a/</sup> Preliminary.

<sup>b/</sup> Includes Bonneville Dam count and estimated catches of upriver fish in Sept.-Nov. fisheries below Bonneville Dam based upon mark recoveries for 1980 & 1981 only.

Controversy surrounded the establishment of the actual harvest deficit owed the treaty tribes going into the 1981 season as set forth by the "Management Plan". This controversy occurred due to questions of foregone harvest opportunity, straying of upriver origin salmon into lower river hatcheries and thus not destined to return to upriver harvest areas, and harvest estimates for subsistence catches. Regardless of this controversy, the upriver origin run was not of sufficient size to eliminate the deficit, however calculated, using traditional harvest methods or fishing areas due to the depressed status

of upriver bright run component. The harvest deficit owed the treaty tribes for fall chinook was ultimately declared by the U.S. District Court to be 25,300 adult fish prior to 1981 harvests. The long-term status of the share deficit is yet to be adjudicated.

Due to the anticipated and ultimate status of upriver "bright" fall chinook as well as the question of allocation deficit between treaty and non-treaty fisheries, no lower river mainstem Columbia River commercial fishery was allowed to target on fall chinook.

Like the question of harvest deficit, the treaty Indian season for the area above Bonneville Dam was set by U.S. District Court action due to inaction by the Columbia River Compact. A decision could not be reached by the Columbia River Compact since conservation could not be defined and applied to fisheries management. The joint Oregon/Washington technical staffs had indicated that the upriver "bright" run size was not of sufficient size to achieve the 40,000 escapement goal, due to anticipated large inter-dam losses, and also sustain a targeted harvest by the treaty Indian fishery. Thus, a fishery only in the Bonneville Pool area was recommended where harvest would target on hatchery origin fall chinook while reducing upriver "bright" harvest to an incidental level. If an incidental harvest was allowable, it was argued that a targeted harvest of similar magnitude could also occur and therefore, the closure of 2/3's of the treaty fishery area was not justified since a showing of "reasonable and necessary for conservation purposes" had not been

made. Such reasoning, obviously, would not allow for maximum harvest opportunity for hatchery origin fall chinook "Tule" run component. This conflict in management strategy was left unanswered by the Columbia River Compact, making U.S. District Court action necessary.

Although indicating the season was adopted without precedence for future season considerations, the season established by the U.S. District Court did allow a targeted harvest of upriver "bright" fall chinook despite the fact that the escapement goal was not to be achieved and seemed to place a higher priority on the treaty fishing location than the future status of the resource. With a mesh restriction imposed to minimize harvest of steelhead, the Court adopted season was noon September 1 to noon September 3 (2 days) in all 3 dam pools, noon September 7 to noon September 11 (4 days) in Bonneville Pool only and noon September 14 to noon September 16 (2 days), again in all three pools. The latter could be curtailed by tribal technical staff's option, if necessary (first 6 hours of this fishing period was eliminated by tribal action after first closing totally then reopening at 6 pm on September 14). Since it had been previously announced that the second fishing period in all three pool areas was being curtailed by tribal action and it was determined that excess returns of "Tule" stock fall chinook would occur at the Spring Creek Federal Hatchery in Bonneville Pool, the Columbia River Compact acted to allow 2 additional days of fishing time in a restricted area adjacent to the hatchery. Subsequent action to re-open the total treaty fishery by the treaty tribes meant that the Columbia River Compact action resulted in only 1 additional day being provided

Table II-41. Columbia River in-river harvest of individual fall chinook stocks (adults) in 1981<sup>a/</sup>.

Fishery	Upriver Bright	Bonneville	Upriver Total	Lower River	Total
		Pool Hatchery		Natural & Hatchery	
<u>Lower River (non-treaty)</u>					
<u>Tributary Terminal</u>					
Gillnet Fisheries	300	500	800	23,200	26,000
<u>Mainstem</u>					
Fall Coho Season	700	100	800	4,400	5,200
<u>Mainstem</u>					
Sport	350	0	350	650	1,000
<u>Total Lower</u>					
River Catch	1,350	2,600	3,950	28,250	32,200
<u>Upper River</u>					
<u>Treaty Indian</u>					
Above Bonneville	NA	NA	45,100	-0-	45,100
<u>Total River Catch</u>	--	--	49,000	28,300	77,300

<sup>a/</sup> Preliminary (as of December 14, 1981).

adjacent to Spring Creek Federal Hatchery. In summary, 3.75 days of fishing occurred in all three dam pools (5 days in 1980) with 4 additional days in Bonneville Pool only and 1 day in the restricted area adjacent to Spring Creek Federal Hatchery.

The Columbia River catch of upriver fall chinook is summarized in Table II-40. The fishery was managed based upon the strength of the two components of the upriver fall chinook run as well as the need to reduce, in as much as was possible, the sharing deficit owed the treaty tribes under the Columbia River Management Plan. This plan requires that a zero deficit be achieved after 5-years. This year was the fifth year of management under the Columbia River Management Plan. In summary, the only commercial harvest of fall chinook below Bonneville Dam occurred in select stock restricted terminal fishing areas and incidental to targeted coho harvests. Despite the almost total lower river harvest curtailment, the treaty-Indian fishing season was one of the most restrictive ever adopted and the catch was considerably below recent years average although above the catch made in 1980.

Escapement at McNary Dam was the smallest in recent two decades and a allocation deficit is still owed the treaty tribes. Table II-41 shows the in-river harvest by fall chinook stocks which occurred in 1981.



### Fall Coho Season

The Fall Coho Season is established in the region below Bonneville Dam to harvest hatchery origin stocks.

The total coho catch in 1981 was second only to the record low 1977 catch as being an all-time record low since the early 1960's. A total of 46,600 coho were caught during the fall coho season with an additional 9,700 coho caught in the lower river terminal fishing areas. Since a mainstem fall chinook fishery did not occur below Bonneville, no coho were caught during that traditional fishing period (Aug-early Sept.).

The lower river non-treaty commercial fall coho season opened on September 27, one day earlier than the record late opening date in 1980, and occurred as scheduled for a total of 25 fishing days, running through November 12 (2-four-day fishing periods followed by 3 3 day fishing periods and then 2 - 4 day fishing periods). The initial open area was restricted to below Longview/Rainier highway bridge to further minimize upriver fall chinook incidental harvest. After initial 2 days open fishing time, area was expanded upstream to Lady Island due to low level chinook harvests and potential to increase coho harvests. The fishing area was not expanded further during the duration of the season. A targeted coho harvest is not allowed in the treaty fishing area due to need to minimize incidental catches of upriver origin steelhead under terms of the "Management Plan". A maximum 7 inches mesh restriction was imposed throughout lower river fall coho season to provide further protection for chinook salmon (9 inches and greater mesh size was allowed for targeted sturgeon fishery). The only mainstem lower river commercial harvest of fall chinook occurred

incidental to a mainstem coho fishery as well as in the Youngs Bay and 5 Washington Terminal river fishery areas. Lower river fall chinook and coho catches are shown in Table II-42.

Table II-42. Columbia River commercial landings of lower river fall chinook and coho (in thousands), 1971-81.

Year	Chinook		Coho <sup>a/</sup>	
	Numbers	Pounds	Numbers	Pounds
1971	122.1	2,027.3	264.3	2,191.5
1972	43.4	715.4	131.3	1,177.5
1973	165.3	3,201.4	183.7	1,823.2
1974	44.7	748.5	261.0	2,391.0
1975	77.4	1,478.1	156.6	1,530.8
1971-75 Average	90.6	1,634.1	199.4	1,822.8
1976	114.9	2,174.2	168.4	1,298.4
1977	97.9	1,721.7	39.0	308.9
1978 <sup>b/</sup>	70.3	1,213.9	132.7	1,074.1
1979 <sup>b/</sup>	74.2	1,283.7	127.6	1,065.7
1980 <sup>b/</sup>	78.4 <sup>c/</sup>	NA	149.5	NA
1981	27.6 <sup>c/</sup>	NA	59.0	NA

<sup>a/</sup> Includes small number of August season landings, except in 1980 which includes terminal fishery catches.

<sup>b/</sup> Preliminary.

<sup>c/</sup> The chinook catch for 1980 & 1981 is an estimate of lower river stocks caught in all fisheries below Bonneville Dam, September-October.

### III Evaluation of 1981 Management

#### Introduction

#### Escapement

#### Columbia River Chinook

#### Upriver Spring Chinook

The upriver run of spring chinook destined for areas above Bonneville Dam was 62,800 adults, a slight improvement over the record low runs of 1979 & 1980 (Table III-9). The escapement of adults into the Snake River at Lower Granite Dam showed considerable improvement over the disaster 1979 and 1980 escapements but still less than 50% of the minimum 30,000 adult escapement goal as set forth in "Management Plan". The Priest Rapids Dam count of 14,500 adults, which measures upper Columbia River escapement above the confluence of the Yakima & Snake rivers also showed considerable improvement (11,000 1971-80 ave.). Although these stocks are known to contribute to the ocean fisheries and only minor inriver harvests has occurred in recent years, the major cause for failure to meet in-river escapement goals was due to in-river environmental problems directly related to Snake River and Columbia River hydroelectric dam projects. Historically, the Snake River component of the upriver Spring chinook run represented the major segment. Based upon comparison of Priest Rapids and Ice Harbor Dam counts, the Snake River component represented a maximum of 48% of the run originating above McNary Dam (maximum percentage since comparison does not include run destined for Yakima River and WDF Hatchery complex below Priest Rapids Dam). The same comparison indicates the 1971-75 average was maximum 81% Snake River origin for run destined to return above McNary Dam.

Table III-9. Estimates of in-river run size and escapement of upriver adult spring chinook, 1971-81.

Year	Run Size	Escapement	Snake River Escapement <sup>c/</sup>
1971	146,500	96,800	21,800
1972	296,500	136,400	38,500
1973	223,800	101,200	52,800
1974	99,800	61,900	15,500
1975	97,900	97,900	16,100
1971-75 Average	167,500	98,800	28,900
1976	63,900	63,700	15,900
1977	138,400	98,600	36,200
1978	127,000	124,700	40,700
1979	48,600	48,100	6,800
1980	53,100	53,100	5,500
1981 <sup>a/</sup>	62,800	61,300	13,100
Goal <sup>b/</sup>	250,000	100,000-120,000	30,000 (minimum)

<sup>a/</sup> Preliminary.

<sup>b/</sup> Set forth in "Management Plan".

<sup>c/</sup> Upper most Snake River Dam.

#### Upriver Summer Chinook

Despite the continued almost total lack of in-river harvest, the Columbia River summer chinook run continues in a depressed state. The 1981 run as measured by the Bonneville Dam count was 27,000 fish, the smallest run ever recorded (Table III-10). Previous record low run size was 1980. The major components of summer chinook originate from the Snake River and the Columbia River above Priest Rapids Dam. The principle reason for not achieving the escapement goal is in-river environmental problems which, like spring chinook, is manifesting itself more in the Snake River than other production areas. However, the problem is further aggravated by harvests in the ocean fisheries. The 1981 Snake

River escapement was only 25% of the 1971-75 average while the upper Columbia River escapement was 75% of the 1971-75 average.

Table III-10. Estimates of in-river run size and escapement of upriver summer chinook, 1971-81.

Year	Run Size	Escapement	Snake River Escapement	Upper Columbia Escapement
1971	89,500	72,100	26,800	17,700
1972	77,500	66,400	20,500	14,800
1973	48,900	43,400	12,000	14,300
1974	34,000	34,000	8,800	13,700
1975	44,400	44,400	8,600	22,200
1971-75 Average	59,600	52,100	15,300	16,500
1976	42,100	42,100	9,900	19,300
1977	41,200	41,000	8,400	19,600
1978	43,400	43,000	11,800	21,200
1979	34,400	34,200	3,600	22,700
1980	31,200	31,100	3,400	18,700
1981 <sup>a/</sup>	27,000	27,000	3,800	12,300
Goal	-	80,000-90,000 <sup>b/</sup>	-	-

<sup>a/</sup> Preliminary

<sup>b/</sup> Goal was set in 1963, subsequently incorporated into "Management Plan".

#### Upriver Fall Chinook

The upriver fall chinook run was only 158,00 adult fish, the smallest run ever observed since the construction of Bonneville Dam in 1938 (Table III-11). The 1981 run consisted of 63,900 adult upriver "brights" and 94,100 adults of Bonneville Pool Hatchery complex (Tule stock) origin. The escapement of 21,000 adults over McNary Dam was the smallest count

recorded in the recent decade. In 1980, an abnormally large inter-dam loss occurred, reducing the possibility of achieving the escapement goal at McNary Dam. This to-date unexplained loss occurred again in 1981 such that the in-river fall chinook run was not of sufficient size to achieve the escapement goal. Inter-dam loss of over 50% has now occurred in two successive years. The Columbia River Technical Advisory Committee and others are reviewing this problem and will seek funding for research to identify the source (s) of this extreme in-river mortality. Since this factor alone has such a large impact upon achievement of escapement goals, ability to harvest more abundant stocks, and to allocate in-river harvest, it is imperative that another year not be lost before research is begun to address this problem. The Snake River component of the upriver "bright" fall chinook run was a record low 700 fish (Ice Harbor count of adults). Like spring and summer chinook runs, a weak Snake River component is typical of this run in recent years.

Table III-11. Estimates of in-river run size and escapement of upriver origin adult fall chinook, 1971-81.

Year	Run Size	Bonneville Escapement <sup>a/</sup>	McNary Count
1971	244,800	102,000	49,000
1972	188,600	55,200	37,600
1973	249,300	91,100	46,600
1974	176,900	74,100	34,600
1975	311,600	97,200	29,600
1971-75 Average	234,200	83,900	39,500
1976	250,400	107,200	28,800
1977	199,000	85,700	37,600

(cont.)

Table (cont.)

1978	183,800	89,500	27,300
1979 <sup>b/</sup>	172,100	84,000	31,200
1980 <sup>b/</sup>	174,900 <sup>c/</sup>	98,100	29,700
1981 <sup>b/</sup>	158,000	101,500	21,000
Goal <sup>d/</sup>	300,000	100,000	40,000

<sup>a/</sup> Bonneville Dam count minus Indian harvest.

<sup>b/</sup> Preliminary.

<sup>c/</sup> Derived from new methodology for stock separation by origin of stock.

<sup>d/</sup> As set forth in "Management Plan".

#### Lower River Spring Chinook

One of the major components of the lower river spring chinook run originates from the Willamette River. The other major component is the Cowlitz River run. The Willamette run was 48,600 fish in 1981 and the escapement of 30,100 adults was at the low range of the desired level of 30-35,000 escapement over Willamette Falls (Table III-12). Escapement to the Cowlitz River was 38,100 fish, including a preliminary estimate of 13,000 recreational catch.

Table III-12. Estimates of in-river run size and escapement of lower Columbia River spring chinook, including jacks, 1971-81.

Year	Willamette River		Cowlitz
	Run Size	(Willamette Falls Count)	
1971	67,400	44,600	11,000
1972	47,100	26,200	9,200
1973	54,500	42,000	13,700
1974	71,800	44,500	27,800
1975	32,600	19,100	45,200
1971-75 Average	54,700	35,300	21,400
1976	40,700	22,200	53,000
1977	58,000	40,000	35,800

(cont.)

Table (cont.)

1978	71,400	47,500	35,700
1979 <sup>a/</sup>	44,600	26,600	17,200
1980 <sup>a/</sup>	42,500	27,000	30,000
1981 <sup>a/</sup>	48,600	30,100	38,100
Goal	-	30,000-35,000	-

<sup>a/</sup> Preliminary.

#### Lower River Fall Chinook

The returns of lower river fall chinook was below average in 1981. The only targeted harvest occurred by recreational fishery (minor) and commercial fishery in select stock tributary river/bay fisheries (restricted area terminal fisheries). Washington terminal area commercial fisheries caught 21,000 chinook while Youngs Bay (Oregon) caught 5,000 chinook (Table II-42).

#### Hatchery Chinook

Returns of adult chinook to Columbia River stations since 1971 are shown in Table III-13. In general, egg take needs were met for all stocks of salmon except upriver fall chinook "brights". Spring chinook eggs were again obtained from federal hatcheries located in Washington to meet Snake River hatcheries production goals. To meet system wide program goals, exchange of eggs occurred between hatchery stations wherever common desired stocks were available.



Table III-13. Adult chinook and coho returns to Columbia River hatcheries (thousands), 1971-80. Includes hatcheries operated by all agencies.

Year	Chinook				Coho	
	Spring		Fall		Below Bonneville	Above Bonneville
	Below Bonneville	Above Bonneville	Below Bonneville	Above Bonneville		
1971	16.9	8.2	55.7	17.1	187.6	20.4
1972	9.3	20.5	41.2	9.6	91.3	6.2
1973	15.1	19.8	50.1	20.4	68.2	4.6
1974	33.2	6.4	34.2	14.2	152.8	10.0
1975	25.9	12.0	34.8	36.8	85.4	16.7
1976	29.9	14.8	51.6	25.8	117.3	14.4
1977	30.2	20.1	41.6	22.2	37.1	2.0
1978 <sup>a/</sup>	25.2	14.1	59.4	20.1	131.4	7.8
1979 <sup>a/</sup>	19.2	9.3	46.8	21.2	101.4	7.7
1980 <sup>a/</sup>	28.4	11.2	36.3	30.2	120.4	3.4
1981 <sup>a/</sup>	33.1	11.8	53.0	24.6	65.3	11.0

#### Columbia River and Oregon Coastal Coho

Measured escapements of coho salmon for the Oregon Production Index (OPI) area totaled 186,000 in 1981. The 1981 OPI escapement of coho was \_\_\_\_\_ the preseason objective of \_\_\_\_\_. This escapement is below the 1978-80 average of 305,700. The 1981 OPI escapement figure included a run size of 151,200 to the Columbia River and an escapement of \_\_\_\_\_ resulting from Oregon coastal hatchery production. The 1981 run of 151,200 to the Columbia River was the smallest in-river run size since the 1977 run when problems with OPI production were first identified. This year's in-river run was considerably below the 1978-80 runs and far below the 1971-75 average of 360,100 (Table III-14). Despite little in-river harvest of early coho, hatchery escapement of 65,300 Columbia River coho in 1981 was second only to the 1977 escapement in being the smallest in the recent decade. Early stock coho (Aug-Sept.) salmon are largely unfishable in the mainstem Columbia river due to the mixed species conflicts with chinook management needs during this period. This problem will exist as long

as lower river harvest constraints exist for fall chinook of upriver origin, subject to treaty Indian allocation. Required egg takes have been

Table III-14. Estimated in-river run size, catch and escapement of Columbia River adult coho, 1971-80 (in thousands).

Year	Catch		Escapement			Minimum Run Size
	Gill Net Below Bonneville	Hatcheries Below Bonneville	Bonneville Count	Willamette Count		
1971	264.3	187.6	53.8	17.4		523.1
1972	131.3	91.3	34.2	10.0		266.8
1973	183.7	68.2	25.8	5.2		282.9
1974	261.0	152.8	31.6	1.5		446.9
1975	156.6	85.4	32.8	5.9		280.7
1971-75 Average	199.4	117.1	35.6	8.0		360.1
1976	168.4	117.3	35.5	2.3		323.5
1977	39.0	37.1	9.3	1.0		86.4
1978	132.7	131.4	30.2	1.7		296.0
1979 <sup>a/</sup>	127.6	101.4	29.6	1.8		260.4
1980 <sup>a/</sup>	143.3	120.4	12.7	1.3		277.7
1981 <sup>a/</sup>	59.0	68.2	23.0	1.0		151.2

<sup>a/</sup> Preliminary.

Required egg takes have been achieved for this stock and surpluses were available although not of the same magnitude as observed in past years especially when the fact is considered that an Aug-Sept. lower river fishery was not allowed in 1981. The dominant stock produced by Washington hatcheries is the late coho (Oct.-Jan.) salmon of Cowlitz River origin. Program goals for these fish is directed at achieving a run timing such that the majority of these fish contribute to the October to mid-November in-river management window, a time after most necessary chinook harvest constraints and before winter steelhead begin entering the river in significant numbers. The proper egg-taking pattern was achieved for the 1978-81 brood cycle and therefore, it is not anticipated that a large late returning (Dec.- Jan.) surplus of adults will occur in 1981 as occurred in 1980.

Declines have been noted in the abundance of natural spawning stocks of coho in the Columbia River. However, the decline is not unexpected since coho management in the Columbia River is based upon hatchery production which would tend to overharvest the natural stocks.

IV OCEAN MANAGEMENT OF SALMON IN 1982  
STATUS OF CHINOOK AND COHO RESOURCE FOR 1982

Columbia River Chinook Stocks

Columbia River chinook salmon are the predominant chinook stocks found north of Cape Falcon off Oregon and along the Washington coast. Of these stocks originating from the Columbia River, the fall chinook "Tule" stock is the largest single contributor to the Oregon-Washington coastal fisheries with spring and summer & upriver "bright" fall chinook stocks contributing lesser amounts.

Status of specific stocks of Columbia River chinook is presented by current in-river management components as follows:

Lower River Spring Chinook

The major lower river spring chinook runs originate in the Willamette and Cowlitz Rivers with minor runs also originating in the Lewis, Kalama Rivers and Sandy rivers. The Willamette run is expected to be above average, about 65,000 fish in 1982 compared to the 1971-75 average of 46,100 fish.

The Cowlitz run is also expected to be as large as the 1981 run of 38,100 fish, and likely will be below the 1971-75 average of 21,400 fish.

Upriver Spring-Summer Chinook

Despite the achievement of desired spawning escapement goal for Snake River spring chinook run component in 1977 & 1978, the 1982 run is projected to be 49,000 fish, a run of the magnitude observed in 1979 (record low). This projection is based upon relationship between returning numbers of jacks and adult brood year production. There are no indications that the summer chinook will improve above record low runs seen since 1979.

### Upriver Fall Chinook

Based on a relationship between a jack index at The Dalles, and John Day dams and the returning adult run of the same brood, the preliminary forecast for the Upriver Bright fall chinook return to the river is 63,000 adults, a record low. This follows record low adult returns of 77,800 in 1980 and 63,900 in 1981.

A relatively large return of two-year-old males of the Bonneville Pool Hatchery stock occurred in 1981. However, no strong relationship exists between jacks and adult production within the same brood for this stock. Therefore, the Bonneville Pool Hatchery stock run to the river in 1982 is not expected to be significantly greater than that experienced in recent years (the 1979-1981 average is 92,600 adult fish).

### Lower River Fall Chinook

The status of the Lower River Hatchery stock is similar to the Bonneville Pool Hatchery stock - while the return of jacks in 1981 may be above average, the run in 1982 is not expected to be significantly greater than the poor returns of recent years. The 1979-80 average run to the river was 106,000 adult fish; the 1981 return is not available at this time.

The status of the Lower River wild stock is not expected to be significantly different than recent year runs. The 1979-80 average run to the river was 28,600 adult fish, the 1981 return is not available at this time.

### Columbia River Coho (Oregon staff)

The return of jacks to Columbia River counting areas in 1981 is about 35,000. The Columbia & Oregon Coastal jack index is about 45,000 and indicates a record low production in the OPI area for 1982, exclusive of private hatchery contribution.

EVALUATION OF 1981 MANAGEMENT  
FOR UPPER COLUMBIA RIVER  
"BRIGHT" FALL CHINOOK

Prepared by:

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Presently, the one major chinook stock with conservation problems where sufficient information is available to evaluate the effect of 1981 ocean regulations with the National Bureau of Standards/Washington Department of Fisheries catch regulation analysis model ("the model") is the Upper Columbia "bright" fall chinook stock. Preliminary evaluation of 1975 brood bright stock coded-wire tag results permitted inclusion of this stock in the regulatory analysis presented to the North Pacific Fishery Management Council in March 1981. Post-season update of that analysis is presented here to evaluate the regulatory actions of 1981. More detailed analysis of 1982 options must await further analysis of upriver bright tagging data plus analysis of tagging data from other stocks.

Essentially, two types of information are required to develop a picture of the 1981 ocean catch distribution of the upriver brights: (1) estimates of fishing rate changes for each fishery of concern plus regulatory measures enacted (e.g. size limits), and (2) an estimate of stock abundance.

The principal fisheries that harvest brights are (not necessarily in order of importance) the Southeast Alaska troll fishery, the British Columbia troll, net and sport fisheries, the Washington/Oregon troll and sport fisheries and the Columbia River net fisheries.

Since direct measures of fishing rates are difficult to obtain, fishing rate changes are usually inferred through examination of changes in fishing effort (e.g. days fished, angler trips, etc.). Comparison of present effort levels with those during the base period (1974-76) when the stock tag data were collected form the basis for estimating fishing rates changes.

Preliminary 1981 Washington ocean troll and sport effort statistics are available and were compared with 1974-76 averages. Effort data for 1981 Oregon coastal catch areas are not available at this time; therefore, observed changes in Washington Statistical Area 1 (Columbia River mouth) were assumed to apply to the Oregon fisheries in that area. Other southerly, marine fishing rates (Oregon south of Cape Falcon; California; Puget Sound; Washington coastal net) were left unchanged from 1981 pre-season expectations.

The 1981 effort statistics for the British Columbia troll fishery are not yet available. To project a picture of 1981 fishing rate changes, a mean of 1979 and 1980 troll-days-fished statistics was employed for each major management area on a monthly basis. Since an odd-year pink salmon run was expected in 1981, the 1979 statistics were felt to be representative of effort distribution and levels under this condition, while 1980 effort statistics represented the most recent overall level of effort in the fishery. The mean of 1979-80 days fished was then compared with the mean of 1974-76 days fished and adjusted for an October closure. No additional adjustments were made for localized short-term closures in Statistical Areas 1, 21, and 23. Angler effort data for the British Columbia sport fishery are not available at this time. However, the new 45-cm sport-caught chinook size limit imposed in 1981 was used in the fishery model simulation runs.

The Southeast Alaska troll fishery presents a difficult challenge in this regard due to a lack of effort statistics. To obtain some idea of the magnitude of fishing rate changes in the Southeast Alaska troll fishery, the average troll

chinook catch during the period 1974-76 was compared to the catch during the period 1977-80. This was done separately for both the total Southeast Alaska region and the outside catch areas and then averaged. The key assumption here is that the overall abundance of stocks contributing to the Southeast Alaska troll fishery had remained relatively stable. If stock abundance had increased during the latter period, fishing rates would be over-estimated and, conversely, if stock abundance had decreased, fishing rates would be under-estimated. The fact that fishery managers coastwide have observed depressed if not declining abundance levels is the rule for chinook stocks contributing to Southeast Alaska plus the fact that statistics show intercepting fisheries (e.g. British Columbia troll) have probably increased their harvest share of these stocks make it more likely fishing rates have been under-estimated rather than the reverse. One additional occurrence pertaining to this problem is the effect of a size limit increase in the Southeast Alaska troll fishery from 26" to 28" beginning in 1977. Simulation studies with the model were used to adjust for this effect.

To describe the effect of 1981 regulations on fishing rates in Southeast Alaska, the 1981 troll chinook catches were compared to the average 1977-80 troll catches on a monthly basis. Again, the key assumption is that overall chinook stock abundance in Southeast Alaska has not changed.

After fishery model simulations with estimated 1981 fishing rate changes, the next task was to relate actual 1981 stock abundance to model results. The mechanism for accomplishing this is to compare the 1981 terminal run size in the Columbia River (Bonneville Dam plus estimated lower river catch) with the model terminal run size (ages 3-5 escapement and in-river net catch). The terminal run size serves as a benchmark for annual comparison of stock abundance changes. The ratio of actual terminal run size to model terminal run size enables the user to scale model recruit population up or down accordingly. Using this recruit scale factor in addition to the above fishing rate changes, model simulations were generated to describe the 1981 ocean catch distribution of brights.

The objective with respect to the bright stock is to increase terminal run size to achieve the spawning escapement objective (i.e. 40,000 adult fall chinook at McNary Dam). In 1981 only 21,000 fish were passed over McNary out of a total run size of 63,900. Under 1981 management conditions in the Columbia River and assuming no harvest of upriver brights above Bonneville Dam by treaty Indian fishermen, a run size of approximately 102,100 would have been needed to achieve the escapement goal. If the harvest rate by treaty fishermen observed in 1981 is assumed, the goal in 1981 would have been 120,500. Both objectives assume:

1. approximately 40% survival of unharvested fish between Bonneville and McNary Dams;
2. approximately 1% lower river interception rate in fisheries directed at stocks other than upriver brights; and
3. a 16% overall harvest rate by treaty Indian fishermen above Bonneville Dam (second objective only).



Table 1 presents the results of model simulation runs. Of the regulatory options considered, only a complete closure of the Southeast Alaska/northern British Columbia troll fisheries or coho-only fisheries in Southeast Alaska to central British Columbia, plus an additional coastwide June closure in all other areas, yielded terminal run sizes within the range of objectives.

Table 1. Results of model simulations of 1981 ocean fishery regulatory impacts on upper Columbia River "bright" fall chinook.

Area	Number of fish (X 1,000)		
	Run 1	Run 2	Run 3
Southeast Alaska	37.9	0	0
Northern British Columbia	27.1	1.3	1.3
Central British Columbia	8.0	0.8	9.5
Northwest Vancouver Island	4.0	4.0	4.9
Southwest Vancouver Island	10.3	10.3	12.5
Other British Columbia <sup>1/</sup>	2.5	2.6	2.9
Washington/Oregon	4.6	4.8	4.8
Columbia River <sup>2/</sup>	63.9	106.0	106.0

Run 1: 1981 fishing regulations and intensities scaled to 1981 terminal run size

Run 2: Alaska to central British Columbia - no chinook retention - all other troll closed additionally in June (assuming no effort shifts)

Run 3: Alaska and northern British Columbia completely closed (assuming no effort shifts)

<sup>1/</sup> Other British Columbia includes Georgia Strait, Johnston Strait, Strait of Juan de Fuca, and Washington coast.

<sup>2/</sup> Columbia River ages 3-5 only.

1982 UPPER COLUMBIA RIVER "BRIGHT"  
FALL CHINOOK RUN SIZE EXPECTATIONS

Salmon Harvest Management Division  
Washington Department of Fisheries

Prepared with information available through December 8, 1981, and, therefore, subject to change. This run size expectation constitutes the best available estimate at this time; while it will be superseded by a more accurate run prediction by July 1982 it does reflect the continuing decline of this resource.

December 9, 1981  
Olympia, Washington

The Washington Department of Fisheries' (WDF) technical staff has developed a technique for making accurate per-season adult in-river run size predictions for the upper Columbia River chinook known as upriver brights by utilizing relationships between age group abundance within a brood year. At this time complete information about the most recently returned year class (1981) is unavailable, nevertheless, an expectation for 1982 in-river abundance is needed for guiding management in both North Pacific and Pacific council management areas.

An early pre-season projection was made of the 1981 in-river run size by quantifying the trend in adult abundance for the years 1975 to 1980 (WDF report, March 1981). The 1981 expectation of 69,400 adults compares with the preliminary estimated 1981 return of 63,900 adults (Figure 1). Though the difference between actual and projected is no greater than the error expected of such a trend line, continued reliance upon such a method should be avoided if additional or more appropriate information is available.

A similarly declining trend to that seen in adult run size is observed of the in-river return of age-two upper Columbia River brights. Upriver bright jacks are enumerated at The Dalles, John Day, and McNary dams, however, a consistent measure of relative age-two population size is found by combining the annual jack counts at John Day and The Dalles dams. To reflect the abundance of a single adult year class, jack counts from brood years of the major three contributing adult age groups (3-5) are combined and averaged. A relationship between jack and adult returns assumes that most of the variability in brood year production occurs prior to the return of two-year-olds and that the maturity schedule of different broods is relatively constant. Though the 1981 jack count increased from the 1980 count, the three-year index corresponding to the 1982 adult run is less than the index of 1981 previously the lowest index within the data base (Table 1).

Upriver bright adult run size is regressed against the jack index for the years 1975 to 1981 to produce a predictive relationship for the 1982 run size. A predicted adult run size of 62,900 is slightly less than the record low run size of 1982 (Figure 2).

LITERATURE CITED

Review of 1981 NPFMC Preferred Options and Refinements to the Analysis of Upper Columbia River "Bright" Fall Chinook Management Needs and Opportunities for 1981. Washington Department of Fisheries March 12, 1981.

Figure 1. Upper bright adult run size, 1975-1981.

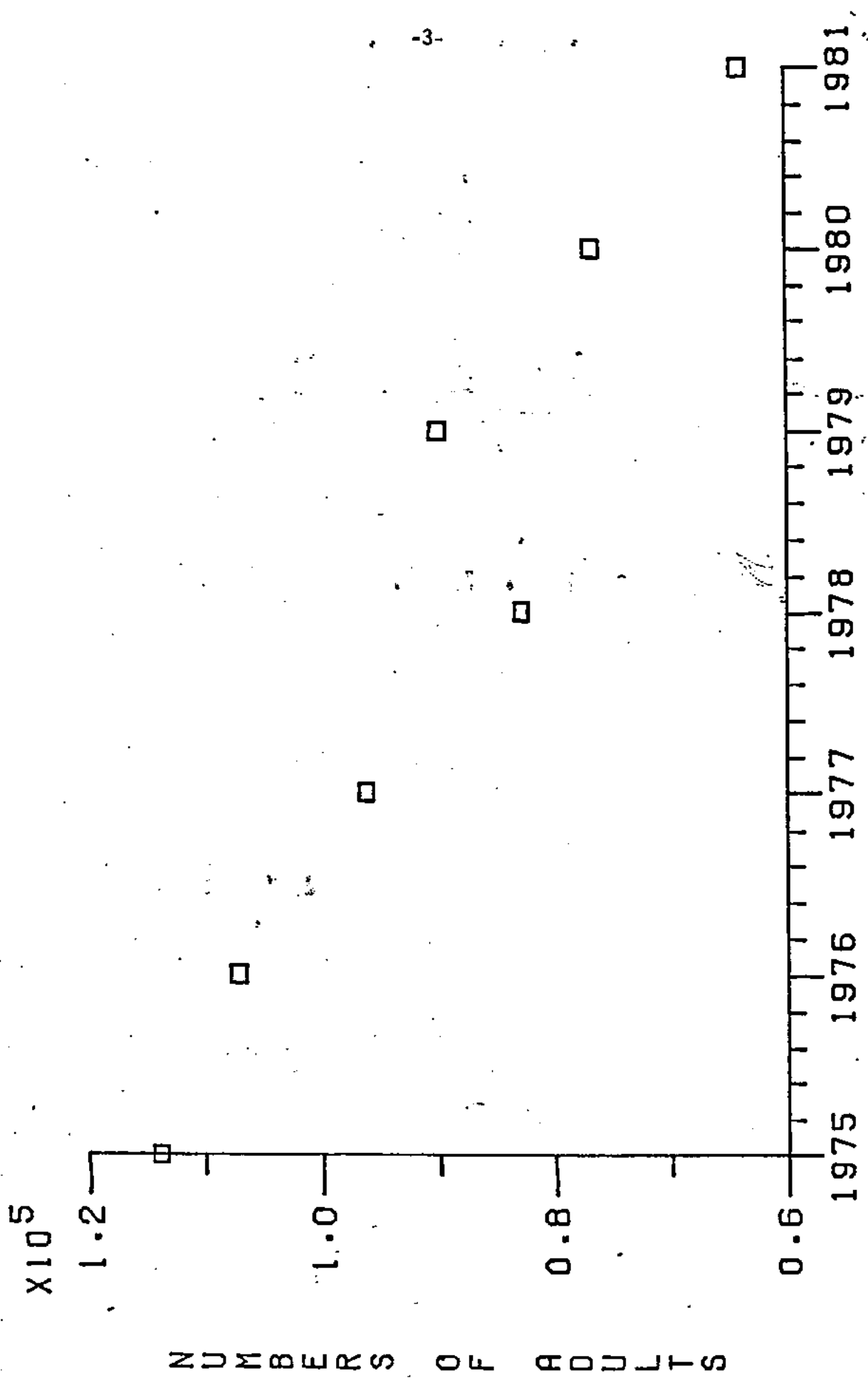
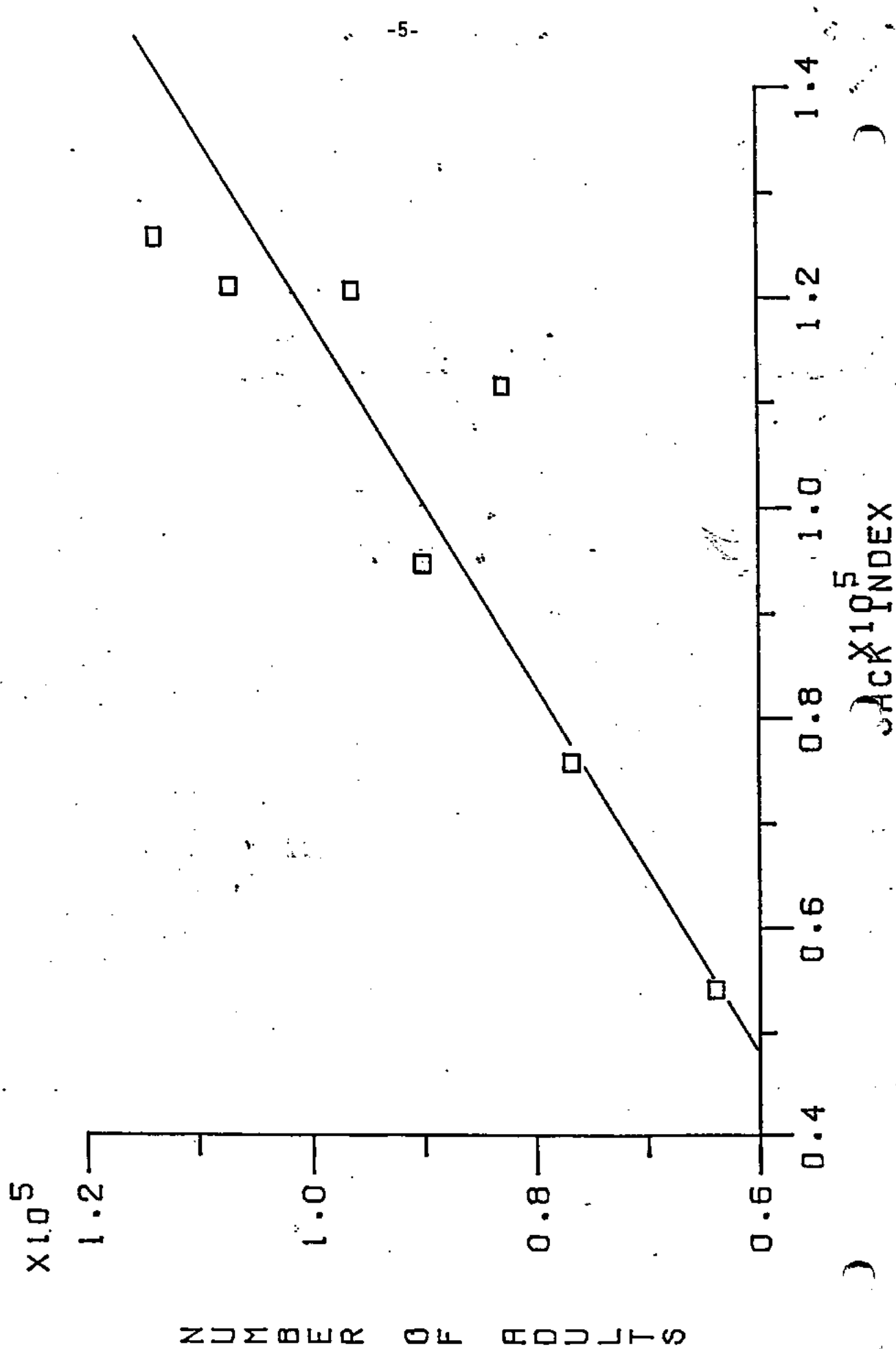


Table 1. Upriver bright adult run size, annual jack count at The Dalles and John Day dams (combined), and the jack index of adult return, 1975-1982.

<u>Year</u>	<u>adults</u>	<u>jack count</u>	<u>jack index</u>
1975	113900	111900	125700
1976	107200	128500	121000
1977	96300	94200	120400
1978	82800	61000	111500
1979	90000	71900	94600
1980	76700	29400	75700
1981	63900	59200	54100
1982			53500

Figure 2. Relationship between jack index and upriver bright adult run size, 1975-1981.





State of Washington  
DEPARTMENT OF FISHERIES



## PROGRESS REPORT

No. 129

**1981 Status of Puget Sound Spring Chinook Salmon  
and Recommendations for Management**

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By  
Harvest Management Division

February 1981

State of Washington  
DEPARTMENT OF FISHERIES

PROGRESS REPORT NO. 129

1981 PUGET SOUND SPRING CHINOOK STATUS AND  
RECOMMENDATIONS FOR MANAGEMENT

Prepared by  
Harvest Management Division

February 1981

## INTRODUCTION

The staff of the Washington Department of Fisheries has prepared this report for the purpose of facilitating management of the Puget Sound spring chinook resource. This report includes information on allowable harvest levels, desired escapements, brood year natural escapements, hatchery releases, and predicted returns of natural and hatchery stocks.

Methodology employed in the calculation of predicted returns remains unchanged from the procedures followed last year. Anyone desiring further knowledge of those methods are referred to Progress Report Numbers 41, 81 and 98, where predictive techniques have been presented in detail.

## ALLOWABLE HARVEST LEVELS

Numbers of spring chinook expected to reach Puget Sound, excluding treaty Indian troll, ceremonial and subsistence catches, and Puget Sound marine sport catch, are shown in Table 1. A quick scan of the column entitled, "Allowable Harvest" shows that desired escapements are not expected to be met in any of the Puget Sound spring chinook streams in 1981. Sport fishing regulations reflect conservation needs with all river sport salmon seasons being closed throughout the spring chinook management period.

## SPAWNING GROUND ESCAPEMENT GOALS

Natural stock escapement goals for Puget Sound streams are the same as given in the 1980 status report, Progress Report Number 98, with the exception of the Duwamish-Green River. The Duwamish-Green River natural spring chinook stock has been removed from the report due to its non-viability.

During the period from July 9-17, 1980, WDF personnel conducted a survey of upper Green River areas where spring chinook would be expected to hold. A total of 16.9 miles of stream between R.M. 44.0 and R.M. 60.9 were surveyed by sections by a team of snorkel-equipped swimmers. Although the surveys were not a complete census of the early-run chinook in the upper river holding area, they are probably indicative of the relative run strength in the Green River. A total of five (5) live and two (2) dead adult chinook were observed over the 16.9 miles of river surveyed. Hatchery plantings may have contributed to the returns to the river in 1980, and if chinook of natural stock origin were present in these upper river holding areas during 1980, they were so few in number that they cannot be viewed as a viable management entity.

#### PREDICTIONS AND MANAGEMENT RECOMMENDATIONS

Puget Sound natural spring chinook runs in 1981 are expected to have no harvestable numbers of fish and are described as poor. Information from Canadian fisheries personnel states that Fraser River spring chinook returns this year will be very similar to 1980 levels, which were termed poor also. Since both Puget Sound and Fraser River natural spring chinook stocks are in need of protection in 1981, the following harvest recommendations are made:

#### Areas 4B, 5, 6, 6A, 6C, 7, 7A and 7D

There should be no fisheries directed at spring chinook in these management areas from April 15 through June 15.

#### Elwha River

Confirmation of remaining natural spring chinook in the Elwha River has yet to be made. In the absence of conclusive evidence confirming their absence, no fishery should take place prior to July 22.

Dungeness River

Area 6D and the Dungeness River should remain closed prior to July 1 to protect both the natural and hatchery origin spring chinook, which are comingled. All adult returns of the hatchery stock will be needed for enhancement efforts. Upstream resting/holding pools and spawning areas should be protected by restricting fishing until spawning is completed around mid-September.

Nooksack River

On- and off-reservation fisheries in Bellingham Bay and the Nooksack River should be curtailed for the duration of the 1981 spring run from April 15 through June 30 for protection of the natural run. In addition, hatchery stocks are anticipated to produce small numbers of fish that will be totally required for further enhancement. Furthermore, based on recent return rates experienced at Nooksack hatchery, the predicted hatchery run size is probably overly optimistic.

Skagit River

Skagit River spring chinook are predicted to return at a level that is only a fraction of the desired escapement level. Therefore, complete protection for the natural stock is required, and there should be no commercial fishing in Skagit Bay, the Skagit River and all tributaries according to the following schedule:

Area 8 (Skagit Bay) - April 15 through June 15, all waters of Skagit Bay and Saratoga Passage north of the Area 8/Area 8A boundary line.

Skagit River No. 1 and below - April 15 through June 15, from the mouth of the North and South Forks to Gilligan Creek.

Skagit River No. 2 - April 15 through June 18, from Gilligan Creek to Hamilton.

Skagit River No. 3 - April 15 through July 7, from Hamilton to "Old Faber Ferry Landing" above Concrete.

Skagit River No. 4 - April 15 until spawning is finished in all areas above "Old Faber Ferry Landing", including all tributaries.

Return rates for hatchery releases in this river system must be viewed as questionable at this time. It is felt that the values used for Puget Sound as a whole are probably optimistic for this stock; but regardless of the rate, all returns of artificially reared stock will be needed for continued enhancement.

A certain amount of cautious optimism can be expressed at the 1980 spring chinook escapement in the Skagit River system. Last year's estimated escapement and return per spawner were at the highest level that we have seen for the last eight years. Escapements for the last three years show a reversal of the previous downward trend. Optimism must be tempered, however, by pointing out that escapement last year was only slightly more than half the desired goal.

#### Stillaguamish and Snohomish Systems

There should be no fishery in Area 8A, the Stillaguamish River below the confluence of the North and South Forks, or the Snohomish River below the confluence of the Skykomish and Snoqualmie rivers prior to July 1. Both forks of the Stillaguamish River and all resting pools and spawning areas of the Skykomish and Snoqualmie rivers should remain closed until the conclusion of spawning.

Duwamish-Green River

Surveys of the principal resting areas during 1980 have shown that very few early-run chinook were present last year and support the suspected absence of a viable natural run. The potential for returns to the Green River in 1981 depends on a fry plant of spring chinook stock of the 1977 brood. Lacking definitive data on return rates for such plants of spring chinook in the Puget Sound area, it is impossible to predict the magnitude of the run; but experience drawn from chinook fry plants would tend to suggest that a minimal return can be expected.

Puyallup River

The extremely tenuous status of the Puyallup River spring chinook run necessitates closing of the Puyallup River and Area 11A, including reservation waters, through June 30. In addition, the White River, including reservation waters, should also be closed through July 31. WDF has committed its efforts to preserve this stock through development of an egg-bank, which may be used as a source in the future to enhance this run.

Minter Creek

Small numbers of White River stock of the 1977 and 1978 broods may return to Minter Creek this year as part of a program to assure the existence of the stock through development of an egg-bank source. All adult returns are essential for brood stock and require complete protection. Therefore, there should be no commercial fishing in Area 13A prior to July 22, and Minter Creek should be closed to fishing through July 31.

Hood Canal

Whether or not there is a natural run of spring chinook in Skokomish River still remains undetermined. In the case of the hatchery run of spring chinook in Hood Canal, planting records indicate releases of Hood Canal Hatchery stock in the Dosewallips River and on-station at Finch Creek. However, return timing data shows this stock to exhibit migration characteristics of summer/fall chinook. Therefore, no predicted return has been calculated for this stock in the spring chinook status report. Instead, these release and return data for the Hood Canal Hatchery stock will be incorporated in future summer/fall chinook status reports.

PREDICTION METHODS

Comments included in the introductory section of this report addressed the question of methodology employed in predictive calculations and told where method details could be located. The only change from 1980 involves updating "the most recent 10-year" data base for the Skagit River.

Predicted returns to the Skagit River are calculated by multiplying the most recent 10-year average return per spawner times the brood or cycle year natural escapement. For 1981, this calculation,  $(1.04) \times (716)$ , gives an expected return value that is approximately 25% of the desired escapement goal of 3,000 spawners for the river system. If, however, the return per spawner realized in 1981 is more similar to recent values observed in 1978-80, we may realize a natural run which is twice as large as the previously calculated return but still only one-half of the desired goal.

Escapements in the Skagit River system should perhaps be viewed positively. As pointed out earlier in this report, returns for the 1978-80 seasons show a promising upward trend. The 1981 return will be of great interest, because it will result mainly from the 1977 brood, which is the weakest parent brood in recorded data for the Skagit River.



Use of return per spawner data for the Puyallup River continues to be meaningless at current stock level. It is probably safe to say that the return to the Buckley trap in 1981 will number less than 50 fish, as has been the case in recent years. Also, contributions of hatchery-reared native stock remains questionable because of possible downstream passage problems encountered by out-migrating smolts.

Table 1. 1981 Puget Sound spring chinook predictions, desired escapements and allowable harvests.

	Predicted total return	Desired escapement	Allowable harvest	Brood or cycle year natural escapement	Artificial production yearling releases (numbers) 1977 brood	Comments
<u>Strait of Juan de Fuca</u> ELRHA - natural	unknown	undetermined	-	unknown		Presence of natural spring chinook has yet to be confirmed.
DUNGENESS - natural - hatchery	few 200	undetermined see comments	- 0	unknown	11,800	All adults are needed for enhancement.
<u>Nooksack-Samish</u> NOOKSACK - natural - hatchery	few 200	500 see comments	0 0	unknown	118,649 <sup>1/</sup>	Complete protection required for natural stock. All hatchery returns needed for enhancement.
<u>Skagit</u> SKAGIT - natural - hatchery	750 200	3,000 see comments	0 0	716	51,080	Complete protection required for natural stock. All hatchery returns needed for enhancement, but success of this program has yet to be substantiated. Therefore, return rates must be questionable at this point for hatchery releases.
<u>Stillaguamish-Snohomish</u> STILLAGUAMISH - natural SNOHOMISH - natural	few few	undetermined undetermined	- -	unknown unknown		
<u>Duwamish-Green</u> GREEN - hatchery	few	0	-		2/	Returns from fry plant are questionable.
<u>Puyallup</u> PUYALLUP - natural	few	undetermined	-	unknown		All adult returns are needed for enhancement efforts to perpetuate the run through development of an egg-bank source.
<u>Minter</u> MINTER CREEK - hatchery	few	see comments	0		20,461 <sup>3/</sup>	All adult returns to Minter Creek will be required for enhancement. Return rate is uncertain for this program.
<u>Hood Canal</u> FINCH CREEK - hatchery	see footnotes indicated under Artificial Production				156,136 <sup>1/4/</sup>	

1/ Although listed in hatchery production tables as "spring chinook", the stock planted exhibits characteristic summer/fall chinook timing.

2/ Fry plant only, totaling 316,250.

3/ Another 960 transferred to NMFS Manchester Pens. Total 1977 brood year artificial production 21,421.

4/ An additional 49,840 planted as fry.

State of Washington  
DEPARTMENT OF FISHERIES



## **PROGRESS REPORT**

No. 130

**1981 Status of Puget Sound Summer /Fall  
Chinook and Pink Salmon and  
Recommendations for Management**

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Harvest Management  
Division

April 1981

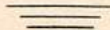
**State of Washington  
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**PROGRESS REPORT**

**No. 130**

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**Harvest Management  
Division**

**April 1981**

Progress Reports are printed by the Department of Fisheries to document progress being made in various projects and programs. They are primarily for internal use and often contain preliminary data and conclusions that may be later revised.

These reports of progress are not considered as scientific publications, but they may be cited when referring to the material contained in them unless specifically noted.

STATE OF WASHINGTON  
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*Rolland A. Schmitten, Director*

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*Peter K. Bergman, Assistant Director*

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## INTRODUCTION

The Washington Department of Fisheries presents these management considerations for 1981 summer/fall chinook and pink salmon returns to Puget Sound in order to facilitate resource management. Data, methods, and recommendations are similar to those of recent years. Techniques utilized to determine escapement goals and escapement estimates are similar to those used in the past (see Washington Department of Fisheries Technical Report No. 29). Pre-season forecasts for 1981 were developed with some changes from previous years. Any changes instituted in forecast methods for 1981 are presented in a later section of this report entitled "PREDICTION METHODS".

Predicted returns of chinook and pink salmon to Puget Sound (excluding treaty Indian troll, ceremonial, and subsistence catches, and Puget Sound sport catch) are outlined in this report by stock management unit. Desired escapements for hatchery and natural runs, allowable harvests, net fishery management recommendations, test fishing needs, and prediction methods utilized are also included. A detailed breakdown of predicted returns, desired escapements, allowable harvests, brood year escapement levels, and artificial production releases are presented by stream in the Appendix.

Puget Sound pre-season salmon forecasts should be used only as a guide for initial establishment of regulations. Even though the forecasts have been fairly reliable, actual run size may deviate from a pre-season forecast because of statistical variability, unusual survival rates, or unanticipated fishing rates in interception fisheries. Fisheries managers, therefore, depend on in-season catch data for indicators of run strength. Fishing regulations can then be adjusted, if necessary, to accommodate the size of the run that actually reaches the subject fishery. In-season adjustment methods will be presented in a separate report and will be similar to those used in recent years.

Chinook stocks in the Skagit, Stillaguamish-Snohomish, Lake Washington, and Duwamish-Green systems will be managed on the basis of natural run escapement requirements. Other systems will continue to be managed to provide full hatchery fish harvest. With the exception of small pink salmon runs destined for Hoodsport, Port Gamble, Chambers Creek, and Minter Creek, this species will be managed for natural run escapement requirements.

FISHERY MANAGEMENT RECOMMENDATIONS

Summer/fall chinook and pink salmon returns to Puget Sound in 1981 are expected to range from small natural runs that cannot withstand directed fisheries to returns of hatchery and natural fish that can be harvested at high rates (Table 1). Although each of the six major production systems will have some harvestable fish returning to Puget Sound this year, some mixed-stock areas will remain closed to protect weak Canadian and/or Puget Sound stocks. Likewise, some extreme terminal areas will not have directed chinook or pink fisheries.

Management recommendations are presented in two ways. First, basic management considerations for each of the numbered management/catch reporting areas and each of the rivers are given in Table 2. This is followed by a more detailed discussion of management recommendations for each stock management unit.

Harvestable numbers represent fish available for harvest by all U.S. commercial net fisheries in Puget Sound. The harvest should be limited to those management/catch reporting areas as outlined herein.

In several stock management areas, allowable harvest is the difference between predicted return and the biologically determined escapement goal. In an area where a hatchery stock returns simultaneously with natural fish that

Table 1. Summary of predicted Puget Sound net fishery harvests of chinook and pink salmon, 1981.

Region of origin	Expected harvest	
	Chinook	Pink
Strait of Juan de Fuca tributaries	1,100 <sup>1/</sup>	102,000
Nooksack-Samish	86,200	58,000
Skagit	12,500	705,300
Stillaguamish-Snohomish	14,800	811,900
South Sound	30,500	82,700
Lake Washington	-2,700	NA
Duwamish-Green	-6,900	NA
Puyallup	-3,900	-77,400
Minter Creek-Carr Inlet	-8,800	-4,300 <sup>2/</sup>
Nisqually	-1,100	-700 <sup>2/</sup>
Deschutes-Capitol Lake	-6,600	NA
Miscellaneous South Sound	-500	-300 <sup>2/</sup>
Hood Canal	9,600	26,500 <sup>2/</sup>
<b>Total</b>	<b>154,700</b>	<b>1,786,400</b>

<sup>1/</sup> Includes an incidental catch of 200 for stocks without a harvestable surplus.

<sup>2/</sup> Comprised totally or almost totally of incidental catch.

Table 2. 1981 summer/fall chinook and pink salmon management recommendations--Puget Sound.

Area	Management period		Relative harvest rate		Comments
	Chinook	Pink	Chinook	Pink	
4B, 5M	June 16-Aug. 29	IPSC control	Minimal	--	IPSC control through 9/12. Weak Canadian and Puget Sound chinook stocks will require net fishery restrictions.
5E, 6C	June 16-Aug. 29	IPSC control	None	--	IPSC control through 9/12. Weak Canadian and Puget Sound chinook stocks will require net fishery restrictions.
6	June 16-Sept. 5	IPSC control	None	--	IPSC control through 9/19. Weak Canadian and Puget Sound chinook stocks will require net fishery restrictions.
6D	July 1-Sept. 19	July 12-Sept. 12	None	Moderate	No harvestable chinook. Net fishery restrictions required.
Dungeness River	July 1-Sept. 19	July 12-Sept. 26	None	Moderate	No harvestable chinook. Net fishery restrictions required.
Elwha River	July 22-Sept. 19	July 26-Sept. 12	Low	Moderate	Success of overall program has yet to be established.
Other Strait of Juan de Fuca tribs.	July 22-Sept. 26	None present	None	--	No harvestable chinook.
6A	June 16-July 15 (summers) July 16-Sept. 5 (falls)	IPSC control	None	--	IPSC control through September 19. Management periods reflect timing of Skagit River chinook stocks. No directed chinook fishery warranted because of weak Canadian and Puget Sound stocks.
7, 7A	June 16-Sept. 5	IPSC control	None	--	IPSC control through and extending past entire period. No directed chinook fishery warranted.
6B, 9	June 16-Sept. 5	July 12-Sept. 12	Minimal	None	Misqually pink need protection. Net fishery restrictions required. Lake Washington, Duwamish, and Hoodspout chinook stocks have low allowable exploitation rates.
7B	July 1-Sept. 5	July 19-Aug. 22	High	Moderate	IPSC control through September 19.
7D	July 1-Sept. 5	IPSC control	See comment	--	Area west of Oyster Creek line must close after August 8 to ensure chinook escapement needs at Samish Hatchery. Samish River and Area 7C east of the Oyster Creek line must be closed from July 1 to assure escapement from all segments of the run.
7C, Samish River	July 1-mid-October	July 19-Aug. 22	High	Moderate	Upriver management periods may need adjustment.
Wooksack River	July 1-Sept. 12	July 19-Aug. 29	Moderate	Moderate	Chinook harvest rate must be established to allow fishery throughout duration of run with majority of harvest taken from summer segment of run. 6-inch maximum gill net mesh required and restriction on purse seines to prevent overharvest of fall chinook segment during pink salmon fishery.
8	June 16-Aug. 4 (summers) Aug. 5-Sept. 5 (falls)	Aug. 2-Sept. 19	Moderate	High	See text for management details by river section. Harvest rates dependent upon those in Area 8.
Skagit River	See text	See text	Low	Moderate	

(Continued)



Table 2. (continued)

Area	Management period		Relative harvest rate		Comments
	Chinook	Pink	Chinook	Pink	
8A	July 1-Sept. 5	Aug. 2-Sept. 19	Moderate	High	Chinook harvest rate must be established to allow fishery throughout duration of run. During last 3 weeks of chinook management period, when majority of pink harvest will occur, a 6-inch maximum gill net mesh required and restriction on other net gear to prevent overharvest of this chinook run segment.
Stillaguamish River	July 1-Sept. 12	Aug. 2-Sept. 19	Low	Low	Harvest rates dependent upon rate in marine waters, but no major fishery anticipated.
Snohomish River	July 1-Sept. 12	Aug. 2-Sept. 19	See comment	See comment	No fishery anticipated.
10	July 1-Sept. 5	July 26-Sept. 12	Low	None	Nisqually pink require protection. Net fishery restrictions required.
10A	July 15-Sept. 12	None present	Low	--	
Duwamish River	July 15-Sept. 26	None present	Low	--	Harvest rate dependent upon that in marine waters.
10B	July 1-Sept. 19	None present	Low	--	No chinook fishery prior to August 1. From August 1 through September 19, a 6-1/2-inch minimum mesh restriction on gill nets to protect Lake Washington sockeye.
10C	July 31-Sept. 19	None present	None	--	Total closure to protect chinook and sockeye spawners.
10D (Lake Sammamish)	July 31-Oct. 3	None present	None	--	Harvestable chinook will be caught incidentally during prior net fisheries.
Cedar River	July 31-Jan. 2	None present	None	--	Total closure to protect chinook and sockeye spawners.
10E	July 1-Sept. 19	None present	See comment	--	No fishery anticipated.
11	July 1-Sept. 5	July 26-Sept. 12	Moderate	None	Nisqually pink require protection. Net fishery restrictions required.
11A	July 1-Sept. 5	July 26-Sept. 12	Moderate	High	Rate depends on that in prior net fisheries.
Puyallup River	July 1-Sept. 12	July 26-Sept. 19	Moderate	High	Rate depends on that in marine waters.
White River	Aug. 1-Sept. 12	None present	None	--	Harvestable will be caught in prior net fisheries.
9A	July 1-Sept. 5	July 19-Sept. 5	--	None	Small hatchery pink run. Hatchery will take all available eggs.
12, 12B	July 1-Aug. 29	July 12-Aug. 29	Low	Low	Harvest should be spread to ensure escapement of both chinook and pink salmon.
12A	July 1-Sept. 5	None present	See comment	--	No harvestable stock present. All Quilcene chinook planted at Walcott Slough.

(Continued)

Table 2. (continued)

Area	Management period		Relative harvest rate		Comments
	Chinook	Pink	Chinook	Pink	
12C	July 1-Sept. 5	July 19-Sept. 5	Low	Low	Rate depends on that in prior net fisheries. Closure near Hoodsport Hatchery required in August and September to ensure hatchery escapement.
Skokomish River	July 1-Sept. 26	None present	High	--	Harvest should be concentrated in the river to protect a weak hatchery run to Hoodsport Hatchery.
12D	July 1-Sept. 5	None present	None	--	No harvestable chinook present.
13	July 1-Sept. 12	Aug. 2-Sept. 26	Moderate	None	Nisqually pink require protection. Net fishery restrictions required.
Nisqually River	July 1-Sept. 19	Aug. 16-Oct. 3	Moderate	None	Chinook harvest rate depends on that in prior marine areas. Pink require protection. Net fishery restrictions required.
13A	July 22-Sept. 19	Aug. 2-Sept. 26	High	High	
13B	July 1-Sept. 19	None present	Moderate	--	Rate depends on that in prior net fisheries.

cannot be harvested independently and the area is managed at the hatchery exploitation rate (e.g., Nooksack River chinook), the harvestable number is higher than this amount. In these areas, the harvest rate for the hatchery stocks also determines the harvest rate for the natural stock. The spawning goal for such natural stocks technically will not be achieved in 1981.

In some stock management units there are minor returns to small streams that are not listed separately in Appendix Table 1. Each of these minor areas has been considered and has been included if it has a surplus that can be harvested. Moreover, each known plant, no matter how small, has been considered.

Effort must be spread throughout the management periods to achieve escapement and catch from all segments of the run. In addition, incidental harvest which occurs during coho fisheries must be subtracted from allowable harvest during directed chinook and pink fisheries.

#### U.S. Convention Waters

Chinook management period: 4B, 5, 6C - June 16 through August 29  
6, 6A, 7, 7A - June 16 through September 5  
Pink management period: 4B, 5, 6, 6A, 6C, 7, 7A - IPSFC control

From June 16 through June 20, all the above areas should be closed to net fishing to protect depressed Canadian and Puget Sound stocks. The Canadian status report "1981 Commercial Fishing Guide" states that "Total [chinook] return to the Fraser River expected to continue on a downward trend. Conservation measures will be imposed." Fraser River chinook escapement in 1977 was 80,000, or 52% of optimum.

The International Pacific Salmon Fisheries Commission (IPSFC) assumes control on June 21. From that date through the chinook management period, purse seines and reef nets must release chinook and drift nets must use 5-7/8-inch maximum mesh size in Areas 4B, 5, 6, 6A, 6C, 7, and 7A. Set nets must use 5-7/8-inch maximum mesh during this time period in Areas 5 (east of Pillar Point), 6, 6A, 6C, 7, and 7A.

Strait of Juan de Fuca Streams

Chinook management period: 6D and Dungeness River - July 1 through September 19  
Elwha River - July 22 through September 19  
Other rivers - July 22 through September 26

Pink management period: 6D - July 12 through September 12  
Dungeness River - July 12 through September 26  
Elwha River - July 26 through September 12

Elwha River is the only Strait of Juan de Fuca stream where chinook and pink fisheries will be warranted in 1981. Some uncertainty exists about the level of chinook harvest because the success of the overall hatchery program has not yet been established. Therefore, estimates of harvestable numbers of hatchery fish may be optimistic. The magnitude of the forecasted pink return may also be optimistic based on catches made during the 1979 fishery and the nature of the escapement estimation methodology.

Local chinook runs to all other streams will be below the desired escapement levels. This necessitates closures in all these streams except the Dungeness River, where harvestable pink are projected. In Area 6D and the Dungeness River, a restriction involving 6-inch maximum gill net mesh and release of chinook by other commercial gear will be required during the pink management period. Limited test fishing should precede any openings for coho to ensure that chinook have cleared the fishing area. Test fishing should not commence prior to the end of the chinook management period.

Nooksack-Samish

Chinook management period: 7B, 7D - July 1 through September 5  
Nooksack River - July 1 through September 12  
7C and Samish River - July 1 through mid-October

Pink management period: 7B, 7C - July 19 through August 22  
7D - IPSFC control  
Nooksack River - July 19 through August 29

A good run of fall chinook to the Bellingham Bay area in 1981 is expected to provide a harvest of approximately 86,200 fish. Allowance must be made for approximately 10% of the chinook catch occurring during the coho fishery subsequent to the chinook management period. IPSFC will have relinquished control of Area 7B prior to the start of the chinook management period, but Area 7D will be under Commission control throughout the management period. An estimated harvestable number of 58,000 pink is projected, with most of the catch occurring between July 26 and August 15.

In spite of a good chinook run with a high allowable harvest rate, care must be taken to ensure sufficient escapement for perpetuation and enhancement of the run, which is predominantly of hatchery origin. Therefore, Samish River and Area 7C inside the Oyster Creek line must be closed throughout the chinook period. Area 7C outside the Oyster Creek line must close from August 9 through the chinook management period. Test fishing by the Department will ascertain chinook status in the area.

Skagit

Chinook management period: 8 - June 16-August 4 (summers)  
- August 5-September 5 (falls)

Skagit River (mouth to Gilligan Creek) - June 16 through September 5

Skagit River (Gilligan Creek to Hamilton) - June 19 through September 19

Skagit River (Hamilton to Old Faber Ferry Landing) - July 8 through September 19

Skagit River (upstream of Old Faber Ferry Landing including tributaries) - continuous closure to protect spawning fish

Pink management period: 8 - August 2 through September 19

Skagit River (mouth to Gilligan Creek) - August 9 through September 19

Skagit River (above Gilligan Creek) - August 9 through October 31

Total returns of Skagit River summer/fall chinook and pink salmon this year are predicted to be 28,800 and 1,035,450 fish, respectively. This should provide a harvest of approximately 12,500 chinook and 705,300 pink. Summer and fall chinook runs to the Skagit River are not predicted separately, but the summer run predominates and should provide the bulk of the catch and escapement. About 75% (9,400) of the catch should be taken during the summer run management period. Of the 3,100 fish to be harvested in the fall management period, all should be reserved for harvest during the pink management period. Thus, Skagit Bay should be closed from the period August 5-15, when the pink run is building. Similar 2-week closures should occur in Skagit River at the start of the respective fall chinook management periods.

The large harvest of pink should start on August 16 in Skagit Bay and continue until coho catches become significant (approximately September 6 in the bay).

Admiralty Inlet-Discovery Bay

Chinook management period: 6B, 9 - June 16 through September 5

Pink management peirod: 6B, 9 - July 12 through September 12

Nisqually pink salmon require protection. Therefore, from late July (when Lake Washington sockeye have cleared) through September 5, a 7-1/2-inch minimum gill net mesh size and release of pink by other commercial gear will be required.

Chinook salmon destined for Hoodspout, Lake Washington, and Duwamish River have low allowable fishing rates, so chinook fishing (if any) in Areas 6B and 9 should be limited.

Stillaguamish-Snohomish

Chinook management period: 8A - July 1 through September 5  
Stillaguamish and Snohomish Rivers - July 1 through  
September 12

Pink management period: 8A, Stillaguamish and Snohomish Rivers - August 2 through  
September 19

The chinook run to this area is composed of three parts, a natural segment which predominates, and artificially produced runs from Skykomish Hatchery and Tulalip Bay. This system is managed to provide for natural run escapement requirements, and harvest rates are established on that basis. As a consequence, the harvest rate for hatchery fish is dictated by the appropriate rate for the natural run. Returns this year are predicted to be 25,300 of which 13,500 will be harvestable in mixed-stock areas. Any chinook harvest in the Stillaguamish River must reflect prior catches from marine waters. An additional harvest of 1,300 chinook in Tulalip Bay will depend upon success of the Tulalip Bay program.

The pink run to this area is predicted to total 1,089,900 with 811,900 harvestable. Most of this harvest should occur between August 16 and September 12.

Southern Puget Sound

Two chinook stocks within this region, Lake Washington and Duwamish-Green, are managed on the basis of natural run escapement requirements. All other stocks are managed to provide full hatchery fish harvest.

Lake Washington

Chinook management period: 10 - July 1 through September 5  
10B - July 1 through September 19  
10C - July 31 through September 19  
10D - July 31 through October 3  
Cedar River - July 31 through January 2  
Pink management period: 10 - July 26 through September 12

Chinook returning to the Lake Washington system this fall are expected to number approximately 12,500. Since the Lake Washington system is managed on the basis of the natural stock, the harvest rate for hatchery fish will be determined by the rate which provides the desired natural stock escapement. Total harvest of both hatchery and natural chinook is predicted to be 2,700 fish. This harvest will be taken by chinook fisheries of low intensity in Areas 6B, 9, 10, and/or 10B and caught incidentally during fisheries for other species. Net restrictions similar to those in Areas 6B and 9 will be required in Area 10 to protect Nisqually pink.

Duwamish-Green River

Chinook management period: 10A - July 15-September 12  
Duwamish-Green River - July 15-September 26

Fall chinook management in the Duwamish-Green River is keyed to attaining full natural stock escapement. The run of natural and hatchery chinook combined is predicted to number 23,500. The harvest rate for the natural stock will provide for a total harvest of 6,900 fish. Around 10% of this chinook harvest will be taken during the coho management period, so the remainder should be taken during the chinook management period. Harvest should be restricted in a manner that spreads the catch throughout the duration of the run and provides protection of Nisqually pink in Area 10.

Puyallup River

Chinook management period: 11, 11A - July 1 through September 5  
Puyallup River - July 1 through September 12  
White River - August 1 through September 12

Pink management period: 11, 11A - July 26 through September 12  
Puyallup River - July 26 through September 19

Natural and hatchery chinook and pink salmon of Puyallup River origin are expected to total 7,100 and 96,800 fish, respectively, of which 3,900 chinook and 77,400 pink will be harvestable. Fishing rates for chinook in Area 11A and the Puyallup River will depend on harvest in prior areas. Because Puyallup pink have a higher allowable exploitation rate than chinook, care must be taken through appropriate maximum mesh restrictions to prevent overharvest of chinook (particularly during the last 2 weeks of August and first week of September, when most of the pink fishery should occur).

Nisqually River

Chinook management period: 13 - July 1 through September 12  
Nisqually River - July 1 through September 19

Pink management period: 13 - August 2 through September 26  
Nisqually River - August 16 through October 3

Predictions for the Nisqually River chinook run this year indicate a return of 2,200 fish can be expected. The chinook run in the Nisqually River is composed of natural and hatchery fish. The allowable harvest of the combined stocks is 1,100 fish. The predicted Nisqually River pink run of 4,500 is less than that required for escapement, so appropriate minimum mesh restrictions will be required in Area 13 and the river during any chinook fisheries.

Minter Creek-Carr Inlet

Chinook management period: 13A - July 22 through September 19

Pink management period: 13A - August 2 through September 26

The Carr Inlet fall chinook and pink runs are entirely hatchery fish from Minter Creek. Forecasts show an expected return of 9,200 chinook and 7,200 pink, with allowable harvests of 8,800 and 4,300, respectively.



Deschutes-Capitol Lake

Chinook management period: 13B - July 1 through September 19

The principal chinook stock in Area 13B is the run to the Capitol Lake-Deschutes River hatchery facility located at the lower end of Budd Inlet. Pre-season forecasts indicate a return of 13,100 can be expected this fall. Hatchery escapement requirements for this stock in 1981 are 6,500 fish. The remaining 6,600 chinook will be available for harvest.

Miscellaneous South Sound

Chinook and pink management periods: incorporated in previous discussions and areas

In addition to the major chinook runs which have been discussed above, there are two minor hatchery programs not situated on large river systems. Garrison Springs, or Chambers Creek, should contribute approximately 200 chinook to various fisheries in marine waters. From a total return of 400 fish, the hatchery facility should realize an escapement of 200. Another facility on McLane Creek producing hatchery chinook is predicted to contribute 300 fish to marine area fisheries from a total return of 700.

The Chambers Creek pink run of 1,800 fish is not large enough to sustain a directed fishery. The harvest of 300 is expected to occur incidentally.

Hood Canal

Chinook management period: 12, 12B - July 1 through August 29  
9A, 12A, 12C, 12D - July 1 through September 5  
Skokomish River - July 1 through September 26

Pink management period: 12, 12B - July 12 through August 29  
12C - July 19 through September 5

The only chinook run in Hood Canal this year with a significant number of harvestable fish is the Skokomish River run. Other stocks, including the hatchery stock originating from Hoodport, have low numbers of harvestable fish that will be caught by low-intensity chinook fisheries in Areas 12, 12B, and/or 12C and by fisheries directed at other species. (Note that Quilcene fish were planted at Walcott Slough and return rates are uncertain.) From a total return of 17,000 Hood Canal chinook, there will be 9,600 harvestable. The bulk of

this harvest, 8,300 fish, consists of Skokomish River chinook. Area closures around Hoodsport Hatchery and Dewatto Bay will be required to assure chinook escapement.

The pink salmon run to Hood Canal is predicted to total 156,200, with 26,500 harvestable. The allowable fishing rate for pink destined for Hoodsport Hatchery is slightly higher than that for pink destined for Area 12B streams.

## PREDICTION METHODS

### Chinook Salmon

The 1981 prediction of summer/fall chinook runs to Puget Sound is the number expected to enter the Strait of Juan de Fuca. The prediction this year is composed of five major parts: the natural portion, two hatchery segments, and the Nooksack-Samish and Hood Canal runs.

The natural portion of each run, with the exception of Hood Canal, is predicted as the mean annual run size originating from that stream. Escapement estimates, plus estimates of natural run catch, are combined to make the natural run size.

Runs resulting from hatchery plants are predicted similarly as the mean annual hatchery run. Hatchery rack counts are added to harvest estimates of the hatchery stocks to produce the hatchery run size. The hatchery run is then divided into two parts resulting from yearling and fingerling releases. The basic procedures employed in preparation of the 1981 hatchery prediction have been discussed previously in Progress Report No. 107. Hatchery runs to Green River, Minter Creek, and Deschutes River were adjusted again this year to reflect recent success of plants.

Methods used to predict the Nooksack-Samish run were presented in the 1980 status report (Progress Report No. 107). The procedure involves calculating a total brood return to Puget Sound from a hatchery production factor (pounds X numbers). The total brood return is then separated into contribution by age group or fishery year. Total predicted return within a given year is the summation of 5-year-old, 4-year-old, and 3-year-old returns from three consecutive brood year releases.

Prediction for the Hood Canal run was made separately using a multiple regression equation. More than 37 combinations of factors involving natural escapements and hatchery releases were examined by a multiple regression program. This analysis yielded the predictive equation:

$$y = 259.85 - 1,091,787 x_1 - 21.03 x_2$$

where

- y = natural log of run to Strait of Juan de Fuca,
- $x_1$  = the reciprocal of hatchery fingerling pounds planted 3 years prior, and
- $x_2$  = natural log of hatchery fingerling pounds planted 3 years prior.

#### Pink Salmon

The 1981 predictions of pink salmon returns to Puget Sound (Appendix Table 2) are the numbers of fish of each specific stock expected to enter U.S. waters.

The natural stock predictions are based on significant correlations of past total Puget Sound recruit/spawner rates (1965-1977) with one or more of the following variables: same brood chum salmon escapement, total precipitation in January, and/or mean sea-surface salinity at Neah Bay during spring months. The chum salmon escapement variable represents the production of chum juveniles which as competitors have been shown to have a significant effect on the survival of pink salmon. The two environmental variables have correlated significantly with past pink salmon returns. Individual stock forecasts were made by allocating the total Puget Sound prediction to each stock based on its relative proportion of 1979 parent-year escapement.

Artificial production returns were predicted using survival rates for previous broods of pink salmon released from each production site. For those release areas where no previous survival data were available, survival rates from the nearest long-term release site were used, e.g., Hood Canal Hatchery survival rates were used for the Port Gamble forecast.

Run sizes entering U.S. waters predictions for both natural and artificial stocks were based on average interception rates for the 1959-79 return years.

Appendix Table 1. 1981 Puget Sound summer/fall chinook salmon predictions, desired escapements, and expected harvests.

Stock	Predicted total return	Desired escapement	Harvest	Brood year natural escapement (1977)	Artificial production releases (1977 brood)	Comments
<b>Strait of Juan de Fuca</b>						
Seki--natural	150	250	0	Unknown		
Hoko--natural	550	850	0	Unknown		
Clallam--natural	100	150	0	Unknown		
Pysht--natural	400	650	0	Unknown		
Lyre--natural	50	100	0	Unknown		
Elwha--natural	350	250	100	Unknown		Escapement reflects same ratio to prediction as for hatchery fish.
--hatchery	2,900	2,100	800		599,992 fingerlings 482,132 yearlings	Estimate of harvestable may be optimistic because success of overall program not yet established.
Dungeness--natural	250	400	0	Unknown		
Salt Creek--natural	100	150	0	Unknown		
Deep Creek--natural	50	100	0	Unknown		
<b>Total</b>	<b>4,900</b>	<b>5,000</b>	<b>900</b>			
<b>Nooksack-Samish</b>						
Nooksack--natural and hatchery	61,200	2,300	58,900	1,500	4,124,578 fingerlings 299,768 yearlings	Includes Lummi and co-op releases. 1,250 expected escapement to Nooksack Hatchery.
Samish--predominantly hatchery	38,300	11,000	27,300	600	4,577,881 fingerlings 479,138 yearlings	
<b>Total</b>	<b>99,500</b>	<b>13,300</b>	<b>86,200</b>			
<b>Skagit</b>						
Skagit--natural	26,400	14,900	11,500	9,500		Harvest rates set on the basis of natural stock.
--hatchery	2,400	1,400	1,000		119,848 fingerlings 926,900 yearlings	Hatchery will take eggs from all available summers and falls.
<b>Total</b>	<b>28,800</b>	<b>16,300</b>	<b>12,500</b>			
<b>Stillaguamish-Snohomish</b>						
Stillaguamish--natural	4,300	2,000	2,300	1,500		Hatchery will take all available eggs. Harvest rate set on the basis of natural stock.
Snohomish--natural	11,400	5,300	6,100	5,600		
--hatchery	6,900	3,200	3,700		3,524,574 fingerlings 416,400 yearlings	
Tulalip--hatchery	2,700	0	2,700		502,206 yearlings	1,400 to be harvested in mixed-stock areas, the remainder in Tulalip Bay.
<b>Total</b>	<b>25,300</b>	<b>10,500</b>	<b>14,800</b>			

(Continued)

Appendix Table 1. (continued)

Stock	Predicted total return	Desired escapement	Harvest	Brood year natural escapement (1977)	Artificial production releases (1977 brood)	Comments
<u>Lake Washington</u>						
Natural	6,600	5,200	1,400	5,800		
Hatchery	5,900	4,600	1,300		2,804,010 fingerlings 157,800 yearlings	Includes University of Washington releases. Harvest rate set on basis of natural stock. Hatchery will take all available eggs.
<b>Total</b>	<b>12,500</b>	<b>9,800</b>	<b>2,700</b>			
<u>Duwamish-Green</u>						
Natural	8,200	5,800	2,400	3,800		
Hatchery	15,300	10,800	4,500		4,793,250 fingerlings	Harvest rate set on basis of natural stock. Hatchery will take all available eggs.
<b>Total</b>	<b>23,500</b>	<b>16,600</b>	<b>6,900</b>			
<u>Puyallup</u>						
Natural	3,100	1,400	1,700	700		
Hatchery	4,000	1,800	2,200		3,650,532 fingerlings	
<b>Total</b>	<b>7,100</b>	<b>3,200</b>	<b>3,900</b>			
<u>Nisqually River</u>						
Natural and hatchery	2,200	1,100	1,100	200	601,381 fingerlings	
<u>Deschutes--Capitol Lake</u>						
Natural and hatchery	13,100	6,500	6,600		4,939,320 fingerlings 1,031,755 yearlings	
<u>Carr Inlet (Minter Creek)</u>						
Hatchery	9,200	400	8,800		2,415,809 fingerlings 242,649 yearlings	
<u>Misc. South Sound</u>						
Chambers Creek--hatchery	400	200	200		162,300 fingerlings	
McLane Creek--hatchery	700	400	300		120,000 fingerlings 66,156 yearlings	
<b>Total South Sound</b>	<b>68,700</b>	<b>38,200</b>	<b>30,500</b>			
<u>Hood Canal</u>						
Hanna Hama, Duckabush, Dosewallips rivers--natural	400	300	100	700		
Quilcene--hatchery	3,000	2,300	700		2,456,534 fingerlings	Planted at Malcott Slough. Success of program not yet established.
Skokomish--natural and hatchery	11,300	3,000	8,300	1,400	2,343,537 fingerlings	1,300 expected escapement at George Adams.
Finch Creek--hatchery	2,300	1,800	500		1,302,368 fingerlings 447,870 yearlings	
<b>Total</b>	<b>17,000</b>	<b>7,400</b>	<b>9,600</b>			

Appendix Table 2. 1981 Puget Sound pink salmon predictions, desired escapements, and expected harvests.

Stock	Predicted total return	Desired escapement	Harvest	Brood year natural escapement (1979)	Artificial production releases (1979 brood)	Comments
<u>Strait of Juan de Fuca</u>						
Elwha River--natural	24,000	10,000	14,000	7,100		
Dungeness River--natural	173,000	85,000	88,000	50,000		
<b>Total</b>	<b>197,000</b>	<b>95,000</b>	<b>102,000</b>			
<u>Nooksack-Samish</u>						
Nooksack River--mostly natural	108,000	50,000	58,000	31,400	200,000 fingerlings (egg box fish)	
<b>Total</b>	<b>108,000</b>	<b>50,000</b>	<b>58,000</b>			
<u>Skagit</u>						
Skagit River--natural	1,035,000	330,000	705,000	300,000		
--hatchery	450	150	300		380,000 fingerlings	Harvest rate appropriate for natural stocks.
<b>Total</b>	<b>1,035,450</b>	<b>330,150</b>	<b>705,300</b>			
<u>Stillaguamish-Snohomish</u>						
Stillaguamish-Snohomish Rivers--natural	1,089,000	277,800	811,200	315,000	757,000 fingerlings (egg box fish)	
--hatchery	900	200	700		529,000 fingerlings	Harvest rate appropriate for natural stocks.
<b>Total</b>	<b>1,089,900</b>	<b>278,000</b>	<b>811,900</b>			
<u>Southern Puget Sound</u>						
Puyallup River--natural	95,000	19,000	76,000	27,500		
--hatchery	1,800	400	1,400		302,000 fingerlings	Harvest rate appropriate for natural stocks.
Chambers Creek--mostly hatchery	1,800	1,500	300		982,000 fingerlings	Incidental catch only.
Nisqually River--natural	4,500	3,800	700	1,300		Biological escapement goal equals 6,000. 700 expected incidental catch.
Minter Creek--hatchery	7,200	2,900	4,300		757,000 fingerlings	
<b>Total</b>	<b>110,300</b>	<b>27,600</b>	<b>82,700</b>			
<u>Hood Canal</u>						
Dosewallips-Duckabush Hama Hama rivers--natural	150,000	125,000	25,000	43,300		
Finch Creek--hatchery	5,900	4,400	1,500		888,500 fingerlings	
Port Gamble--hatchery	300	300	0		47,000 fingerlings	Hatchery will take all available eggs. Incidental catch only.
<b>Total</b>	<b>156,200</b>	<b>129,700</b>	<b>26,500</b>			

Graphical Material Relating to  
British Columbia Chinook Salmon  
Runs and Fisheries

and

Fraser River Status Report

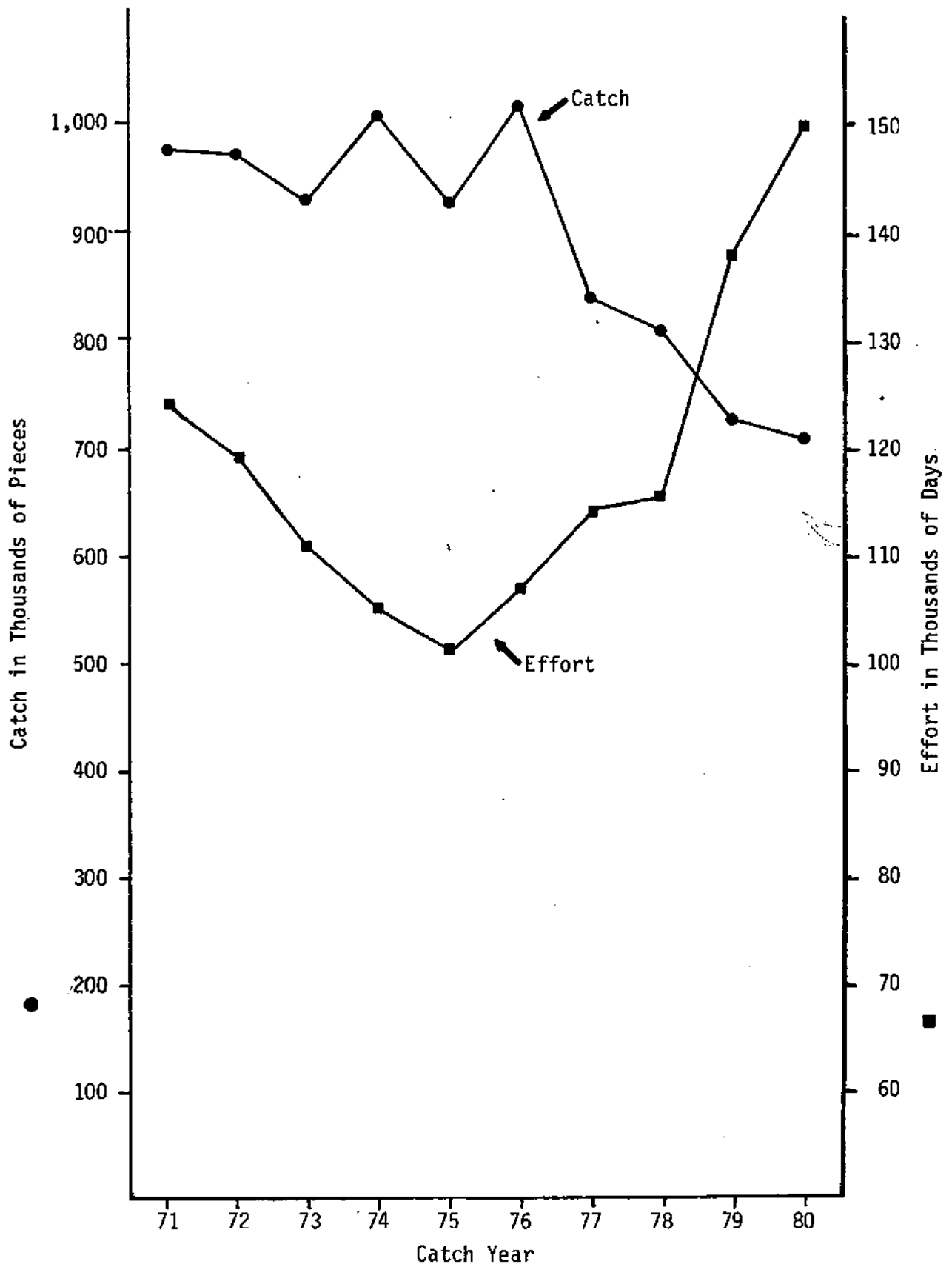


Figure 1. Catch of chinook salmon and fishing effort in ocean troll fishery. (Canadian data, Ken Pitre, Canada Department of Fisheries and Oceans, personal communication.)



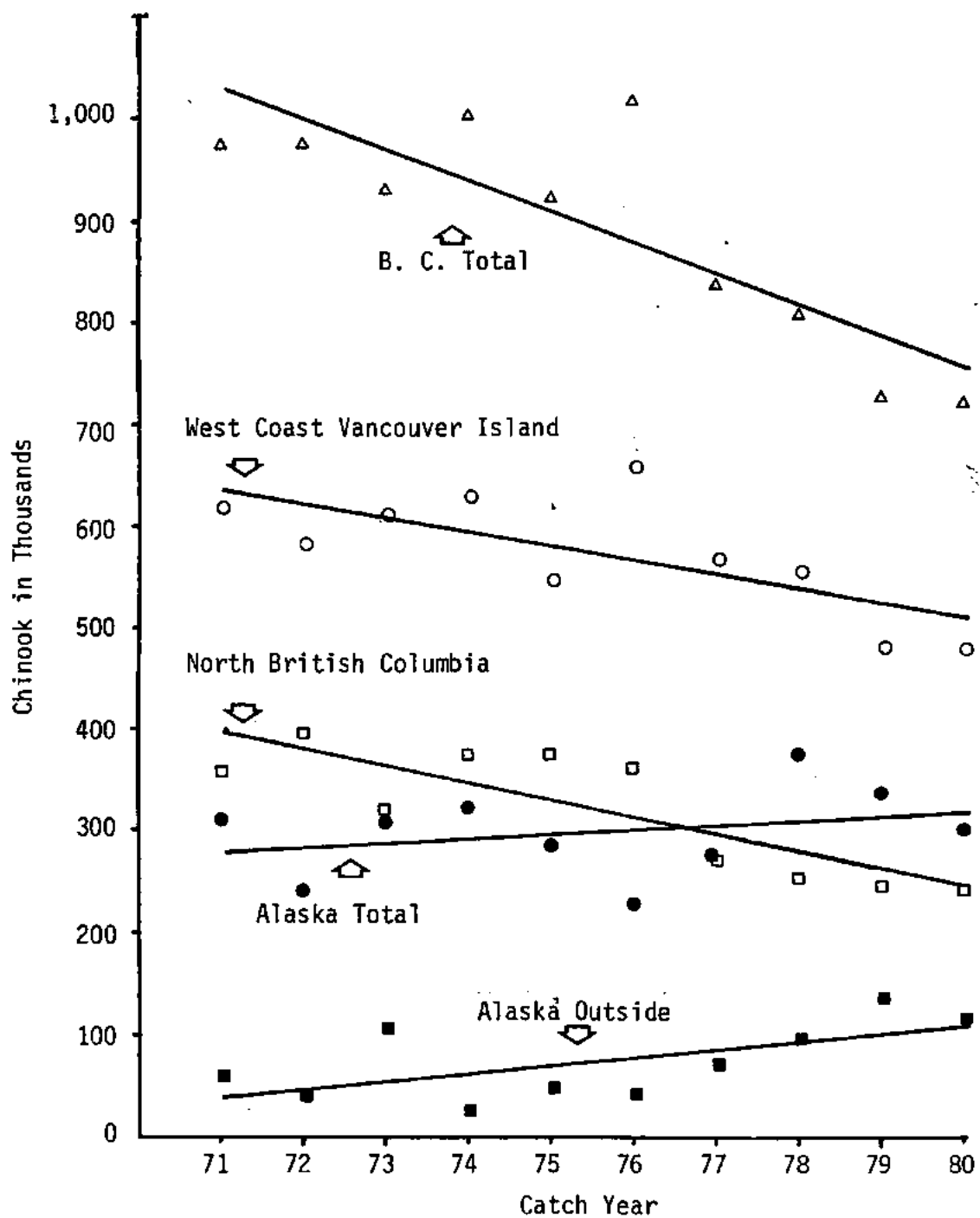


Figure 2. Summary of British Columbia and Alaska troll chinook catch, 1971-1980. (Canadian data, Ken Pitre, Canada Department of Fisheries and Oceans, personal communication.)

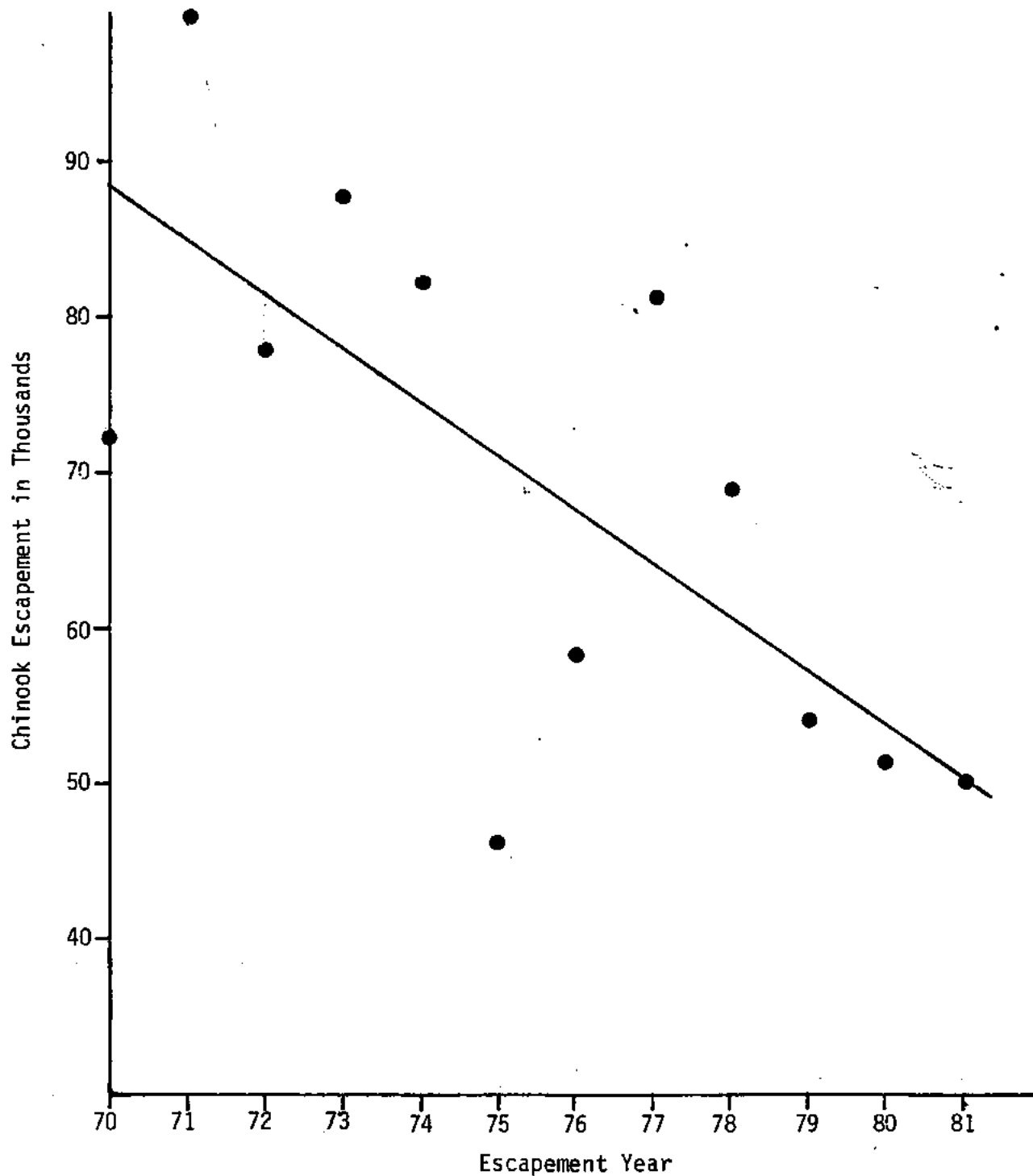


Figure 3. Canadian chinook escapements north of Cape Caution, 1970-1981 (Canadian data; Ken Pitre, Canada Department of Fisheries and Oceans, personal communication).

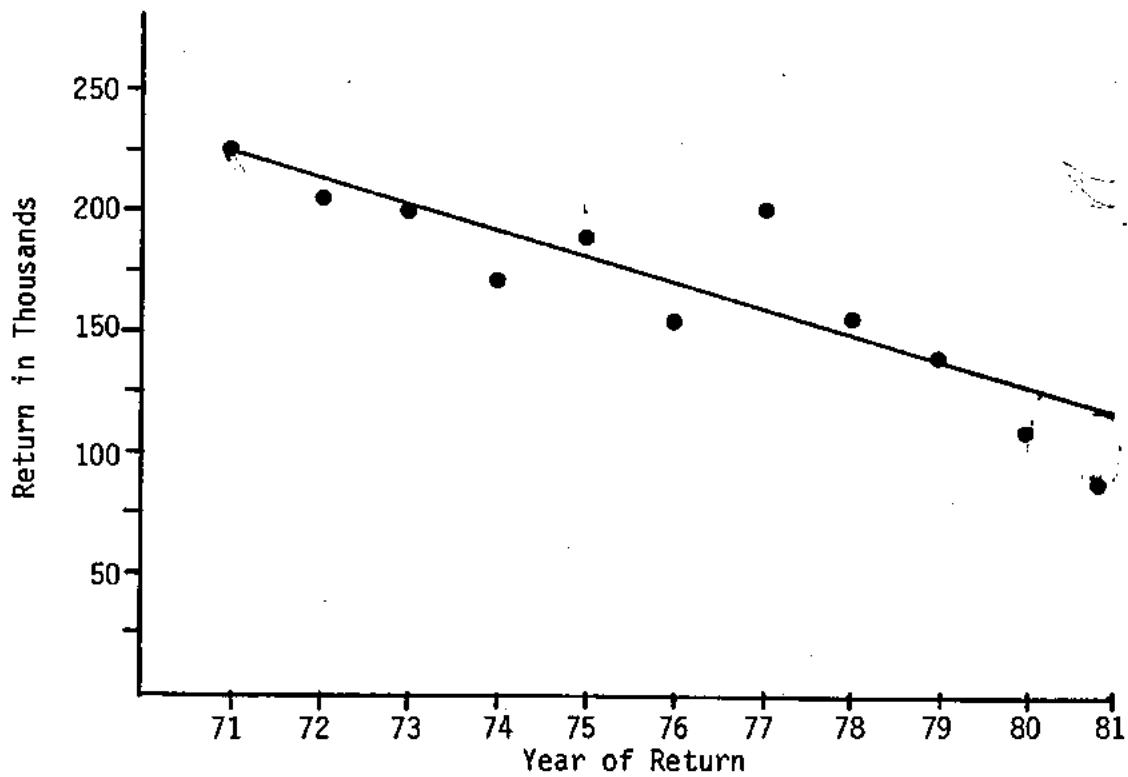


Figure 4. Fraser River chinook salmon returns from 1970 to 1981. Returns include escapement, Indian food fish, river sport catch, and terminal net catch. (Canadian data, K. Pitre, Canada Department of Fisheries and Oceans, personal communication.)

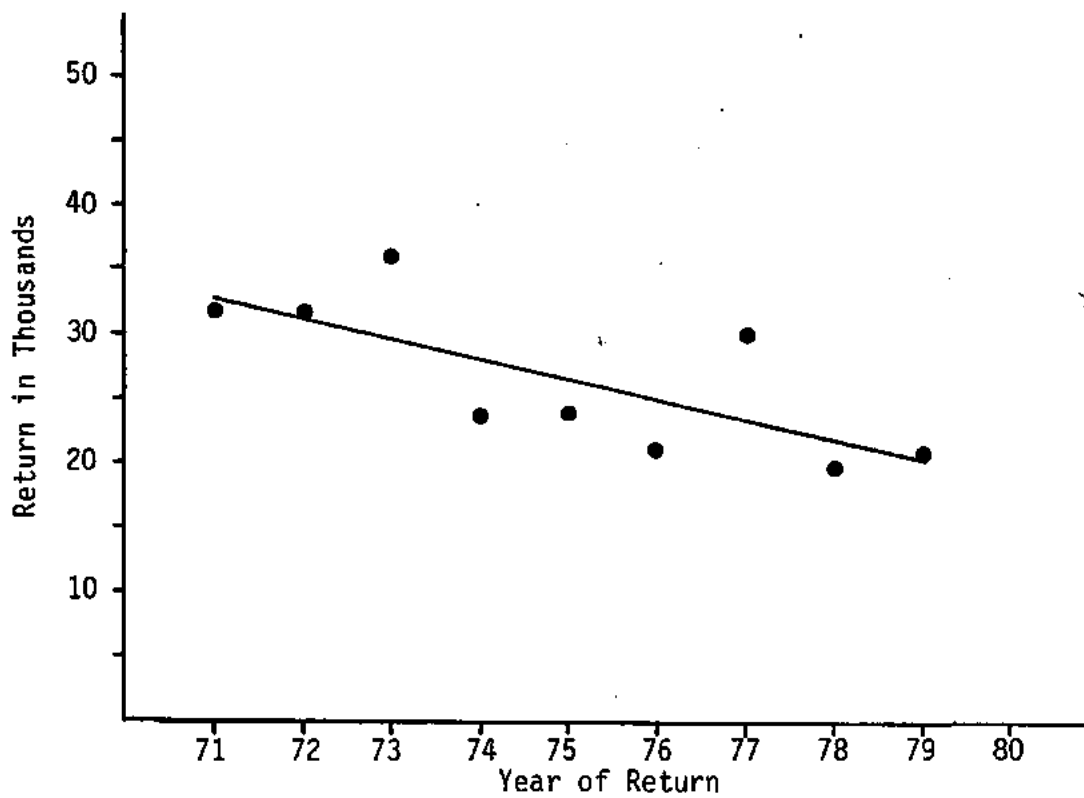


Figure 5. Chinook returns to Georgia Strait index streams, 1971 to 1979. (Canadian data, K. Pitre, Canada Department of Fisheries and Oceans, personal communication.)

## Review of 1981 Fraser River Salmon Catches and Returns

### 1. Sockeye

The preseason forecast of 6 million sockeye was exceeded by the actual return of approximately 7.9 million. Most of the strength in this year's return was in the Horsefly run which is dominant on this cycle. The total return for this stock was about 4.2 million. The Early and Late Stuart runs (also dominant on this cycle) were the other main contributors with total returns estimated at 800,000 and 1.5 million, respectively.

The total catch in all areas was about 6.0 million fish of which 4.7 million (79%) were taken by Canadian fishermen and 1.3 million (21%) by United States fishermen. Of the total Canadian catch, about 1.2 million fish were taken within Convention Waters and about 3.5 million outside of Convention Waters, mainly in Johnstone Strait. The large catch in Johnstone Strait reflects the high diversion rate on the large Horsefly run in particular. The total diversion rate of 69% was more than four times greater than the longterm average of 15% on this cycle. This is the fourth consecutive year in which the proportion of the run returning through Johnstone Strait has been abnormally high.

The Area 29 gillnet of about 826,000 was somewhat below the average of 1.0 million for the last four years of this cycle.

The spawning ground escapement was 1.4 million with an excellent escapement of 677,000 into the Horsefly River.

### 2. Pink

The I.P.S.F.C. preseason forecast for Fraser River pinks indicated a run of 9 million whereas the actual return was 17.0 million, the largest on record. The catch in all areas totalled 12.6 million of which Canada took an estimated 8.8 million (70%) and the United States 3.8 million (30%). Of the total Canadian catch approximately 4.2 million were taken within Convention

waters and 4.6 million in outside waters primarily off the west coast of Vancouver Island and in Johnstone Strait. The Area 29 catch was about 287,000 compared to an average of 246,000 on the last four pink salmon cycles.

The spawning ground escapement of 4.4 million was the largest on record.

### 3. Chinook

Declining returns of chinook to the Fraser River and other Georgia Strait streams over the past decade with a particularly low return to the Fraser in 1980 resulted in a number of conservation measures being implemented by both Canada and the United States in 1981 in an effort to increase the chinook return to the streams of origin. The main conservation measures were as follows:

#### (a) Fraser River

- (i) elimination of early gillnet fishery directed on chinooks
- (ii) reduction of maximum gillnet mesh size to 5½ inches from previous maximum of 5 7/8 inches during sockeye fisheries
- (iii) no Area 29D fisheries when expected ratio of sockeye to chinook was less than 10:1
- (iv) no chinook sport fishing in river and off mouth except for jacks in river below Boston Bar

#### (b) Outside Canadian Fisheries

- (i) two-area troll
- (ii) reduced troll season
- (iii) spot closures on problem juvenile areas
- (iv) sport fishing conservation package

(c) United States Waters

- (i) no fishery targeting on chinooks prior to I.P.S.F.C. control  
(third consecutive year that this has been in place)
- (ii) gillnet mesh size restricted to maximum of 5 7/8 inches during sockeye and pink salmon fisheries
- (iii) non-Indian seines and reef nets were required to release chinook up to August 1 while Indian seines were required to release chinook greater than 28 inches in length to August 1.

While the benefits of some of the conservation measures were not expected to accrue for another one or more years some benefits should have been apparent as greater returns to the river and higher escapements in 1981. Any analysis, of course, suffers from lack of a control; what the return would have been had the conservation measures not been in place is impossible to determine.

Table 1 shows catches, escapements and total return of chinook to the Fraser River since 1971. The incidental commercial catch in Area 29 was only about 18,000, a record low as was the total return to the river of 80,000. The spawning escapement of 51,000 while well below the 10-year average of 66,000 was within the recorded range of recent years. However, it is only about one third the number considered to be optimum for the Fraser River.

The elimination of the directed chinook fisheries prior to I.P.S.F.C. control in both Canada and the United States did not achieve the desired result of substantially increasing spawning escapements to the upper Fraser (primarily to streams upstream of Prince George). In fact, escapements to this area were well below average. Had the fishing closures not been in effect the spawning escapements to this area would have been disastrous.

Another conservation measure that was expected to show some benefits this year was the chinook release program in United States waters because these fisheries take large numbers of maturing chinooks of which a high proportion are considered to be of Fraser River origin. The incidental catches of chinook in Area 29 did not show any evidence of a major influx of fish and the spawning escapement of runs assumed to move through the lower Fraser River in July (when the release program was in effect), such as Chilko, were below average. The chinook test fishery also indicated a low return as the total catch was below that of 1980 (Fig.1). The apparent lack of effectiveness of the chinook release program may have been related to high mortality as chinook tend to be especially sensitive to handling.

While the spawning escapement to the Fraser River was low on the whole, there were areas such as some tributaries of the Thompson River that had a relatively good return. Others, including the late-timing Harrison River run were well below average.

#### 4. Coho

The return of coho to the Fraser River in 1981 was exceptionally poor. The incidental Area 29 catch of only 4,000 is the lowest on record. While the spawning escapement information is presently incomplete preliminary information indicates that many streams in both the upper and lower Fraser will have below average escapements. Low wild coho escapements seem to be general throughout Southern British Columbia this year.

#### 5. Chum

The pre-season forecast for Fraser River chums was for a return of 700,000 in 1981, equivalent to the number considered to be optimum for spawning. Test fishing in Johnstone Strait and in the Fraser River indicated that no fishable surplus was available throughout the season. Spawning escapement estimates are incomplete at this time. Although some of the small streams



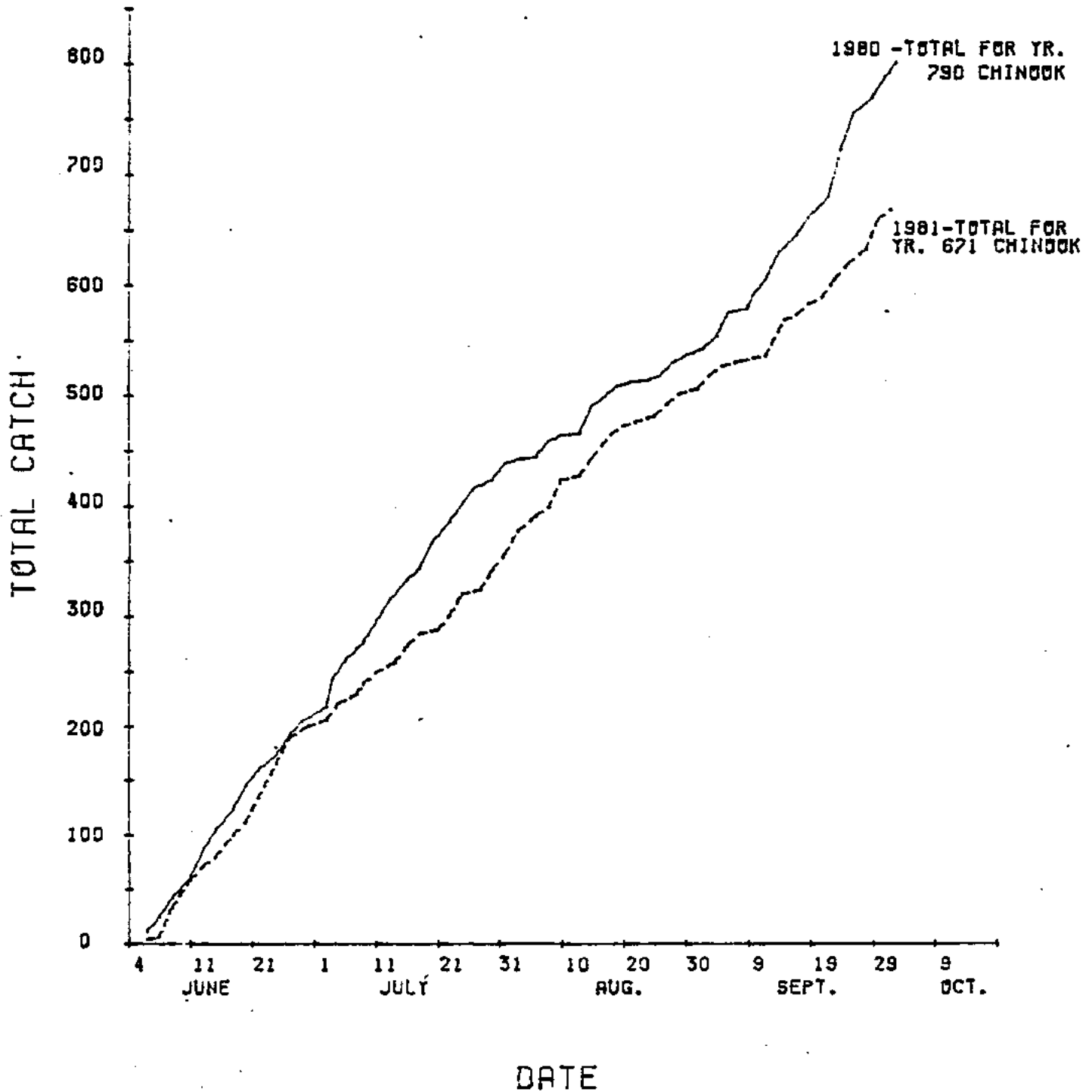
had relatively good escapements the later segments of the run are weak so the overall escapement is expected to be less than optimum.

TABLE 1. Catch, Escapement and Total Return of Fraser River Chinook

	<u>Commercial Catch</u>	<u>Sport and Indian Food Catch</u>	<u>Escapement</u>	<u>Total Return</u>
1971	132,000	33,000	60,000	225,000
1972	121,000	36,000	48,000	205,000
1973	95,000	23,000	81,000	199,000
1974	68,000	26,000	76,000	170,000
1975	74,000	35,000	80,000	189,000
1976	80,000	30,000	44,000	154,000
1977	91,000	31,000	80,000	202,000
1978	54,000	29,000	73,000	156,000
1979	52,000	26,000	63,000	141,000
1980	39,000	18,000	56,000	113,000
1981	18,000*	11,000*	51,000*	80,000

\* preliminary

FIG. 1. COMPARISON OF THE TOTAL CUMULATIVE CATCHES OF CHINOOK IN THE ALBION TESTFISHERY IN 1980 AND 1981.



Draft of 12/21/81

**DRAFT**

**CURRENT STATUS OF SOUTHEAST ALASKA CHINOOK SALMON STOCKS**

Southeast Region  
Division of Commercial Fisheries  
Alaska Department of Fish and Game  
Juneau, Alaska

December 1981

## BRIEF

Chinook salmon runs occur in some 33 rivers and streams throughout Southeast Alaska. Three major systems, the Alesk, Taku, and Stikine Rivers are thought to produce approximately 70% of the total production while 8 medium and 22 minor systems produce an estimated 20% and 10% respectively. Hatchery production is currently small relative to natural production but is expected to increase substantially during the next decade.

Commercial chinook salmon catches in Southeast Alaska declined from an average of 610,000 during the 1930's to 320,000 during the 1970's. The 1981 catch was approximately 268,000. Significant contributions of non-Alaskan stocks to the total catch coupled with the lack of effective stock separation techniques prevent drawing direct inferences from total catches to changes in Southeast Alaska stock abundance. However, historical catch data from terminal area fisheries and available escapement data also indicate significant declines in Southeast Alaska stocks. It is estimated that Southeast Alaska stocks may currently be producing at only about half the potential level expected from minimum management escapement goals.

A management program is currently in progress to rebuild depressed Southeast Alaska chinook stocks. More restrictive fishery regulations begun in the mid-1970's and expanded in 1980 and 1981 appear to have arrested the decline in escapements in most systems and significantly increased escapements to two major systems, the Taku and Stikine Rivers in 1980 and 1981. Proposals are being made to further delay spring opening dates in certain southern Southeast Alaska areas in 1982 to increase escapements to 4 medium systems in the Behm Canal area. Tentative plans are also being made to supplement several natural stocks in this area with hatchery produced fish of the same brood stock in an effort to speed the rebuilding process.

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## INTRODUCTION

Natural chinook salmon runs are known to occur in some 33 rivers and streams throughout Southeast Alaska (Figure 1). Three of these, the Aisek, Taku, and Stikine Rivers, are classified as 'major' producers with potential run sizes exceeding 10,000 fish. Eight of the systems are classified as 'medium' producers with potential runs ranging from 1,500 to 10,000 and 22 are classified as 'minor' producers with potential runs of less than 1,500 fish. Chinook salmon have also reportedly been observed on occasion in a number of other rivers and streams, however, these runs in total are thought to be small in comparison to the classified runs.

Of the 33 classified systems, 3 major, 5 medium, and 1 minor system are currently surveyed annually to estimate relative spawning abundance. These nine systems are currently used to provide an index or relative measure of annual chinook salmon spawning to all Southeast Alaska systems. In the 3 major systems which are large mainland rivers, surveys are conducted only on some of the more important spawning tributaries with physical characteristics which allow aerial spawning ground surveys. Counting weirs are currently used on the Kluckshu River, a major tributary of the Aisek, and on the Situk River. Escapement estimates based on aerial and/or ground surveys represent peak spawning counts unless expanded appropriately to estimate total escapement.

While some of the other non-index systems are surveyed occasionally, poor survey conditions due to glacial water and other factors prevent obtaining consistent annual escapement estimates from spawning ground surveys.

Chinook salmon are also produced in several Southeast Alaska hatcheries including ADF&G hatcheries at Crystal Lake and Deer Mountain and a NMFS research facility at Little Port Walter. Contributions to commercial and recreational fisheries are currently estimated to be in the range of 2,500 to 5,000 fish. Substantially expanded production is planned for a number of new hatcheries.

For a more detailed discussion of Southeast Alaska chinook salmon stocks the reader is referred to:

A Study of Chinook Salmon in Southeast Alaska.

Paul Kissner. Alaska Department of Fish and Game. Anadromous Fish Studies, Vol. 18. AFS 41-5. 1977

#### CURRENT STATUS OF NATURAL STOCKS

While it is generally agreed that Southeast Alaska natural chinook salmon stocks are depressed compared to both historical catch levels and estimated potential production, it is difficult to estimate quantitatively the degree to which they are depressed. This is due to the lack of consistent historical records of annual escapements and the inability to allocate catch from large mixed stock fisheries to individual contributing systems. There are several approaches that can be used, however, to provide some general impressions of the current status of these stocks.

#### Historical Commercial Chinook Salmon Catch Data

Commercial catches of chinook salmon by Southeast Alaska fisheries averaged 320,000 fish annually during the 1970's or about half of the 610,000 average annual catch taken during the peak decade of the 1930's (Figure 2). Significant contributions to this harvest by non-Alaskan stocks and the



absence of effective stock separation techniques required to determine stock components in these highly mixed stock fisheries prevent direct inferences being made from total catches as to the status of Southeast Alaska chinook salmon stocks. However, historical catches by Southeast Alaska fisheries operating in more terminal areas near local chinook producing systems such as the Alsek, Taku, and Stikine Rivers also reflect serious declining trends (Figures 3-4).

While historical catches shown for the terminal area gillnet fisheries have not been adjusted for fishing effort and thus are not a direct measure of relative stock abundance, the large early declines occurred during periods before significant reduction of fishing effort occurred. The very low level catches in more recent years, however, reflect both low stock abundance and significantly reduced fishing effort resulting from more restrictive fishery regulations designed to rebuild these runs.

#### Historical Chinook Salmon Escapement Data

Historical chinook salmon escapement data available for the 9 index systems combined with preliminary estimates of optimum escapement and/or minimum escapement goals also provide some general indication as to the degree to which these stocks are currently depressed. This information is shown graphically in Figures 5-13 .

Minimum escapement goals for Southeast Alaska chinook salmon index systems currently being surveyed have been established based on the maximum number of spawners observed since surveys were initiated in the early 1950's (except for the Situk River where weir counts date back to 1928). Since the 1950's Southeast Alaska chinook stocks appear to have been substantially depressed below historical high levels and based on harvest patterns of

fisheries in terminal areas, even maximum escapements observed during this latter period do not appear to have reached or exceeded optimum escapement levels. (Analysis of data is being continued however, and revision of some escapement goals are anticipated in particular for the Stikine and Situk Rivers.)

Expanding average minimum escapement goals for surveyed systems to non-surveyed systems within each of the run size categories--major, medium, and minor--results in an estimated total minimum escapement goal for all Southeast Alaska systems of 66,000 to 80,000 fish. Average escapements observed during 1978-80 are estimated to have been 25,000 to 34,000 indicating a 42,000 to 46,000 spawner deficit.

Chinook salmon escapements to Southeast Alaska systems are therefore estimated to have averaged some 25,000 to 34,000 fish during the three year period 1978-80 or less than half of the total minimum escapement goal of 66,000 to 80,000 (Figure 14). As a result, production in terms of average annual harvest from Southeast Alaska stocks is also thought to be less than half of the harvest which might be expected if minimum escapement goals were being achieved (Tables 1-2). Although some improvement was observed in escapements to the Taku and Stikine Rivers in 1980 and 1981, escapements to other surveyed systems were generally unchanged (Table 3).

#### SUMMARY

Based on historical catch data in terminal area fisheries beginning in the early 1900's and on historical escapement data from the early 1950's for a number of index systems, Southeast Alaska chinook salmon stock abundance appears to be substantially below historical high levels and estimated

optimum levels. The apparent decline in stock abundance during the 1940's and 1950's was probably due to overfishing and possibly to some degree on less favorable environmental conditions.

The failure of Southeast Alaska chinook stocks to respond during the 1970's to more favorable environmental conditions as reflected by a general statewide increase in salmon production (Figure 15) was probably due primarily to continued overfishing and the resulting low escapement levels.

In response to more restrictive regulations for terminal gillnet fisheries (and recreational fisheries) since the mid-1970's and for the troll fishery in 1980-81, the decline in stock abundance appears to have been stopped. In addition, escapements to two of the major systems, the Taku and Stikine Rivers, increased significantly in 1980 and 1981.

Additional regulations are being proposed for 1982 to further delay the opening date of the summer season in District 1 in an attempt to increase escapements to chinook salmon systems in Behm Canal, namely the Unuk, Chickamin, Blossom, and Keta Rivers.

FIGURES AND TABLES

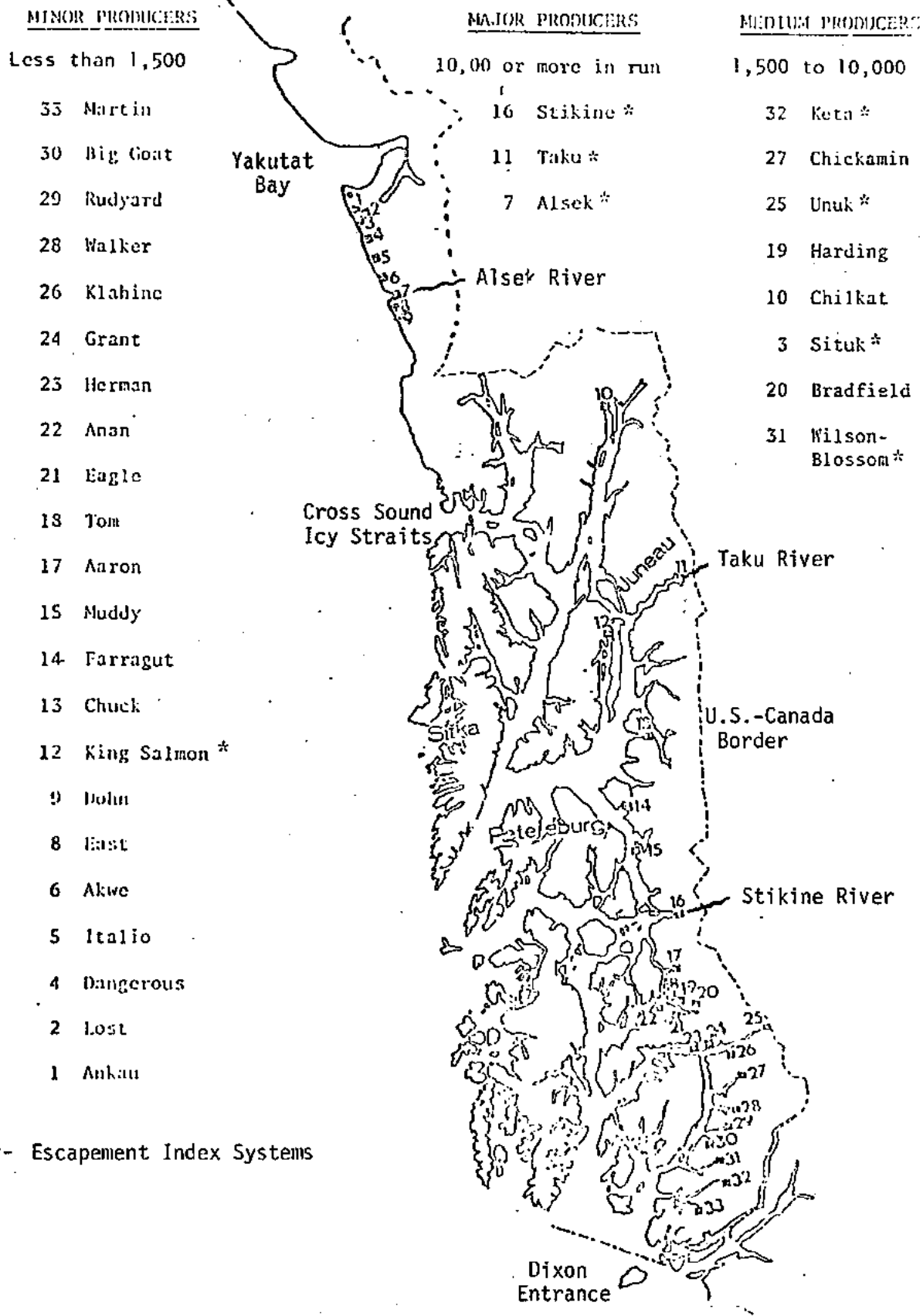


Figure 1. Approximate locations of chinook salmon systems in Southeast Alaska (ADF&G 12/81).

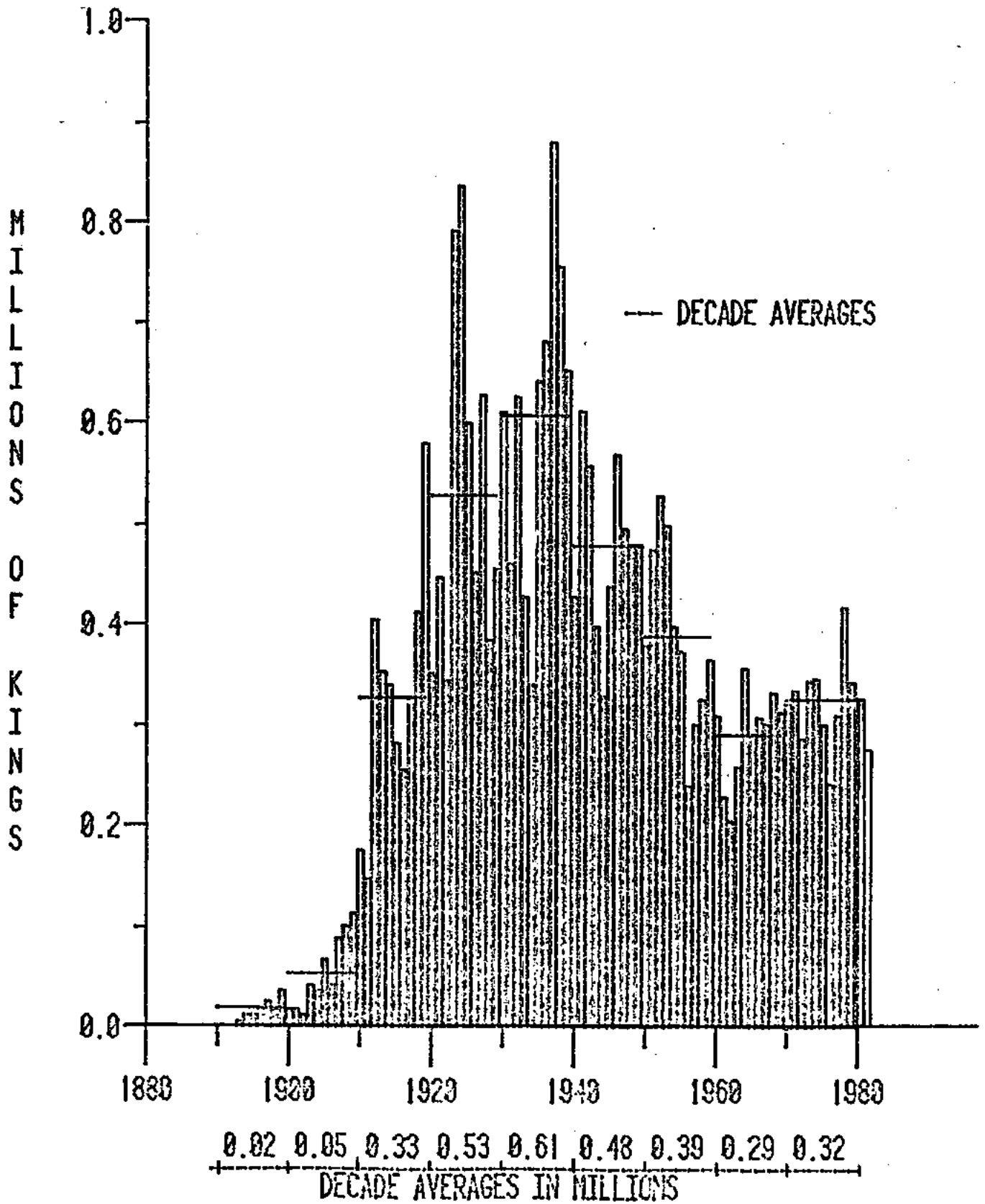


Figure 2. Southeast Alaska Region Annual Commercial Chinook Salmon Catches, 1893 to Present. (ADG&G 12/81)

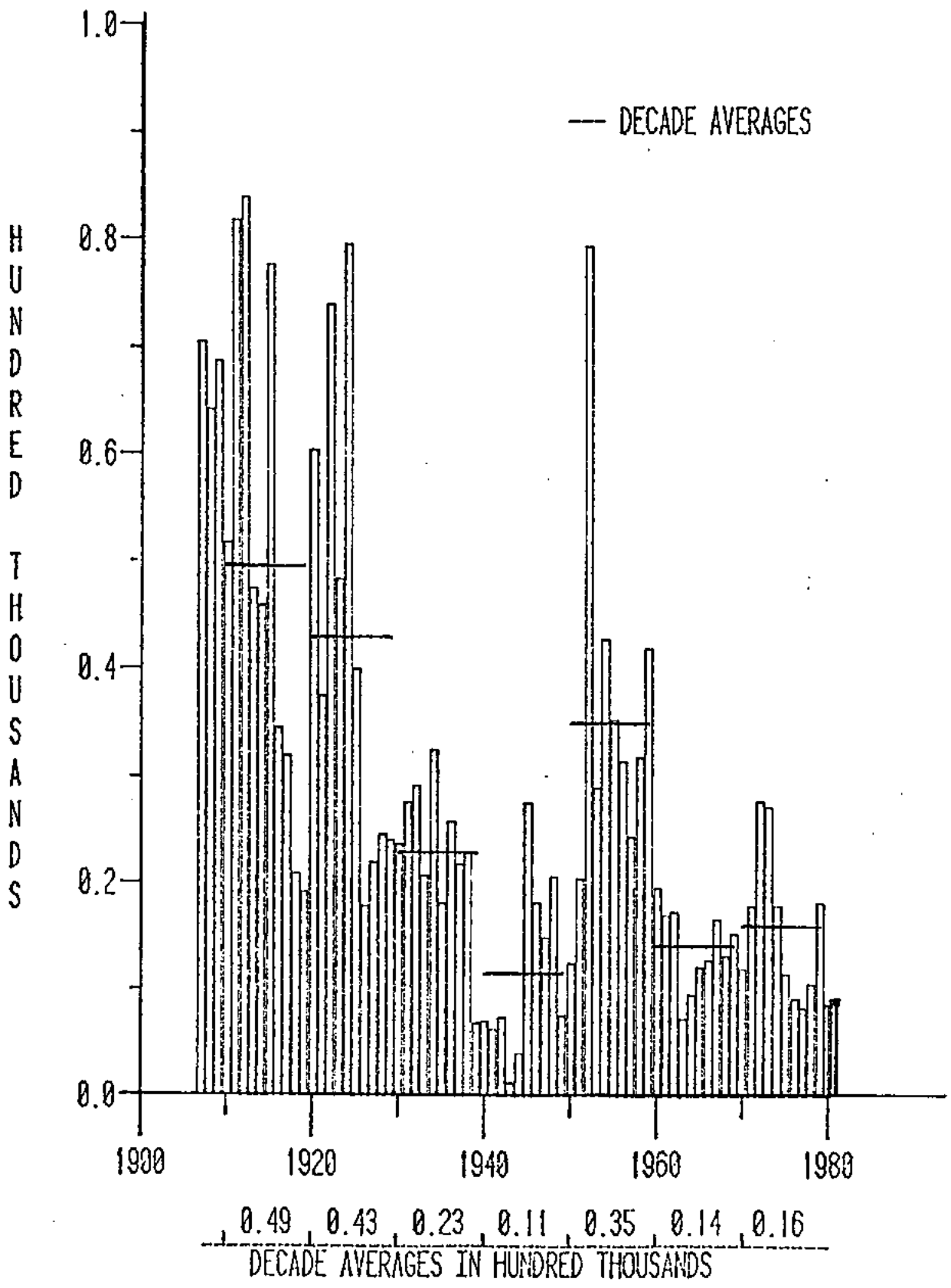


Figure 3. Southeast Alaska Historical Commercial Chinook Salmon Catches in Gillnet Fisheries, 1907 to Present. (ADF&G 12/81)

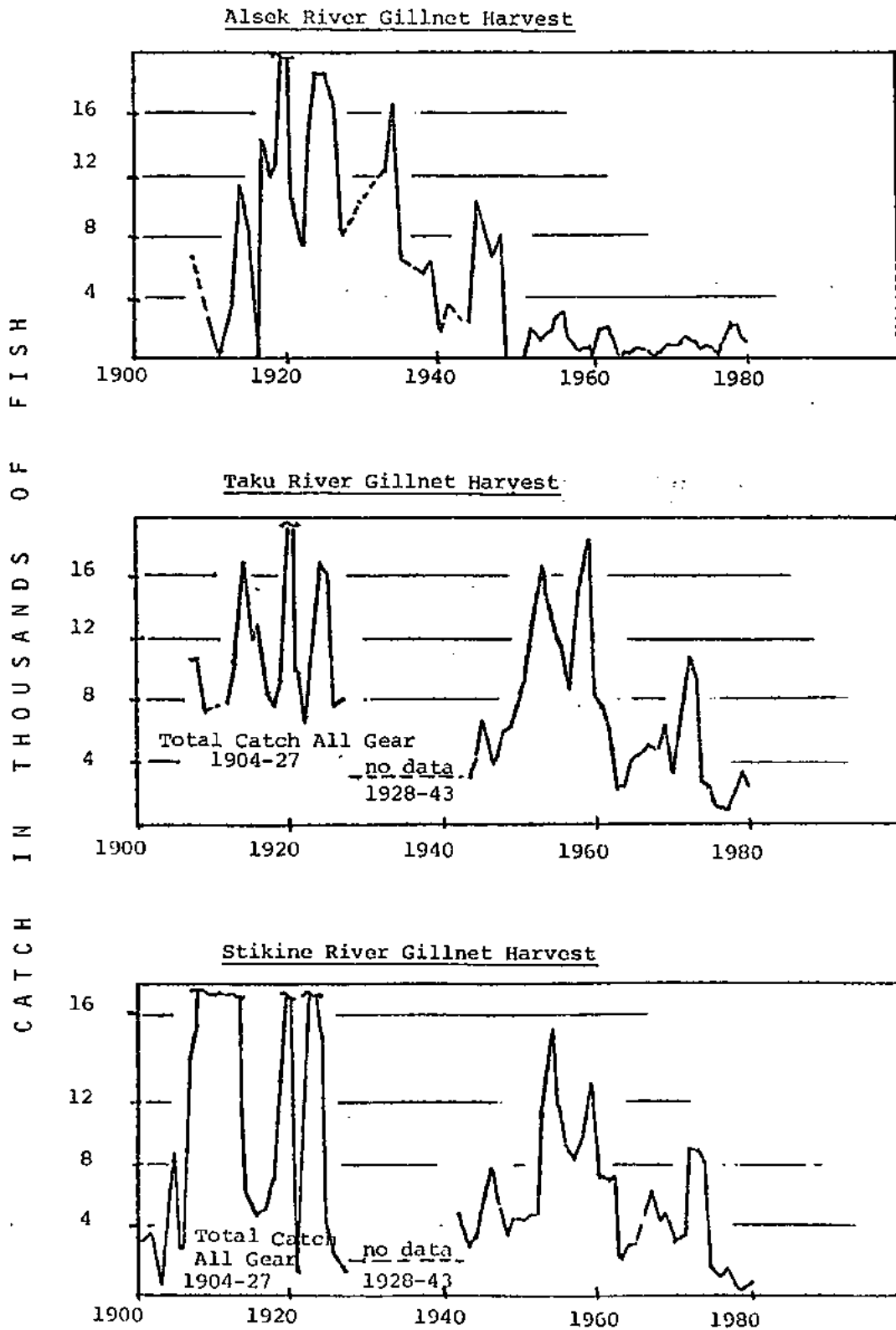


Figure 4. Historical Chinook Salmon Catches in Terminal Area Fisheries on the Alsek, Taku, and Stikine Rivers. (ADF&G 12/81)



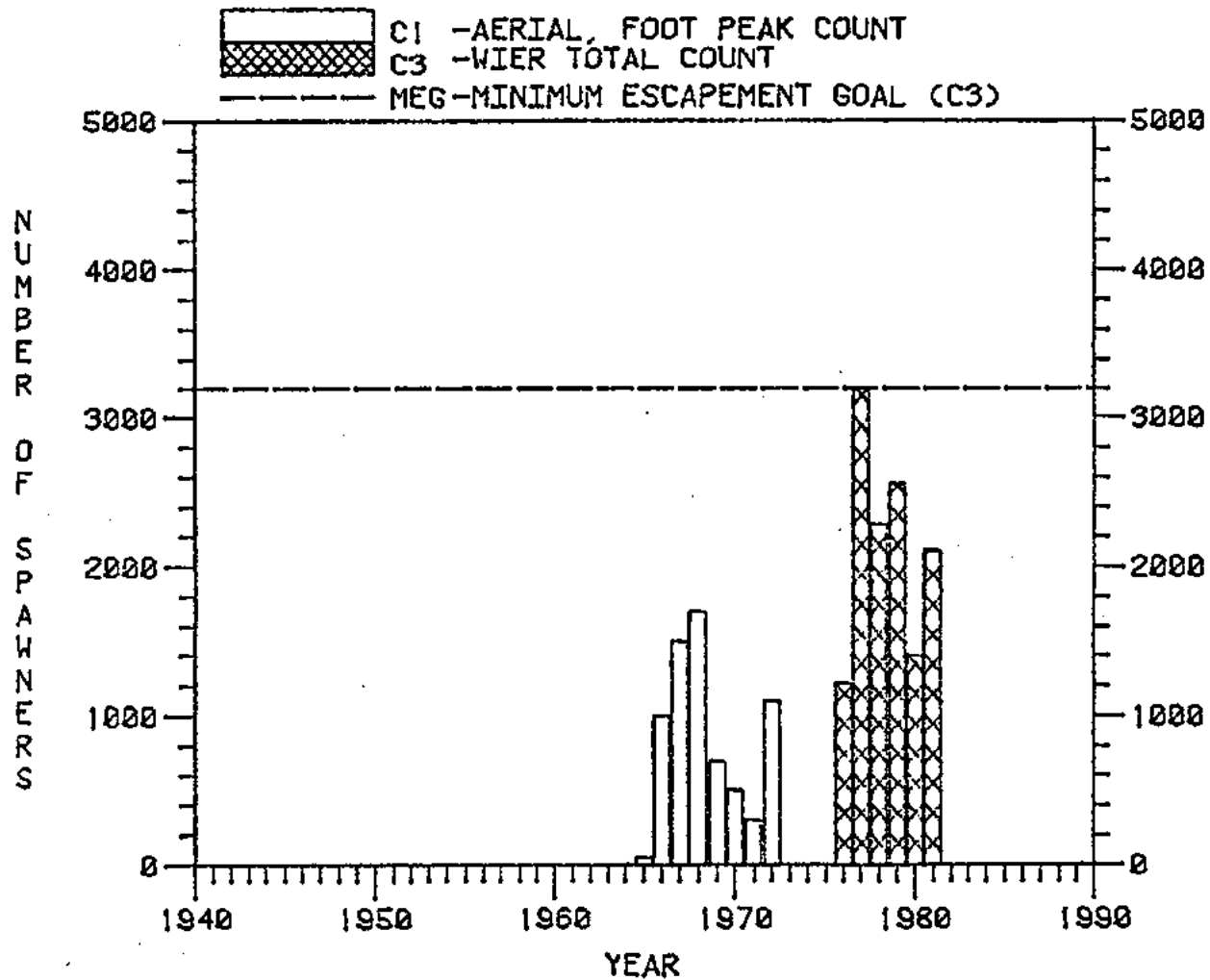


FIGURE 5. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE KLUCKSHU LAKE, ALSEK RIVER, SOUTHEAST ALASKA, 1965 TO 1981. (ADF&G 11/81)

(Note: Average contribution of Kluckshu Lake tributary to total Alsek River chinook salmon production estimated to be approximately 64%.)

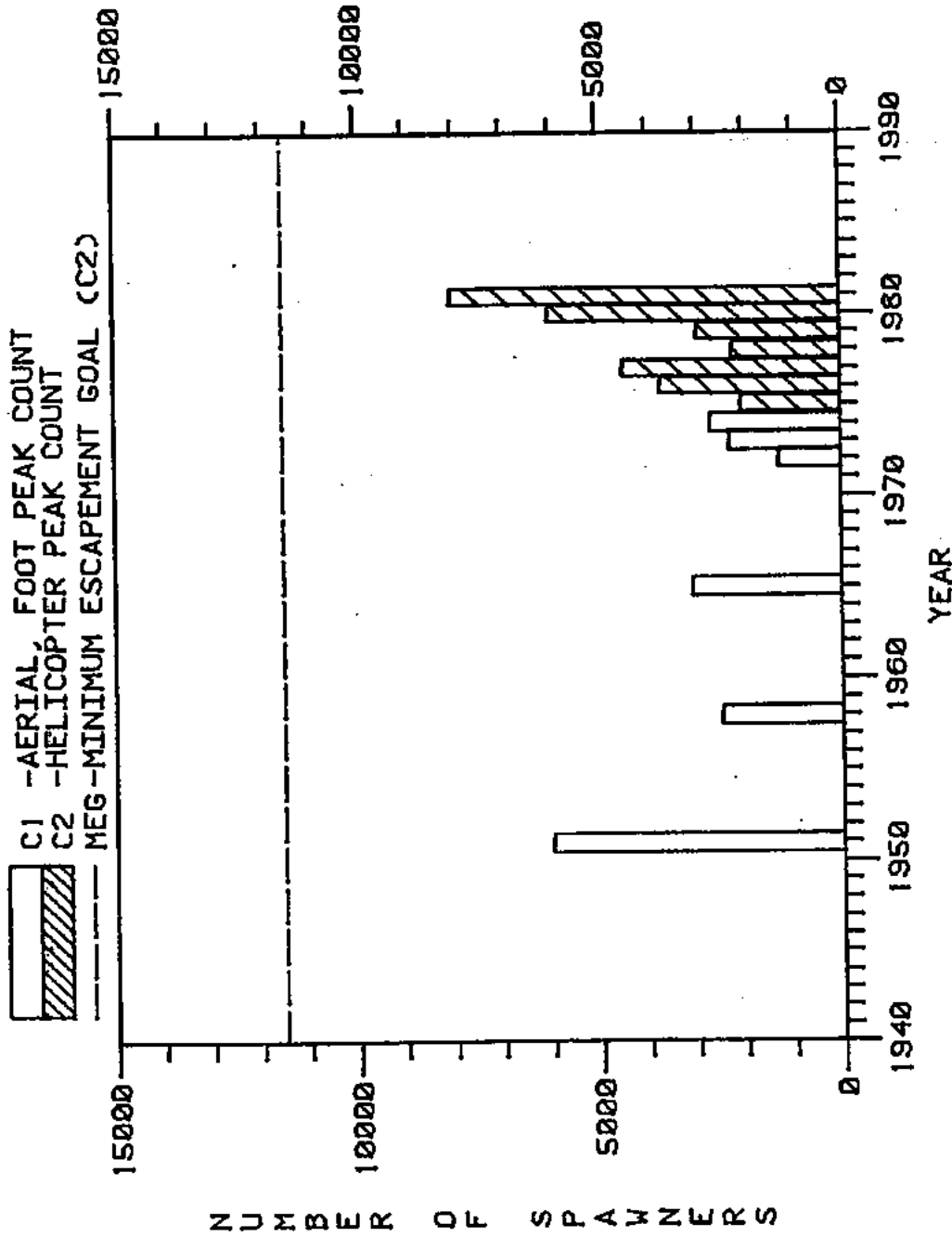


FIGURE 6. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE NAKINA AND NAHLIN TRIBUTARIES OF THE TAKU RIVER, SOUTHEAST ALASKA

1951 TO 1981. CADFG 11/81D

(Note: Average contribution of Nakina and Nahlin tributaries to total Taku River chinook salmon production estimated to be approximately 60%.)

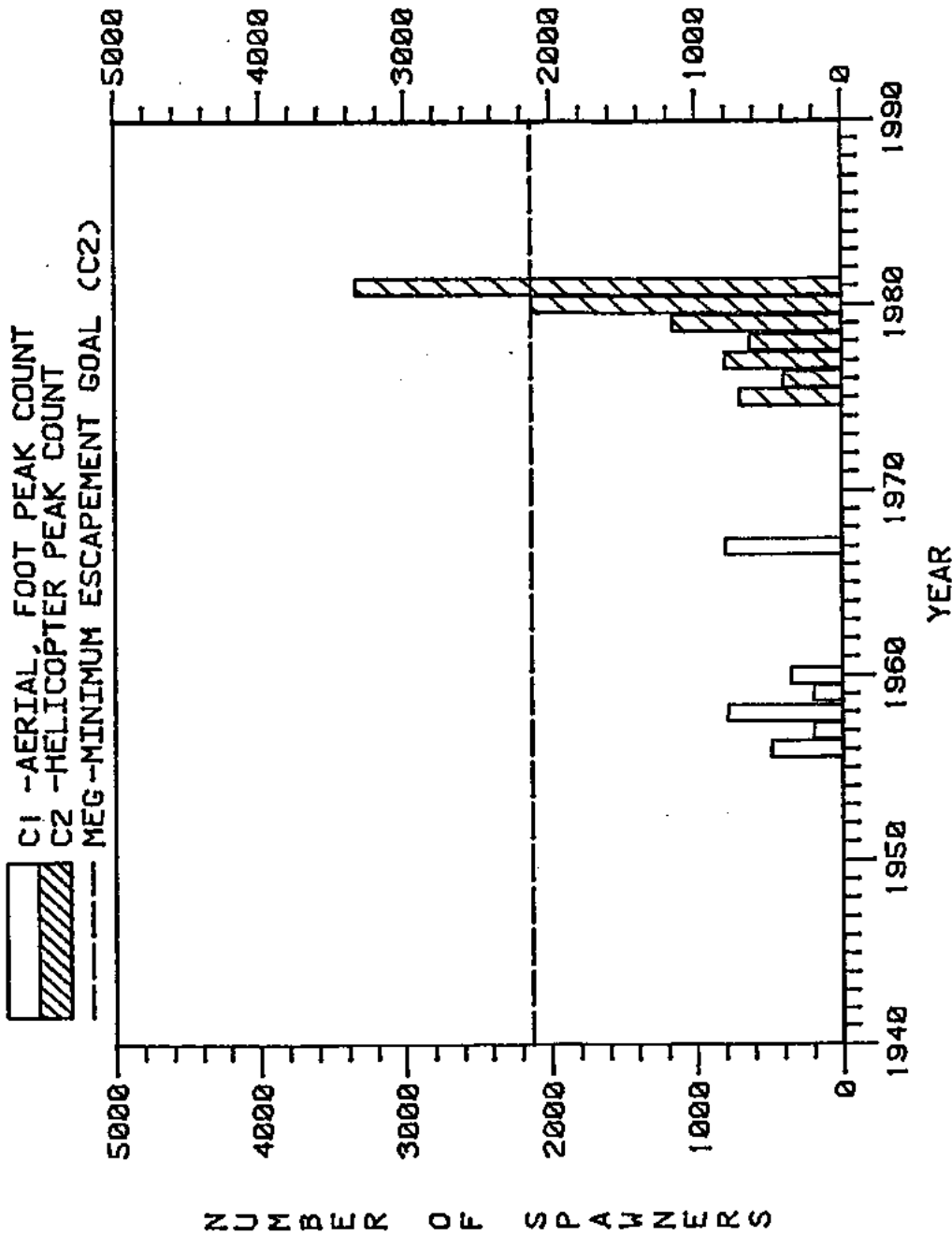


FIGURE 7. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE LITTLE TAHLTAN RIVER TRIBUTARY OF THE STIKINE RIVER, SOUTHEAST ALASKA 1956 TO 1981 (ADF&G 11/81)

(Note: Average contribution of Little Tahltan River tributary to total Stikine River chinook salmon production estimated to be approximately 25%.)

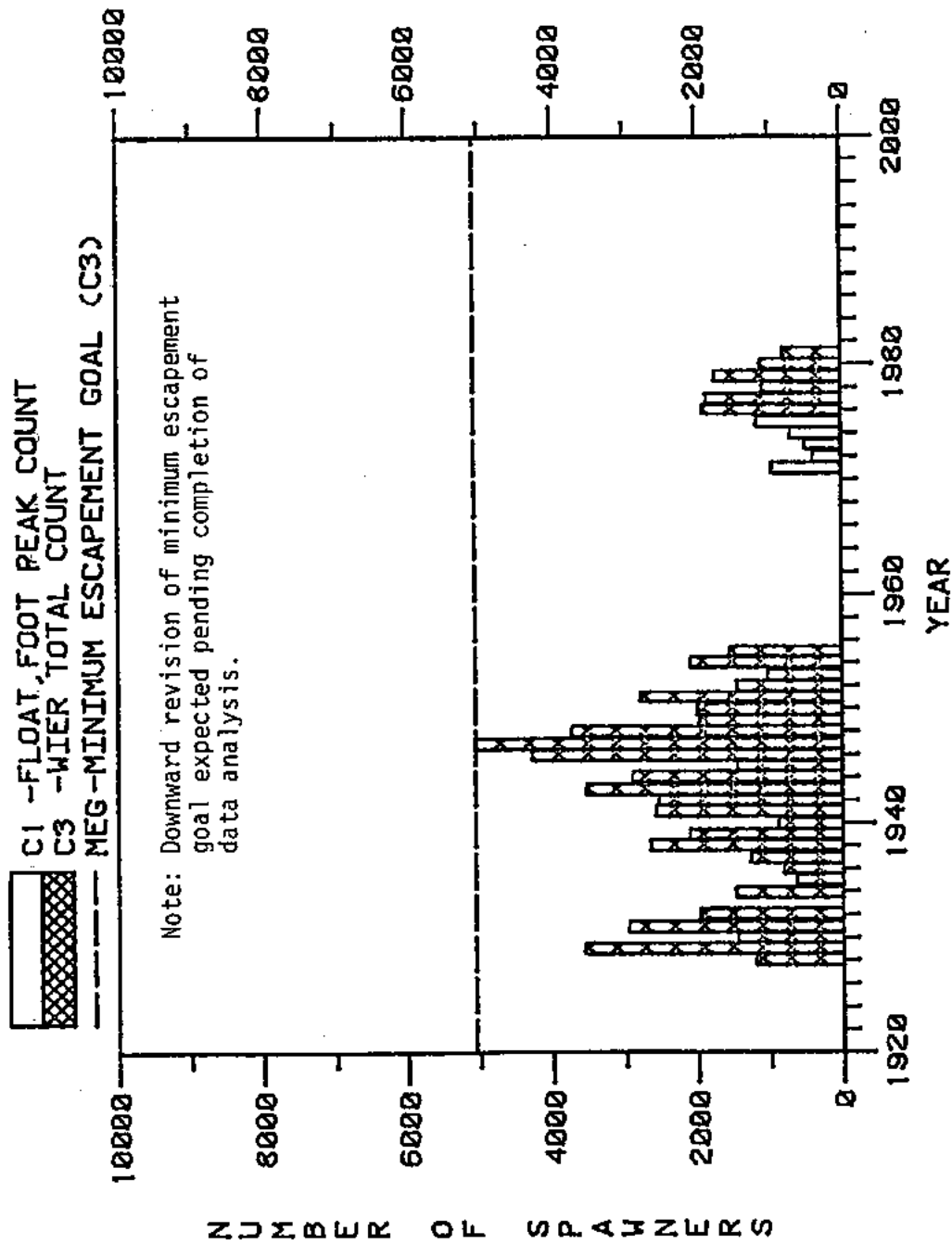


FIGURE 8 . OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE SITUK RIVER, SOUTHEAST ALASKA, 1928 TO 1981. (ADF&G 11/81)

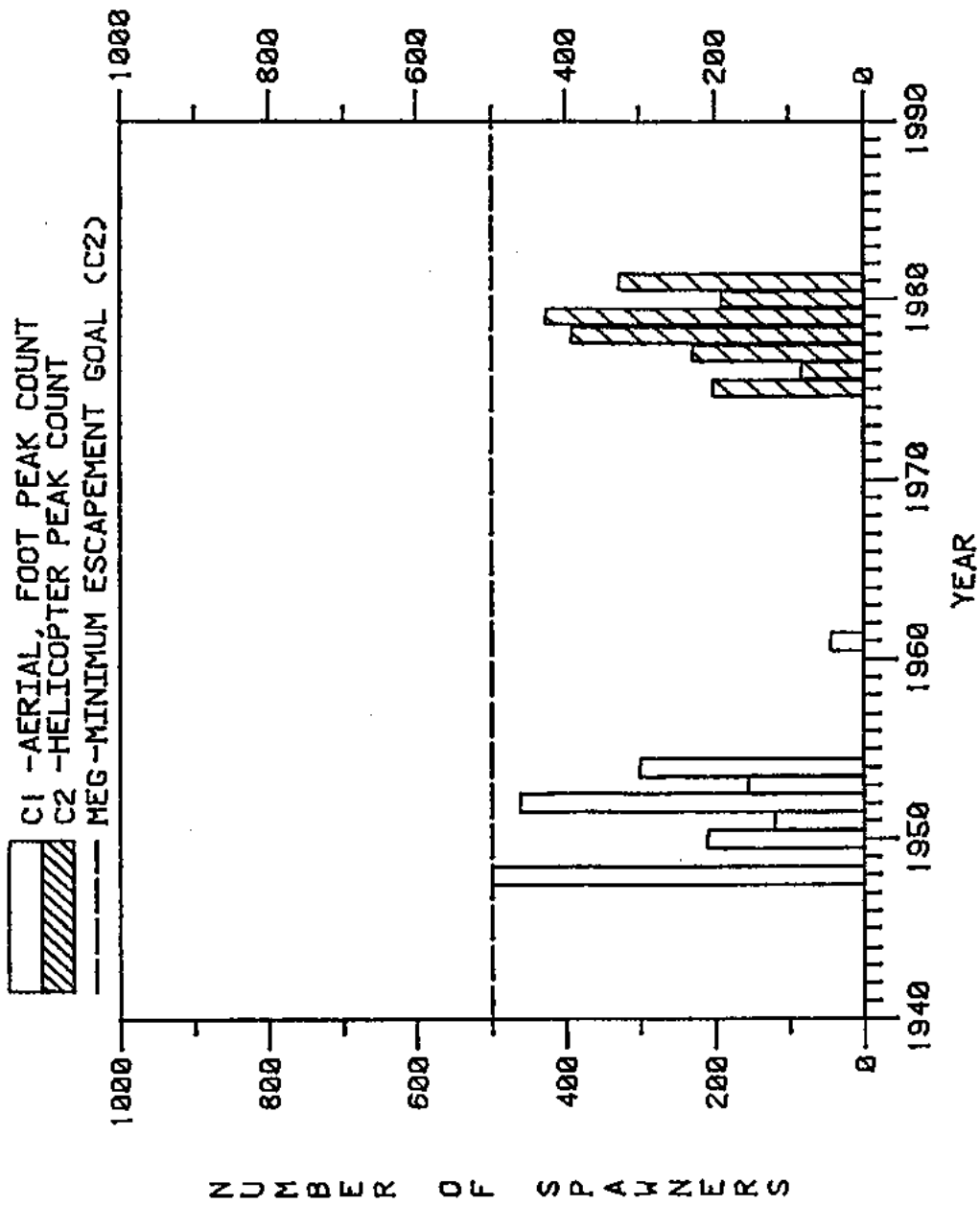


FIGURE 9. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE KETA RIVER, SOUTHEAST ALASKA, 1948 TO 1981. CADF&G 11/81D

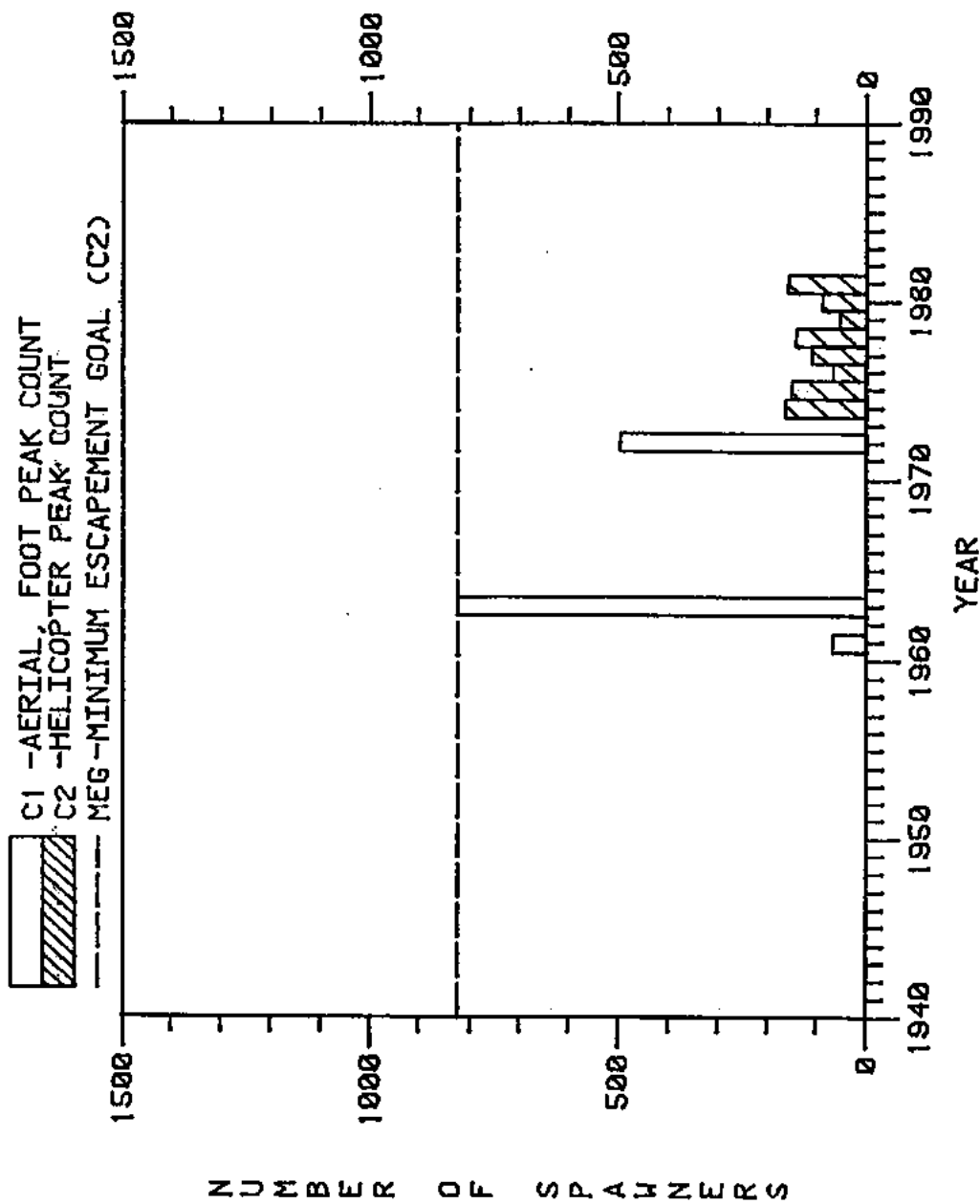


FIGURE 10. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE BLOSSOM RIVER, SOUTHEAST ALASKA, 1961 TO 1981. (ADF&G 11/81)

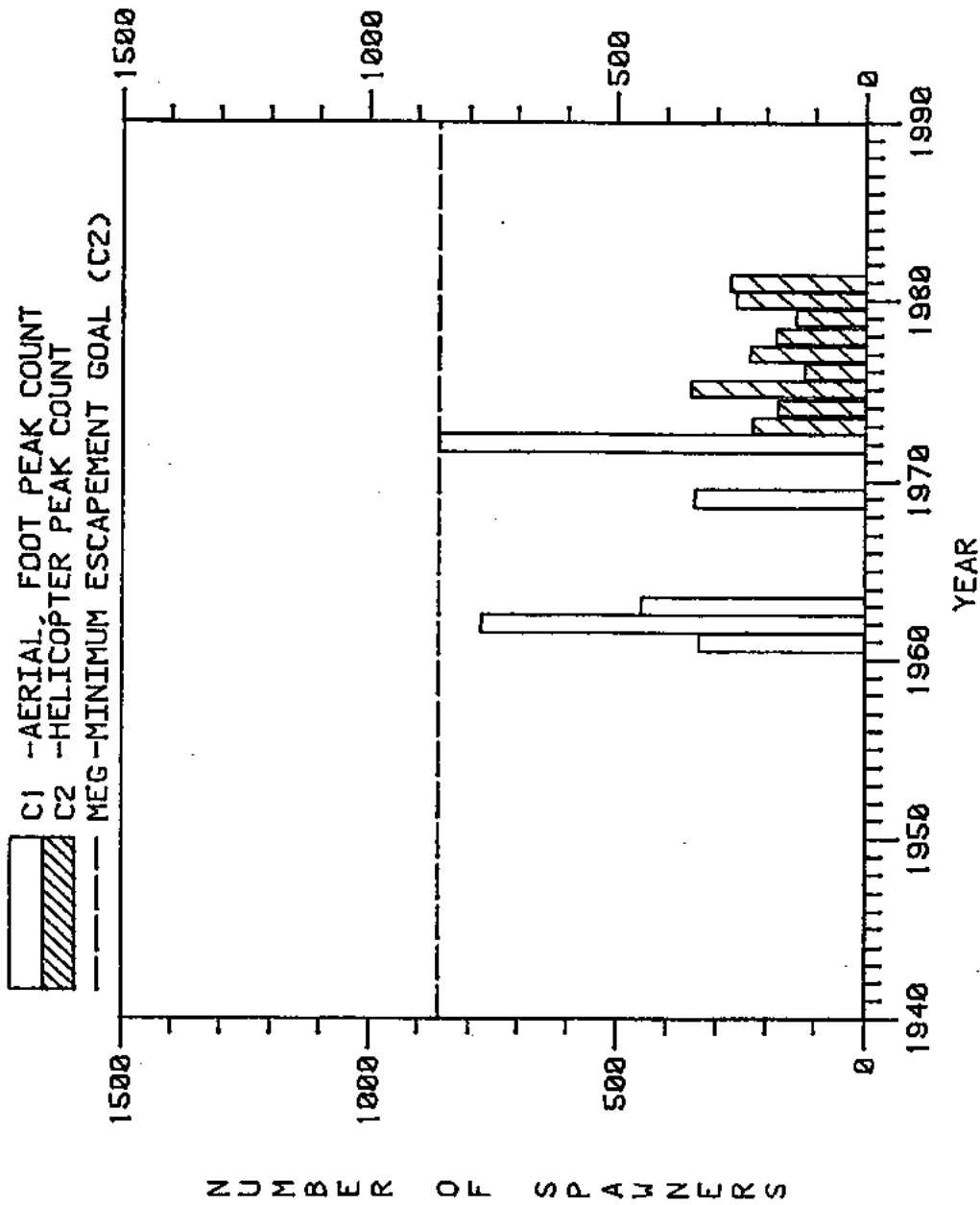


FIGURE 11. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE CHICKAMIN RIVER, SOUTHEAST ALASKA, 1961 TO 1981. (ADF&G 11/81)

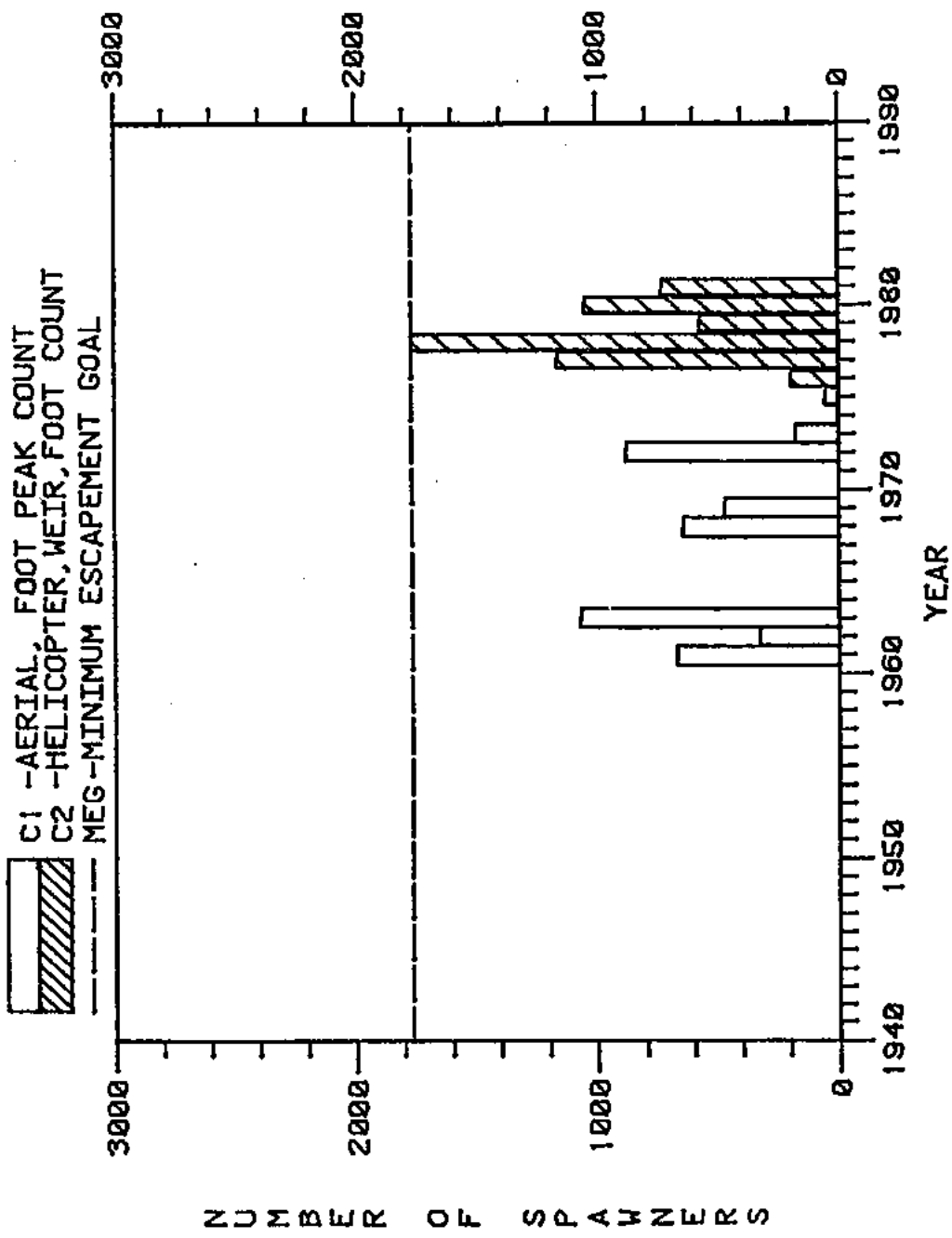


FIGURE 12. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE UNUK RIVER, SOUTHEAST ALASKA, 1961 TO 1981. CADF&G 11/81D



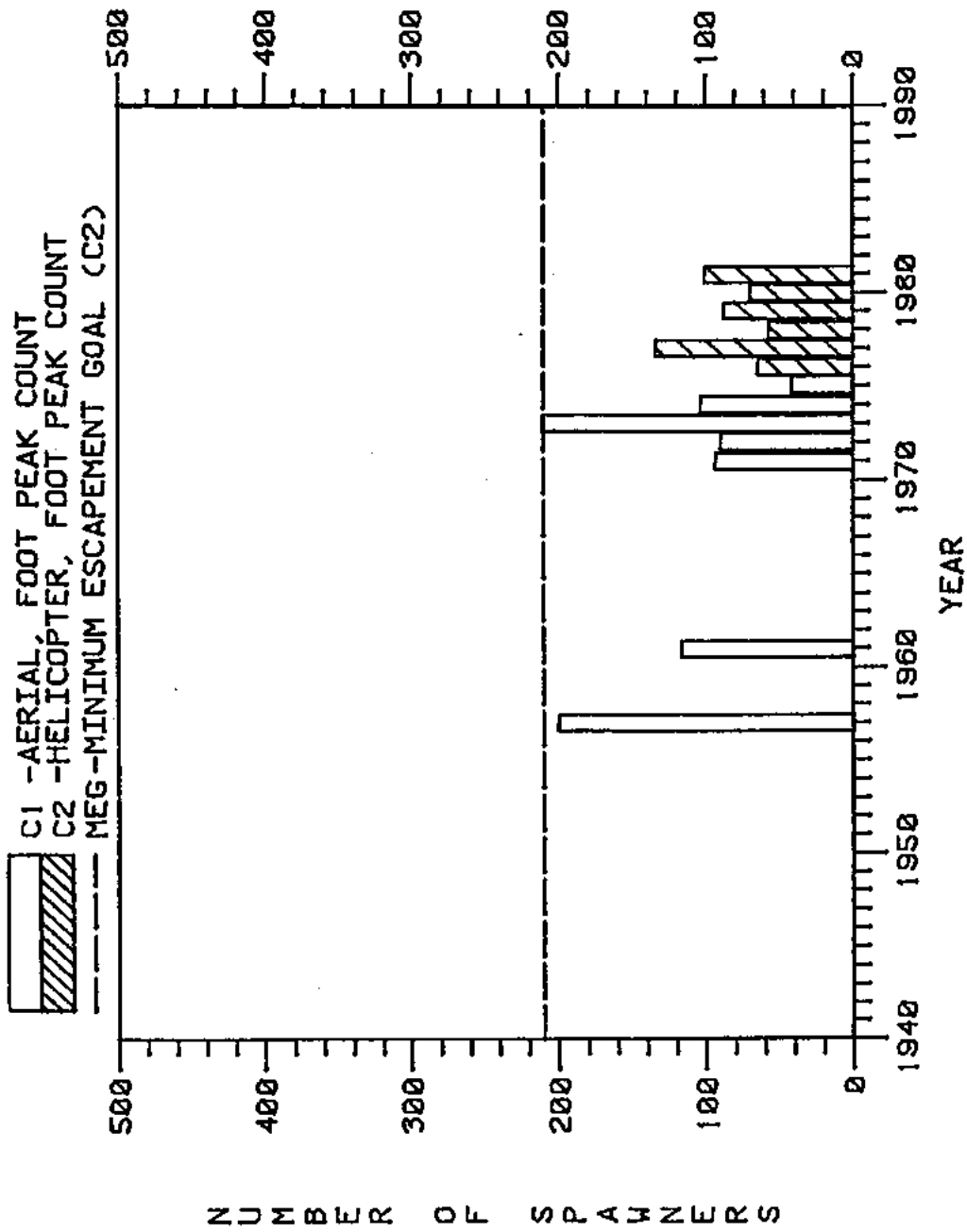
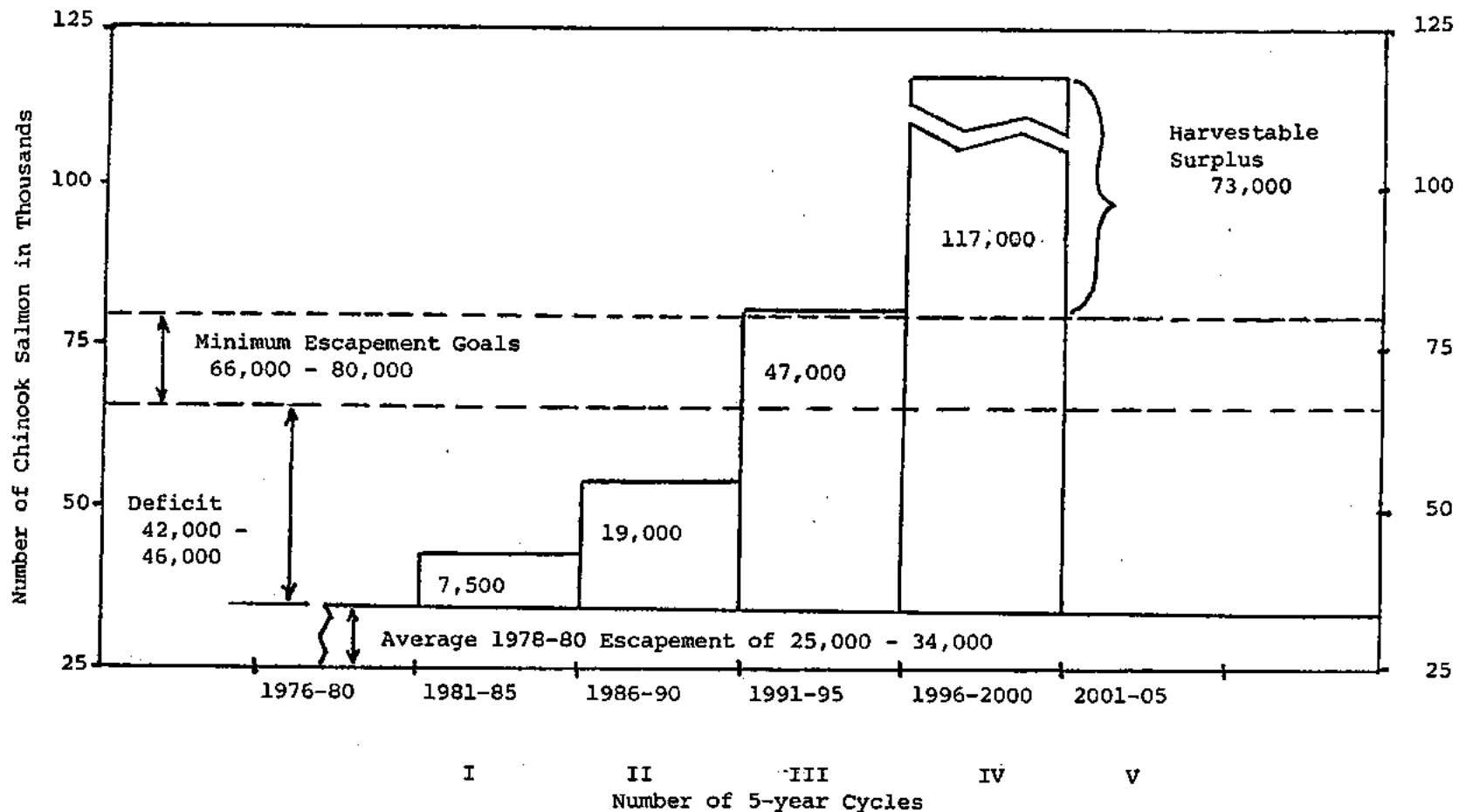


FIGURE 13. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE KING SALMON RIVER, ADMIRALTY ISLAND, SOUTHEAST ALASKA, 1957 TO 1981. (ADF&G 11/81)

Figure 14. Projected Average Increases in Chinook Salmon Escapements to Southeast Alaska Systems from Proposed 10% Reduction of the Southeast Alaska Commercial Chinook Salmon Harvest Ceiling from 320,000 to 288,000 in 1981.

(Note: Projections made 12/80.)



Note: The projected increases in escapements are based on an assumed 3:1 adult return per spawner ratio adjusted downward to 2.5:1 for harvest in fisheries not currently limited by the O.Y. Catch ceiling.

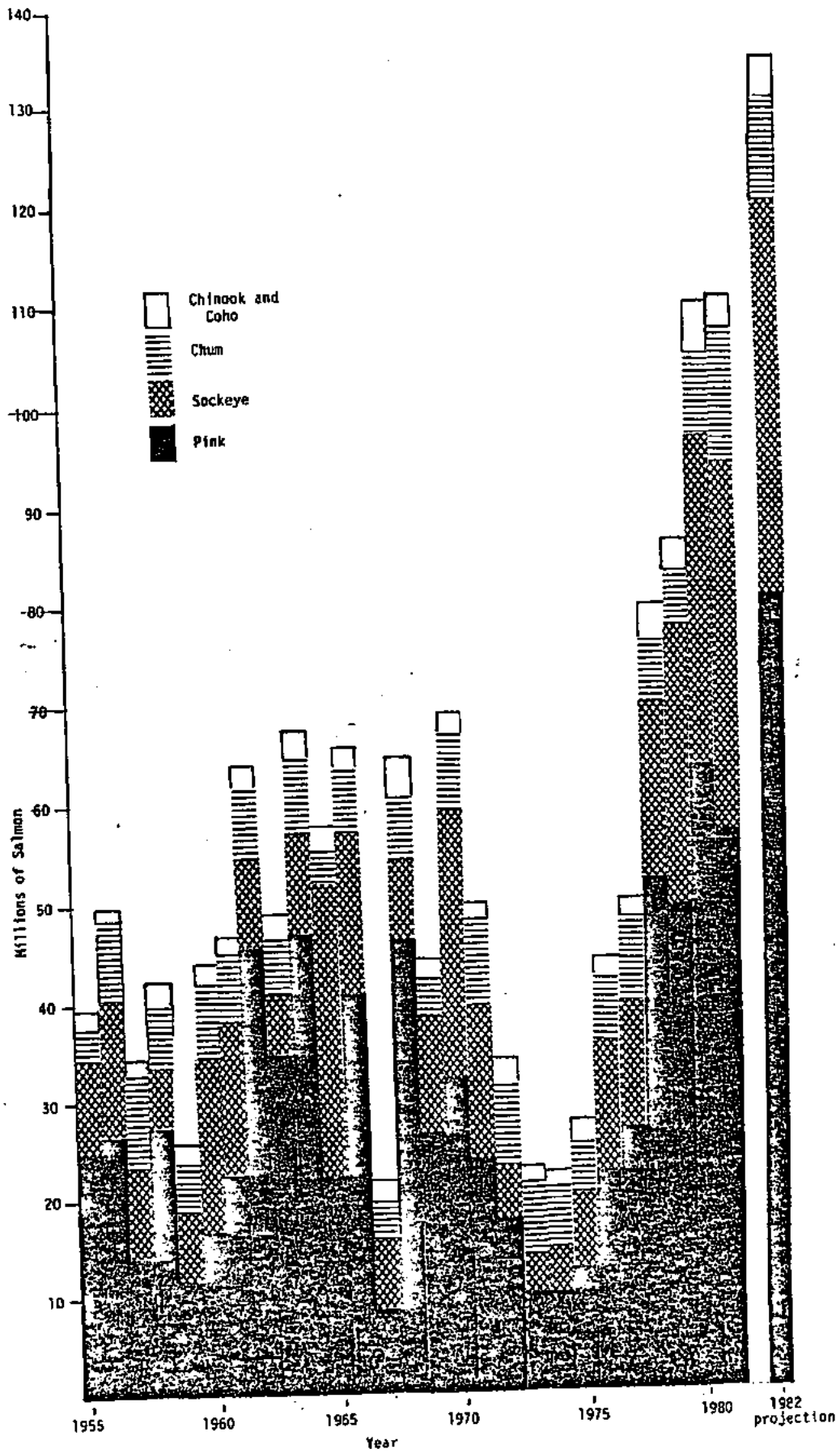


Figure 15. Alaskan commercial salmon harvests by species, 1955-1981, and the 1982 projected harvest.

Table 1. Estimates of potential average annual harvest from current minimum escapement goals for natural chinook salmon runs to Southeast Alaska systems (cont. p. 1/2) (ADF&G-80).

<u>Assumptions</u>								
Average Counting Rate for Aerial/ <sup>1/</sup> Peak Surveys	Average Return Per Spawner Ratio (Harvest Rate)	Alsek	Major Systems (3 Total)			Medium Systems (8 Total)	Minor Systems (22 Total)	All Systems Total
			Taku	Stikine	Subtotal			
50%	1.5:1 (33%)	2,500	15,000	8,400	25,900	9,500	4,400	39,800
	2:1 (50%)	5,000	30,000	16,800	51,800	19,100	8,800	79,700
	2.5:1 (60%)	7,500	45,000	25,200	77,700	28,600	13,200	119,500
	3:1 (67%)	10,000	60,000	33,600	123,600	38,200	17,600	179,400
	3.5:1 (71%)	12,500	75,000	42,000	129,500	47,800	22,000	199,300
75%	1.5:1 (33%)	2,500	15,000	5,600	23,100	7,200	3,000	33,300
	2:1 (50%)	5,000	30,000	11,200	46,200	14,400	5,900	66,500
	2.5:1 (60%)	7,500	45,000	16,800	69,300	21,600	8,900	99,800
	3:1 (67%)	10,000	60,000	22,400	92,400	28,800	11,800	133,000
	3.5:1 (71%)	12,500	75,000	28,000	115,500	36,000	14,800	166,300
Average					75,500	25,100	11,000	111,700
High					129,500	47,800	22,000	199,300
Low					23,100	7,200	3,000	33,300
Approximate Percent Contribution					70%	20%	10%	

<sup>1/</sup> Unless specified otherwise in the explanatory notes below.

Note: Return per spawner ratios in the mid to upper range, viz. 2.5:1 to 3.5:1, are thought to provide the most realistic estimates of actual production.

Table 1. Estimates of potential average annual harvest from current minimum escapement goals for natural chinook salmon runs to Southeast Alaska systems (cont. p. 2/2) (ADF&G-80).

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Notes on Computations and Assumptions

1) Major Systems

Alsek - An average Kluckshu contribution of 64% is assumed based on the average observed Kluckshu escapement compared to escapement to other tributaries. Thus the total minimum escapement goal for the Alsek system is  $3,200 \div .64 = 5,000$  fish.

Taku - An average Nakina contribution of 40% is assumed. An aerial/peak survey counting rate of 75% is assumed for the Nakina tributary. Thus, the total minimum escapement goal for the Taku system is  $(9,000 \div .40) \div .75 = 30,000$  fish.

Stikine - An average Little Tahltan contribution of 25% is assumed. Thus, the total minimum escapement goal for the Stikine system is  $2,100 \div .25 = 8,400$  plus an adjustment for the aerial/peak counting rate.

2) Medium Systems

The weir/total minimum escapement goal of 5,100 fish is used for the Situk River. Based on the other four medium systems surveyed, an average aerial/peak minimum escapement goal per system of 1,000 fish is assumed. At a 50% counting rate for aerial/peak surveys, this yields a total minimum escapement goal of 19,100 fish for all eight medium systems while a 75% counting rate yields 14,400.

3) Minor Systems

An average aerial/peak minimum escapement goal per minor system of 200 fish is used. At a 50% counting rate for aerial/peak surveys, this yields a total minimum escapement goal of 8,800 fish for all 22 minor systems while a 75% counting rate yields 5,900.

Table 2 . Estimates of potential average annual harvest from average 1978-80 escapements to chinook salmon systems in Southeast Alaska (cont. p. 1/2) (ADF&G-80).

<u>Assumptions</u>								
Average Counting Rate for Aerial/ <sup>1/</sup> Peak Surveys	Average Return Per Spawner Ratio (Harvest Rate)	Alsek	Major Systems (3 Total)			Medium Systems (8 Total)	Minor Systems (22 Total)	All Systems Total
			Taku	Stikine	Subtotal			
50%	1.5:1 (33%)	1,620	4,570	5,250	11,440	3,500	1,580	16,520
	2:1 (50%)	3,250	9,140	10,500	22,890	7,010	3,170	33,070
	2.5:1 (60%)	4,880	13,710	15,750	34,340	10,520	4,760	49,620
	3:1 (67%)	6,500	18,280	21,000	45,780	14,020	6,340	66,140
	3.5:1 (71%)	8,120	22,850	26,250	57,220	17,520	7,920	82,660
75%	1.5:1 (33%)	1,620	4,570	3,500	9,690	2,560	1,060	13,310
	2:1 (50%)	3,250	9,140	7,000	19,390	5,110	2,110	26,610
	2.5:1 (60%)	4,880	13,710	10,500	29,090	7,660	3,160	39,910
	3:1 (67%)	6,500	18,280	14,000	38,780	10,220	4,220	53,220
	3.5:1 (71%)	8,120	22,850	17,500	48,470	12,780	5,280	66,530
Average					31,710	9,090	3,960	44,760
High					57,220	17,520	7,920	82,660
Low					9,690	3,500	1,060	13,310
Approximate Percent Contribution					70%	20%	10%	

<sup>1/</sup> Unless specified otherwise in the explanatory notes below.

Note: Return per spawner ratios in the mid to upper range, viz. 2.5:1 to 3.5:1, are thought to provide the most realistic estimates of actual production.

Table 2 .. Estimates of potential average annual harvest from average 1978-80 escapements to chinook salmon systems in Southeast Alaska (cont. p. 2/2) (ADF&G-80).

Notes on Computations and Assumptions

1) Major Systems

Alsek - An average Kluckshu contribution of 64% is assumed based on the average observed Kluckshu escapement compared to escapements to other tributaries. The average 1978-80 weir/total escapement to the Kluckshu was 2,082 fish. Thus the estimated total 1978-80 average escapement to the Alsek system is  $2,082 \div .64 = 3,253$ .

Taku - An average Makina contribution of 40% is assumed. An aerial/peak survey counting rate of 75% is assumed. The average 1978-80 aerial/peak escapement to the Makina was 2,743 fish. Thus the estimated total 1978-80 average escapement to the Taku system is  $(2,743 \div .40) \div .75 = 9,143$ .

Stikine - An average Little Tahltan contribution of 25% is assumed. The average 1978-80 aerial/peak escapement to the Little Tahltan was 1,312 fish. Thus the estimated total 1978-80 aerial/peak escapement to the Stikine system is  $1,312 \div .25 = 5,248$  plus an adjustment for the assumed aerial/peak counting rate.

Medium Systems

The average 1978-80 weir/total escapement for the Situk River is 1,327. The average 1978-80 aerial/peak escapement per system for the four medium systems thus surveyed is 406. Expanding these rates to all eight systems yields average 1978-80 total escapement estimates of 7,011 assuming a 50% aerial/peak counting rate and 5,114 assuming a 75% counting rate.

3) Minor Systems

The average 1978-80 aerial/peak escapement for the King Salmon River is 72 fish. Expanding this to all 22 minor systems yields 3,168 if a 50% counting rate is assumed and 2,112 if a 75% counting rate is assumed.

Table 3 . Preliminary estimates of 1981 chinook salmon escapements to selected Southeast Alaska systems (ADF&G 11/81).

Note: Over 30 chinook salmon producing systems exist in Southeast Alaska. However, due to poor surveying conditions in many systems only those included below are currently surveyed in a consistent manner each year to provide a relative measure or index of total chinook salmon escapements to Southeast Alaska systems.

System - Tributary	Type of Survey <sup>1</sup>	Escapements			Minimum Escapement Goal <sup>2</sup>
		Ave. 1975-80	1980	1981	
<u>Major Systems (3 Total)</u>					
Taku - Nakina	(1)	2,810	4,500	5,100	9,000
- Nahlin	(1)	780	1,530	2,940	2,500
Taku Subtotal		3,590	6,030	8,040	11,500
Stikine - Little Tahltan	(1)	620	2,140	3,330	(2,100)
Alsek - Kluckshu	(2)	2,130	1,400	2,110	3,200
<u>Medium Systems (8 Total)</u>					
Situk	(2)	1,490	1,120	810	(5,100)
Behm Canal Systems					
Keta	(1)	250	190	330	500
Blossum	(1)	100	90	160	800
Chickamin	(1)	220	260	280	900
Unuk	(1)	800	1,050	730	1,800
Behm Canal Subtotals		1,370	1,590	1,500	4,000
<u>Minor Systems (22 Total)</u>					
King Salmon	(1)	76	70	100	200

<sup>1</sup> Type of Survey Codes (1) - Helicopter peak spawning count (primary method).  
(2) - Weir total count.

<sup>2</sup> These minimum escapement goals, established in 1980, represent maximum escapements observed since the 1950's (except for the Situk) when Southeast Alaska chinook stocks were seriously depressed. Revision of goals for some systems, in particular the Situk and Stikine, is expected pending further data analysis.



1981 Management of the Southeast Alaska Salmon Troll Fishery  
In the Federal Fishery Conservation Zone

Federal management of the offshore southeast Alaska troll fishery began in 1977 subsequent to the passage of the Fishery Conservation and Management Act (FCMA) which created the fishery conservation zone (FCZ) from 3-200 miles offshore. The North Pacific Fishery Management Council (NPFMC) recommends management regimes for the FCZ to the Secretary of Commerce, who approves and implements them. Troll gear is the only authorized gear for commercial fishing in the FCZ.

Historically, southeast Alaska trollers fished primarily coastal and inshore waters but recent shifts in fishing effort have significantly increased the catch occurring in central and offshore waters. Annual chinook and coho salmon troll fishery catches from the FCZ are shown in Table 1. The 1981 chinook salmon catch from the FCZ was 57,700, and the 1981 coho salmon catch was 116,000.

Table 1. Number of southeast Alaska troll fishery landings and catch of chinook and coho salmon from the FCZ 1970-76 and 1977-81.

Year	No. of Landings	Chinook		Coho	
		Number	% of Total Catch	Number	% of Total Catch
1970-76	301	41,200	16	31,000	6
1977	337	50,000	18	9,100	2
1978	2,125	61,600	17	107,600	10
1979	5,544	116,300	35	294,600	32
1980	7,714	133,600	45	292,600	41
1981	3,045	57,700	23	116,000	14

The 1981 FCZ catch of both chinook and coho salmon were less than one-half of the 1980 FCZ catches and represented only 23 percent of the 1981 total chinook salmon catch and 14 percent of the total 1981 coho salmon catch. The 1980 FCZ catch of chinook and coho salmon, by comparison, represented a record high of 45 and 41 percent of the total 1980 catch of each species. The reduced 1981 FCZ catches most likely resulted from the FCZ being closed from August 10 through the remainder of the season. The FCZ was closed on August 10 by field (emergency) order, in cooperation with management in State waters, for the purpose of allowing more coho salmon to reach inside fishing areas. The FCZ was not reopened on August 20, when State waters reopened, because catch projections for the remainder of the season in State waters indicated that the upper end of the NPFMC optimum yield range of 272,000 chinook salmon would be met and significant mortality due to hook and release of chinook would occur during any directed coho fishery. Table 2 compares the 1980 and 1981 days fished.

Table 2. Season dates and numbers of days fished in the FCZ during 1980 and 1981.

1980		1981	
<u>Dates</u>	<u>No. Days</u>	<u>Dates</u>	<u>No. Days</u>
April 15-July 15	91	May 15-June 26	42
July 26-September 21	57	July 5-August 10	36
Total	148		78

The 78 days fished during 1981 represents a 47 percent reduction in fishing time from 1980. The delayed opening date in 1981 was a consequence of a cooperative effort with the State to protect mature Alaskan spring chinook salmon as they returned to southeastern Alaska spawning areas. The overall reduction in the length of the fishing season in the FCZ in 1981 resulted from implementation of a 15 percent reduction in the chinook salmon optimum yield from the 1980 level of 286,000-320,000 to 243,000-272,000 chinook salmon for 1981.

REPORT TO THE BOARD OF FISHERIES

1981 SOUTHEAST ALASKA SALMON TROLL FISHERY

By:

Region I Staff

Southeast Region  
Alaska Department of Fish and Game  
Commercial Fisheries Division  
November 1981

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## INTRODUCTION

The troll fishery in Southeast Alaska occurs in State and Federal waters from Cape Suckling southeast to Dixon Entrance (figure 1). Target species are primarily chinook and coho salmon although an increasing number of fishermen also target on pink salmon. Catches of chinook for the period 1970-1980 have averaged 301,000. The 1981 chinook catch by the troll fishery was 247,000. Catches of coho for the period 1970-1980 averaged 619,000. The 1981 coho catch was 861,000. Catches of other species by the troll fishery in 1981 included 576,000 pinks, 9,000 chums and 7,600 sockeye. Annual salmon catches by the troll fishery since 1970 are shown in Table 1. Fishing periods and period catches of chinook and coho for the 1981 seasons are shown in Table 2.

Historically trollers fished coastal and inshore waters but in the last 20 years a trend of increased fishing effort in offshore and coastal waters has occurred. Seventy-two percent of the 1981 troll catch of chinook was taken in coastal State and offshore Federal waters with 26% of the catch reportedly taken in offshore Federal waters (FCZ) only.

Troll gear, which annually harvests approximately 95% of the total all-gear chinook catch and 65% of the all-gear coho catch, is separated into two gear types; power and hand troll gear. The Alaska Commercial Fisheries Entry Commission currently issues 973 power troll permits and 2,150 hand troll permits. Preliminary estimates of gear actually fished during the 1981 season include approximately 850 power troll and 1,150 hand troll units. Hand troll gear permit holders accounted for approximately 13% of the chinook troll catch and 21% of the coho troll catch in 1981.

In recent years, several changes have occurred in the troll fishery that have affected management decisions and consequently the conduct of the fishery.

First, chinook salmon production from Southeast Alaska river systems has remained depressed as a result of decreased spawning escapements. In spite of severe curtailment of terminal area net fisheries, inside troll fisheries and sport fisheries beginning in the mid-1970's, escapements did not initially increase as increased effort by the troll fishery apparently offset inside and terminal area fishery restrictions. In 1980 and 1981, when more restrictive regulations were also extended to the troll fishery, some improvement in escapements occurred although the improvement was generally limited to two major systems, the Taku and Stikine Rivers. Escapements to many of the non-Alaskan chinook systems contributing to the S.E. Alaska troll fishery are also currently below optimum levels.

Second, coho escapements and production have generally declined although not as severely as chinook.

Third, increases in troll fishing effort have occurred. Increased numbers of participants during the 1970's as well as increased actual fishing power due to vessel and gear improvement produced this overall increase in fishing effort.

Fourth, recent restrictions placed on fishing time, gear and areas have resulted in more intense fishing effort during open periods.

Fifth, fishing restrictions, which were initially applied to terminal and inshore areas for the purpose of increasing escapements, transferred more fishing effort to coastal and offshore areas. As more fishermen became aware of better availability of fish in outer coastal areas, this outward shift of effort increased further. This further compounded mixed stock management problems. Harvests remained high in these areas while catches in inside fisheries and escapements of chinook and coho declined.

#### 1981 Season Summary

Prior to the 1981 troll season, several regulatory changes were adopted by the Alaska Board of Fisheries and the North Pacific Fisheries Management Council. The two regulations that most influenced management strategy of the Department in 1981 were the reduction of the optimum yield or guideline harvest range for chinook and specification of the policy to curtail the outside coho catch to allow more fish to reach corridor and terminal areas.

The commercial chinook harvest guidelines established by the Board and Council for the 1981 season differed in that the range specified by the Board required approximately a 10% reduction over the 1980 range of 286,000 to 320,000 while the range specified by the Council required a 15% reduction. In numbers of fish, the Board's range was 272,000 to



285,000<sup>1/</sup> and the Council range was 243,000 to 272,000. Since both of these ranges were significantly below recent years' chinook troll catches, but applied to both net and troll gear, the harvest ceilings represented a major step toward rebuilding Alaska's chinook stocks through providing increased escapements.

Winter and summer seasons were established for purposes of maintaining the traditional winter troll fishery and to facilitate enumeration of catches. The winter troll season was established as October 1 through April 14. To provide maximum benefit to depressed Alaskan stocks of chinooks the Board also specified a closure of the troll fishery to occur from April 15 to May 14. The summer season was established as May 15 through September 20.

A major problem complicating effective coho troll fishery management is the magnitude of catch that occurs in outer areas prior to the time the stocks are segregated and run strength can be assessed. A progressively larger segment of the annual catch has been taken in recent years from coastal and offshore areas as the fish migrate from the offshore feeding areas to the terminal areas and spawning streams. This phenomenon has resulted in more restrictive measures imposed on all gears in the terminal areas to insure escapement which has in turn changed the historical allocation balance of coho salmon between user groups as shown

<sup>1/</sup> A harvest guideline of 272,000 to 288,000 initially considered by the Board at the January 1981 meeting, was shown in the 1981 Regulation booklet. However, the final harvest guideline established by the Board at the March 1981 meeting was 272,000 to 285,000.

in Figure 2 and Table 3. The Board adopted a policy in 1981 to return these inside district troll coho catches to pre-1978 levels by 1984, by specifying a 10-day troll closure to allow more coho to move further along their migration routes and to inside waters.

#### In-season Management Strategy

The 1981 troll fishery was managed to insure that the chinook salmon catch did not exceed the guideline harvest level established by the Board. The guideline harvest level of 285,000 fish included catches by all commercial gear types. This was the second year that a guideline harvest range was established to limit the total commercial harvest of chinook salmon in Southeast Alaska fisheries.

The Department's management plan included provisions for implementing a closure during the latter part of June, if necessary, to extend the chinook season through the end of August. This was to insure that the guideline harvest level was not achieved prior to mid-August, thereby increasing effort on coho stocks and a higher mortality on chinook hooked and released in the resulting coho only fishery. By June 15 it was apparent that the catch levels to that date were above 3 of the 4 most recent years' catches (Figure 3). This indicated that if recent years' catch patterns occurred throughout the rest of the season the harvest level would have been achieved by late July. The troll fishery was then closed for 9 days, June 26 through July 5.

The higher than normal early season catch level was due to a combination of several factors: (1) unusually good weather which allowed access to prime fishing grounds for all of the 42 days between May 15 and June 25, and (2) increased early season effort in numbers of vessels fishing due to predicted poor returns of chinook in Washington and Oregon and corresponding closures, and the reduction of the guideline harvest level in Alaska.

Following the reopening of the troll fishery on July 5, chinook and coho catches were monitored on a weekly basis. Catch projections based on fish ticket accounting systems and port sampling of deliveries were used to estimate fishery performance for chinook and coho.

A system was devised whereby normal fish ticket accounting and early landing reports from major ports were combined. This system provided weekly fishery performance estimates. These weekly estimates were then compared to the 77-80 fishery performance weekly averages and projections were made on chinook total catch and coho run strength.

By the first week of August it appeared that the chinook harvest was comparable to previous years and catch projections indicated that the chinook catch would probably reach the guideline harvest level by the first week of September. Coho returns to inside areas, as determined from inshore and terminal area catches, were poor and below the 10 year average while coho catches by the troll fishery in outer areas were relatively strong compared to recent years (Figure 4).

The troll fishery was closed again on August 10 for 10 days for the purpose of allowing more coho to reach inside areas. The National Marine Fisheries Service issued a similar regulation for the FCZ, but did not reopen the FCZ to trolling for the remainder of the 1981 season because of projections that the Council OY ceiling of 272,000 chinook would be met and significant mortality due to hook and release of chinook would occur during any coho directed fishery.

During the period from August 20 when the fishery reopened to September 3, catches of chinook and coho were monitored closely because catches appeared to be approaching the harvest ceiling for chinook and several districts continued to exhibit poor coho catches.

Historically, effort levels in numbers of vessels targeting on chinook in coastal waters have produced substantial catches during late August and early September. Numbers of vessels continuing to fish during this time period, in 1981, were greater than normal and the Department projected that the guideline harvest level would be achieved by the first week of September. The troll fishery was closed to the taking of chinook salmon in all areas and certain districts were also closed to trolling entirely for coho conservation on September 4. Districts closed to coho fishing to protect weak coho runs were 5, 6, 7, 8, 10, 15 and portions of 9 and 12.

Between September 4 and 10 concerted efforts were made to collect all fish tickets from remote buyers and landing ports to tabulate the chinook catch. By September 10 preliminary figures indicated that the catches of chinook were at the low end of the Board's guideline harvest range of 272,000-285,000. In order to prevent hooking and release mortality of chinook salmon during the ongoing coho fishery, the troll fishery was reopened to the taking of chinook in those areas opened to coho fishing. The fishery remained opened in those areas until the close of the summer season on September 20.

In addition to the foregoing description of actions taken by the Department during the 1981 troll season in Southeast Alaska, the following management measures were also taken.

The waters of District 9 in the near proximity to Little Port Walter and Big Port Walter were not closed on September 4 to allow harvest of coho returns resulting from a surplus of hatchery and lake stocking experiments.

In the Yakutat area, the weekly fishing period for trolling specified in the regulations was extended to seven days for the area between Dangerous River and Sitkagi Bluff in August when it appeared coho returns to the Situk River were near average and catches by troll gear were minimal. Following the opening of the area to 7 day per week fishing by troll gear a period of mild weather and reductions in fishing areas elsewhere in Southeast Alaska resulted in increased effort in the Yakutat area to more than triple from 6 to 20 power troll vessels and 18 hand troll vessels. Coho availability in the area was good and catches by power

troll vessels of 150-200 coho per day were reported. Trolling was returned to the weekly fishing period specified in the regulations on August 31 when the high effort levels and good catches began to affect inriver net fishery management before coho run strengths could be assessed.

#### Evaluation of In-season Management Strategy

The primary management goals in 1981 for the troll fishery were: (1) Increase chinook escapement and reverse the trend in declining production from systems in Southeast Alaska; (2) provide for a harvest of chinook by all gear types within the range established by the Board; and (3) reverse the trend of declining escapements of coho and increase the numbers of coho reaching inside areas while providing for a harvest level determined by in-season assessment of run strength.

Preliminary estimates of the total chinook catch by all gear, including that portion of the winter troll fishery from October 1 to December 31, 1980, indicate that a harvest of approximately 268,100 fish was achieved. This includes an estimated 19,500 fish taken incidentally in net and trap fisheries as shown in Table 4. It appears, therefore, that the final catch will probably be near the lower end of the Board harvest guideline range and the upper end of the Council range (Figure 5).

Based on catch projections made in late August and early September, a slightly larger total season chinook harvest near the mid to upper end of the Board range of 272,000 to 285,000 had been expected. The lower catch apparently occurred due to several factors, including differences between preliminary in-season catch estimates and final catches tabulated by computer from fish tickets, and lower than expected late season catch rates resulting from reduced availability of chinook combined with a shift of effort to the relatively strong coho runs in some areas. Other factors included the impact of the FCZ being closed from August 10 through the remaining part of the season and an apparent reduction in the number of boats holding and freezing fish during the season to be sold at the end of the season.

Chinook escapements to two of the three major river systems in Southeast Alaska were increased in 1981 (Table 5). The major Taku River tributaries, the Nakina River and the Nahlin River, showed substantial improvement. The major Stikine River tributaries, the Tahltan River and Little Tahltan River, also showed significant improvement. Escapements to several other lesser producing chinook salmon systems including the Chilkat River and the Farragut Bay streams appeared to have improved over recent years.

In the southern portion of Southeast Alaska, escapements to the medium sized streams in Behm Canal were mixed. The Blossom River and Keta River escapements were approximately twice the 1980 escapements, however, the Unuk River escapement was less than 1980 and the Chikamin River escapement showed little improvement. Escapements to the Behm Canal systems were all substantially below minimum escapement goals.

It appears that, for northern Southeast Alaska streams, the fishing restrictions between April 15 and May 14 contributed to the increased escapements. In the southern districts, which have slightly later run timing, the closure did not contribute significantly to increasing the escapements. The Department has submitted proposals to delay the fishing season opening in portions of District 1. These proposals, if adopted, should increase the chinook escapements to southern Southeast streams.

Coho escapements in 1981 appear to have generally improved over recent years, however, surveys are still being conducted and a more complete assessment will be provided at the Board meeting. Exceptions to these improvements were in the middle districts (5-10) where some systems declined in escapements. The northern and southern systems showed generally good escapements. Primary reasons for the increases in coho escapements were the August 10-20 troll closures and the late season net gear restrictions.

#### Special Problems

The periodic closures during the 1981 season reportedly caused some crowding of boats into certain areas. Many skippers reported that they could not move into distant areas because of the short time during openings. The result was concentrations of 100-200 vessels in several coastal areas. Additionally, problems were reported in landing of the catch when all of these boats came to port following a closure. Difficulties in unloading, re-icing and re-supplying were a direct result of



overcrowding. Processors reported difficulty in maintaining production quality when large volumes of fish were unloaded at the start of a closed period. Some problems also arose during the time beginning August 20 when the federally managed Fishery Conservative Zone remained closed to fishing while state waters were open. Many fishermen were confused regarding the exact delineation of boundaries for the FCZ area.

#### Observations on Marked or Scarred Fish

A number of chinook and coho caught in the 198 troll fishery were observed to be scarred. The Department will present a short report with visual aids on this subject at the Board and Council joint session in January.

The incidence of these external scars was about 1% for chinook and 3% for coho overall, although there were incidences as high as 10% for some deliveries sampled. The scars appear to be caused from encounters with predators and/or fishing gear, possibly nets, of unknown origin. The Department and National Marine Fisheries Service is continuing to investigate the possible sources of these scars.

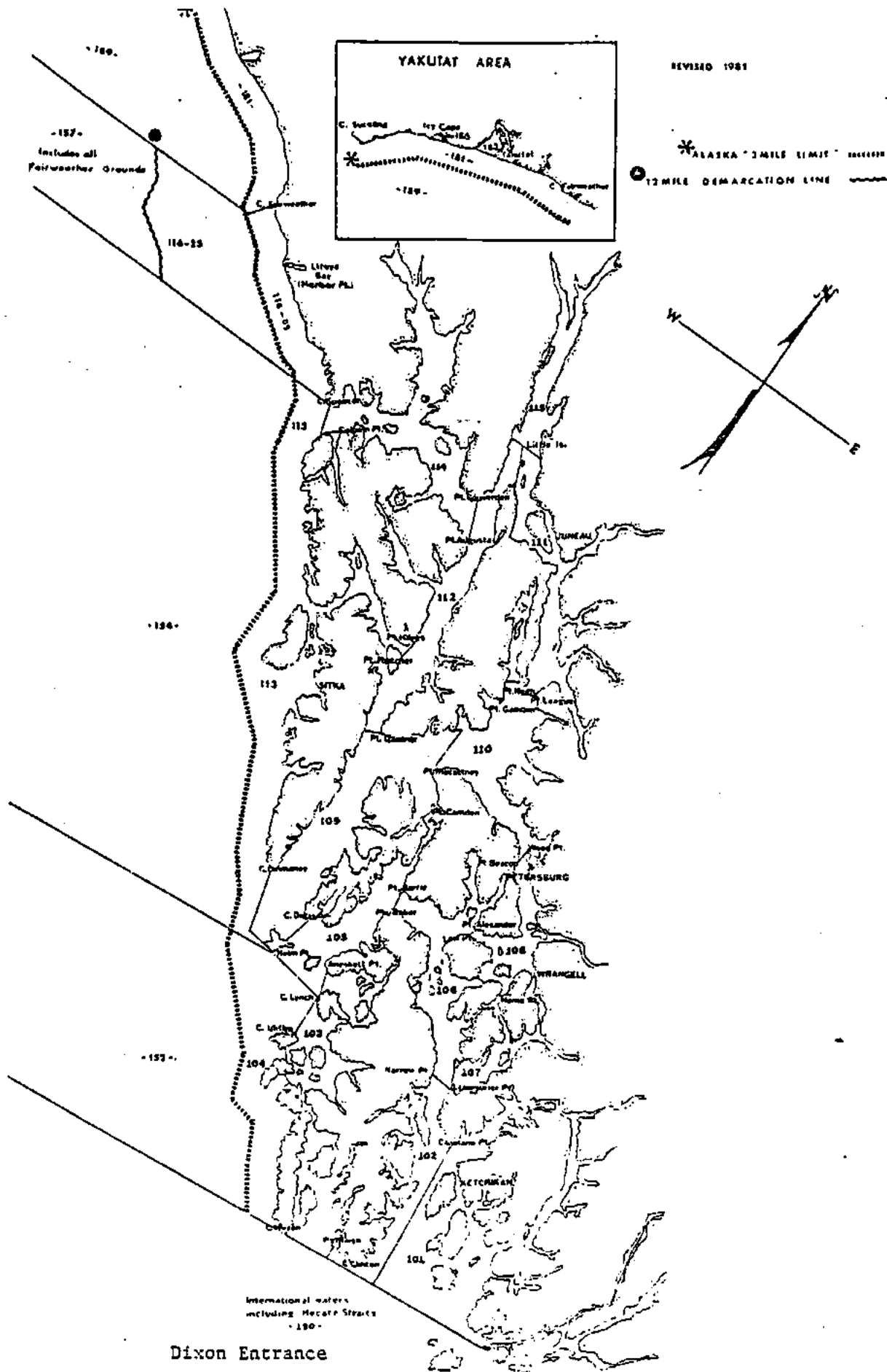


Figure 1 . Southeast Alaska Troll Fishery Statistical Areas

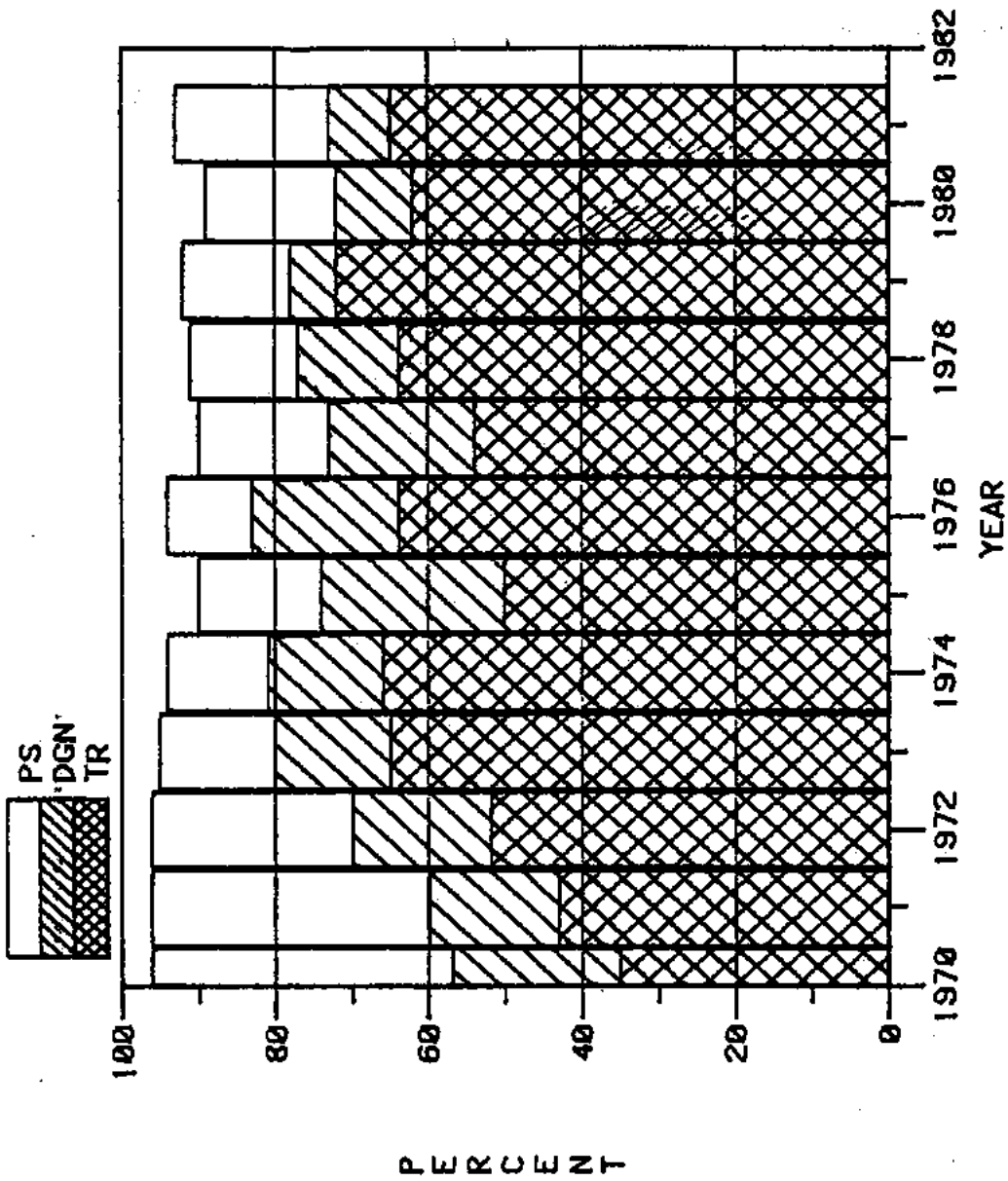


FIGURE 2. PERCENT OF TOTAL SOUTHEAST ALASKA REGION COHO SALMON HARVEST TAKEN BY PURSE SEINE(PS), DRIFT GILLNET(DGN) AND TROLL(TR) GEAR, 1970-81 (ADF&G)

PREPARED 11/18/81

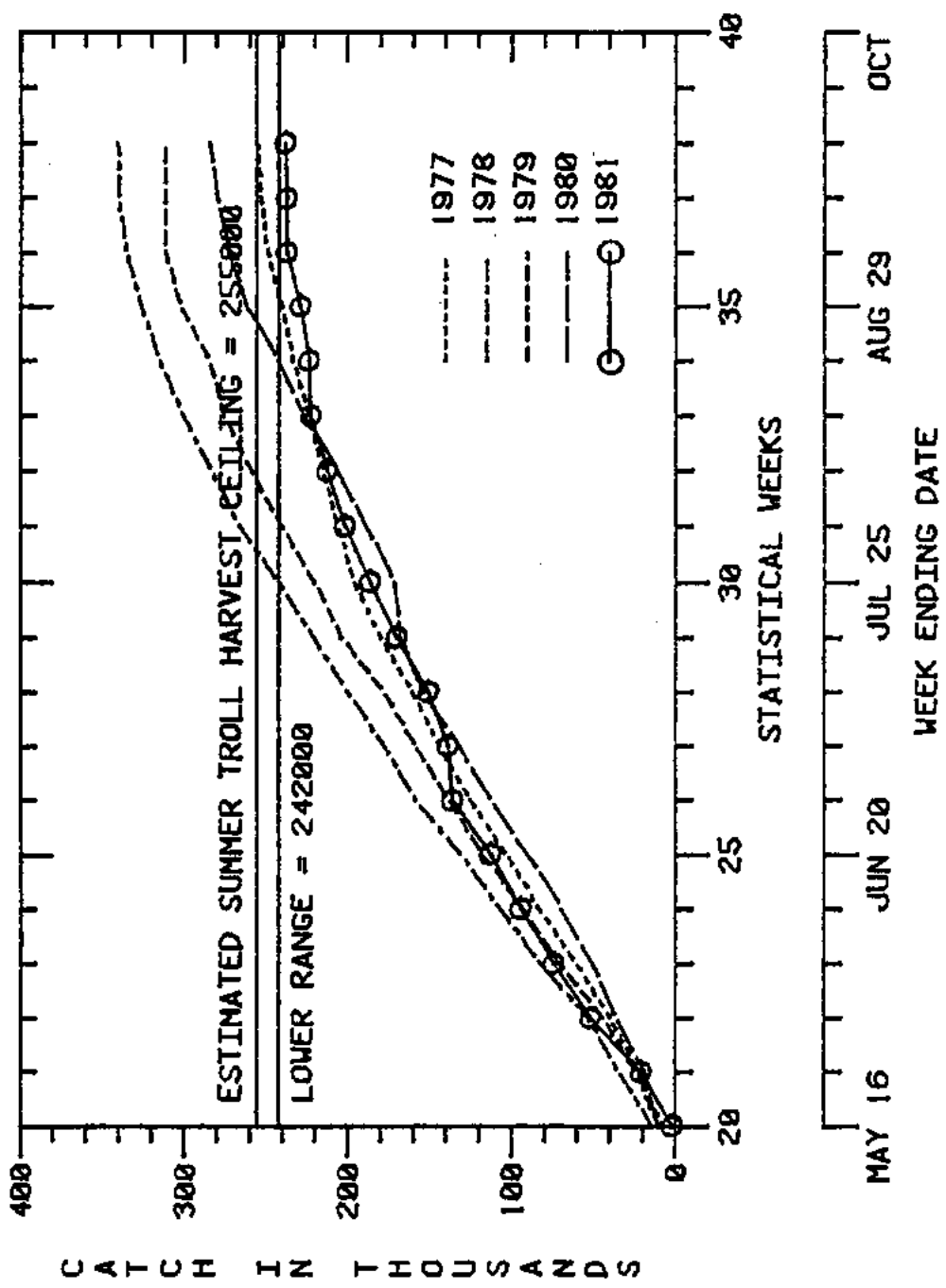


FIGURE 3. SOUTHEAST ALASKA TROLL FISHERY CUMULATIVE CHINOOK SALMON HARVEST BY WEEK BEGINNING MID-MAY, 1977-81 (ADF&G). (1981 DATA PRELIMINARY)

PREPARED 11/18/81

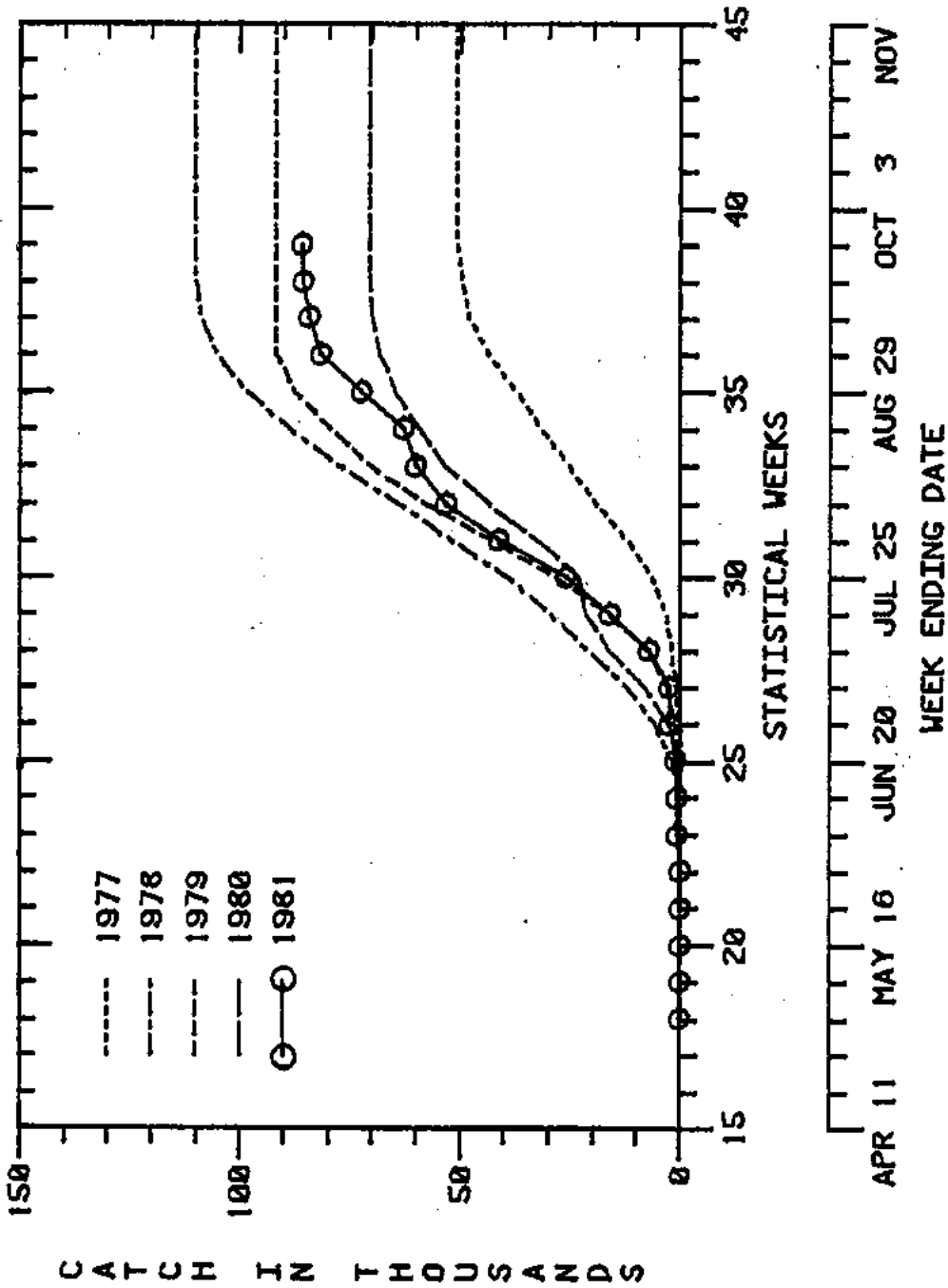


FIGURE 4. SOUTHEAST ALASKA TROLL FISHERY CUMULATIVE COHO SALMON HARVEST BY WEEK BEGINNING MID-MAY, 1977-81 (ADF&G). (1981 DATA PRELIMINARY)

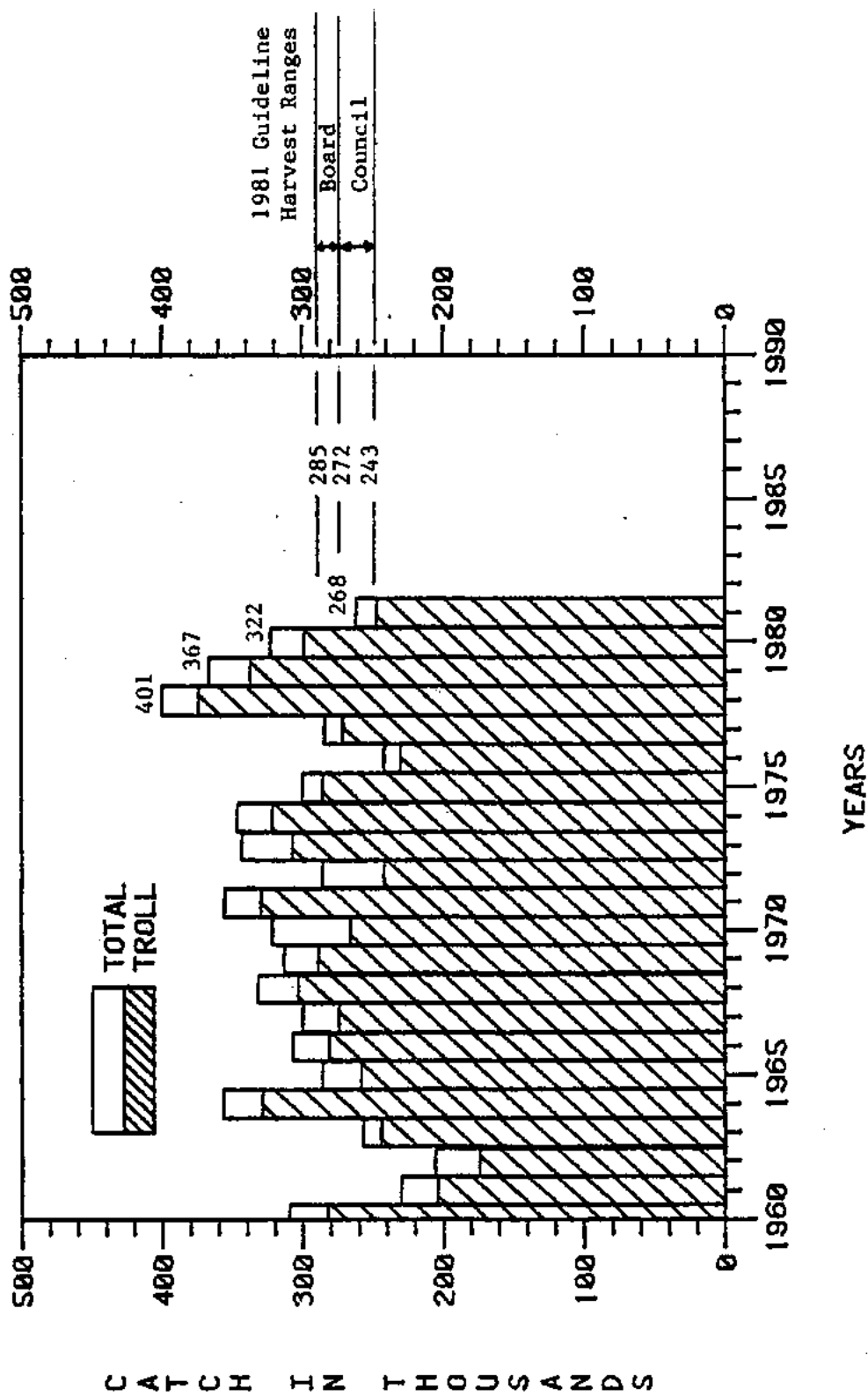


FIGURE 5. SOUTHEAST ALASKA COMMERCIAL CHINOOK SALMON CATCHES, 1960-81

Table 1 . Southeast Alaska region annual commercial salmon catches in numbers by species, 1970 to present (ADF&G 11/12/81).

Gear troll

Year	Chinook	Coho	Sockeye	Pink	Chum	Total
1970	305431	267763	477	70076	2804	646551
1971	333738	391569	936	104633	7672	838548
1972	242095	791668	1068	166853	11680	1213364
1973	307815	540104	1222	134585	10466	994192
1974	322208	846620	2606	263603	13819	1448856
1975	287348	214254	1103	77207	2825	582737
1976	231282	524992	1274	193777	4635	955960
1977	271777	506927	5701	281286	11617	1077308
1978	375624	1102066	2804	617817	26211	2124522
1979	338219	918596	6455	629192	24703	1917165
1980	299930	706521	2902	267465	12213	1289031
-----						
Average 1970 to present	301406	619189	2413	255136	11695	1189839
1981(Prelim.)	247000	860900	7600	576000	9000	1700500

Footnotes: (1) Most recent years data should be considered preliminary.

Table 2 . Preliminary 1981 Southeast Alaska Troll Fishery  
Chinook and Coho Salmon Catches by Fishing Period  
(ADF&G 11/81)

<u>Closed Periods (Days)</u>	<u>Open Periods (Days)</u>	<u>Chinook</u>	<u>Coho</u>
<u>Winter Season</u>			
	Oct. 1 - Dec. 31, 1980	1,600	
	Jan. 1 - April 14, 1981	8,000	
Winter Season Subtotals		9,600	
<u>Summer Season</u>			
April 15 - May 14 (30)			
	May 15 - June 25 (41)	138,900	23,400
June 26 - July 4 (9)			
	July 5 - Aug. 9 (36)	83,400	577,500
Aug. 10 - 19 (10) <sup>1</sup>			
	Aug. 20 - Sept. 3 (15)	15,000	240,800
Sept. 4 - 12 (9) <sup>2</sup>			
	Sept. 13 - 20 (8)	1,700	19,200
Sept. 21 - 30 (10)			
Summer Season Subtotals (68)		239,000	860,900
Season Totals <sup>3</sup>		248,600	860,900

Notes: <sup>1</sup> Federal FCZ waters remained closed to fishing after Aug. 10.

<sup>2</sup> The Sept. 4-12 closure included all districts for chinook salmon and districts 5-10, and portions of 12 and 15 for coho salmon. These coho closures remained in effect to the end of the coho season on Sept. 20.

<sup>3</sup> Troll fishery harvest of other species included 576,000 pinks, 9,000 chums, and 8,000 sockeye.



Table 3 . Southeast Alaska region annual commercial salmon catches by gear in numbers and (percent), 1970 to present (ADF&G 11/04/81).

Species Coho

Year	Drift Gillnet		Set Gillnet	Troll	Trap & Misc.		Total
	Seine	Gillnet	Gillnet		Misc.	Total	
1970	294624 (39)	166413 (22)	30279 (4)	267763 (35)	2510 (0)	761589 (100)	
1971	326423 (36)	159240 (17)	37683 (4)	391569 (43)	12 (0)	914927 (100)	
1972	390643 (26)	275527 (18)	46298 (3)	791668 (52)	4688 (0)	1508824 (100)	
1973	129593 (15)	124369 (15)	41776 (5)	540104 (65)	557 (0)	836399 (100)	
1974	166687 (13)	186583 (15)	77556 (6)	846620 (66)	1011 (0)	1278457 (100)	
1975	70201 (16)	102237 (24)	37403 (9)	214254 (50)	3262 (1)	427357 (100)	
1976	87613 (11)	156223 (19)	51744 (6)	524992 (64)	3089 (0)	823661 (100)	
1977	160519 (17)	183702 (19)	92228 (10)	506927 (54)	1374 (0)	944750 (100)	
1978	245074 (14)	223341 (13)	139500 (8)	1102066 (64)	4527 (0)	1714508 (100)	
1979	177010 (14)	83214 (6)	95885 (7)	918596 (72)	9608 (1)	1284313 (100)	
1980	194268 (17)	112608 (10)	119571 (11)	706521 (62)	2800 (0)	1135768 (100)	
-----							
Average 1970 to present	203878 (19)	161223 (15)	69993 (7)	619189 (59)	3040 (0)	1057323	
1981 (Prelim.)	266000 (20)	99700 (8)	91000 (7)	860900 (65)	4200 (0)	1321800	

Average 1970 to present

Footnotes: (1) Average percent harvest by gear type calculated from average harvest in numbers by gear type.  
 (2) Percents may not sum exactly to 100 due to rounding.  
 (3) Seine and drift gillnet catches include salmon harvested by Annette Island Reserve fisheries.

Table 4 . Preliminary 1981 Southeast Alaska Commercial Chinook  
 Salmon Catches by Gear (ADF&G 11/81)

Fishery	Preliminary Catch
Troll Fishery	248,600 <sup>1/</sup>
Seine Fishery (incidental harvest)	9,700
Gillnet Fishery (incidental harvest)	8,800
Trap and miscellaneous	1,000
Est. Total Commercial Harvest	268,100

<sup>1/</sup> Includes approximately 1,600 fish harvested during that portion of the winter season from Oct. 1 through Dec. 31, 1980.

Table 5 . Preliminary estimates of 1981 chinook salmon escapements to selected Southeast Alaska systems (ADF&G 11/81).

Note: Over 30 chinook salmon producing systems exist in Southeast Alaska. However, due to poor surveying conditions in many systems only those included below are currently surveyed in a consistent manner each year to provide a relative measure or index of total chinook salmon escapements to Southeast Alaska systems.

<u>System - Tributary</u>	<u>Type of Survey<sup>1</sup></u>	<u>Escapements</u>			<u>Minimum Escapement Goal<sup>2</sup></u>
		<u>Ave. 1975-80</u>	<u>1980</u>	<u>1981</u>	
<u>Major Systems (3 Total)</u>					
Taku - Nakina	(1)	2,810	4,500	5,100	9,000
- Nahini	(1)	780	1,530	2,940	2,500
Taku Subtotal		3,590	6,030	8,040	11,500
Stikine - Little Tahltan	(1)	620	2,140	3,330	(2,100)
Aisek - Kluckshu	(2)	2,130	1,400	2,110	3,200
<u>Medium Systems (8 Total)</u>					
Situk	(2)	1,490	1,120	810	(5,100)
<u>Behm Canal Systems</u>					
Keta	(1)	250	190	330	500
Blossum	(1)	100	90	160	800
Chickamin	(1)	220	260	280	900
Unuk	(1)	800	1,050	730	1,800
Behm Canal Subtotals		1,370	1,590	1,500	4,000
<u>Minor Systems (22 Total)</u>					
King Salmon	(1)	76	70	100	200

<sup>1</sup> Type of Survey Codes (1) - Helicopter peak spawning count (primary method).  
(2) - Weir total count.

<sup>2</sup> These minimum escapement goals, established in 1980, represent maximum escapements observed since the 1950's (except for the Situk) when Southeast Alaska chinook stocks were seriously depressed. Revision of goals for some systems, in particular the Situk and Stikine, is expected pending further data analysis.

# B.C. Ocean Troll Catches

North

B.C

Coast

Ocean 000

Troll 000

Troll (Does not include Georgia St.)

71	272	976
72	358	978
73	270	932
74	313	1005
75	328	924
76	317	1021
77	242	839
78	233	810
79	245	729
80	243	722

SOUTHEAST ALASKA SALMON TROLL FISHERY PROPOSALS FOR 1982  
SEASON FOR JOINT CONSIDERATION BY ALASKA BOARD OF FISHERIES  
AND NORTH PACIFIC FISHERIES MANAGEMENT COUNCIL (January 7, 1982)

- (1) Chinook salmon harvest guideline optimum yield range.  
Alaska Board of Fisheries proposals # 109 (staff), 111, 112  
NPFMC OY proposals # 2-8
- (2) Open area west of Cape Suckling to trolling.  
Alaska Board of Fisheries # 128  
NPFMC area proposal # 2
- (3) Treble hooks.  
Alaska Board of Fisheries proposal # 127  
NPFMC gear proposal # 7
- (4) Retention of tagged, undersized salmon.  
Alaska Board of Fisheries proposal # 130 (staff)  
NPFMC size limit proposal # 2
- (5) Number of lines.  
Alaska Board of Fisheries proposals # 120, 121, 122, 125  
NPFMC gear proposals # 2, 3, 4, 6
- (6) Definition of FCZ Management Unit.  
Alaska Board of Fisheries proposal # 133  
NPFMC area proposals # 3, 4