ALASKA LEGISLATURE COMMITTEE FILES 1981-1982 8672

1208 ARRC FISHERIES ISSUES

1208

Appendix Table 1. (continued)

Stock	Predicted total return	Desired escapement	Harvest	Brood year natural escapement (1977)	Artificial production releases (1977 brood)	Comments
Lake Washington						
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.
Total	12,500	9,800	2,700			
Duwamish-Green						
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.
Total	23,500	16,600	6,900			
Puyallup						
Natural	3,100	1,400	1,700	700		
Hatchery	4,000	1,800	2,200		3,650,532 fingerlings	
Total	7,100	3,200	3,900			
Nisqually River						
Natural and hatchery	2,200	1,100	1,100	200	401,3[illegible] fingerlings	
Deschutes--Capitol Lake						
Natural and hatchery	13,100	6,500	6,600		4,939,320 fingerlings 1,031,755 yearlings	
Carr Inlet (Minter Creek)						
Hatchery	9,200	400	8,800		2,415,809 fingerlings 242,649 yearlings	
Misc. South Sound						
Chambers Creek--hatchery	400	200	200		162,300 fingerlings	
McLane Creek--hatchery	700	400	300		120,000 fingerlings 66,156 yearlings	
Total South Sound	68,700	36,200	30,500			
Hood Canal						
Hamma Hamma, Duckabush, Dosewallips rivers--natural	400	300	100	700		
Quilcene--hatchery	3,000	2,300	700		2,456,534 fingerlings	Planted at Walcott 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	
Total	17,000	7,400	9,600			

Graphical Material Relating to British Columbia Chinook Salmon Runs and Fisheries

and

Fraser River Status Report

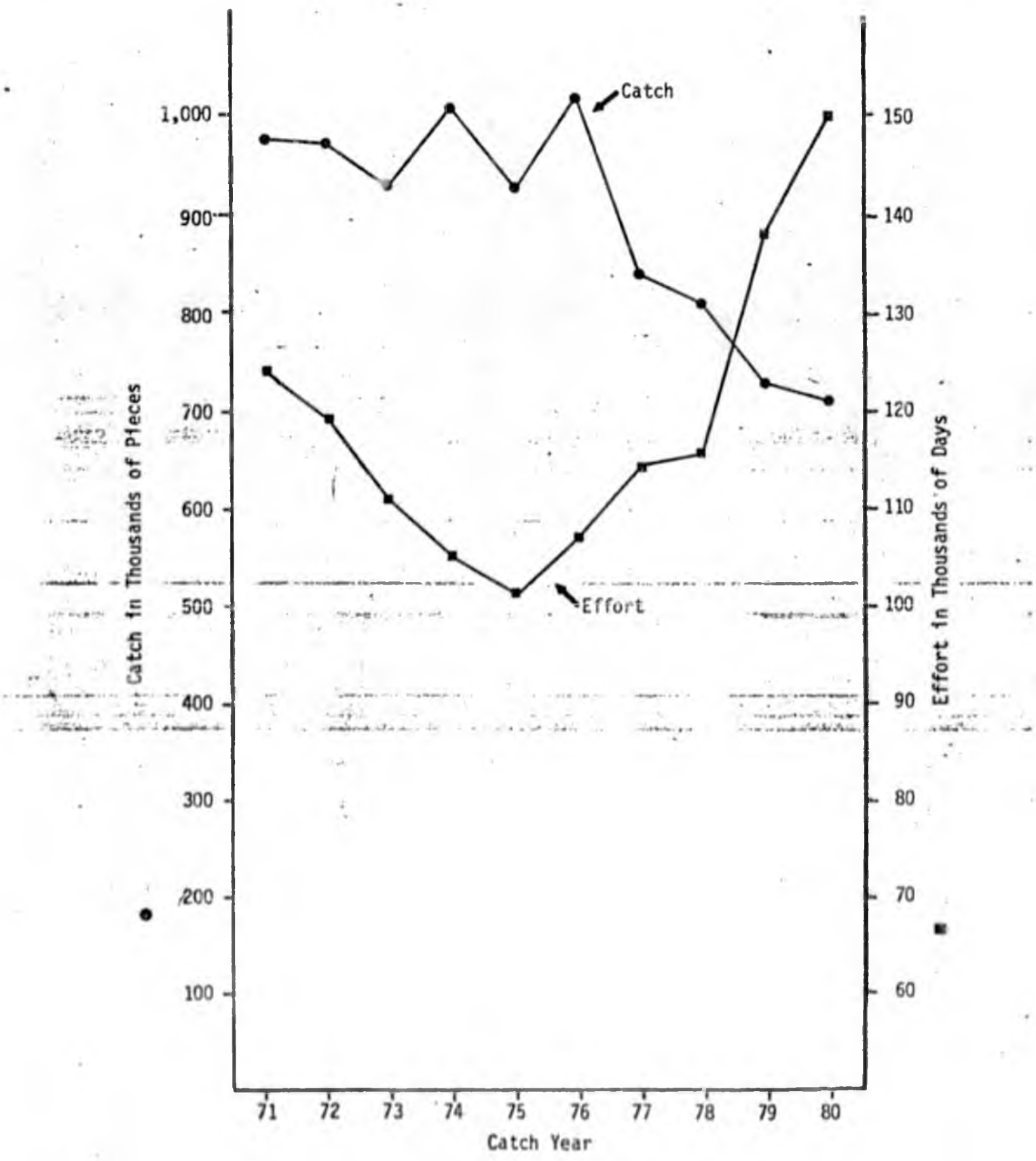


Figure 1. Catch of chinook salmon and fishing effort in ocean troll fishery. (Canadian data, Ken Pitre, Canada Department of Fisheries and Oceans, personal communication.)

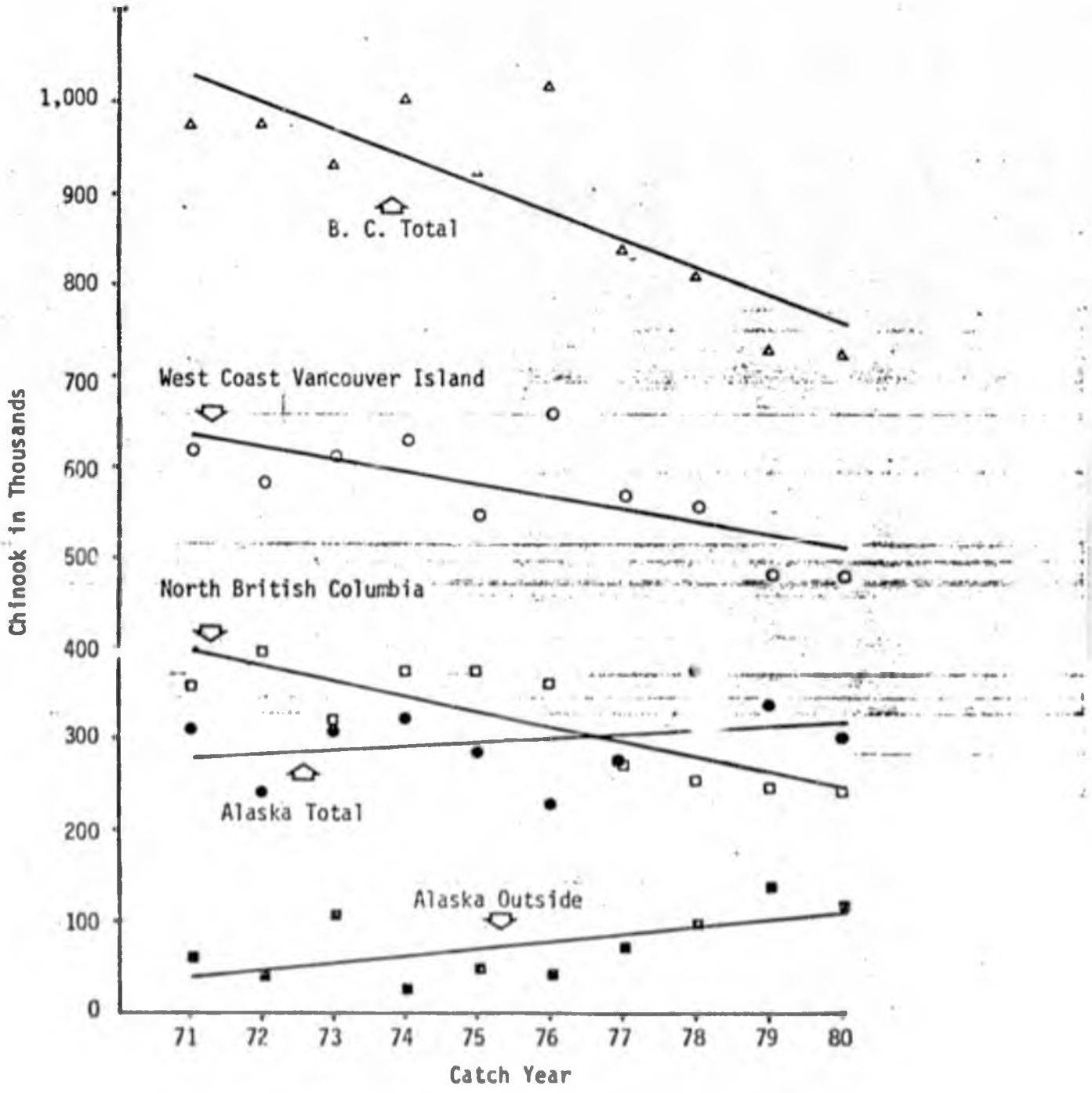


Figure 2. Summary of British Columbia and Alaska troll chinook catch, 1971-1980. (Canadian data, Ken Pitre, Canada Department of Fisheries and Oceans, personal communication.)

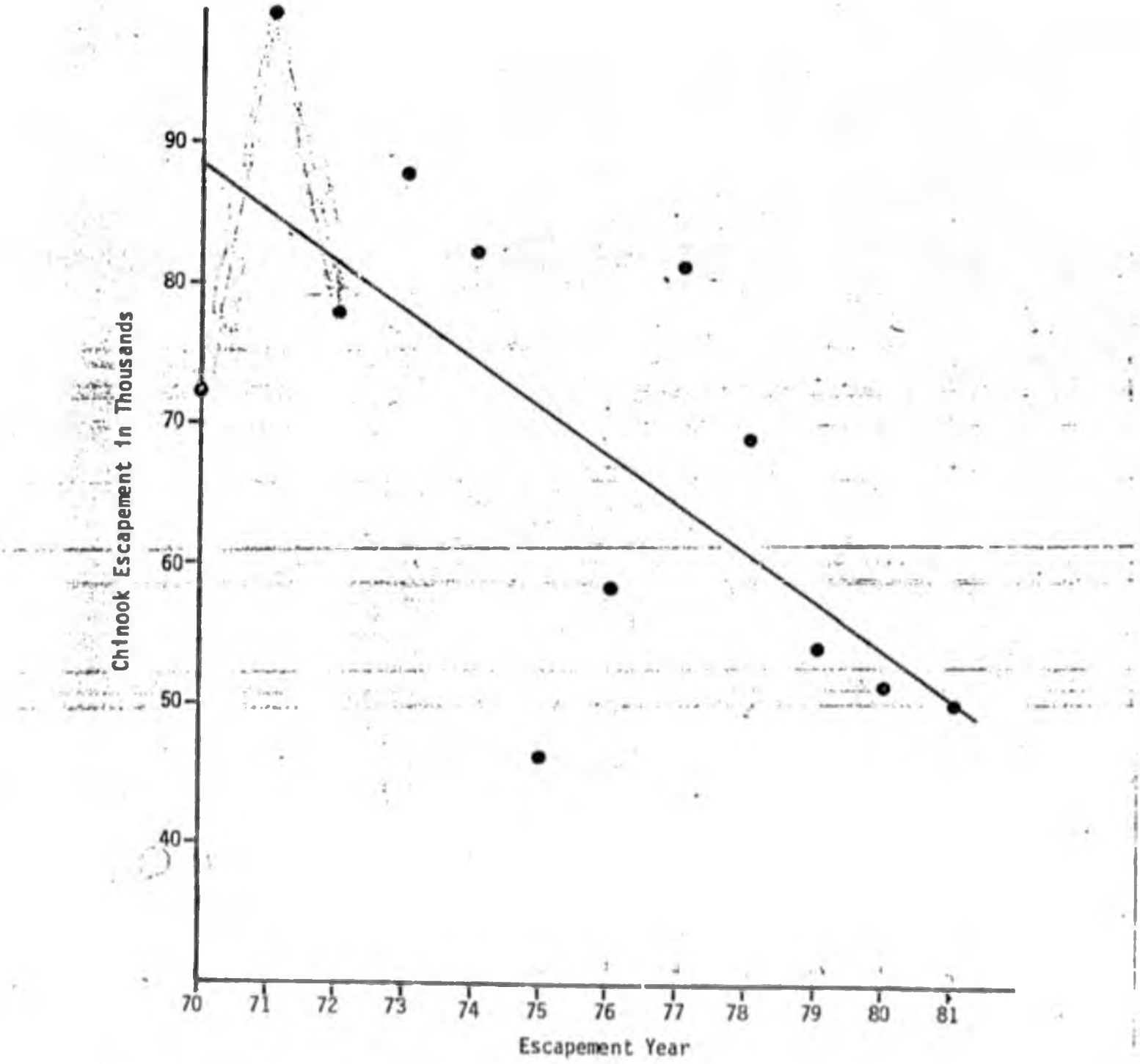


Figure 3. Canadian chinook escapements north of Cape Caution, 1970-1981 (Canadian data; Ken Pitre, Canada Department of Fisheries and Oceans, personal communication).

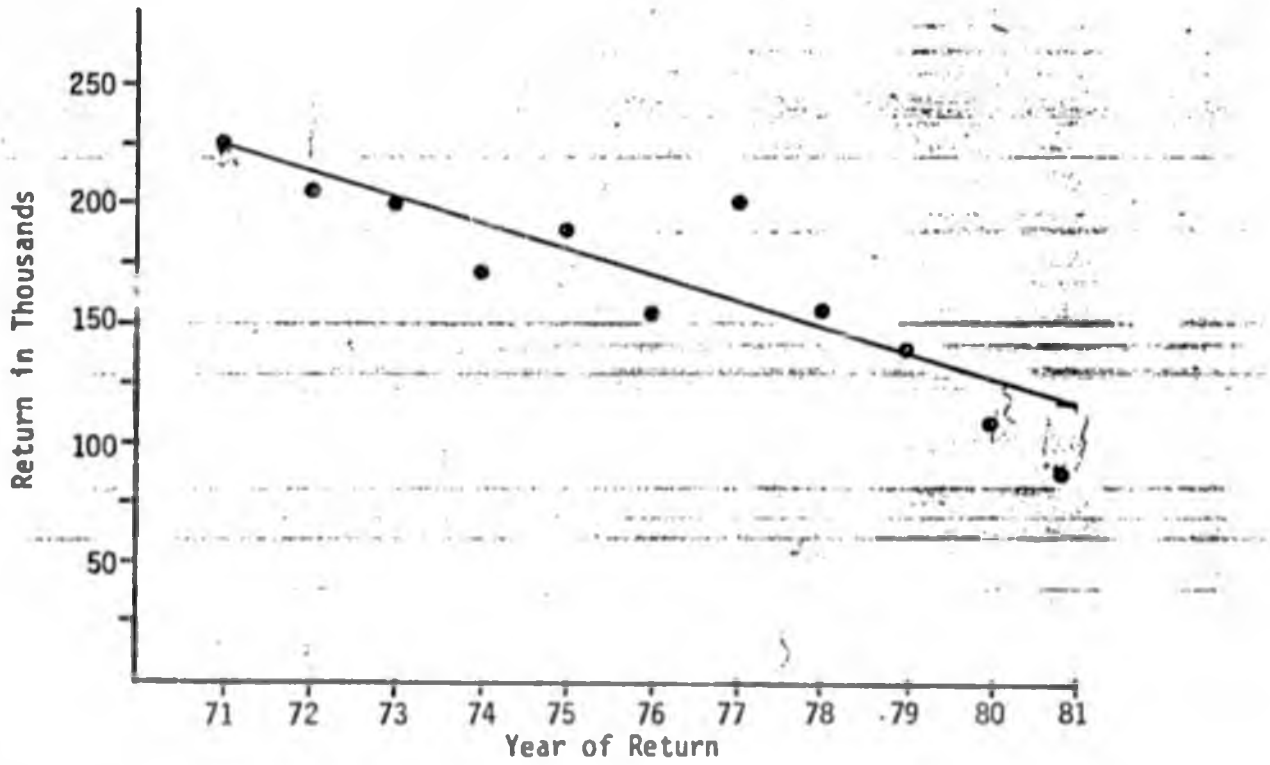


Figure 4. Fraser River chinook salmon returns from 1970 to 1981. Returns include escapement, Indian food fish, river sport catch, and terminal net catch. (Canadian data, K. Pitre, Canada Department of Fisheries and Oceans, personal communication.)

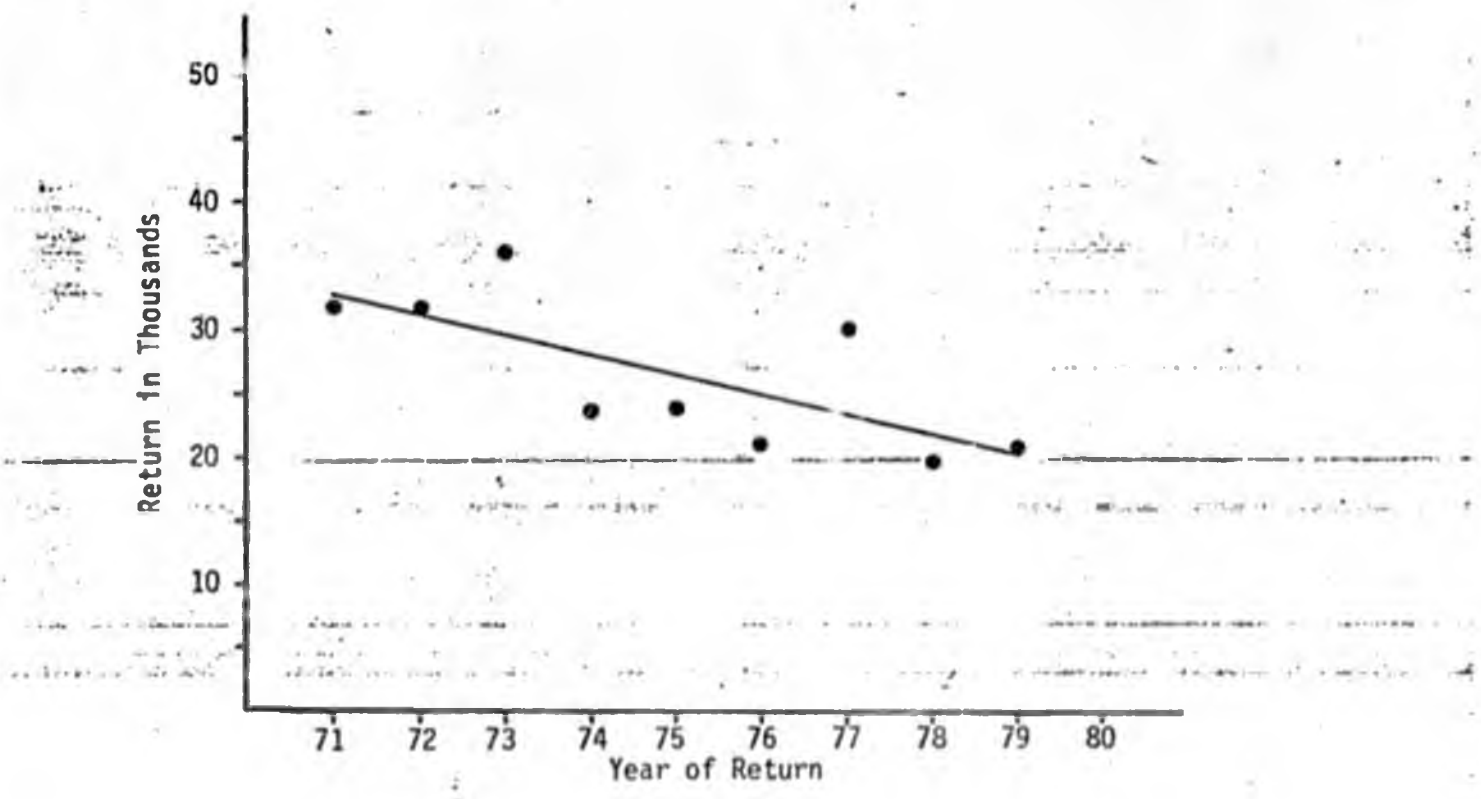


Figure 5. Chinook returns to Georgia Strait index streams, 1971 to 1979. (Canadian data, K. Pitre, Canada Department of Fisheries and Oceans, personal communication.)

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

...3

(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 disasterous.

...4

Another conservation measure that was expected to show some benefits this year was the chinook release program in Unites 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

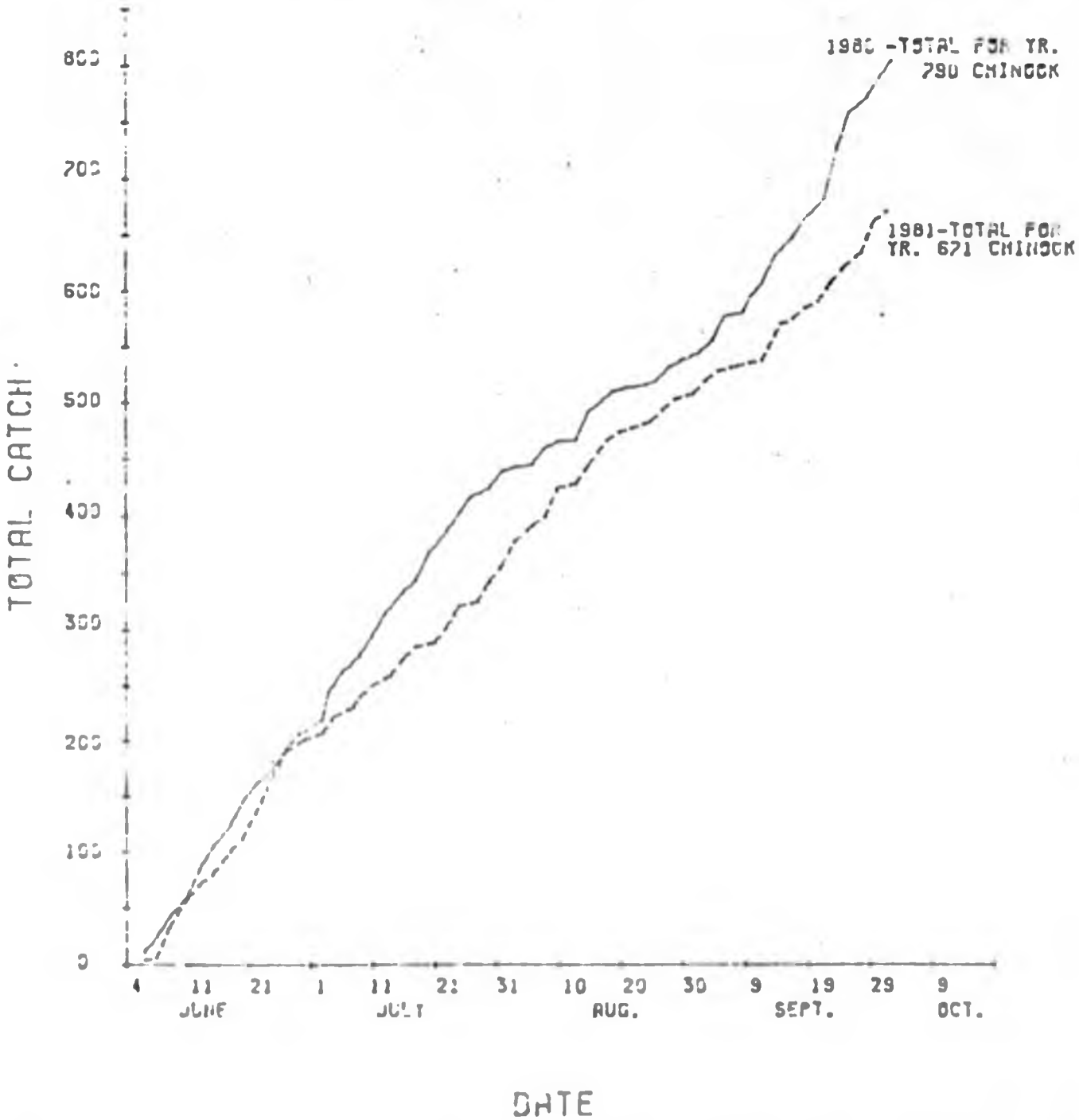
had relatively good escapements the later segments of the run are weak so the overall escapement is expected to be less than optimum.

TABLE 1. Catch, Escapement and Total Return of Fraser River Chinook

	Commercial Catch	Sport and Indian Food Catch	Escapement	Total Return
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.



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	
Dates	No. Days	Dates	No. Days
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.

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 Alsek, 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 Alsek, 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 Alsek, 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

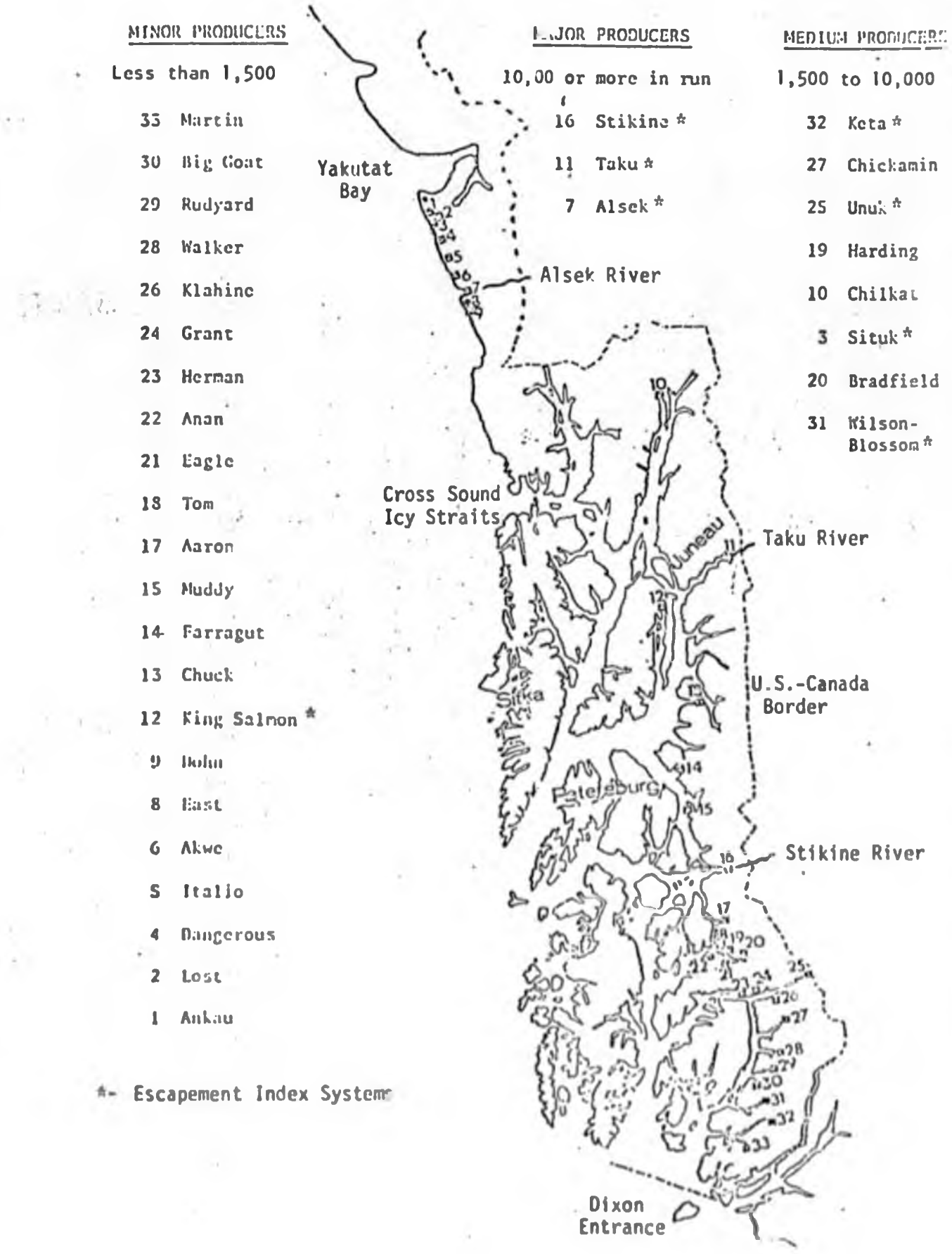


Figure 1. Approximate locations of chinook salmon systems in Southeast Alaska (ADF&G 12/81).

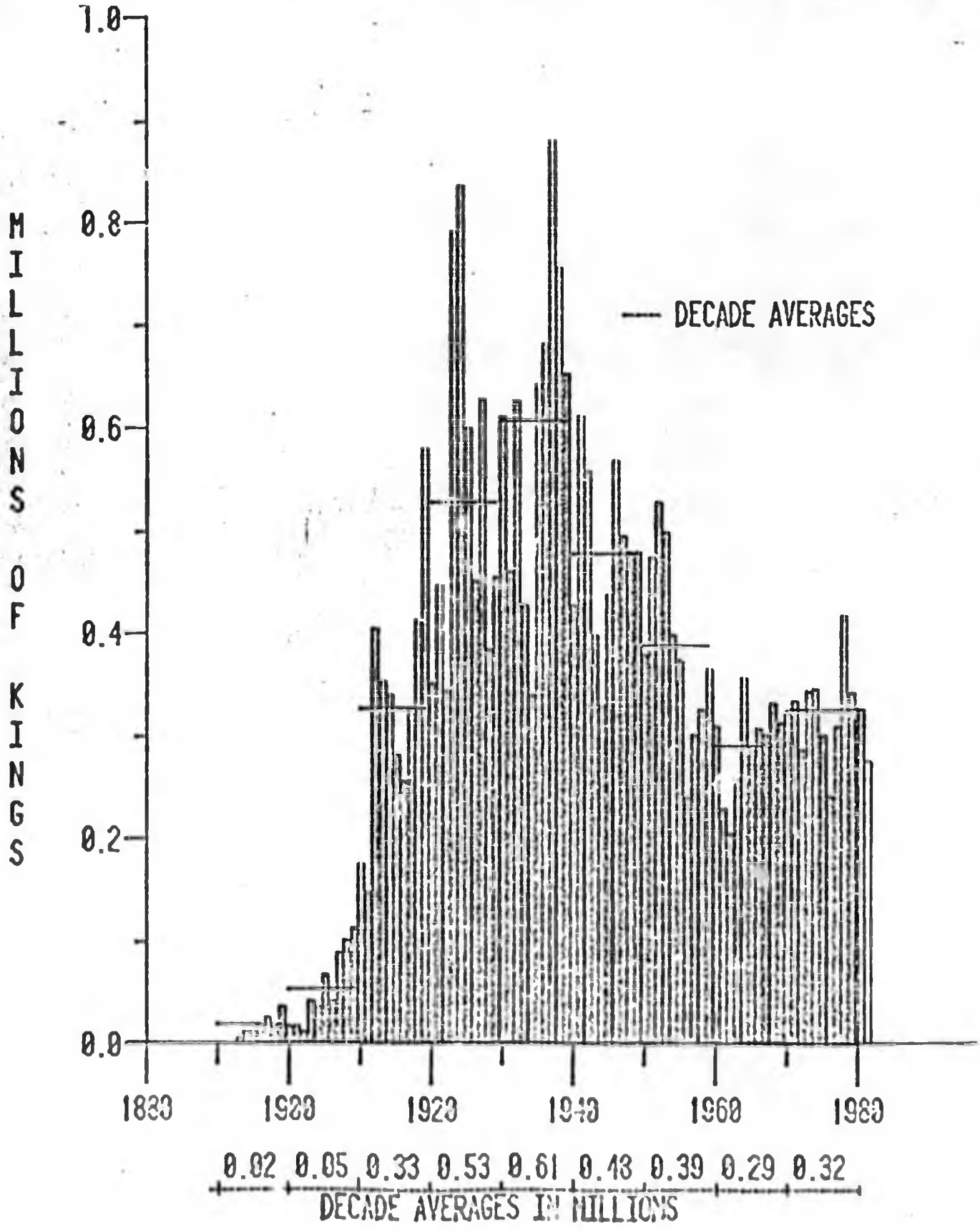


Figure 2. Southeast Alaska Region Annual Commercial Chinook Salmon Catches, 1893 to Present. (ADG&G 12/81)

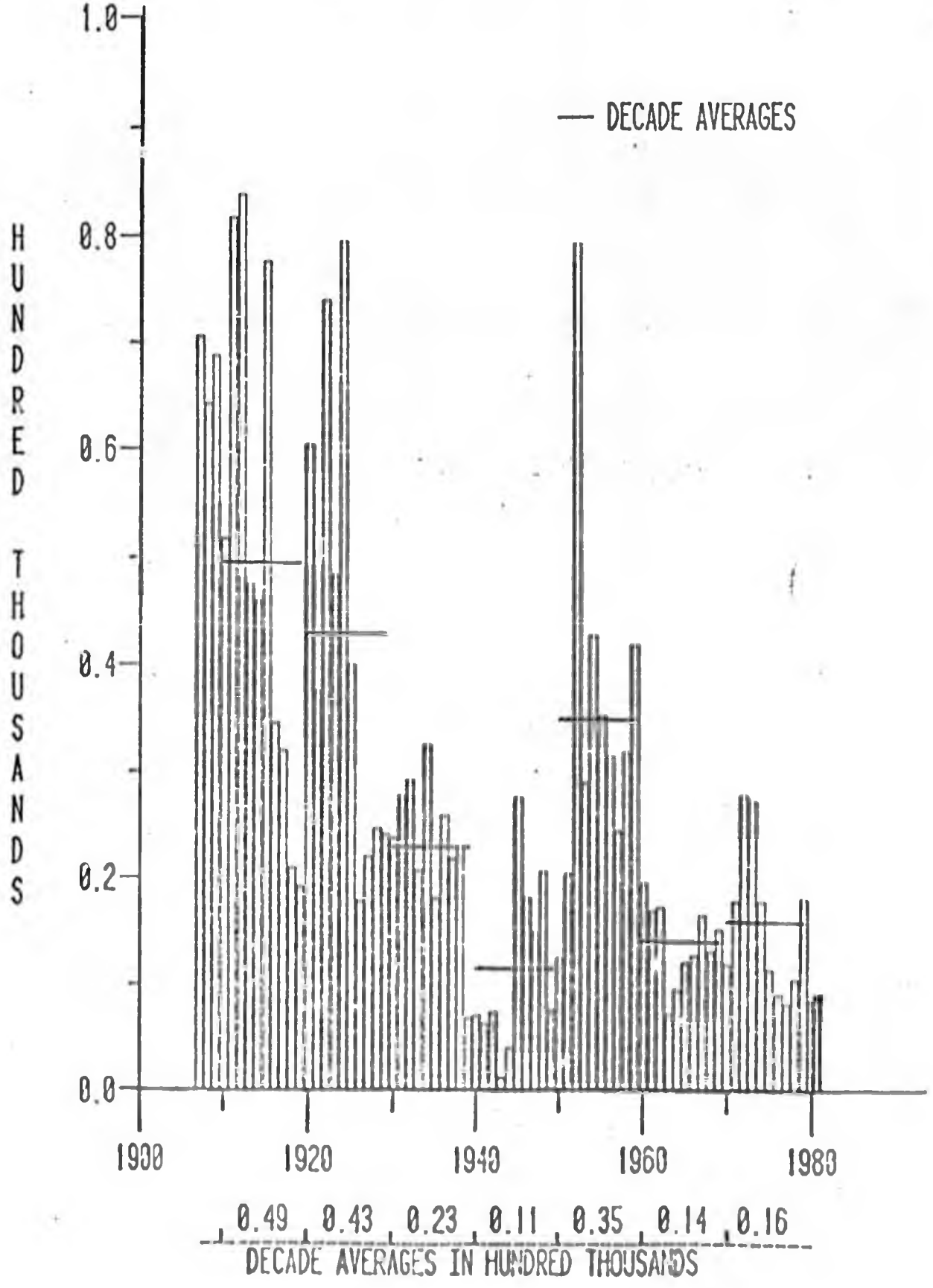


Figure 3. Southeast Alaska Historical Commercial Chinook Salmon Catches in Gillnet Fisheries, 1907 to Present. (ADF&G 12/81)

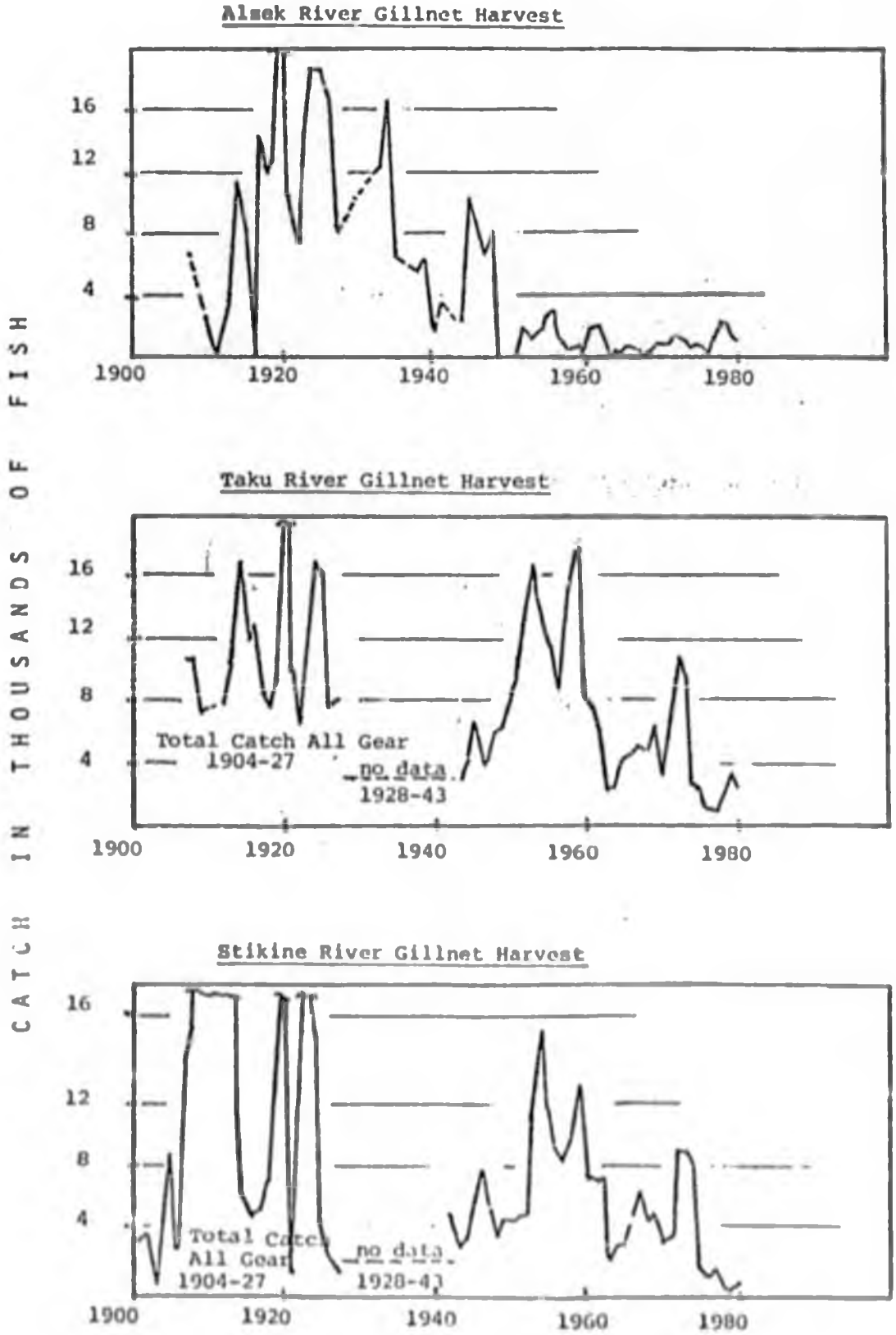


Figure 4. Historical Chinook Salmon Catches in Terminal Area Fisheries on the Alsek, Taku, and Stikine Rivers. (ADF&G 12/81)

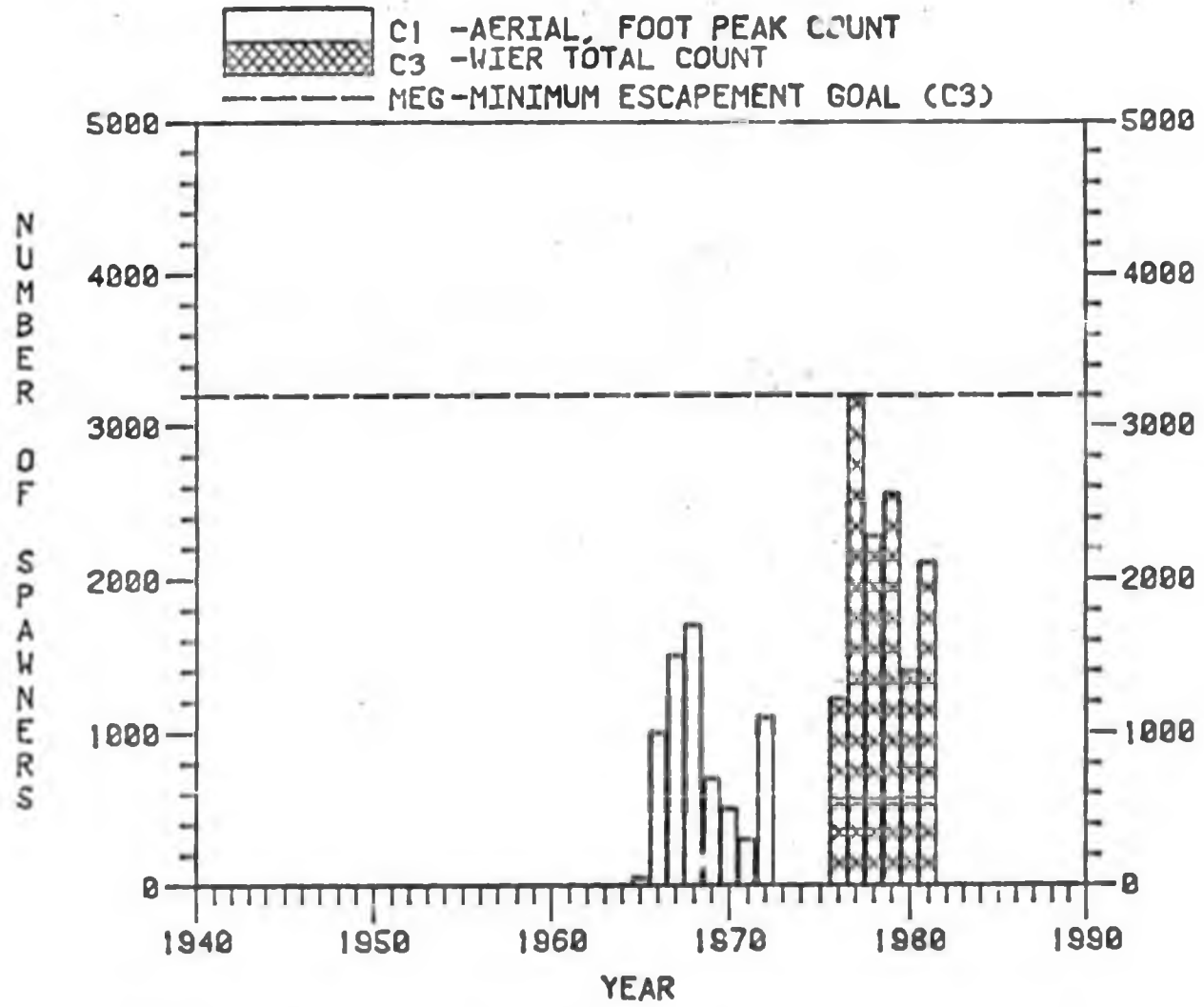


FIGURE 5. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE KLUCKSHU LAKE, ALSEK RIVER, SOUTHEAST ALASKA, 1965 TO 1981. (ADF&G 11/81)

(Note: Average contribution of Kluckshu Lake tributary to total Alsek River chinook salmon production estimated to be approximately 64%.)

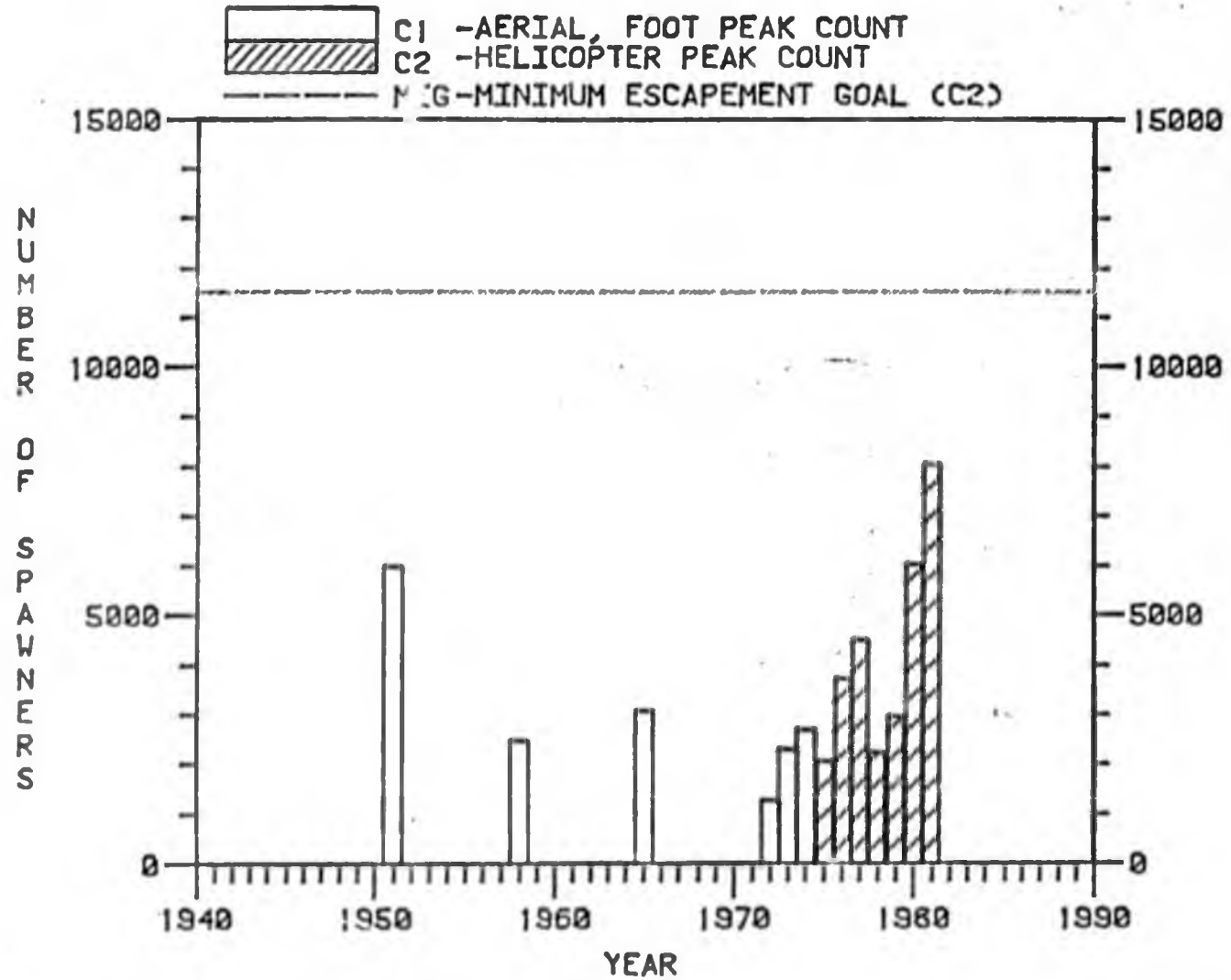


FIGURE 6. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE NAKINA AND NAHLIN TRIBUTARIES OF THE TAKU RIVER, SOUTHEAST ALASKA 1951 TO 1981. (ADF&G 11/81)

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

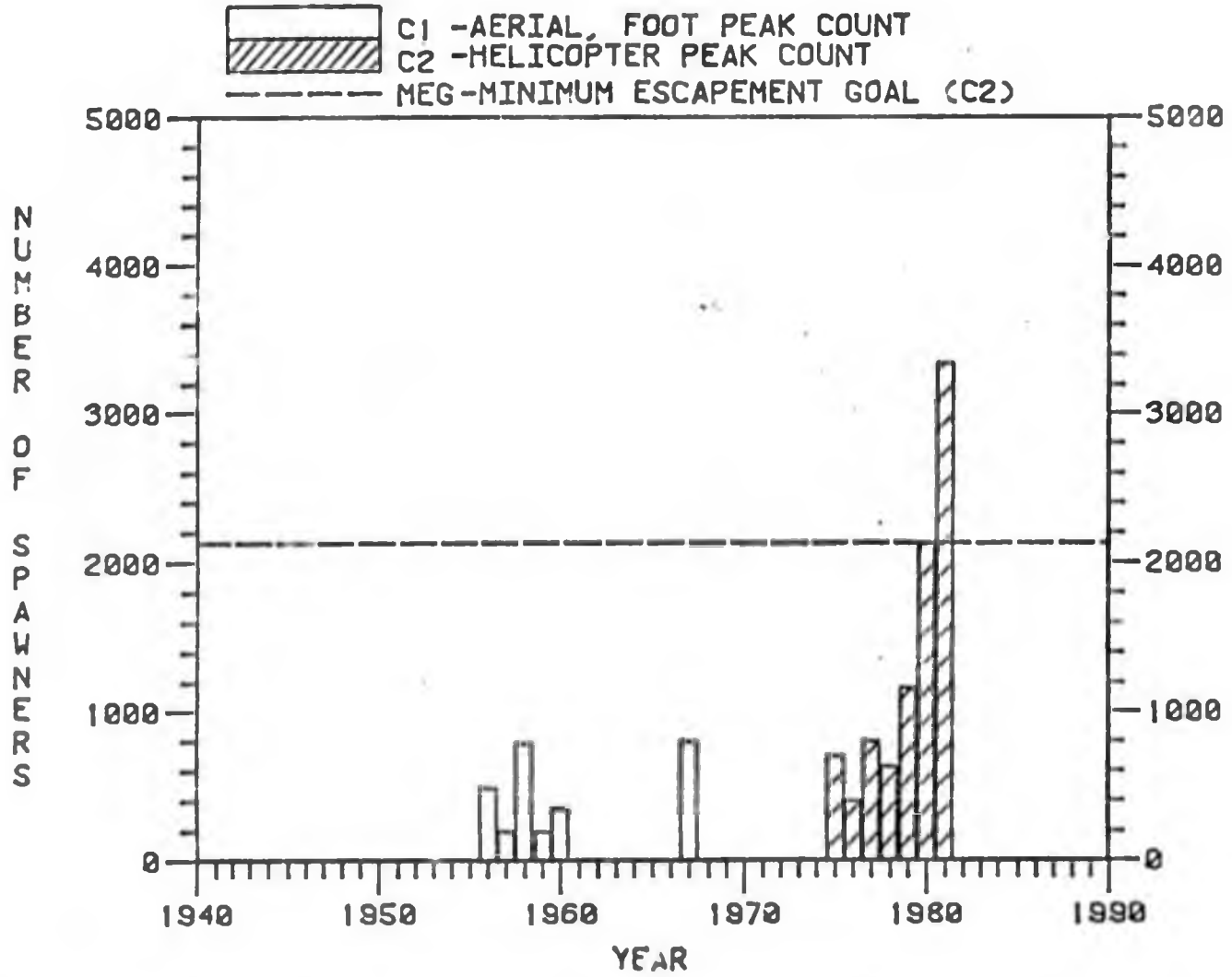


FIGURE 7. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE LITTLE TAHLTAN RIVER TRIBUTARY OF THE STIKINE RIVER, SOUTHEAST ALASKA 1956 TO 1981 (ADF&G 11/81)

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

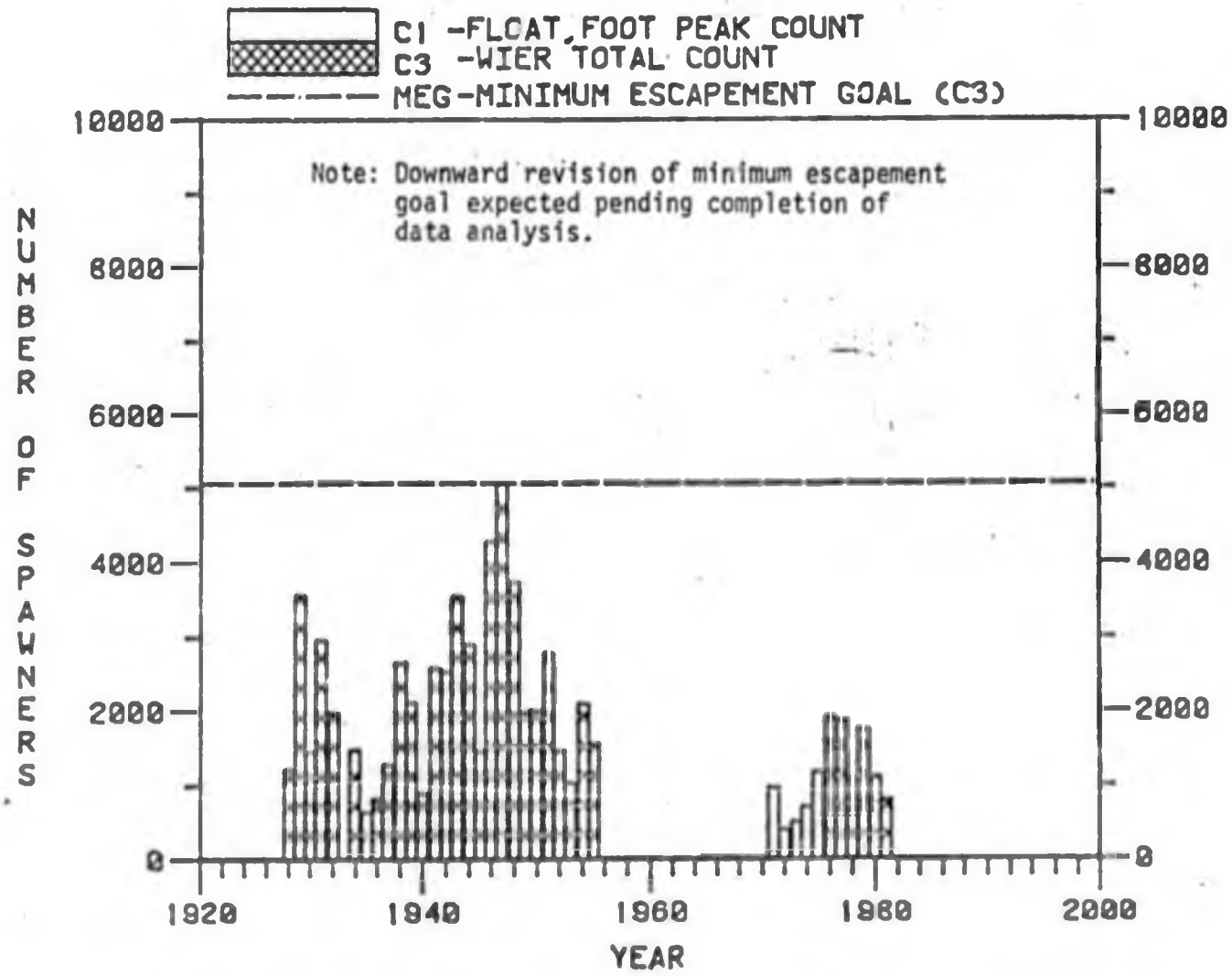


FIGURE 8. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE SITUK RIVER, SOUTHEAST ALASKA, 1928 TO 1981. (ADF&G 11/81)

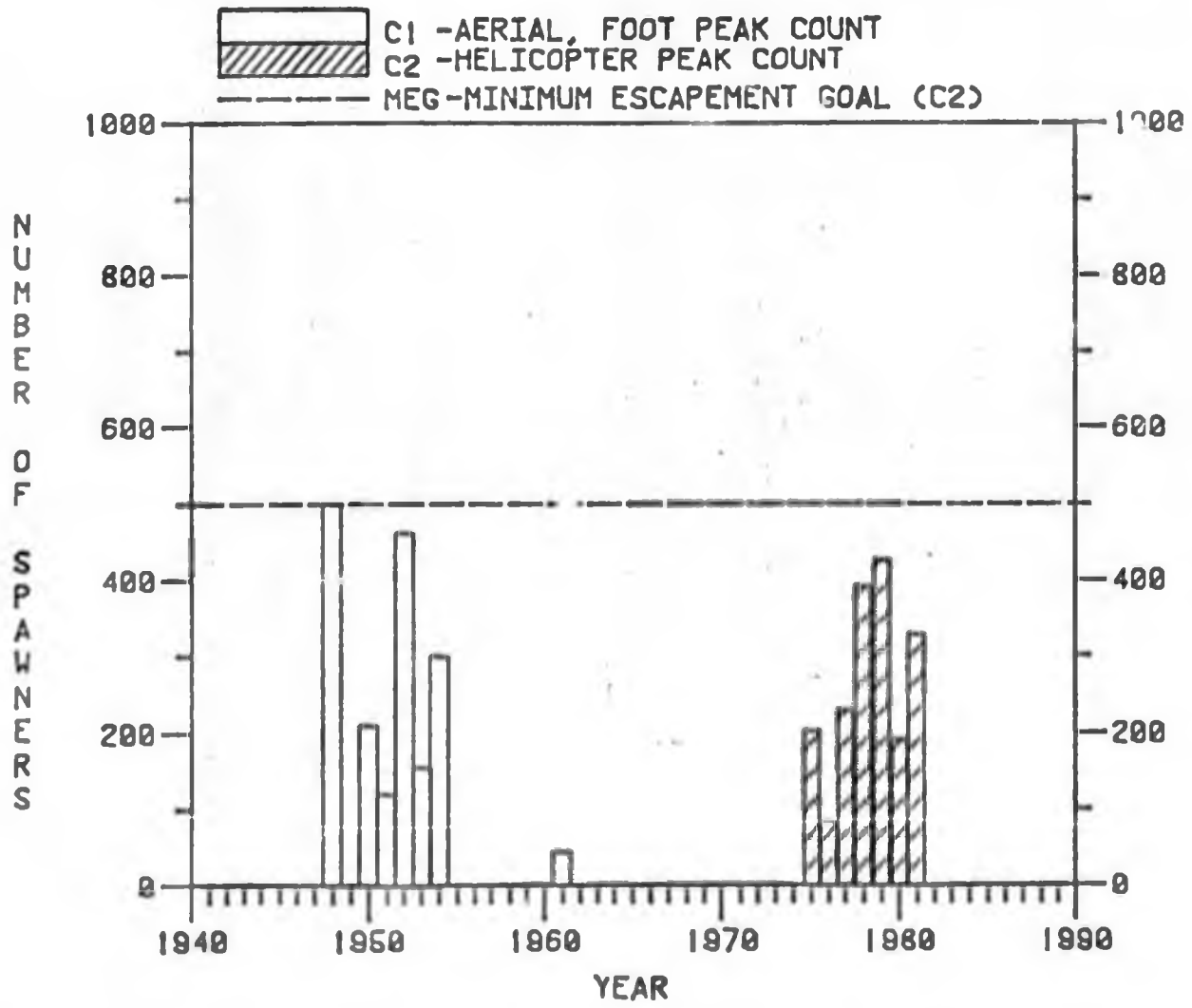


FIGURE 9. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE KETA RIVER, SOUTHEAST ALASKA, 1948 TO 1981. (ADF&G 11/81)

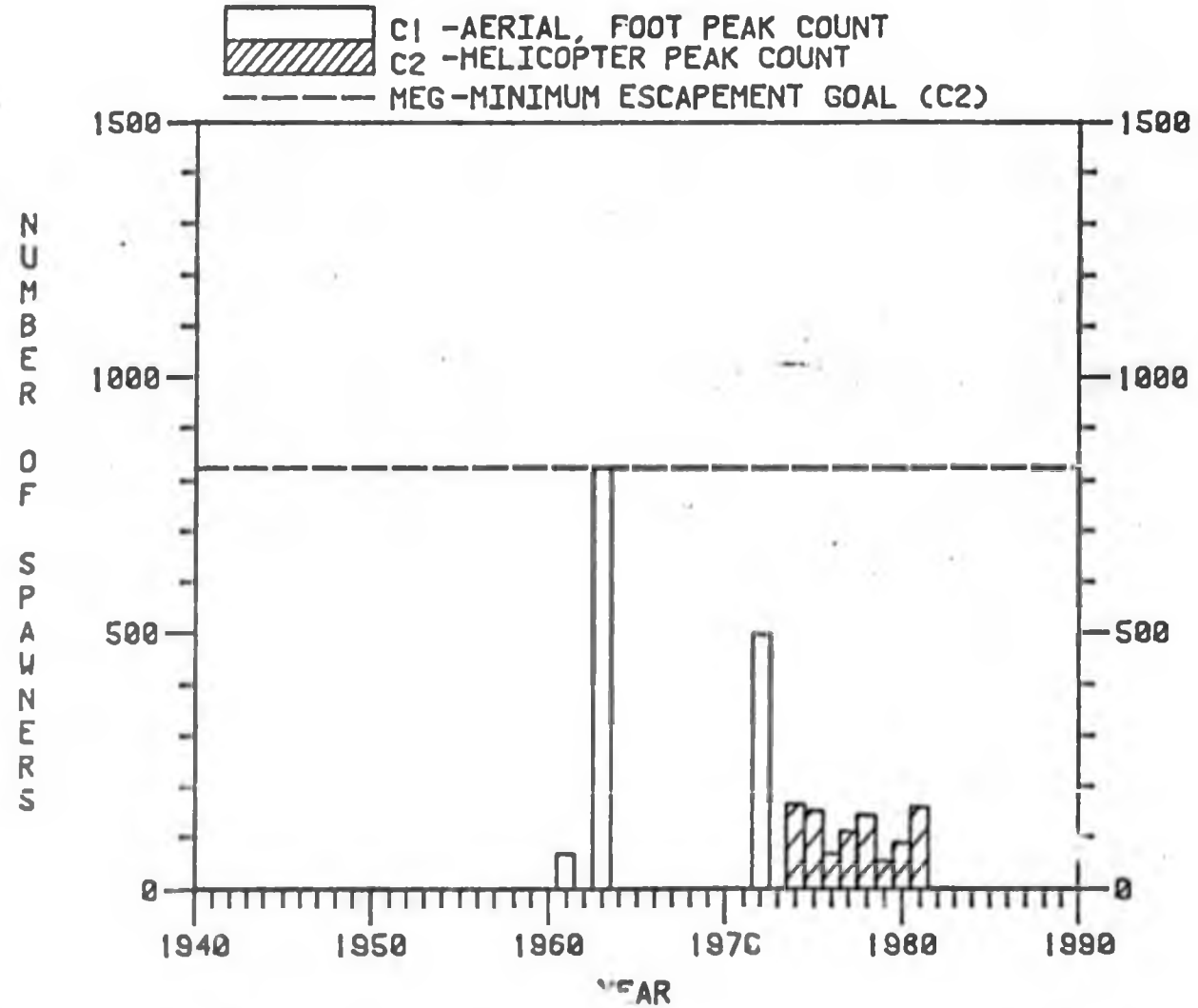


FIGURE 10. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE BLOSSOM RIVER, SOUTHEAST ALASKA, 1961 TO 1981. (ADF&G 11/81)

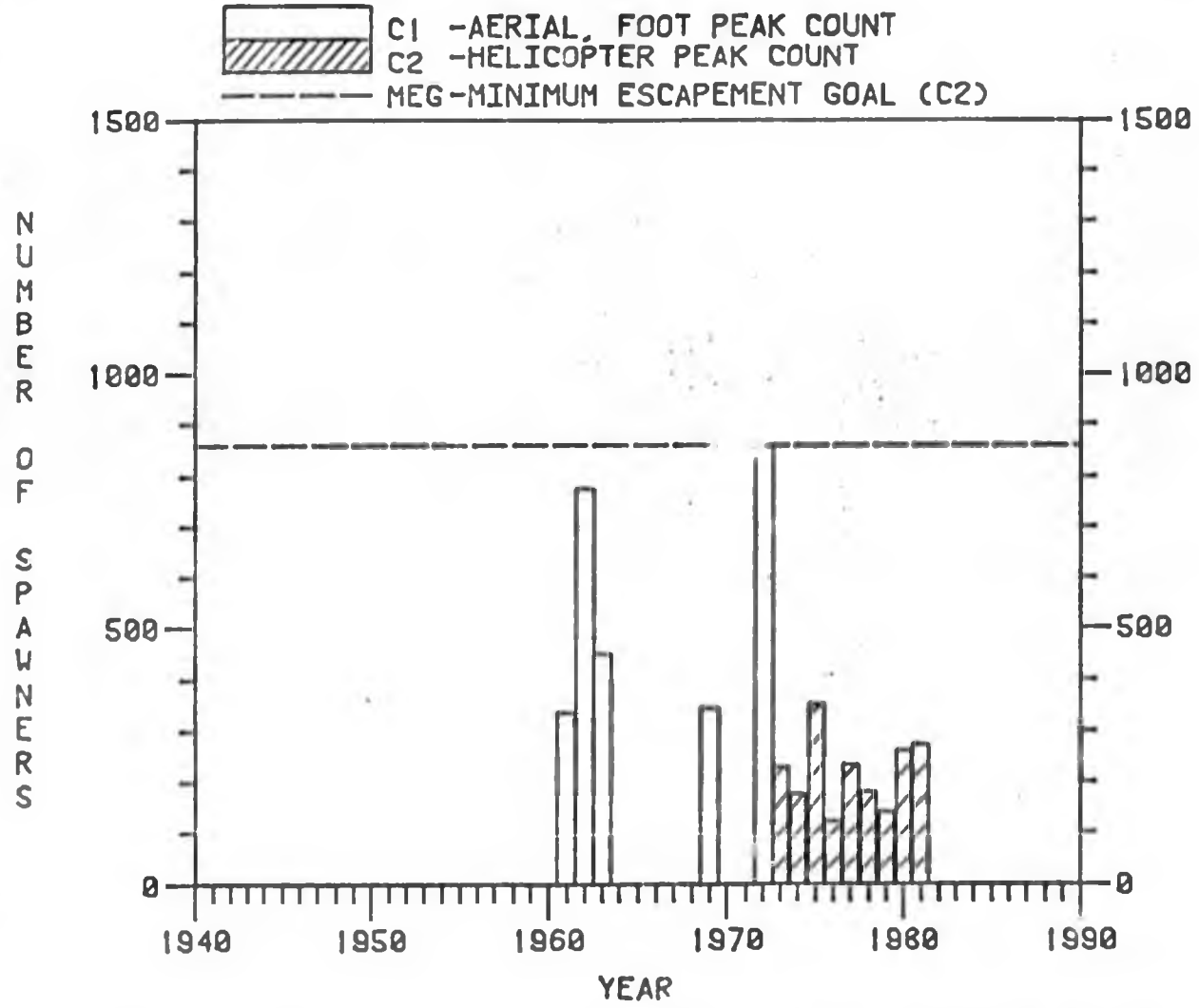


FIGURE 11. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE CHICKAMIN RIVER, SOUTHEAST ALASKA, 1961 TO 1981. (ADF&G 11/81)

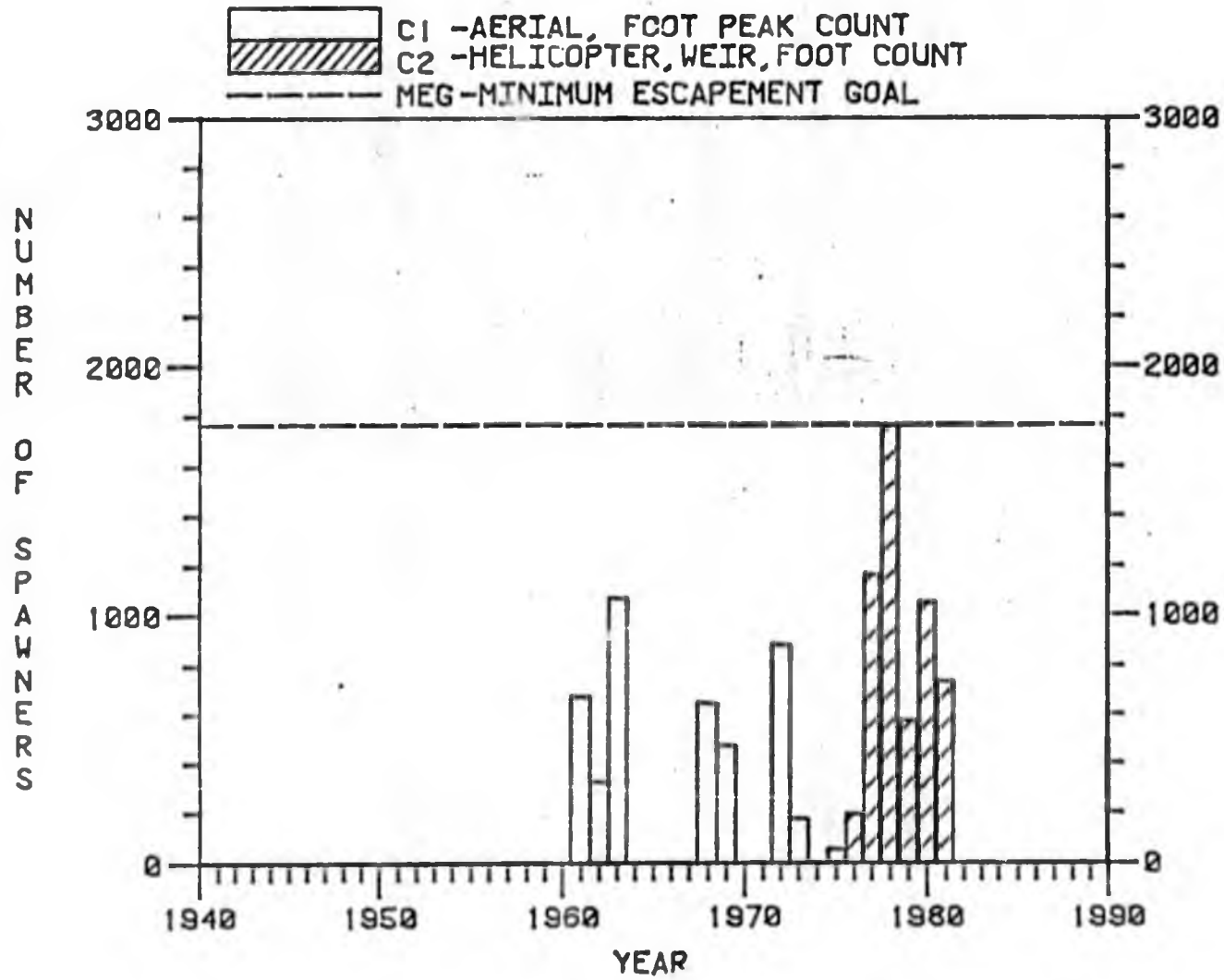


FIGURE 12. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE UNUK RIVER, SOUTHEAST ALASKA, 1961 TO 1981. (ADF&G 11/81)

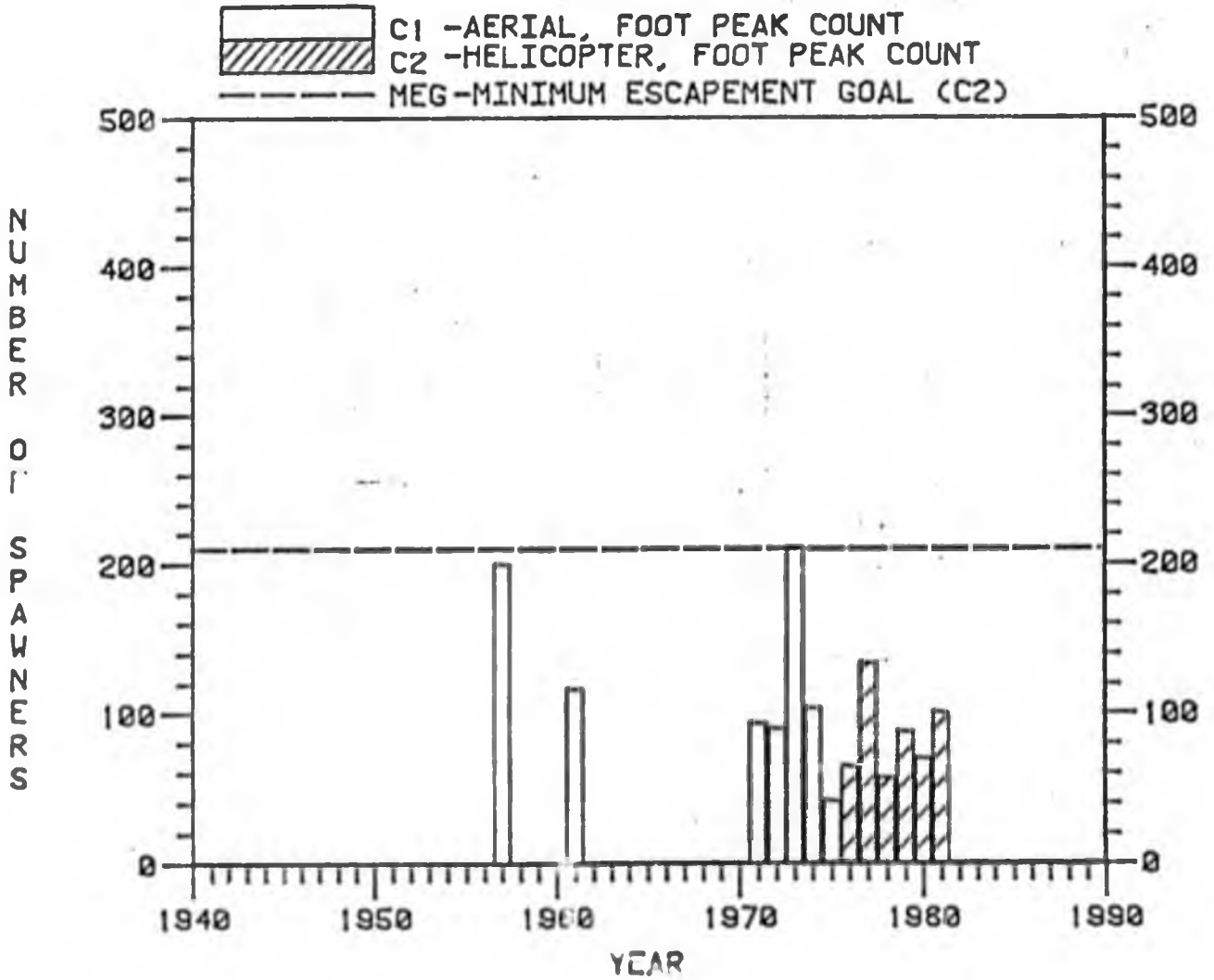
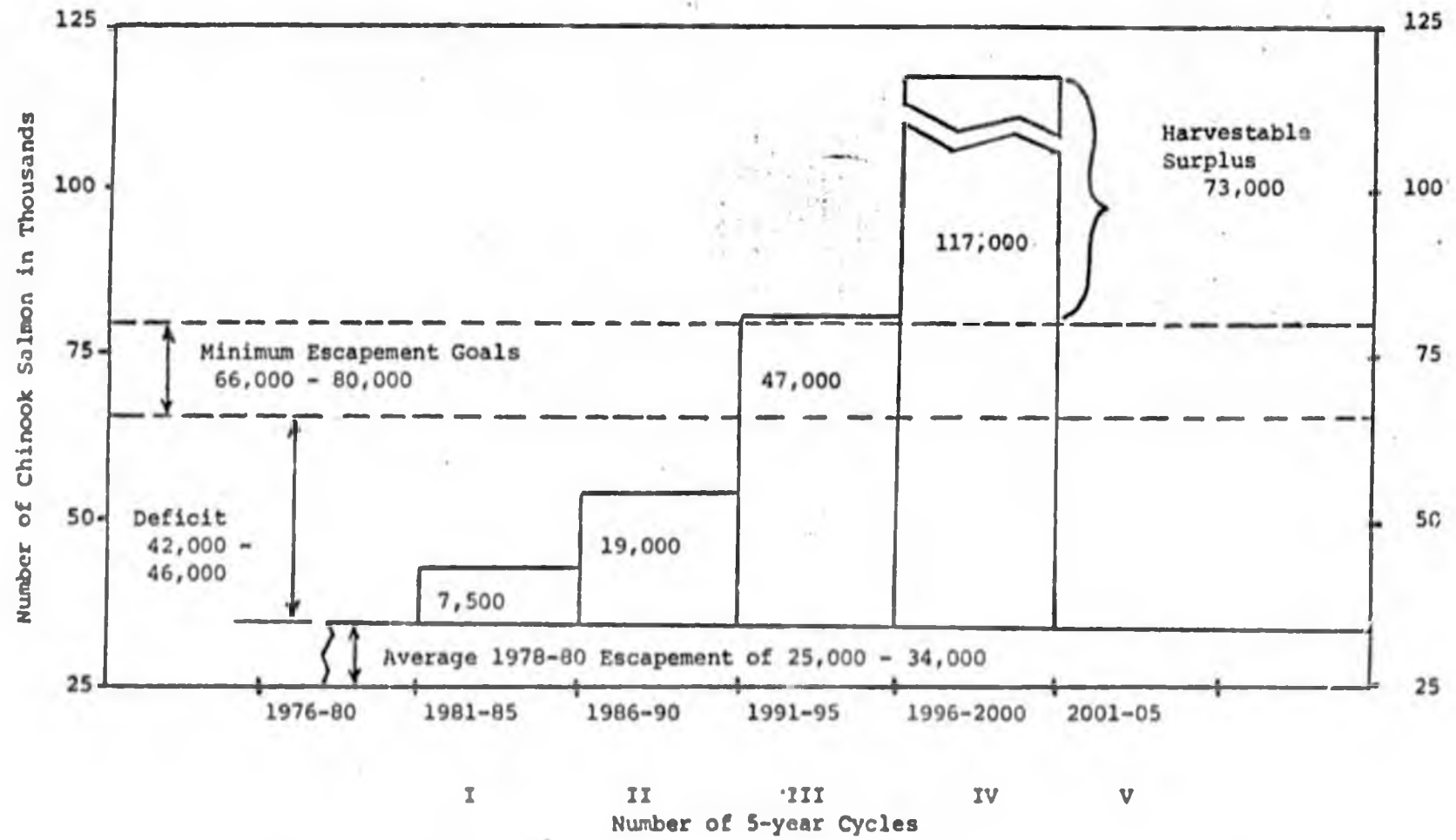


FIGURE 13. OBSERVED CHINOOK SALMON ESCAPEMENTS TO THE KING SALMON RIVER, ADMIRALTY ISLAND, SOUTHEAST ALASKA, 1957 TO 1981. (ADF&G 11/81)

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.

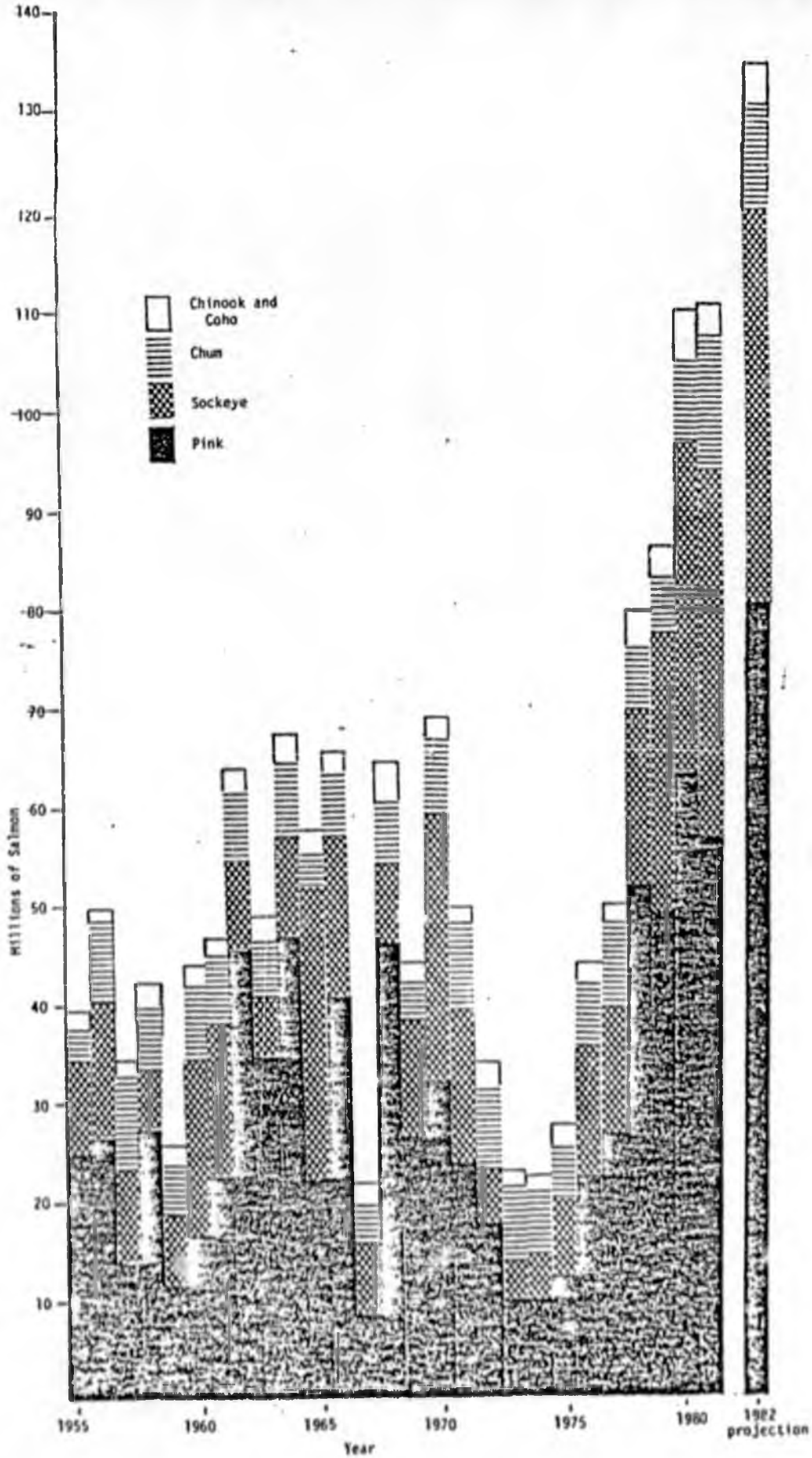


Figure 15. Alaskan commercial salmon harvests by species, 1955-1981, and the 1982 projected harvest.

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).

Assumptions								
Average Counting Rate for Aerial/Peak Surveys 1/	Average Return Per Spawner Ratio (Harvest Rate)	Major Systems (3 Total) Alsek	Taku	Stikine	Subtotal	Medium Systems (8 Total)	Minor Systems (22 Total)	All Systems Total
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	28,500	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%	

1/ 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).

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 ÷ .64 = 5,000 fish.

Taku - An average Nakina contribution of 40% is assumed. An aerial/peak survey counting rate of 75% is assumed he Nakina tributary. Thus, the total minimum escapement goal for the Taku system is (9,000 ÷ .40) ÷ .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 ÷ .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).

Assumptions

Average Counting Rate for Aerial/ Peak Surveys 1/	Average Return Per Spawner Ratio (Harvest Rate)	Major Systems (3 Total) Alsek	Taku	Stikine	Subtotal	Medium Systems (8 Total)	Minor Systems (22 Total)	All Systems Total
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%)	4,860	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%	

1/ 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 ÷ .64 = 3,253.

Taku - An average Nakina contribution of 40% is assumed. An aerial/peak survey counting rate of 75% is assumed. The average 1978-80 aerial/peak escapement to the Nakina was 2,743 fish. Thus the estimated total 1978-80 average escapement to the Taku system is (2,743 ÷ .40) ÷ .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 ÷ .25 = 5,248 plus an adjustment for the assumed aerial/peak counting rate.

2) 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[1]	Escapements			Minimum Escapement Goal[2]
		Ave. 1975-80	1980	1981	
		Major Systems (3 Total)			
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
		Medium Systems (8 Total)			
Situk	(2)	1,490	1,120	810	(5,100)
Behm Canal Systems					
Keta	(1)	250	190	330	500
Blossom	(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
		Minor Systems (22 Total)			
King Salmon	(1)	76	70	100	200

[1] Type of Survey Codes (1) - Helicopter peak spawning count (primary method).
(2) - Weir total count.

[2] 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.

TRANSCRIPT SYNOPSIS

ADMINISTRATIVE REGULATION REVIEW COMMITTEE
FEBRUARY 10TH, 1982 TELECONFERENCE HEARING
RE: DEPT. OF FISH AND GAME REGULATIONS
1) METHODS USED BY THE DEPT. OF F&G TO DETERMINE POTENTIAL FISH CATCH STATISTICS
2) WHETHER REGULATIONS PROHIBITING SPORT FISHING OFF TROLL VESSELS SHOULD BE REPEALED.

TAPE #1, SIDE #A

Rep. Dick Randolph, Chairman -- made opening statements and introduced committee members, Sen. Colletta, Rep. Abood, and Rep. Moss, guest members of the Dept. of F&G Mil Zhan, Ken Parker, Nel Seibel, Paul Larson, Frank Van Hulle, Paul Kissner, Bob Simons, Conrad Seibel, Guest Chairman of Juneau Troll-PAC Larry Smith.

Rep. Dick Randolph then outlined the five areas of concern: 1) principle of Optimum Yield, 2) Limited Entry, 3) Time and Area Closures, 4) the use of Fish Tickets to establish harvest guidelines, 5) present prohibition of sport fishing from troll vessels.

Larry Smith, Chairman of Juneau Troll-PAC, Box 3020, Juneau AK 99803, - expressed concern regarding government management of the Troll fishing industry; effects of the 1976 Magnuson Act have been the mass implementation of regulations. Interplay Federal and State management has resulted in confusing and uncoordinated data and regulations. He set parameters of discussion. The salmon resource is not as depleted as we have been led to believe by management. Data is insufficient. Escapement figures are inaccurate. Foreign interception in FCZ is extensive - 200 to 500 thousand fish anually. Data input from other sources other than their own is ignored. ATA data is ignored. Troll fishing industry is the major part of Southeast AK's economy and in the past the industry has been an economically stable one. Troll catch represents over 40% of all catch of Southeast gear types. Optimum Yield has not been proven as an effective way of managing the fishery. Federal and State management only takes into account that data which complies with their already existing management plans. Biological data is being used for political ends. The public is exempt from decision making process. Public response is not taken into account. The management goal of conservation of fisheries resources should not be carried out to the extent that the Alaska fishing industry is destroyed. Mr. Smith calls for a private study to re-evaluate present methods used to evaluate data and to investigate more efficient possiblities. Inaccuracy of the use of fish tickets as means of determining abundance of the resource. All that fish tickets provide is a report of the number of fish caught. Written testimony will be provided.

Ken Parker, Deputy Director of Commercial Fisheries Division of the Dept. of F&G. - Written documents submitted. The Southeastern troll fishery has been subject to stringent regulations in the last two years. This has occured because of the depressed state of the Chinook and Coho salmon stocks and the necessity to balance the harvest between the in and off shore fisheries. He introduced other department staff.

Paul Larson, Southeast Region Finfish Coordinator for Division of Commercial Fisheries of Dept. of F&G. - Statement re: time and area closures placed on Southeast troll fishery. Troll fishery occurs in both State and Federal waters. Troll fishery is the only AK fishery allowed in FCZ off AK coast. It is important to manage the fishery so that the harvest is only the surplus after escapement needs have been met. The Board of Fisheries establishes the regulations which will guide the arrangement of fishing seasons. Conservation measures are necessary and time and area closures are the means the Board relies on

TAPE #1, SIDE #A continued

to achieve this. Further restrictions of harvesting seasons i. necessary because the resource has shown a need to be further protected; therefore, time and area closures have become more stringent. Compared with other fishing industries around the state there were very few emergency closing orders issued for the Southeast area troll fleet in 1981. He expressed all the complicated mechanisms of issuing time and area closures to indicate that they are not decided at the whim of the department.

Nel Seibel, Southeast Region Biometrician for Division of Commercial Fisheries of Dept. of F&G. - Comments on principle of Optimum Yield. He introduced statistics regarding first use of OY in 1980 season. All gillnet operations on Southeast Chinook salmon have been closed down since mid 1970s to lighten pressure on Southeast stocks. The necessity of Federal management of especially Chinook salmon within the FCZ was determined to be of great importance because the majority of those stocks being fished by the Southeast troll fleet were found not to be of AK origin. Rather, they were from Oregon, Washington and British Columbia rivers, streams, and hatcheries, where there is also a demand for these fish. The SE troll fishery is also one of the oldest sharing the harvest of these stocks, and the number of Chinook salmon is depressed. Hence, there have been cutbacks in the number of fish that can be harvested to allow these stocks to be replenished. There are not effective identification methods currently available for Chinook salmon stocks in areas of intermingling stocks; neither are they available for other species. Chinook salmon harvest in SE has increased from 301,000 in 1975 to 401,000 in 1978, even though there were more trawl vessels in intermingling stock areas in outer coastal regions. The problem then became how to take these concerns into account in a manner consistent with the Fisheries Conservation and Management Act, which says fisheries must be managed for Optimum Yield. This was not possible because of a lack of information, and the complexities of commercial, recreational, and subsistence fisheries throughout the state. Therefore, an overall catch limit was thought to be a reasonable way of addressing these problems; the limit was found by averaging stocks taken by trawlers from 1971-77 mainly, and was reviewed each season. In the 1980 season, 286-320 thousand was the limit developed by the state and federal boards of fisheries; the actual catch exceeded the upper range end by about 3,000. In 1981, the limit was lowered to 268 thousand, which was at the lower end of the Board's range, and upper end of the Council's range. From projections made in late August and early September, there was expected to be more Chinooks caught in the late part of the season. However, this didn't occur because of the shifting of stocks, and the FCZ closure in an attempt to keep the number within the lower Council limit, among other reasons. Preliminary hand counts based on some 30 thousand fish tickets were

Mil Zhan, Executive Director of Board of Fisheries and Game ---
The Board of Fish and Game establishes regulations and policies which are implemented by the Department of Fish and Game; the Board of F&G functions separately from the Department. The Board's regulations are for the conservation and management of resources, and determine the allocation of resources. Board decisions are based on biological data, expertise from the department staff, and public input. The board is the primary way for public involvement; there are 67 different boards across the state, where public testimony is heard concerning local needs

TAPE #1, SIDE #A continued

and issues. The Fish and Game Board considers 400-600 regulations annually; coordinated efforts are intended to be responsive of public needs, as well as, those of the resource. Sen. Colletta asked about how much weight the Board puts on public testimony. It was replied that the Board has professional biologists who could be depended upon most of the time. He then asked if it wasn't a sham, because the conclusions are one-sided, and the public has no recourse. Mr. Zhan replied that the Board is in a tough situation and must decide between biological and social needs.

TAPE #1, SIDE #B

Earl Krygier, Biologist for the Alaska Troller's Association --- He indicated that Alaskan fisheries should be managed by Alaskans, and that there are problems with the Department of Fish and Game's management. The Department can much better manage our resources in conjunction with the industry than with the federal government. A dual management system is not possible other than what could be called dual management by the state and the fishing industry. Escapement data is inaccurate. Optimal counts in reality were historic highs. Counts taken with fixed wing aircraft are highly inaccurate. It would take two years to gather, devise methodology, and develop index systems for Cohos when there is presently practically no data available. He states that much time would also be needed to complete the stock recruitment information for King Salmon. The troll fishery was closed down in 1981 for 10 days under a two tier prerequisite; one - the salmon were moving to inside waters, and two - the stocks were above the ten year average. The first prerequisite was irrelevant because of changed patterns in seining and gillnet fishing. A test fishery would much better answer this prerequisite. The second prerequisite is refuted by the fact that even after a 10 day closure, the 1981 catch was a record catch for the past 12 years. Exploitation rates are incorrect. Even with the total exploitation rate as high as 90%, we doubt this happens under the present management system; we do not know how much Coho stocks can take, i.e., they may be able to take as much as 95 or 96%. Work needs to be done on an a true exploitation rate for adequate management. Information on stock separation is also needed by scale pattern analysis and electrophoresis studies. As an industry biologist, he does not feel money would be well spent on investigative methods of evaluating the Department's present research methodology, but rather, money is needed to complete or initiate research either privately or governmentally which would give the Dept. the tools for correct management of the fishery. A list of needed management research has been provided by the Natural Resource Consultants in their work for the North Pacific Management Council. Industry and the Department should sit down together and prioritize the research that needs to be done. Written testimony has been provided.

Don Masterson, representing the Juneau Charter Boat Association. -- He spoke on the issue of sport fishing from troll vessels. Hand and power trollers are often involved in the charter business as well. They are almost forced to be because their fishing time has been so drastically cut and because tourism makes it a worth while enterprise. The charter boat owner is allowed to sport fish off his vessel. He sees no reason why the troller should not be allowed to do the same, like every other commercial fishing vessel.

Eric McDowell, a commercial salmon fisherman from Homan-McDowell Economic and Management Consulting Firm. -- He stated that he had been asked by the Alaska Troll Legal Fund to investigate the economic impact of two management measures. One is a series of 6 errors made in season management made in 1981 and the other is the economic impact of the quota system established by the Department. Cost of managment errors which could be rectified through better management techniques was 1.3 million dollars lost to Southeastern

TAPE #1, SIDE #B continued

fishermen. The quota system cost nearly another million dollar loss to AK fishermen. Errors were: 1- overestimation of potential catch by 73%, 2- Arithematic error of 12,000 Chinook salmon, 3- double counting of fish tickets, 4- overestimation of contents capacity of freezer boats, 5- use of fish tickets with relatively high catches as indication of average catches, 6- inaccurate estimates of boats fishing and daily catch per boat. He expressed need for improved management, but emphasized that although there are problems with state mangement, it far surpasses the federal management capabilities. Written testimony was provided.

Floyd Blossom from Soldotna -- There is no need for the Department to create a fourth fisheries group; the categorization of commercial, sport and subsistence is enough. Advisory boards are not being listened to by the Dept. There is a run of fish two weeks before the fishing season starts. The biologist in Soldotna thinks the Dept. of F&G should open up the season earlier because of this early run particulary since the fishermen fill their quota on the late run putting undue stress on that particular run and none on the earlier one. He is afraid the late run will be destroyed. Proposals put in by the advisory boards were ignored by the Board.

Theo Carson, member of the United Cook Inlet Association. -- Drift fishermen who practices law during the winter. In Cook Inlet there is no data base from which their biologists can work. There is no inventory of their streams, not even the Kenai River or important spawning beds. Sport fishing is permitted right on the spawning beds. Mayor of Kenai Peninsula complained to Governor, who, when he consulted with the commissioner was told there was no problem and nothing was done. Area biologists have tried to get management action through emergency orders before the Board; this is an indication of what type of data they are working from. He strongly favors the organization of regional boards who actually have more than an advisory function. Actual regional control is needed. A private agency should investigate the Dept. of F&G research methodology, but it is imperative that that agency be independant, and have full authority to investigate.

Walt Pasternak, troller from Sitka who also is an ATA board member --- He addressed Optimum Yield. The OY is not based on biological data, but rather inaccurate catch data. Through the mid 60s and early 70s there was a small Canadian troll fleet operating off the Fairweather Grounds which had a substantial catch and was not moved outside of 12 miles until the late 70s. Their catch is not incorporated into the Dept. determination of the OY. The Canadians also fish on much smaller fish.

Bruce Bachen, former fisheries biologist for ATA who is presently testifying because of personal interest. --- Money should not be allocated to a private agency to tell us what the Dept. already knows it does not know. What is needed is that money be used to further existing research and for implementing greatly needed new research. There is need for additional work on researching Coho stocks. Rational plan needs to be developed for better management that will benefit the fishermen, as well as, the resource.

Richard Lundahl, chairman of Pelican advisory committee --- the committee has participated in public hearings for a long time. Since 1974, Pelican has had an advisory committee which has been very active by attending almost every Board meeting. They have also attended every North Pacific Fisheries Council meeting since 1977. The Pelican advisory board has only met with frustration; They have never been listened to. A packet put together by the advisory board is available. There is a disproportionate number of non Alaskans on the Council. Foreign fleets which should be gradually eliminated from the 200 mile limit. He expressed the fear that the OY will be frozen, and that although stocks are improving, fishermen

TAPE #1, SIDE #B continued

will never be allowed to harvest the additional fish. The OY range is not large enough. A complete biomass study of King salmon should be made. A fishery should not be managed if there is no data. Trollers should tag the fish they are forced to throw back overboard because of size limits. If the troll fleet is destroyed these fishermen will be forced to impact other fisheries. The banks do not want back the boats which no other fishermen would buy. Hatcheries are a too long term solution; another solution is needed now! Trawling on the high seas is far more destructive than trolling. Trollers should be allowed to sport fish off their vessels. Written proposals from the Pelican board are available.

Al Burch, manager of the Alaskan Draggers Association and a member of the Kodiak Dept. of F&G Advisory Committee, and an appointee to the Shrimp Study Group. --- There is quite a problem in the Kodiak area with shrimp survey methods; surveys are only as good as the boat and equipment they are done with. They should be done in a commercial boat with a commercial captain on board because his livelihood depends on these counts. There are many problems which cause unnecessary compromising by management and the fisheries; there have been many lengthy meetings; now something should be done. More testimony will be given later.

TAPE #2, SIDE #A

Jim Hubbard, member of the Alaska Draggers Association and an appointee to the Shrimp Study Group in Kodiak --- He stated that quotas have a large impact on Kodiak's shrimp industry. As an example, 50,000 lbs. of product takes 3-4 hundred man hours to process. Hence, when catches are restricted, there is a great impact on the whole town's economy. Written testimony will be forwarded.

Rob Miller, Ketchikan --- He feels the law prohibiting sport fishing fishing from a troll vessel is unnecessary. His reasons for opposition included that charter boats which are licensed to hand and power troll have certain strict requirements to follow; trolling vessels should be required to comply with charter vessel regulations. Another problem facing charter vessels is that the Dept. of F&G has a registration form that doesn't check the licensing of the person through the Coast Guard and thus makes it so that a person chartering without being licensed by the Guard can not be prosecuted.

Frank Thompson, of the Thompson Fish Company in Hoonah----
He agrees with Rep. Randolph's proposal which calls for an investigation by a private agency into F&G methods. The OY should not be cut because such action would hurt the trollers considerably. The fishery should be maintained as much as possible, and not be constrained by unnecessary bureaucracy. The eight day on, six day off closure on fishing is a great economic hardship for the community. Bob Bitterman also tried to testify, but the teleconference transmission at that moment was cut off.

Gordon Peterson, a representative of the Icy Straits Trollers Association from Hoonah --- Because management didn't feel limited entry would take care of pressures from the rapidly growing hand trollers, the eight day on, six day off fishing closure was imposed. The eight and six plan is not the prime reducer of pressure in the eight and six area. The number of hand troll permits dropped from 3800 permits before the eight and six closure to 1150 permits in 1981. The reduced number of permits is spread over a larger area now because of the reopening of Cross Sound and the 3-mile limit to hand trollers. Then it was decided that the rest of SE needed a measure to ensure escapement, so the Chinook Closures for 30 days in the spring and the 10 day Coho Closure was imposed. Now SE could be assured of escapement, but Icy Straits still has the eight and six closures, plus the 30 and 10 day ones, although no one else does.

TAPE #2, SIDE #A

With limited entry the area doesn't need the 10 and 30 day closures in conjunction with the eight and six day ones, which is evident from area Coho catches. Regulations that management has made are often hard to repeal, and he suggests that this problem be severely looked at.

Michael Ferguson, a nine year troll fisherman, who until last year could support himself by fishing; however, because of management regulations which reduced fishing time, he has had to go to work this winter. --- This is happening to many fishermen in Pelican. Fisheries management is causing social and economic hardships that haven't been taken into consideration by the fisheries' managers. Many fish that are caught are marked by gillnet ant trawl scars. These two different types of fisheries are intercepting troll catches. The State of Alaska says there is no intermingling of SE trollers' catch stocks and the westward stocks, however, the trollers weren't allowed to fish west of Cape Suckling because these stocks supposedly didn't intermingle. He wrote and sent pictures to the National Marine Fisheries Service, and they explained them as drop outs from the Copper River Gillnet Fishery. Federal Biologists claim the above absurdity, while the state claims the fish don't go west of Cape Suckling. Who is right? The fishermen get caught in the crunch. The Japanese Gillnet Fishery admitted to catching over 700 thousand salmon in 1980. The OY doesn't deal with foreign interception, and so businessmen like him are bankrupt, while foreign fisheries continue to be active. In a July closure last year, the foreigners were catching the fish that the American fisherman were not allowed to catch. Management said they had gotten rid of all the bottomfisherman and in place put midwater fishermen, therefore, nevertheless, allowing foreigners. One solution could be a troll plan using newer data; the F&G even admitted that there were problems with the data. Satellites could also be used to solve this problem. Fishermen are being managed to allow escapement in southern rivers. Fish are being "pastured" in Alaskan waters, but Alaskan fisherman are not getting any return; fishermen should be entitled to a form of "rent" in terms of fish.

Diana Runde, fisherman and chairwoman of Sitka Troll-Pac. She mentioned that Ed Wojeck, executive director of ATA couldn't be there due to meetings in Phoenix on the Columbia River issue. There is insufficient information on Alaskan fish. People on the Yukon with fishwheels indicate that they find many King salmon with old sport fishing treble-hooks in them, and would like to know where they are coming from. Sitka fishermen have recovered tags from Washington State, partially because the tags weren't taken early enough in the season. Area tags have been pooled, so important information is lost. A test troll fishery was turned down because net fisherman were not getting many Cohos. The Sitka office admitted that they had no way of knowing if escapement had been reached because tests couldn't be carried out on glacial streams. The Sitka City and Borough assembly passed a resolution asking the Board for support of the troll fishery because the city is economically dependent on its fisheries.

Larry Drummer, an operator of a charter boat who has been engaged in hand trolling since 1975 and earns his living by fishing. --- He finds it impossible to comply with the regulation whereby only two gurdies and four fishing poles can be aboard. Due to the sporadic nature of his lifestyl and because he lives aboard, when called for a charter, they have no place to put their extra fishing poles and gurdies. This also means that if a charter wants to take out more than six fishermen, he is doing it illegally. He would also like to sportfish off any boat, and sees no reason why trollers should be discriminated against.

Ron Williams, chairman of the Fisheries Committee of the Alaska Native Brotherhood --- The ANB is opposed to limited entry for hand trollers.

TAPE #2. SIDE #A continued

There was a potential of 4400 permit holders, but there were only 1100 issued. The commissioned number of 2150 was supported because it was thought it would allow the elders and young people to participate in hand trolling. It would provide a means of employment when there isn't other employment available. This has been discussed with the Limited Entry Commission, which has assured them that they have tried to develop provisions for the young and elderly, but to no avail. ANB has been conservation minded. because their survival depends on fish. ANB feels there ought to be an agreement with the US, Canadians and Natives before harvest levels are established. Resoulutions that had been adopted by ANB and ANS conventions were then introduced. 8163 - asks for removal of fisheries on the Chilkat and Cowat Rivers, and Chilkat Lake, so salmon would be able to reach their spawning grounds, 8144 - asks the Board of Fisheries to remove the regulation that prohibits the use of commercial troll vessels for sport fishing, and 8119-asks that the Board of Fisheries abolish eight and six day closure regulations. Copies of these were left for members of the committee.

John Wilcox, president of the Juneau Hand Troll Association, which represents 400 hand trollers. --- There is a need for an outside agency to examine the Dept. of Fish and Game methods of operating. Fish tickets have been used to establish guidelines and quotas; the data acquired from them is being manipulated so that the resource is not being used to its best advantage. OY allows for bad years, but in good years, fishermen are only allowed as many as the Board says. Hence, the number of trollers has decreased from 4000 in 1978 to 1918 last year. OY is a product of a joint meeting of the Alaska Board of Fish and the North Pacific Fisheries Management Council; The North Pacific Council was forced to accept the OY, and then the OY was determined, excluding the two best years in the past decade. Hence the base started out low, and each year, there has been more reductions. The eight and six day closures has forced Huina residents to fish part time, so that they can barely make a living. They use small skiffs, and when attempting to get to the open fishing areas, there have been accidents. Other fisheries continue to operate during the trolling closurers. Fisherman cannot take their problems to court because of high costs; the lawyers used by the are also used by the Japenese; it seems a more objective attorney could be found to help the Board. The Juneau Hand Troll Assoc. has quit placing propsals before the Board since in the past 3 years, only 2 have been adopted; the Dept. of F&G had most of theirs approved. In a past Board meeting, a Washington biologist said they had lost over 34 thousand Chinook from one dam to another on the Columbia River. It was not stated where the fish had gone; instead. they asked the Alaskans to further cut their take of Kings. Fish have been caught with net and troll marks on them, although there are no American trawl or gillnet fisheries out in the FCZ. Hence, foreign fisheries are having a profound impact. Direction needs to be given to the Dept. of F&G, the Board of Fisheries, and the North Pacific Fisheries Management Council.

Ed Bergeron. He wanted to know how much money is being spent on the off-shore studies for King and Chinook salmon, and also the in-shore studies on salmon. This information should be available through the Dept. of F&G. There has only been one Dept. of F&G study on which they base all their off-shore information. It was done in the 50's. Also. he would

TAPE #2, SIDE #A continued

like to see a catalogue of all salmon streams in AK, and how much was spent by different areas for tagging. He is fairly sure the tagging program is almost non-existent. With a state-wide troll permit, he is not allowed to fish above Cape Suckling, although he was before 1970; if they were allowed to fish up there, it would eliminate the concentration of trollers on the outside. He would like to see the Sitka field office personnel replaced due to the erroneous information it produces.

Dean Paddock, a commercial fisherman who once worked for the Dept. of F&G, and has attended almost all meetings of the Board of Fisheries. --- We now have problems in SE, which were not there before. In Bristol Bay, where he fishes, there was once many more restrictions, now there are great returns of fishing stocks. This has occured because of consistent biological programs of the Dept. of F&G and the Board of Fisheries. The Board, at statehood, received the ability to function freely and not to be committed by concrete rules. The system has been successful and he feels it will continue to be successful as it is presently managed. We don't have data and management tools because in the past we didn't need them. The Fishery used to be wide-open. Department problems are fiscal and personal. Also, the Board cannot adopt every resolution made by the advisory boards. There is a bad situation down here, and there are tremendous unsolved problems concerning foreign fleets. We need more tools and money to help the fisheries. The basic agency responsibility is for the conservation of the resource, not for the economic base it provides.

John Ritter, who makes his living by trolling. When the troll season is closed, yet other fishery seasons are open to boats that catch more in one day than trollers catch in a week, there are obvious management problems. In regards to sportfishing from a commercial vessel, many would like to have crab or shrimp for personal use, but aren't allowed to take it.

Bob Horchover, skipper of a charter vessel, who primarily takes people fishing, but also uses it to go from Juneau to Sitka. ---- These trips are often used for pleasure, but because it is a commercial vessel, it can't be used for personal fishing. He proposes that charter vessels not be commercial vessels: the small amount of fish taken could be registered with the Dept. He would like to be taken out of the commercial fisheries category or have it made such that when a person is not using his boat for commercial purposes, it wouldn't be classified as a commercial vessel.

Sara Walsh. She is in favor of repealing the regulation prohibiting sport fishing form commercial troll vessels. One of the main summer SE attractions is sport fishing, and it would be nice to take friends out fishing. This regulation is far too restrictive and discriminatory.

Russ Schultz, a hand troller. ---- Regulations are regulating Alaska fisherman, though we don't know for sure whether the fisherman in this state are the major impact on Alaskan fisheries. The Boards can only regulate our catches; it ignors the foreign aspect. He suggests using some political clout to get all-around management of the stocks which people make a living on. If fisherman must stay at the docks and watch foreign trawlers, what is currently being done isn't effective management.

Jerry Musa, member of the Elfin Cove Advisory Committee, and also active in Troll-Pac. ---- Elfin Cove is totally supported by fishing. It is frustrating to be managed by people who only use best available

TAPE #2, SIDE #B continued

data, fish are miscounted, areas are not put down properly, and tag data is not correct. 50 thousand Taku Area fish were tagged, but not recovered by American fisheries unless they were spawning or juvenals. If the Dept. of F&G doesn't guess correctly, there is a big impact on the community. When the State has such vast resources, all possible efforts should be made to know what those resources are.

Larry Smith, Chairman of Troll-PAC, ---- The reason sport fishing from commercial vessels was prohibited was to deter people from going into the hand troll fishery. Since them, limited entry has been established; there were about 4 thousand hand trollers around in 1978-79, now there are only about 1,800. There no longer is a valid reason for keeping this regulation. Family and friends aren't allowed to go sport fishing of a fisherman's vessel. Also, about 75 days were taken away in fishing time, yet insurance must still be paid even while the boat lies idle. The eight and six day closure in Icy Straights has caused all the pressure to be concentrated into certain areas farther away from home. In fact, it has increased pressure on the resource by concentrating pressure on particular stocks in smaller areas. Trollers have not been able to make the Board understand the problems of the eight and six closure, and they don't get an equal opportunity to speak at Board meetings. The Federal Government is a lot to blame for this, because it manipulates the Board's ability to manage the fishery. The industry is not being heard. Fishermen are on shaky economic ground. The Federal Government is not considering Alaska's stocks and resources, but has ulterior motives as its priority. They have not proven that Alaskans are catching Columbia River Brites. Other problems of wastes and dams on the Columbia are impacting stocks not the Alaskan troller. There is no answer for why so many fish disappear between the Bonneville and McNary dams. They are probably being poached. Because of the Council, the Board is not allowed to address these problems. Even the fish numbers being accounted for on the Columbia River are not being calculated into Alaska's OY. Fishermen need to be dealt with fairly, and someone isn't addressing the real problem. Senator Colletta then asked if Mr. Smith or his organization appeared before the Board when these regulations were being proposed. Mr. Smith answered that he had appeared at local advisory board meetings, and that he had submitted written testimony to the Board regarding the proposed regulations. Sen. Colletta asked if there was much response to Board meeting notices, or if fishermen waited until regulations were implamented before complaining. Mr. Smith responded that in some cases regulations are accepted to see if they will work, and only then if they don't is there an outcry. A fisherman has other responsibilites than just monitoring the state and can't always keep up with what regulations are being promulgated.

Dorthy Osburn, a fisherman. ---- She indicated that she knew three biologists who had worked on Bristol Bay stream enhancement of Sockeye Salmon runs. She remarked that they were finding net marked fish. On her boat she has one sport pole which she has never been able to use. Whenever the family prepares to go commercial fishing, they must arange to have the pole kept with someone in Pelican. By having a sport fishing and hunting license from the state, she is entitled to use a crab pot and to fish for shrimp. Foreign trawlers have to pay the US government so that observers can be placed on their boats. The money goes to the National Marine Fisheries Service but never gets allocated to actually place those observers on foreign vessels. When people lose their gear due to reckless foreign fishermen, the Coast Guard doesn't respond to citizens complaints. Many fishermen are retired and have provided a good income for themselves, however, if things continue the way they are, they will be the only people who ever can afford to fish.

TAPE #2, SIDE #B continued

Rod Darnell, a troller. ---- His boat is his only home, and yet he is being told that unlike every other US citizen, he is not allowed to keep a sport fishing pole in his home. There is something wrong. Not allowing sport fishing from trolling vessels is a very poor policy and indicates poor management. Since limited entry came into effect in 1972, the troll industry has, every year, taken cut-backs. The OY figures came from years with low catches. Every year more and more regulations are implemented. The King salmon has a 5 to 7 year cycle, yet each year there are more restrictions, without any evidence that these regulations are even helping. Regarding the eight and six day closure, we don't know what effect it has on stocks. It hasn't been even seven years, but hand trollers are only allowed two lines. Somewhere the piling up of regulations must stop.

Dorthy Osburn then asked about the rules regulating the use of crab pots. She understood that if she had a sport fishing and hunting license, she could then use a crab pot. A member of the Dept. of F&G responded that he was not totally sure on this policy, but that he knew the personal use fishery is handled under subsistence regulations, and that there is no provision prohibiting someone from having a subsistence crab pot on a troll or other commercial vessel. Ms. Osburn said that she was under the impressio she could have a crab pot over the side of her boat. Conrad Seible, who is a member of the Dept. of Public Safety Division of Fish and Wildlife Protection, said that there is possibly some confusion between what is considered subsistence and what is considered sport fishing. Under subsistence regulations, one is allowed to possess a crab pot, and one does not need a sport fishing license. Ms. Osborn asked about out of state fishermen; are they also only prohibited from taking salmon?

Sen. Colletta then informed the group of the Regulation Review Committee's functions. It addresses regulations, and has the authority to submit legislation to make changes. It will not take any action to implement policy changes. Its members do what they can to act as mediators between the state's policy makers and the people as concerns whether or not regulations coincide with legislative intent.

TAPE #3, SIDE #A

Sen. Colletta continued that the ARRC can open lines of communication between the state and the people by at least making regulators aware that there are problems and by getting, like in this hearing, both sides to actually listen to each other and communicate their frustrations. When regulators see that the lines of communication are breaking down, instead of putting the public on the defensive, perhapse it should come to the Administrative Regulation Review Committee and see if they can help bridge the gap. Sen. Colletta thanked Dorthy Osborn for having brought up the issue of crab pots. because due to her statements, Dept. of F&G members were able to clarify a confusion which had frustrated many fishermen; namely, having a crab pot over the side of ones boat was considered subsistence fishing and not sport fishing which means there is no licensing requirement. The problem was simple one of miscommunication. Hopefully by next Wednesday, Dept. of F&G members will be able to answer other queries, and if not, Sen. Colletta is sure answers will be forthcoming. This hearing and the Dept.'s answers will be the first steps towards getting the problems actually solved. Transcripts in synopsis will be available for everyone attending next Wednesday's meeting so that everyone can quickly refresh their memory as to what the major problems were that this hearing addressed. Sen. Colletta then apologized for the absence of the other committee members who could not be present during the entire conference because of the call on the House which they can in no way avoid.

A continuation of this Feb. 10th, 1982 hearing on the Dept. of Fish and Game regulations will be held on Feb. 17, 1982 in the Capital Building Butrovich Room (#205) from 4:00 to 6:30 p.m. PST.

TRANSCRIPT SYNOPSIS

ADMINISTRATIVE REGULATION REVIEW COMMITTEE
FEBRUARY 17TH, 1982 TELECONFERENCE HEARING
RE: DEPT. OF FISH AND GAME REGULATIONS
1) METHODS USED BY THE DEPT. OF F&G TO DETERMINE POTENTIAL FISH CATCH STATISTICS
2) WHETHER REGULATIONS PROHIBITING SPORT FISHING OFF TROLL VESSELS SHOULD BE REPEALED.

TAPE #3, SIDE #B

Rep. Dick Randolph, Chairman -- He introduced the members of the committee: Sen. Colletta, Rep. Moss and Rep. Abood. The topics for discussion were: 1) optimum yield, 2) limited entry, 3) time and area closures, 4) use of fish tickets to establish harvest guidelines, 5) present prohibition of sport fishing from troll vessels.

Earl Krygier, biologist for the Alaska Trollers Association -- He outlined his testimony from last week, and added that the proposed cuts in the Dept. of F&G's budget will cause research to be cut back by about 20-25%. The National Marine Fisheries Service has proposed even more drastic cuts than the Legislature, they suggest an almost 70% cut back which would all but obliterate salmon research. He asked people to contact their state and federal legislators urging them not to go through with these cuts. As research which would be valuable to the Troll fishery, he suggested that ATA's proposal to provide an inseason contact with fishermen be adopted. The furthering of efforts such as the log program would help improve inseason management. Any test fishing would benefit all fisheries in the state; budget cuts would all but eliminate these already much neglected projects.

Eric McDowell, a commercial salmon fisherman form Homan-McDowell Economic and Management Consulting Firm -- He was asked by the Alaska Troll Legal Fund to prepare an estimate of the economic losses to SE AK fishermen from the institution of the King salmon quota, and due to managment errors in the 1981 season. A copy of the report was submitted during last week's hearing. SE AK fishermen lost $1.3 million in direct income due to errors in management. Errors were based on faulty catch tickets, inaccurate vessel data, double counting and inappropriate use of averages for the estimation of catch levels. AK fishermen lost almost another $1 million as a result of the quota that was established because of Federal pressures on the Dept. of F&G. This is another disgrace the Department must bear because of federal intervention. This report's major findings indicate that critical management decisions made in 1981 were based on erroneous and inadequate data. There is inadequate field personnel, so that no matter how great the effort, an acceptable level of management can not be achieved. Even the SE Chinook fishery which has a very predictable season pattern suffered due to the lack of proper management. If yearly adjustments are made, it is hard not to come up with a good catch estimate. Errors made at the Sitka office, caused regional management to underestimate the overall catch. Studies to acquire better data for managing the fisheries are needed. Most of the errors made could have easily been prevented. Had existing data been handled better, an accurate maximum quota would have been come by. He outlined six specific errors: 1) late in the season the Dept. of F&G overestimated the catch by 73% for a two week period. It was clear on Aug. 20th that catch levels were poor. In mid-June, catches were already falling significantly below the three year average. By using more typical weekly patterns, they could have come very close to the quota. Solutions include using representative averages to track weekly patterns, beginning earlier in the season to track these patterns, and using practical knowledge, including poor weather conditions to evaluate catch statistics. The Dept. should be in contact with the fishermen. In order to catch the amount predicted, fishermen would have had to achieve a 20 year record catch rate; 2) arithmetic errors resulted in the loss of 10,000 salmon; 3) double counting fish tickets; 4) overestimation of contents, capacities and numbers of freezer boats; 5) using fish ticket with exceptionally high catches as representative of all tickets; and 6) inaccurate estimates, based on fly-over observation of fishing boats' daily catches. These last errors were caused by faulty ticket, vessel, and

TAPE #3, SIDE #B continued

catch data provided by the Dept. of F&G's Sitka office. Computers could be programmed to catch the double counting of fish tickets. Fishermen could be asked how many they had on board. Catch estimates shouldn't be based on the number of boats, but rather, on the availability of fish. Sampling should be done with tickets, boats, and days of effort known. With limited entry, the Dept. knows how many boats there will be. Fly-overs do not work. The actual catch rate was less than one Chinook per day; double that rate was needed to achieve the Dept. set chatch quota. Historical data should be used as a guide. Professionals with statistical background should be employed, particularily in the Sitka office. Evidence should not simply be construed. The fisheries should have state and not federal management; the state has not had strong enough leadership to overcome federal pressures. Mr. McDowell supports Mr. Krygier's statement that regional management is operating under a handicap not having enough fisheries research information available.

Sen Colletta asked why the Dept. of F&G uses a three year average, as opposed to one of 6 or 10 years. Mr. McDowell responded that the three most recent years were thought to predict the next, but the last three years had an abnormally high catch rate. Sen. Colletta then asked if a three year base is historical. Mr. McDowell replied that this was the first time averages were ever used; obviously there isn't a good enough data base. Two years ago, using such averages seemed to work, but last year the use of averages caused problems. Sen. Colletta then said that Mr. McDowell had mentioned possible solutions for all the other problems he had outlined but none for the three year average. Mr. McDowell replied that it was fine to start with the three year average principle, but that as the season progressed, necessary adjustments should have been incorporated. If such adjustments had been made, the 73% loss to SE AK fishermen would never have occurred. There were obvious problems at the beginning of the season. Catch predictions should be adjusted as the season progresses. Rep. Moss asked who lost all the fish tags? Mr. McDowell answered that according to the biologists he had interviewed, the state, and the Sitka office especially, were responsible for the loss of about 10% of the tags. In regards to foreign fisheries, Rep. Moss asked if they return tags. Mr. McDowell responded that few tags were ever brought back by foreigners. Sen. Colletta them asked whether the Dept. of F&G has many seasonal workers; counting might be a seasonal responsibility while supervision is not. Rep. Moss asked what was being done to correct the situation in regards to the foreign fisheries. The only response was an out-break of laughter.

Rep. Randolph then introduced Jim Beaton, from the Board of Fisheries, and thanked him for coming. Then Dept. of F&G members were asked to respond.

Smith Moore, Dirctor of Commercial Fisheries for the Dept. of F&G -- In regards to foreign fisheries and interceptions, he stated, that on the high seas, there are both micro-water and external tag experiments. There has been fair foreign cooperation in returning tags with the external markings. On micro-water tags there is almost no return, partially due to the fact that American observers can not be on Japanese motherships when they are fishing outside the Fisheries Conservation Zone. The foreign Bering Sea Troll fishery intercepts up to about 110,000 Kings of Alaskan origin. Japanese mothership fisheries, gillnets, and high seas fisheries since 1952 under the International North Pacific Fisheries Commission were prohibited from fishing for salmon north of the "extension line". It was re-negotiated in 1978, and we asked that they leave the 200 mile zone altogether. There are a few others who fish west of 175° N, including the land based fisheries, which is a group of 300 independent gillnet boats that fish off the Japanese

TAPE #3, SIDE #B continued

mainland. They fish independently. Their troll fishery in the Gulf of AK probably intercepts a number of Kings. Most of the Bering Sea Trawl Fisheries and mothership opperations are intercepting western AK Kings. The Dept. is not sure what goes on in the land-based fisheries which are estimated to catch up to 160 thousand Kings. The Gulf of AK Troll King catch is estimated at between 20 and 40 thousand Kings annually. The Department is just beginning to collect biological data on this fishery.

Dave Cantillon, regional supervisor for the SE AK Dept. of F&G Div. of Commerical Fisheries -- During the past two seasons, the OY has been used to manaing e Chinook salmon, but in recent years, only about 20 thousand have been taken by the net fisheries as incidental catch; there is no targeted net fishery on Chinook stocks. In 1980, when the OY was initiated, the Dept. operated at the high end of the OY range, and estimated accurately. That year it was thought that they wouldn't come close to the initial OY, but a spurt of fish late in the season and the closing of the Chinook fishery on Sept. 20 caused the OY to be held. The Dept. had very little time that year to prepare for a counting problem. In 1981, the Board and Council couldn't agree on a joint OY range. Consequently the total take was 6% underestimated. The Council had a lower OY range. so they closed the FCZ range on Aug. 19. Most of the troll fishing of Chinook salmon is taken in June and July; and during the 1981 season, there was some of the highest weekly catches on record, so fishing was obviously quite good at that time.. Projections were that if the fisheries continued at their normal rate through the whole season, the OY would have been exceeded. Closures were needed. Rep. Moss then asked what some of the OY's individual components meant. Mr. Cantillon responded that the initial OY represented a catch average from 1971 to 1977. The Chinook came from a number of sources, possibly 20% of these fish come from Alaskan rivers, 30-40% are Canadian, and the rest come from the lower 48. A number of currently contributing stocks are in poor shape. In the fall of 1980, the Dept. presented to the Board of Fisheries a rehabilitation program for the next 20 years, which the Board accepted. There are, nevertheless, many other entities fishing on these stocks; continually causing great coordination problems. The Board's position is that AK has taken all the necessary steps to hold down its fishing, now responses are needed form other areas.

Nel Seibel, Southeast Region Biometrician for the Dept. of F&G Div. of Commercial Fisheries -- The Dept. will respond in writing to the Homan-McDowell report which Eric McDowell outlined. 1982 is only the second year the SE Alaska Fisheries were managed by catch limits or an OY on troll fisheries. The Dept. is going through a learning process. Estimatesat the beginning of th season seem high but by the end they are more accurate. The years of '78 through '80 were exceptional. He agrees with Mr. McDowell that these years were exceptional, but the Dept. is not sure of why they were such good years. The use of the 3 or 5 year average is debatable, but the Dept. didn't feel 1981 was exceptional; the Dept. didn't want to use the best of those years as a means of projecting future years so an average for 1978-1980 was used. At the time of the final closure, projections indicated that the catch would be 281 thousand; this explains the 4 thousand end of the season bulge. The Dept. uses averages because it doesn't have too much else it can rely on. The Dept. would like to replace averages with better actual inseason catch data. Ways of getting at this include programs where fishermen would be contacted upon arrival, or a program by which 20 fishermen would be selected to report to ATA once a week, so their information could be used to adjust average based data. In regards to arithmetic errors, in my brief discussion

TAPE #4, SIDE #A

with Earl Krygier, I discovered there was no real error. There were two estimates. The one of August 9 was based on the rough data we had in hand, and the other was for through Aug. 25. It looked as if we had added in the 10 thousand winter catch twice, when we actually hadn't. But, the double countin of fish tickets actually did take place; tickets were accidently entered twice into the computer. The Department has now set up a system which permanently prevents this from happening again. The Dept. handles about 30 thousand tickets. The Chinook tickets are hand tabulated to speed up the process. At the time it looked like there was an overage of ',500 fish. The estimation of boat contents, didn't enter strongly into the season end regulation. The Dept. would like to have a special tracking system, as well as, a better reporting system. Inaccurate estimates in fly-overs were caused by the exceptional number of boats fishing during just a few weeks. He commented that the Sitka office was going through a learning process; like the regional office, it carries a large part of the responsibility for the compiling of fish tickets. Furthermore, projections were not based soley on Sitka information; they were based on fish tickets from all over SE which had been jointly run through the computer system.

Jim Beaton, member of the Board of Fisheries -- The Board is well checked by the Governor and the Legislature. Chairman Randolph then explained that Mr. Beaton was making reference to last year's SB 5 which gave the Administrative Regulation Review Committee the statutory authority to suspend regulations promulgated in the ' rim of legislative sessions, but not while it is in session. During the on, only a bill can be used to repeal a regulation. He would like to the results of this hearing to be 1) a bringing together of the two sides to peacefully discuss their problems and 2) an exploration of other offical means of alleviating these prob'ems. Mr. Beaton continued that he believes very strongly in the Board process, and that he feels the Board has always tried to get all segments of the public involved. He doesn't see how the process can work any other way. He resents having the idea suggested that there be another party to mediate because that is the Board's essential function. If the Board needs to be improved, he feels it is up to the legislative and executive branches to appoint better Board members. The Board could do a better job, but money to remedy many of the expressed problems is just not available. Federal oversight also presents many problems, but the Board is doing its best to cope with them.

Ben Burn, chairman of the Craig Advisory Board -- He complained that people should be allowed to sport fish off of a commercial vessel; people can't afford to have two boats. He also wanted to know why a sport fishing and hunting license must be bought to fish halibut, red snapper, ect., for personal needs, yet no license is needed for clams, abalone, or roe. The regulations should be coordinated so that they become consistent. Also, when someone catches too many fish, they must be dumped overboard; this is unreasonable. He complained about not being able to have a free line over-board on a commercial vessel. Another unreasonable regulation is that one must fish two years on a power troller before one can get a power troll permit, yet seiners only need to meet a one year requirement. These regulations are discriminatory, as well as those regulating the transfer of permits.

Marilan George, a commercial salmon troller from Petersburg -- There is a need for more money in research areas. The reason tags are not recovered to the extent desired is that there isn't anyone living along Alaskan rivers the way there are people living along the rivers of the lower 48. More funding is needed for paid observers. There should be people who recover tags from cold storages at the beginning of the season as well. Money should be spent on stream enhancement projects, so fish can more easily get to their spawning grounds. To insure better operations, the Legislature needs to appropriate more funds to the Dept. of F&G.

TAPE #4, SIDE #A continued

Chris Page, a troller from Goose Bay -- He doesn't feel that having funds allocated to a private research agency to investigate the Dept. of F&G methods of collecting and evaluating information will benefit anyone other than those contracted to do the study. He feels that the Dept. of F&G methods are basically sound, but often in their surveys they lack the efficent intensity needed to prevent the generation of erroneous information. There are low levels of pre-commercial sampling in relation to the estimated value or abundance of a resource. Budgetary constraints force management by crisis. Fishermen suffer because there are cuts in the amount of tagging, survey flying, stream counts, and the enumeration of AK salmon stocks. Research is needed to determine why Cohos are returning from the ocean with net markes. [illegible] allowing trollers to sport fish from their vessels discriminates agains trollers. Crabbers and seiners can sport fish, so their shouldn't be a difference when it comes to trollers. The State Board of Fisheries can adopt regulations without public input. Board of Fisheries members are political appointees. The Board has adopted several regulations which have never appeared in the public package for review. This includes the '81 decision to limit hand trollers to one line, and to reduce the King salmon OY to 240 thousand fish. The Board says that by publishing a legal notice to amend and review regulations they have the authority to create any regulation they feel necessary. They are cutting citizen input drastically. The Legislature should review the Board process. Mr. Page will make his written testimony available to the committee.

Tony Gugenbesler, -- The Dept. of F&G and the Board of Fisheries often depends on erroneous information. They are too conservative. During the last Board of Fisheries meeting that pertained to trolling an extremely low estimate of King salmon escapement was accepted. Dept. staff gave figures for only one tributary on the Andrews river. The estimate of King salmon in this tributary underlogged the escapement for the whole river.

TAPE #4, SIDE #B

Lance Mingle, Chariman of Wrangell Troll Pac -- He questions the accountability of the Dept. of F&G; they failed to allow fishermen to reach the OY. Mistakes made were due to data entered into the computer. Considering how large an operation the Department is, it should be able to keep its data coordinated. The Dept. of F&G should be more responsible. Fishermen can't afford the losses that have been imposed upon them. Wrangell Troll Pac supports having a study done on Dept. of F&G operations.

Bob Ducker, fisherman from Soldotna -- He will submit his testimony in writing.

Hubert McGrowan, representative of the Sand Point Advisory Committee and the Alaska Commerical Marketing Association -- The Bristol Bay Red salmon run is far more than that of the Alaska Peninsula run. The Committee is dissatisfi with the 6.8% of the total harvestable red salmon that the Peninsula fishermen are allowed while the Bristol Bay fishermen are not. There are four times as many Bristol Bay fishermen dependent on Red salmon for their livelihood than on the Alaska Peninsula. The ratio is about 14 to 1. The proposed quota would cut fisherman's allowed catches by 25%. Many area fishermen are totally dependent on these runs. There is consistent underforcasting of the Bristol Bay area harvestable catch. 1976-81 forcasts were 73 thousand and actual runs were 85.16 thousand which is only 90% accurate. If one deletes the exceptional year of 1980, the figures only become 70% accurate. It is hard for the Dept. of F&G to make accurate estimates, but it is a bit peculiar that nevertheless they consistently underset the quotas. The actual harvest of the Bristol Bay run by Peninsula fishermen was only 5.1%. At Advisory Board meetings there are always complaints about how low forcasts are. We are being urged to take the 6.8% quota to court, but we are not sure anything would come of it.

TAPE #4, SIDE #B continued

Earle Johnson, from Sitka -- CS SCR 31 says it speaks for the SE AK troll fishery; it should include all fisheries because the problem is a statewide concern. Dept. of F&G data often is outdated and pertains to different locations from those presently fished. There are many fisheries organizations which should participate in the recommended study. During the National Marine Board of Fisheries' hearing, one member of the Board said he didn't really care if the Japanese were in or outside the limit, because they would catch Alaskan fish no matter what the state does. In regards to sport fishing from troll vessels, he doesn't want to see fishing issues become political. The problem should be resolved in other ways.

Steve Laposki, from Sitka -- He is against limited entry; there should be a strong system of free enterprise and a strong system of enforcement based on accurate data. There should be less politics involved in the management of the fisheries. Alaskan management of their fish is very tied up in foreign and out of state interests. 6 and 8 day closure laws do a great deal of harm to many areas. The public is not represented by the Board. The Alaskan fishermen's interests are set aside for those of other groups. There is a need for better enhancement and more fish hatchery programs. Sport fishing should be allowed from troll vessels.

William Thomas Sr., a Ketchikan resident and vice chairman for the Alaska Native Brotherhood Grand Camp -- He supports the repeal of regulations prohibiting sport fishing from commercially licensed vessels. A sport pole should be a part of the equipment of every boat in case of regular gear failure. He supports the comments made earlier by the off-net sites of Craig and Wrangell. Limited entry is restricting the rightful opportunity of Alaskan residents. With lower 48 stocks becoming endangered, Alaska should take measures to protect its resources from being destroyed in the same way.

Terry Cardey, from Haines -- He will be in Juneau tomorrow and will submit his testimony at that time.

Capt. Frank W. Sharp, Anchorage member of the Dept. of Public Safety Div. of Fish and Wildlife Protection -- There are many misconceptions about sport fishing from commercially licensed trollers. While people on trollers are prohibited from using rod and reel, they are not prohibited from using crab pots, or from going clamming, etc. These other activities can be done because they aren't considered sport fishing, but rather, subsistence, and no licensing is required for subsistence fishing. A commercial salmon troller uses lines to catch salmon. Since crabbers, gillnetters and seiners don't use rods commercially, it can easily be distinguished what type of fishing they are doing. On board a commercial troller, the conditions under which a salmon was caught can not be so easily distinguished, thus a sport or subsistence caught salmon could easily enter the market illegally as a commercially caught fish. This would allow trollers to fish in areas closed to commercial fishing, but open to sport fishing. When limited entry on hand trolling first became an issue, there were over 5 thousand licensed hand trollers, but the Limited Entry Commission decided it should cut that number to 2150, still last year there were only 1100 hand troll fishermen. Perhaps this restriction on commercial salmon trollers using sport fish gear, reduced the number of people willing to troll leaving more Kings for other commercial users. The policy of the Div. of Wildlife Protection was that they would support sport fishing off commercially registered trollers only if they could not sport fish while physically engaged in commercial trolling. Therefore, commercial and sport caught fish could not be on board together. Any fish caught off a commercially registered troller in a closed area would have to have a fin removed, to identify it as sport caught. These regulations were in effect in 1979, but enforcement was so difficult that the Department decided to prohibit further sport fishing from troll vessels.

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TAPE #4, SIDE #B continued

Leo A. Land, from Haines -- He has done research since 1966 and has repeatedly given the information he has found to legislators. He is very concerned about the Limited Entry Commission Reports. There are 26 permittees who if they do not pay by the end of this year will lose their permits to the State. If one has a grocery store the State has no right to force one to license it, and if the State forces licensing it most definitely does not have the right to demand the payment of back fees. This aspect of these regulations should be repealed. 21 of these permits are for salmon, one is a drift gillnet, one a hand troller, and one a seiner. The permittees are from village communities where they are not in the position to help themselves. He came down on his own money, and has done all the research on his own. The State needs to do something about the injustice involved in the confiscation of these permits.

Gordon Pederson, representative of Hoonah and Icy Straits Troller's Assoc. -- He addressed the eight and six closure laws. Before last year no closures from April 15 to Sep. 20. When the April 6 closure occurred, almost half of the trollers fishing time was lost. In 1980, hand trollers lost permission to use two lines, which cut their harvest abilities in half, and after 1981, inseason closures, there was practically no fishing time left at all. Permit holders reduced from 2622 to 1135. Fishing days were reduced from 158 to 62 in the Icy Straits Area. The Straits and Lynn Canal areas are the only ones which still are inflicted with the 8 and 6 closure regulations. They are proposing the removal of the 8 and 6 only in the Icy Straits area; it should be removed from everywhere.

Lottie Edelman, representative of the Kenai, Cook Inlet Area, and Kenai Peninsula Fishermen's Association -- She is against the Legislature regulating the Dept. of F&G. Once in a while, the Legislature should make sure things are being governed on biological grounds and not political ones. In 1977, a salmon management plan was adopted in Cook Inlet. It designated the Cohos, Pinks, and Chums as the target fish of the commericial fishery, and the Kings and Chinooks were those desired by sport fishermen and thus reserved for them. In the plan, the Department established fixed dates for opening and closing the season which have had a disasterous result for several streams. Commercial fishermen had harvested Kings since the 1800's; a number of years ago fishermen asked for a closure, so they were closed down for 16 years. Then fishermen requested a test fishery when they saw the number of fish was rebuilding, but this request was denied. July 1 is the opening date, and an August 15 closure is now in effect. The Kenai River every even year has a heavy run of Pink salmon. In 1980, the local staff asked for a closure because they still were running fairly heavy on Aug. 15. However, this was denied them by the Board. Last year the same thing occured again. In 1980, there was quite a return of Red salmon. By June, 200,018 was the cumulative count, but the season could not be opened because of the management plan. The sport fishery was opened, other areas were open, yet the commercial fishermen were not allowed to fish. By July 31st only 56,625 Reds were left. Who knows what the effects of this mismanagement will be four years from now. A Coho run comes in Sept. first. Labor Day is the last fishermen's effort, so there is hardly any fishing of this run. The fish average 12 to 14 lbs. We don't mind letting the sports fishery fish them, but on the Monday after Labor Day there should be an opening for commercial fishing as well. There has been very little research done on this run. We feel our staff is very good, but we need biological management before the resource is destroyed.

Bolney Smith, representing Wrangell Troll Pac -- The OY is meaningless because it doesn't take into consideration the difference between seasons. Fish tickets show there was a large run in 1981, of which 400 thousand Kings could have been harvested. In the past three or four years, the run has gotten better, so the early April and May closures were unnecessary.

Closures of the inside waters, along with limited entry has put serious restraints on the hand troll fleet. The data used to establish harvest guidelines only tell what has been caught, and not anything about the catch in five to ten days. By the time records get to Juneau and back, the fish have left.

TAPE #5, SIDE #A

Weather considerations, spot fish counts, tagging and more accurate data collection are the first steps which need to be taken. He supports a private investigation into the Dept. of F&G. Why does the Dept. deny tag data when all this information is dearly needed? He suggested that there be Coho tagging done during the troll fishery closures.

Bill Stokes, past chairman of Sitka Hand Trollers and SE Hand Troll Associations -- Fishermen may be looking for exact answers in an inexact science. If one small mistake is made, it can have drastic effects. We don't need money to tell us what is wrong, fishermen know what's wrong with the Dept. of F&G. The Dept. is expensive to run, but fishermen can not afford not to have their fishery managed. Fish require expert management. He put in a proposal to the Board of Fisheries concerning the ban on sport fishing from commercially licensed troll vessels. He suggests this information be looked up. The issue deals with a protection problem not a Board of Fisheries problem. He proposed that sport fishing be allowed in areas which now are exclusively set aside for commercial use, and he would not allow any commercial fishing vessels to sport fish in the sport fishing zones. People can not afford two separate boats, one for sport fishing and the other for when they need to go commercial fishing!

Eric Jordon, full time power troller, was a secretary to a Fish and Game Advisory Committee in 1977, member of the North Pacific Management Council Advisory Pannel for the last two years and he has represented many fisheries groups including trawl fishermen and hand trollers before the Board of Fisheries -- He agrees to the existence of the serious mistakes outlined by Eric McDowell. He personally contacted managers last summer before these regulations actually went into effect. At the time he indicated his concern regarding the inaccuracy of the data being used. He has talked to the managers since and is confident that due to hindsight such mistakes will not happen again. The Department would not have passed the regulations it did, and managers will do better in regulating the fishery in 1982. He opposes a study and recommends the money be used to support further research and management needs of the Department. The more information the Department has available the more precise management will become. He is opposed to the Legislature overruling the Board's decision to prohibit sport fishing off troll vessels regardless of how much he himself would like to be able to do so. The appropriate role of the Legislature is to provide the funds needed for research and better management. It should carefully review the Governor's appointments to the Board of Fisheries and to the Department heads. Overruling the Board weakens the present system. The Legislature's position should be to strengthen it or develop a new system. ATA's suggestions are inappropriate for the achievement of the common goal of better management. He has three suggestions: 1) He recommends extensive hearings on whether or not the State should request the NPFMC to get out of the salmon management business. He personally thinks salmon management should be handled by the state. 2) He recommends the Legislature work in conjunction with fishermen to protect the all important fish habitats such as the ones on the Stikine River. 3) He suggests a cooperative program with trollers to tag Chinook under 28" and during Chinook closures when they are fishing Cohos and Humpies to release the Chinook alive. Fishermen are willing to participate in such a program. Funds are needed for tags, tagging tools and data extraction and evaluation, as well as for an extensive log book program. He encourages the Legislature to work with the Alaskan Trollers Association and the Dept. of F&G and the Board to develop such a program.

TAPE #5, SIDE #A continued

John Durkin, -- Southeast seems to have very little knowledge of the INPFC (The International North Pacific Fisheries Council) and its functions. In Petersburg there is a commissioner of the INPFC. There is no high seas data available on the migration of fishries stocks for Bristol Bay, Prince William Sound, or Cook Inlet. The new INPFC treaty was one which the INPFC did not want. It was arranged because of pressure from the State Dept. The INPFC wanted the line left at 175° West, but it was moved to 175° East. As soon as that happened there appeared a 534 boat fleet just outside the 200 mile limit using 3 1/2" gear. That fishery is so destructive that it is not even permitted within 12 to 14 hundred miles of Japan, yet it can exist on the Alaskan side of 170° East. Everyone all across the State is complaining about the Columbia River problems, putting Alaksans and Washingtonians at each others throats while the vital facts are being ignored. The fish are being harvested out of existence before they even get down into state or federal waters. A communication break down has caused fishermen to blame their biologists and managers when the real problem is foreign interception. The problem to be solved is how to get those fish back, only then is it worth while to argue over which states should get what share of American stocks. Certainly accurate information is necessary, but how that information is dealt with is essential. Are various members on the Board representing fishermen, themselves or even Japanese interests? More care needs to be taken in the appointment of Board members. The Board is becoming complicated. The Legislature copped out by not defining a subsistence user. It was the duty of the Legislature to do that, and now as things stand, each case must be adjudicated by the Board. The Board should be freed from such duties so it can get back to what it was intended to do -- manging the fisheries. If the foreign processors can force a fishermen's strike, we will have the foreign fleets right back within our waters. There has been practically no representation for fishermen since the passage of the Fisheries Conservation Management Act in 1976. Alaskan canned salmon has been outlawed by several European nations. You can imagine what effect that will have. Biological management and political mangement are two different things. Hatchery development is necessary. In regards to the repeated mention of the Sen. from Japan, he questioned which senator people were referring to. He feels there are several persons in influencial positions who are serving the ends of foreign interests and not those of Alaskans. There should not be so many net marked fish. Something is wrong!

Bill Stocks, -- the sport fishing issue has a certain rational, however, there is a problem in having a blanket regulation the way it is now established It should be suggested that the March Board hearings take up this issue. The problem is not just one for sport fishing for salmon but for bottom fish as well.

Richard Lundahl, Chairman of the Pelican Advisory Committee -- Time is of the essence. There is not much time left. Many documents are produced but hardly any of them are reviewed. Testimony which the Pelican Board prepared for the Board was made available. Mr. Lundahl urged that members of the Administrative Regulation Review Committee please to review it. Hatcheries are needed. Regulation proposals should have objectives identified. Specific statements regarding time frame for testimony and comment should be made clear. A list of the predicted benefits to the user groups involved should be distributed with the proposals. Issue papers for each Board meeting should be prepared listing concerns, proposed action, and predicted benefits. This would help assure that each topic discussed is clear and will keep testimony and comments to the point. He feels it would be nice for trollers to be able to sport fish from their vessels, but this is only a minor issue. The fleet is suffering and may be totally destroyed. Action must be taken to insure that the industy's needs are taken into consideration.

TAPE #5, SIDE #A continued

The OY has reduced the catches to already practically unbearable lows, and it seems as though those cuts are going to continue. The troll fleet was a viable industry and when permits were being sold the State gave the impression that it was going to get better. Now the industry is dying and fishermen find themselves terribly over capitalized. The permits say state wide, then why can't fishermen now fish westward and northward. The FCMA implies that Alaskan fishermen would be protected form foreign overharvesting. Why is this not so? The State instigated low interest loans and tax incentives, and construction funds incentives in order to encourage investment in the fishing industry, and now it seems to be working to insure the industry's destruction. Power trollers only catch 2.2 salmon per day on the average. They catch selectively few and good quality fish. They are the best indication of where the fish actually are and could be a valuable tool in determining what areas should be restricted from trawl fishing.

Bruce Wallace, executive director of Southeast seiners -- Testimony today has been basically that of hook and line people, and therefore, only part of the problem has been presented. Their arguments are valid, but it should not be forgotten that there are domestic net fisheries as well. He also has numerous problems with the Department and feels the most effective way to deal with those problems would be to confront the Department directly. He feels money could be much better spent inside the Department rather than on an outside research project. There are many important research projects within the Department which need funding badly. The system as it stands, is workable and only needs to be cleaned up and reenforced.

Rep Randolph, -- commented that in view of all the proposed budgetary restraints the House has been suggesting for all departments he feels it is important not to neglect enforcement. No matter what department is being cut, enforcement whether for life, liberty or fish should not be restricted. It is going to take an active effort on the part of everyone involved to make sure that management is not treated in a way that will end up being detrimental to the resource.

Ed Bergeron, -- He commented on research that has been done on salmon stocks. The NPFMC and the Board of Fisheries have been basing some of their policies on sparce data. The statistical history the committee has before it contains warnings of what would happen on the Columbia River if adequate measures were not taken. This repor was written in 1952. As far as he knows there has been no research done on the off shore salmon fishery between 1952 and 1972. Then again there was a study done in 1981. This shows how limited research has been. These three investigations are what the Department is basing all its management on. Obviously more studies are needed. Funding for such studies is desperately needed.

TAPE #5, SIDE #B

Mil Zahn, Executive Director of the Board of Fisheries -- The Board came to its present position regarding sport fishing from troll vessels because of the difficulty in monitoring sport fishing from these vessels. They were getting numerous reports that sport caught fish were being sold on the commercial market. It had become almost impossible to separate troll and sport fishing harvest statistics. By prohibiting sport fishing from troll vessels the Board felt it could limit the overall commercial troll effort.

TAPE #5, SIDE #B continued

?, another member of the Dept. of F&G -- Research on the Stikine River has begun and is going to be well under way this year. OY was decided upon in a joint session of the NPFMC and the Board. Also joint stocks are in desperate trouble in many areas and all those concerned must work together to insure the resource's conservation for all. There are many stocks which are caught by outside fishermen whoes management is not controlled by the State which nevertheless impact the Alaskan fishing industry. Concerted action is needed.

Rep Randolph thanked everyone for participating and then called the hearing to a close.

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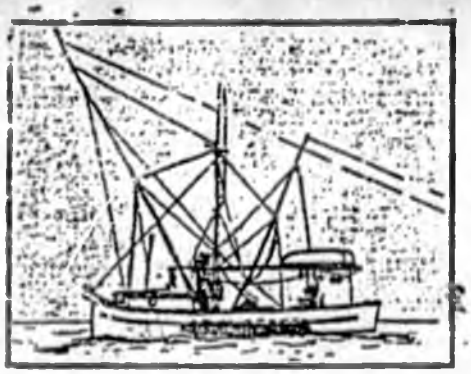

Alaska
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REPRESENTING ALASKA POWER TROLLERS

205 North Franklin Street
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TESTIMONY TO THE LEGISLATURE'S ADMINISTRATIVE REGULATION REVIEW COMMITTEE BY EARL E. KRYGIER, LOG BOOK BIOLOGIST

I would like to start by saying that one of the major reasons that Alaska became a state was to extricate itself from federal management of its fisheries. With the inception of the 200-mile limit, the federal government is again surreptitiously taking control of the Alaska fisheries. I believe Alaska fisheries must be managed by Alaskans.

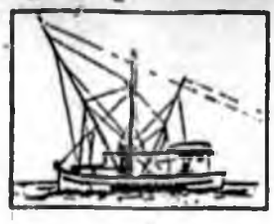
As to the point at hand, regarding the Alaska Department of Fish and Game, there are some specific problems with the department's management scheme which I will discuss, but it must be emphasized that ADF&G is much more capable of managing our resource, possibly in conjunction with industry , than are the federal managers. A dual management system is impossible!

Specifically, escapement extimates as they relate to the optimum yield, are a major problem. Inadequate escapement counts affected the 1980 management of Southeast salmon. The Board of Fisheries was given escapement counts which were called optimal, when in fact they were historic highs. Some of these abnormally high counts were taken with fixed wing aircraft, rather than the more accurate foot, weir, or hilicopter counts. The Department's king salmon biologist considers fixed wing aircraft counts inaccurate. The use of glacial and non-glacial water condition years in the counts affects escapement trends. We need true optimal escapements from stock and recruitment curves, or at least historic "means" until optimal escapements are determined. Two years of extensive work could develop methodology and devise index streams for cohos for which almost no data is available and complete the stock/recruitment information for king salmon.

Next

In 1981 the troll fishery was closed for 10 days under a two-tiered prerequisite: first, stocks being above the 10-year average and second, fish were moving to the inside.

The 1981 catch was the second or third highest in the past 12 years and this occurred when we had a 10-day closure at the height of the season. Determination of whether the fish were moving to the inside was made by comparing the 10-year averages or gillnet, seine and sport fishing. This 10-year average is statistically



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irrelevant because of changes in fishing areas in the gillnet and seine fishery. A test fishery would better answer this second prerequisite.

Next

Exploitation rates on coho, which effect time and area closures by trollers, have been given as 90% on some stocks. We feel these estimates are incorrect. First, inadequate escapement and tagged/untagged ratios from spawning grounds make this estimate unreliable. Second, NMFS using adequate research methods and giving trollers special openings, show trollers only able to harvest 20-50%, while seiners could take only 60% at terminal areas under special openings. Even with total fishery exploitation rates as high as 90% -- which we doubt happens under present management -- there is no information as to what levels of exploitation coho stocks can take. 1977 and 1978 were touted by the department as being exceptionally bad excapement years, yet these produced the 1981 near-record year. Work needs to progress on true exploitation rates for adequate management.

Lastly

Information on stock separation is also needed by scale pattern analysis and electrophoresis studies.

From my perspective as an industry biologist, I do not feel that money would be well-spent to <u>investigate</u> methods of collecting and evaluating statistics of the department's. Rather, money (a large amount) is needed to complete or initiate research, either privately or governmentally, which would give management the tools to correctly manage the fishery. A list of needed management research has been provided by the Natural Resources Consultants in their work for North Pacific Fisheries Management Council. If industry and the department sat down and prioritized the needed research -- and the monies were made available -- I feel most of the management inadequacies could be alleviated.

Homan-
McDowell

Economic and Management Consultants

Frank Homan • Eric McDowell • Peter McDowell

ECONOMIC LOSSES TO SOUTHEAST ALASKA FISHERMEN DUE TO CHINOOK SALMON MANAGEMENT ERRORS AND THE QUOTA IMPOSED DURING THE 1981 SEASON

For:

Alaska Troll Legal Fund

Alaska Trollers Association

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ECONOMIC LOSSES TO SOUTHEAST ALASKA FISHERMEN DUE TO CHINOOK SALMON MANAGEMENT ERRORS AND THE QUOTA IMPOSED DURING THE 1981 SEASON

INTRODUCTION

In 1981, Southeast Alaska fishermen lost at least $1,261,000 in income due to errors in the management of their fishery. The losses were caused by three closures for king salmon and by the incidental loss of other species during the June closure. Errors causing unnecessary closures included using faulty catch, ticket, and vessel data, double counting, and using late season averages for exceptional years to project 1981, an average year for chinooks.

In addition, the region's fishermen lost another $907,000 due to the imposition of a king salmon quota. This politically determined catch ceiling was imposed primarily at the urging of federal officials and is considered an unusual management measure for a salmon fishery. All other Alaska salmon fisheries are managed on a biological basis for escapement.

Losses due to management errors:

1) June 26-July 4 closure imposed due to failure to consider current catch data:

Chinooks (8,541 at $44.55)*	$380,500
Cohos (45,157 at $9.59)*	433,100
Other salmon (estimated)	75,000

*Average 1981 weights and prices used.

2) August 10-19 closure imposed on all species when single species fishery for chinooks during at least part of this closure would have allowed a catch of:

Chinooks (3,103 at $44.55) $ 138,200

3) September 4-12 closure on chinook resulting from a 23% overestimate of catch for the Aug. 20-Sept. 3 period:

Chinooks (5,256 at $44.55) $ 234,200

Total losses due to management errors: $1,261,000

Losses due to Quota (Optimum Yield):

	No. Chinooks	Economic Losses
1) April 15-May 14 Closure	6,400 @ $44.55	$285,100
2) August 10-19 Closure	13,963 @ $44.55	622,100
	20,363	$907,200

The following report documents six management errors of 1981 and offers solutions for improving catch estimating methods. In addition, the report estimates what catches would have been without closures (an average king salmon year and a banner coho year) and quantifies the king salmon lost to fishermen during each of the season's four closures.

The major finding of this report was that critical management decisions in 1981 were made on inadequate field research and data. Good management simply cannot occur in the absence of good information, even in the Southeast chinook fishery which has steady and predictable seasonal patterns when compared to many other fisheries.

The major recommendations of this report are a change in field research and data management at Sitka and, an improved data collection and reporting system for in-season management. It is further recommended that Southeast fishermen, fishermen's organizations and others dependent on the fishery encourage their legislators to support the budget and research necessary to improve management of the region's salmon fisheries.

ASSESSMENT OF MANAGEMENT ERRORS

1. Error: Overestimating late season catch by 73% for a two-week period by using averages for three exceptional years, 1978-80, when, in fact, a 6- or 10-year average would have been more appropriate. Catches for weeks 35 and 36 were estimated to be 26,000 when the actual total was 15,043, an error of 73%. Late season 1981 was obviously not as strong as the 1978-80 late seasons. This was very clear as soon as fishing opened on August 20. And as early as week 24 (June 7-13), two full months before the August 15 closure, weekly catches were falling significantly below the three-year average. The 1981 seasonal pattern more closely resembled the 6-year average for 1975-1980. An estimate slightly below the 6-year average, a level obvious since June, would have been very accurate for the remainder of the season.

Solution:

- Use a more representative average to track weekly patterns and begin comparisons early in the season.

- Consider practical factors such as weather (50 knot winds and 20 foot seas prevented fishing outside for three days after the opening), effort (concentrated on plentiful cohos in inside waters, not on chinook), and the FCZ closure, which along guaranteed catches below historic late season levels.
- Be in contact with fishermen. The entire troll fleet and the ATA staff knew full well that 1981 was a good, but not exceptional, year.

2. Error: Arithmetic error of 12,000 chinook. The August 25 ADF&G estimate of catch levels to date apparently added the winter catch twice and overestimated the summer catch by 2,000 with an unprocessed ticket factor. Total error was 12,000 more chinook than had actually been caught. Part of this unexplained amount may be due to a "freezer boat" factor, detailed in Error 4.

NOTE: Errors 3 through 6 were caused by faulty ticket, vessel, and catch data provided by the ADF&G Sitka area office to the regional office in

Juneau. Taken together, these errors in management information appeared to have led to unnecessary closures.

3. Error: Double counting fish tickets, overstating catch by about 3,500 chinook, according to ADF&G.

Solution:

- Program computer to catch double counts. This is being done by ADF&G for next season.

4. Error: Overestimating the contents, capacities and numbers of freezer boats with chinook on board after the August closure. The Sitka office list of freezer vessels includes many which are not freezer boats or were not freezing in 1981. Furthermore, the list includes overestimates of the capacity and contents of some freezer boats, according to ATA. As a result, an erroneous factor for freezer boats was apparently included in catch estimates. Documents on freezer boats are on file at the ATA office.

Solution:

- Verify freezer boat capacity with fishermen through ATA. Ask fishermen or inspect boats to determine fish on board.

5. Error: Using fish tickets with exceptionally high catches as being representative of all tickets, when in fact they were doubtfully representative or statistically selected. This caused the false impression that fishing was exceptional after the August closure when, in fact, chinook fishing was poor. This put the regional officer in the position of making decisions with erroneous data.

Solution:

- Do not base catch estimates on the number of boats but rather on the availability of fish.
- Contact fishermen to find out how fishing is. This was done successfully by the regional office in 1980, through ATA.
- When sampling tickets it should be done in a statistically acceptable manner with tickets, boats, and days of effort known, or reliably estimated. Otherwise the sample is statistically invalid. Use historical data on boats fishing and catch per boat as a guide.

6. Error: Making inaccurate estimates, based on a flyover, of boats fishing and daily catch per boat after the August closure. According to ATA staff, the Sitka troll management office estimated the

number of boats fishing to be greater than average in late August 1981, when, in fact, actual ADF&G data show total boats in week 35 numbered less than the 4-year average. This overestimate of boats, when coupled with the inflated fish ticket sample in Error 5, again led to the misconception that chinook catches were large.

In truth, trollers averaged less than one (.95) chinook per day in weeks 35 and 36 in 1981, about half of that needed to reach the ADF&G estimate for those weeks. After accounting for errors, trollers would have had to exceed the record catch rate for weeks 35 and 36 to reach the 1981 quota.

Solution:

- Use historical data as a guide when estimating numbers of boats fishing and catch per day. Historical data were apparently ignored or at least not used during this critical period of decision making.
- ADF&G should employ, as head of the Sitka management office, a professional having a background in statistics and an ability to work cooperatively with other professionals and fishermen.

In addition to the expensive errors detailed previously, the Sitka office has, on many important occasions, produced poor and inaccurate statistical work. According to several fisheries scientists and biologists, significant numbers of recovered tags have been lost; tag sampling is not done in early season when Alaska stocks are abundant, thereby skewing results; area tags have been pooled, losing valuable information and distorting marked/unmarked ratios, and a faulty statistical evaluation distorted the coho exploitation rate. These documented examples, as well as others not specified here, have and will continue to disrupt the regional office's diligent and intelligent efforts at competent management. Good management can only be accomplished with good information. Critical errors and inadequate research and field data will continue to harm both fishermen and regional managers until a change is made to insure good management information.

EXPLANATION OF TOTAL CHINOOK HARVEST ESTIMATE

The first step in calculating the economic loss to Southeast Alaska fishermen is to estimate the volume of catch had the season remained open and had a king salmon quota (optimum yield) not been imposed. In other words, what kind of a season was 1981 from a biological standpoint?

To make this estimate for king salmon, average weekly catches during the 6-year period of 1975-1980 without closures or imposed quotas (with adjustments for closures for September 6-20, 1979 and July 15-24, 1980), were compared with weekly catches 1981. (See Table 1.) This provides a method for estimating what would have been caught had fishermen been allowed to fish. It also adjusts for any "build-up" and "catch-up" effects which may have occurred just before and after closures. Using this method for estimating the season's catch, Southeast Alaska fishermen would have caught 305,400 chinook in 1981 had a quota not been enforced.

Other methods to estimate probable catch could be used. Applying 1981 daily averages to closed periods is one method and another is using year averages. Both methods would yield a higher probable catch. However, the smoothing method was selected because it is based on acutal current catches and it accounts for changes in effort levels before and after closures.