# INFORMATION AND CONSIDERATIONS RELATING TO STRUCTURING OF THE 1988 SOUTHEAST ALASKA SUMMER TROLL CHINOOK SALMON SEASON

By

Southeast Region Staff

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1 The Regional Information Report Series was established in 1987 to provide an information access system for all unpublished divisional reports. These reports frequently serve diverse ad hoc informational purposes or archive basic uninterpreted data. To accommodate needs for up-to-date information, reports in this series may contain preliminary data.

Corrections and Clarifications to
March 11, 1988 Version
of

# INFORMATION AND CONSIDERATIONS RELATING TO STRUCTURING OF THE 1988 SOUTHEAST ALASKA SUMMER TROLL CHINOOK SALMON SEASON

## CORRECTIONS:

### Page 40, Table 9:

The preseason projected 1988 summer troll catch should be 165,000 chinook rather than 170,000 as shown in the lower portion of the table. (The projected catch of 5,000 chinook during the June experimental troll fisheries was not subtracted from the projected total 1988 season troll catch of 240,000 in the March 11 version.) The effect of this change is to reduce by approximately one half day the preseason projected duration of the summer troll chinook season under the assumption of an average fleet catch rate of 9,000 chinook per day. This does not substantively change projections of the expected total duration of the 1988 summer troll chinook season under the different management options selected for illustration. (Note: Some variations are expected to occur between preseason projections and actual chinook salmon catches. The most current inseason information on actual catches and Alaska hatchery contributions will be used for inseason management decisions.)

## CLARIFICATIONS:

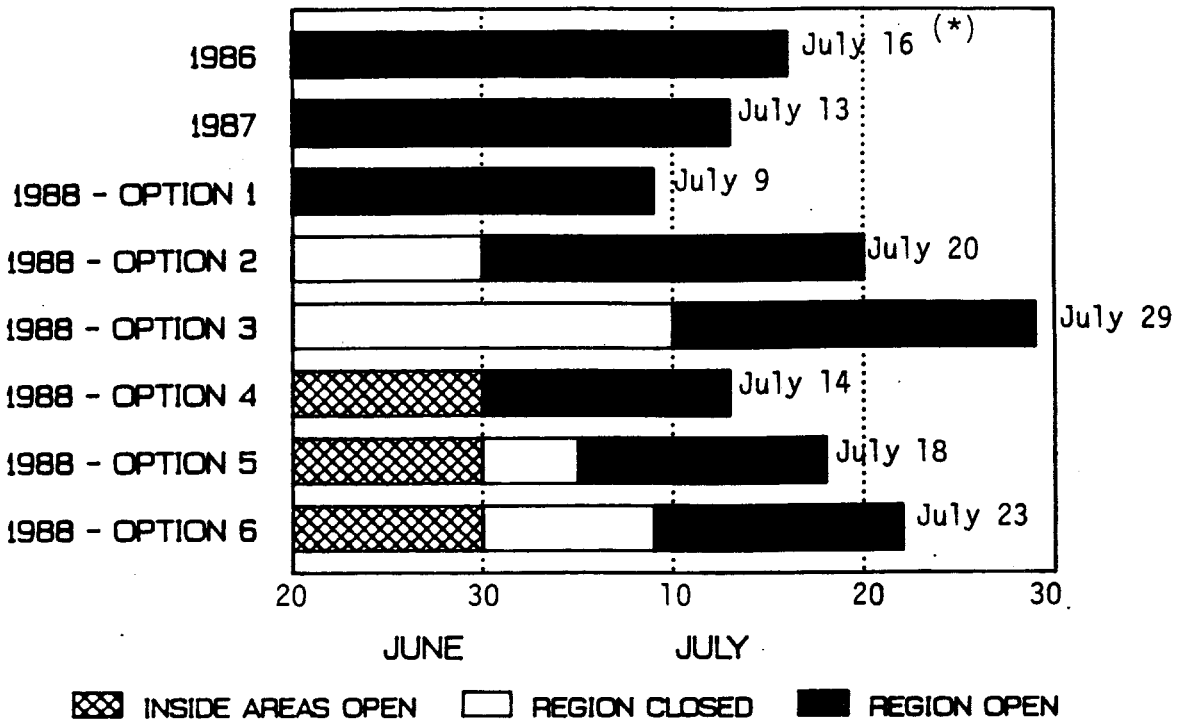
### Page 31, Figure 13: Projected closing dates for the Southeast Alaska summer troll chinook season.

Figure 13 was revised (see attached figure) to more clearly illustrate open and closed chinook fishing periods under different management options for the 1988 summer troll chinook seasons.

ADF&G
April 2, 1988

FIGURE 13

# PROJECTED CLOSING DATES
## 1988 S.E. ALASKA SUMMER TROLL CHINOOK SEASON UNDER DIFFERENT MGM'T OPTIONS




(*) Additional chinook openings Aug. 21-26 and Sept. 1-9 to catch remaining quota were equivalent to approx. 10 days at June 20 - July 15 catch rate.

<u>1988 OPTIONS (SELECTED FOR ILLUSTRATION):</u>

1 June 20 regionwide opening

2 July 1 regionwide opening

3 July 10 regionwide opening

4 June 20-30 inside area opening;
July 1 regionwide opening

5 June 20-30 inside area opening;
July 5 regionwide opening

6 June 20-30 inside area opening;
July 10 regionwide opening

## INTRODUCTORY NOTE

This report was prepared to provide some background information for considering different options or approaches to structuring the 1988 Southeast Alaska summer troll chinook season. A series of public meetings, organized with the help of local advisory committees, are being held during mid-March in a number of fishing communities throughout the region to provide fishermen and Department staff an opportunity to initially discuss this issue. The Board of Fisheries is scheduled to consider public and Department proposals, and develop final regulations for the 1988 summer troll season during it's April 15-18 meeting in Sitka.

Readers are cautioned that some information in this report is based on preliminary data, particularily chinook salmon catch and hatchery contributions for the 1987/88 winter troll fishery which is currently ongoing. Some changes will occur as more complete fish ticket information and coded wire tag data is compiled. However, these changes are not expected to be large enough to affect general projections or conclusions of this report.

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## 1. INTRODUCTION

The length of the Southeast Alaska summer troll chinook season has decreased dramatically in recent years - from 169 days in years prior to 1980 to 23 days in 1987. Season reductions have resulted primarily from imposition of chinook catch ceilings to address coastwide natural chinook conservation problems. However, increased chinook abundance in Southeast Alaska waters during the past several years has further exacerbated the problem. These factors, combined with an above average chinook catch during the current winter troll season, have raised the question as to how the 1988 summer troll season best be structured to maximize returns to trollers while meeting chinook conservation needs and other management objectives.

The U.S./Canada Pacific Salmon Treaty, signed in March 1985, included provisions for a 15-year coastwide chinook salmon rebuilding program. To achieve rebuilding by 1998, or in approximately 3 cycles, ceilings were imposed on chinook salmon catches in a number of major coastal fisheries. Non-ceilinged fisheries were placed under pass-through provisions which required those fisheries to be managed to allow the bulk of depressed chinook stocks, saved through reduced catches in ceilinged fisheries, to reach the spawning grounds. The 1988 season will represent completion of the first 5-year cycle of the rebuilding program.

Beginning in 1985, chinook salmon catches by Southeast Alaska fisheries, as well as most Canadian fisheries, were placed under ceilings as part of the Treaty chinook rebuilding program. Southeast Alaska fisheries had been under chinook ceilings since 1980 in response to both local and coastwide chinook conservation concerns, however ceilings imposed under the Treaty further reduced chinook catches in these fisheries. The catch ceiling for Southeast Alaska fisheries, commercial and recreational combined, is currently 263,000 chinook salmon. (The Treaty does allow for harvest of new Alaska hatchery chinook production in addition to the base catch ceilings.)

Reductions in chinook catch ceilings have resulted in shortening of summer chinook seasons for the Southeast Alaska troll fishery which accounts for most (approximately 80-90%) of the Southeast chinook harvest. During the past several years, increased chinook abundance in Southeast Alaska waters, in combination with fixed catch ceilings, have required even further shortening of the season. In 1987 the summer troll season was open for 23 days of chinook fishing compared to 41 days in 1986 and 34 days in 1985. In years prior to 1980, the entire summer seasons of 169 days was open to chinook fishing.

Recent significant reductions in the Southeast Alaska troll summer chinook seasons have impacted the conduct and management of the fishery in a number of ways. First, fishermen and

processors have had to adjust operational schedules and marketing strategies to the shortened seasons. Second, the shortened seasons have created a number of new fisheries management problems. These include the following:

(1) Reduced chinook fishing time has reduced opportunities for the troll fleet to harvest Alaska hatchery chinook which were intended to help alleviate some of the impacts of lower base catch ceilings;

(2) Reduced summer chinook seasons, combined with increased chinook abundance, high prices and a mild winter, increased effort and chinook catches in the 1987/88 winter fishery, further reducing the chinook harvest available for the 1988 summer fishery;

(3) Incidental hook and release mortalities of chinook salmon occurring after allowable chinook catches have been taken and the fleet continues to fish for coho and other non-chinook species have increased as a result of shortened chinook season; and

(4) Closure of the summer troll chinook season by mid-July has increased troll targeting on coho salmon during the remainder of the general summer season with a potential for increased coho harvest rates.

The above factors need to be taken into account when structuring the 1988 summer troll chinook season to ensure that benefits to the fishing community are maximized while potential adverse impacts are minimized.

## 2. REVIEW OF RECENT U.S./CANADA SALMON TREATY DEVELOPMENTS

At it's annual meeting in February, the Pacific Salmon Commission dealt with a number of issues relating to Alaska. These included negotiating fishing arrangements for the transboundary rivers and the Canadian Area 1 troll pink salmon fishery. Although the current chinook annex, which expires at the end of 1988, was not up for renegotiation in February, the Commission did discuss a number of chinook salmon issues. These included approving the 1988 Alaska hatchery addon, assessment of chinook rebuilding progress, potential adjustments of catch ceilings, pass-through monitoring, and approaches to minimization of incidental mortalities. Several panel workgroups were established to ensure that information necessary to renegotiate the chinook annex next winter would be available next fall.

ADF&G Commissioner Don Collinsworth, who is also Alaska's Treaty Commissioner, has prepared an open newsletter for fishermen describing developments during the February negotiations. This newsletter is being distributed through advisory committees and ADF&G offices throughout the region. The portion of the newsletter relating to chinook salmon has been included below. Also, for general reference, information reported to the Commission on coastwide chinook salmon catches and escapements have been included in Appendix 1 of this report.

[Excerpt from March newsletter.]

### Chinook Salmon

Treaty Background

The previous newsletter outlined the status of the current chinook salmon annex and considerations regarding possible changes to that annex. As stated earlier, the current annex runs through the 1988 season and includes the following provisions:

1. A 263,000 all gear base catch ceiling for Southeast Alaska and Northern British Columbia. ( A hatchery addon for Southeast Alaska will be allowed in addition to the base catch ceiling.)

2. A 360,000 chinook catch ceiling for the troll fishery off the west coast of Vancouver Island.

3. A 275,000 ceiling for troll and sport fisheries in Georgia Strait.

4. Provisions requiring nonceilinged fisheries in Canada and the Pacific Northwest to pass through chinook salmon, saved by the ceilinged fisheries, so they accrue primarily to spawning escapements of depressed stocks.

The rational for the original negotiation of these regimes was covered in the last newsletter, however, I will summarize the

highlights here. At the time of the treaty, there was no doubt that many natural chinook salmon stocks from Southeast Alaska to the northern coast of oregon were depressed; some very severely. One of the primary problems was the huge (up to 2,000,000) chinook catch off the coast of British Columbia which had escalated dramatically from the 1950's catch levels.

The Alaskan fishery is dependent, probably over 80 percent, on chinook produced in British Columbia, Washington and Oregon. A collapse of these stocks would require the dramatic curtailment, or even elimination of some of our traditional fisheries. Alaska was concerned that prior to the Treaty, tribal interests in the Pacific Northwest were focusing their attention on what actions could be taken in the Southeast Alaskan fishery in the absence of a treaty to control the Canadian fishery. The final chinook agreement among United States' interests stemmed from a realization by people in the Pacific Northwest that without control on Canada, any actions taken in Alaska would have very minor beneficial effects on either their allocation or conservation. For this reason, Alaska and the confederated tribes signed an agreement that the confederated tribes would not, through legal efforts, try to impose the Boldt decision in Alaska as long the Pacific Salmon Treaty was in place and working to the benefit of the stocks. To a great extent Canada came to the treaty table because of the final agreements on the Fraser River which they viewed as being beneficial to their interests.

The final treaty provided for a three-cycle rebuilding program for chinook salmon, with much higher catch ceilings than would have been required to rebuild the stocks in one or two cycles. The agreement also allowed for the addition of new enhancement-created fish to catch ceilings provided certain requirements could be met and it did not automatically reduce quotas for incidental mortalities.

## 1987-88 Negotiations

The 1988 season marks the end of the first cycle of rebuilding. To date much of the information required to show where we are in the rebuilding process has either not been available, or is not considered conclusive since we have not completed a full cycle. Completion of the first cycle in 1988 should provide sufficient data to determine trends in the rebuilding program. The Alaskan delegation feels that substantial progress has been made toward rebuilding; that the increased abundance in Southeast Alaska waters demonstrates how far some stocks are ahead of the rebuilding schedule; and that our impacts on depressed chinook stocks are being reduced by dilution from stronger stocks. While such results may justify a quota increase, we have not been in a good position to prove this technically.

In addition, increases in the chinook catch by Southeast Alaskan fisheries would require the Commission to consider whether increases in other fisheries are appropriate to maintain some

allocation balance between the various jurisdictions. While some fisheries in terminal areas to the south of us (particularly the Columbia River) have increased dramatically, many of the non-ceilinged fisheries and Canadian fisheries are at or below levels existing when the treaty was signed. Specific information on how each of these fisheries operates, which stocks they affect, and how their harvest and effort compare to pre-Treaty periods has also not been available prior to this time. What is actually happening in terms of coastwide harvest sharing has not been very clear.

As stated previously, unanimous agreement within the Commission is required to change or add something new to the treaty annexes. People from the southern U.S. and Canada were simply not ready to discuss manipulation of harvest ceilings or final assessment of rebuilding status in this year's negotiating cycle. The Commission is gearing toward the renegotiation of nearly all the annexes, especially that of chinook, in 1989 when the chinook annex expires. Canada has a major chinook conservation problem in Georgia Strait and is discussing internally the need to significantly reduce quotas and harvests in Georgia Strait. They are presently going through a very intense internal political process to decide how those reductions should be taken, and in that atmosphere, Canada was not willing to discuss revisions to the chinook annex this year. In fact, at the instigation of Canada the Joint Northern/Southern Panel never formally met during this session.

Accomplishments at the February negotiating session were as follows:

1. Securing the 1988 hatchery chinook add-on for the Southeast Alaskan fishery.

2. Obtaining recognition within the U.S. section that incidental chinook mortalities caused by increasing abundance, should not be automatically subtracted from catch ceilings.

3. Insuring that all information required to evaluate rebuilding including pass-through and incidental mortalities is made available for the 1988/89 negotiating cycle. The panels and commission have agreed to establish a series of subgroups to:

a. assess rebuilding and what rebuilding means relative to adjustment of catch ceilings and pass-through provisions, and

b. to develop approaches on how mortalities will be handled up and down the coast.

## Incidental Chinook Mortalities

The U.S. southern and the northern panels have already come to some preliminary agreements on an approach to address

mortalities. This includes incentives for minimizing mortalities, and the provisions that mortalities due to increased abundance rather than conduct of fisheries will not be subtracted from quotas. This is a major breakthrough, and a realization by the southern U.S. of Alaska's specific problems relative to increased chinook abundance and the need to harvest coho salmon.

The main thrust of the general agreement on how to address mortalities now seems to be a more rational approach to dealing with this coastwide problem, rather than the previous push to simply subtract them from ceilinged fisheries. It also acknowledges that all jurisdictions should be taking whatever means they can to minimize unnecessary mortalities. It is probable, however, that mortalities judged not necessary to the conduct of fisheries will have some influence on commission decisions on coastwide ceiling levels next year. Mortalities, after all, are fish that are not available for future harvest, and in many people's mind avoidable mortalities are part of allocation. The Board of Fisheries will be considering the question of mortality minimization in terms of season structure at their April 15-18 meeting in Sitka. Setting the stage for successful negotiations in 1989 should certainly be in all of our minds.

While final decisions on chinook ceilings in 1989 will to some extent be a political one, there is no doubt that the decision-makers will need all the technical data they can get to support their positions. We are all painfully aware of the effect of the increased abundance of chinook in the summer and winter fisheries in Southeast Alaska and are concerned by the problems caused by the fixed ceiling. The negotiation strategy for next fall must include:

1. consideration of Alaska's receiving a fair share of increases in coastwide chinook harvest;

2. ceiling relaxations which do not affect the rebuilding of depressed stocks;

3. the ability to structure our seasons and to take advantage of our hatchery-produced chinook salmon;

4. a reasonable way of looking at the minimization of chinook mortalities in all fisheries (including the non-ceilinged fisheries);

5. work in the interim by technical groups; and

6. the formulation of a strategy to balance all the issues that need to be negotiated next year.

Your help and assistance will be basic to this endeavor.

## 3. BRIEF REVIEW OF 1987 SEASON

In 1987, Southeast Alaska fisheries were managed under the following Pacific Salmon Commission established provisions:

(1) an all-gear base catch ceiling of 263,000 chinook salmon;

(2) an Alaska hatchery addon to be calculated inseason on the basis of coded wire tag sampling;

(3) a 7 1/2 percent management range, calculated in numbers of fish, for cumulative deviations from the base catch ceiling beginning in 1987. (This is equivalent to +/- 19,700 chinook relative to the 263,000 base catch ceiling.)

Preliminary 1987 post season data indicates the following performance:

(1) the total all gear catch is 279,700 chinook salmon; the all-gear base catch (excluding hatchery addon of 16,000) is 263,700 chinook salmon;

(2) the 1987 Alaska hatchery addon, calculated on the basis of coded wire tag recoveries, is 16,000 chinook salmon. This yielded a total 1987 catch ceiling of 279,000 chinook salmon. (The addon was calculated as the estimated total Alaska hatchery harvest of 23,300 chinook reduced by 5,000 for pre-treaty hatchery harvest and 2,300 for potential estimation error risk adjustment.);

(3) the deviation of the preliminary 1987 Southeast Alaska chinook salmon catch from the catch ceiling is + 700 chinook salmon or 0.3 percent;

The 1987 Southeast Alaska all-gear catch of approximately 279,700 chinook salmon consisted of a commercial catch of 257,700 (92.1%) and a recreational harvest of 22,000 (7.9%) as shown in Table 1. Alaska hatcheries contributed an estimated 23,300 chinook or 8.3 percent of the total harvest (Table 2).

The 1987 commercial catch included 15,400 chinook harvested incidentally in net fisheries where chinook represented about 0.1% of the all species catch of 12.4 million fish. The 1987 incidental net harvest was below the guideline harvest level of 20,000 chinook (excluding Alaska hatchery harvest) established by the Board of Fisheries, and below the 1986 catch of 22,000. This was primarily the result of purse seine fishery restrictions implemented for pink salmon conservation.

### 3.1 1987 Troll Season

The 1987 troll fishery harvest of 242,300 chinook occurred as follows (from Table 1):

28,400 = 12% in winter fishery (Oct. 1 - April 14);

4,400 = 2% in June experimental hatchery fisheries;

209,500 = 86% in general summer season (June 20 - July 12).

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242,300

The 23-day 1987 summer troll chinook season was the shortest on record (Fig. 1). This was the result of the chinook catch limits imposed under the Treaty, combined with the high 1987 chinook catch rates which averaged 9,100 chinook per fleet day, an increase of 50 percent over the 1986 rate of 6,000 per fleet day (Fig. 2). After the allowable chinook catch was reached on July 12, chinook non-retention was implemented during the remainder of the general summer troll season from July 13 through Aug. 2 and from Aug. 13 through Sept. 20. (The troll fishery was closed to all fishing for 10 days during Aug. 3-12 for coho management.) A number of outside coastal areas of frequent high chinook abundance were closed to all fishing after July 12 to help minimize hook and release of chinook salmon. Catches of other species during the 1987 summer season included: 1,040,000 cohos, 410,000 pinks, 8,800 chums, and 7,200 sockeye.

The 1987 troll coho fishery occurred from June 20 through September 20 except for the 10-day closure Aug. 3-12. Approximately 73,000 or about 7 percent of the total season coho catch of 1.0 million was landed prior to July 4, while 146,000 cohos or 14 percent were landed prior to July 11 (Fig. 3). The majority of the coho catch, about 854,000 coho or 86 percent occurred after the July 13 chinook closure.

### 3.2 1987 Alaska Hatchery Chinook Contributions

Contributions of Alaska hatchery chinook salmon to Southeast Alaska fisheries continued to increase in 1987 with an estimated 23,300 hatchery chinook being harvested by all commercial and recreational fisheries. This was an increase of 6,500 chinook or nearly 40 percent over the 1986 contribution of 16,800 chinook (Fig. 4).

A new hatchery production addon of 16,000 chinook was allowed in addition to the base catch ceiling of 263,000 in 1987. The addon was calculated by subtracting 5,000 chinook for old or pre-Treaty (1984) hatchery harvest, and 2,300 for risk adjustment from the total hatchery contribution of 23,300. Risk adjustment is a

procedure established by the Pacific Salmon Commission to compensate for potentially overestimating hatchery contributions due to statistical variability in the estimation procedure. (Calculation of the 1987 addon is shown in Table 3.)

The troll fishery harvested 16,600 Alaska hatchery chinook or about 70 percent of the total Alaska hatchery catch of 23,300 chinook salmon. Alaska hatchery chinook represented 12 percent (3,500 chinook) of the winter troll catch; 32 percent (1,400 chinook) of the catch in the June experimental fisheries; and 6 percent (11,700 chinook) of the summer troll catch (Fig. 5).

The experimental fisheries were conducted several days a week during the first three weeks of June of 1987 in areas adjacent to several hatcheries. (Refer to Appendix 2 for ADF&G news release specifying intitial 1987 opening dates and areas.) These fisheries were conducted in areas adjacent to the Crystal Lake, Little Port Walter, Neets Bay and Medvejie hatcheries to determine the feasibility of increasing harvest of returning mature chinook salmon. About 70 boats participated, harvesting 4,447 chinook of which 1,414 or 32 percent were of Alaska hatchery origin (Figure 6 and Table 4).

During the summer fishery, the proportion of Alaska hatchery chinook in troll catches was highest in the inside areas and lowest in the outside areas. As shown in Figure 7, 24.5 percent of the chinook caught in the northern inside areas (Chatham Straits north) and 8.6 percent in southern inside areas (Frederick Sound south) were Alaska hatchery chinook compared to less than 2 percent in the outside areas.

## 4. DISCUSSION OF 1988 SEASON

The Alaska Board of Fisheries will be meeting April 15-18 in Sitka to consider public proposals and establish regulations for the 1988 Southeast Alaska commercial troll fishery. Local advisory committees are currently meeting to review proposals and develop recommendations for the Board. The following section is intended to provide some additional information on factors which may influence these discussions, such as current winter troll chinook catches. In addition, some considerations and options for structuring the 1988 summer troll season will be discussed.

### 4.1 U.S./Canada Treaty Considerations

The 1988 Southeast Alaska fisheries will be managed to take into account the following provisions of the current Chinook Annex of the U.S./Canada Treaty:

(1) a base catch ceiling of 263,000 chinook salmon for all Southeast Alaska commercial and recreational fisheries;

(2) an addon to the base catch ceiling for harvest of Alaska hatchery chinook to be calculated inseason on the basis of coded wire tag sampling;

(3) a 7 1/2 percent management range for cumulative deviations from base catch ceilings beginning in 1987, the range being equivalent to +/- 19,700 for a ceiling of 263,000, (a ceiling overage of approximately one thousand chinook occurred in 1987);

(4) minimization of incidental mortalities of chinook salmon through appropriate design and conduct of fisheries.

### 4.2 1988 Alaska Hatchery Addon

Preliminary 1988 preseason projections made last fall indicated an expected contribution of about 36,000 Alaska hatchery chinook to all Southeast Alaska commercial and recreational mixed stock fisheries (Table 5). This would generate a new hatchery production addon of 27,000 (Table 6).

Preliminary inseason information from the current winter fishery indicates that a somewhat lower 1988 hatchery contribution, and addon, could occur. (See discussion in following section on 1988 winter troll fishery.) However, until more definitive data is obtained, the current preseason projected addon will be used.

Results of coded wire tag sampling of chinook salmon catches during the remainder of the winter season, and during the summer season will be analyzed to estimate actual Alaska hatchery contributions, and determine the appropriate 1988 hatchery addon.

## 4.3 General Management Objectives for the 1988 Troll Fishery

Basic management objectives for the 1988 Southeast Alaska troll fishery are as follows:

Chinook Salmon Management

- o Ensure allowable chinook harvest
- o Meet U.S./Canada Treaty provisions
- o Provide for harvest of Alaska hatchery chinook
- o Continue natural chinook rebuilding program

Coho Salmon Management

- o Ensure allowable coho harvest
- o Provide for coho conservation
- o Manage for Board coho catch allocation objectives

## 4.4 1987/88 Winter Troll Fishery

The 1987/88 winter troll season began October 1, 1987 and will continue through April 14, 1988. Fishing during the winter season is limited to those areas inside the surf line. Chinook salmon harvested during this period will count toward the 1988 chinook catch ceiling, with catches of Alaska hatchery chinook contributing to the hatchery addon.

To date the Board has not placed a limit on the chinook catch during the winter troll fishery. The winter fishery has been considered a high priority fishery by the Board because of it's historical importance to the rural fishing communities throughout Southeast Alaska. However, in previous years the Board has indicated that consideration of some limitations might be necessary if the winter catch should reach or exceed approximately 40,000 chinook. This level was exceeded for the first time during the 1987/88 season, with 45,000 chinook already being taken through Dec. 31, 1987. Since the Board will not consider this issue until the mid-April Board meeting, the 1987/88 winter season will continue as planned through the regulation closure on midnight April 14.

A total 1987/88 winter catch of about 70,000 chinook is projected through April 14. This is based on the assumption that the

proportionate catch during the second half of the season will be similar to the 1986/87 season when 35 percent of the winter catch occurred between Jan. 1 and April 14. This would represent an increased of about 42,000 or 150 percent over the 1986/87 winter catch of 28,000 chinook. The increased catch appears to be due to several factors including increased chinook abundance, increased effort as reflected in landings, and a relatively mild winter which contributed to the increased effort.

As shown in Figure 8 and Table 7, winter troll chinook catches, and effort as reflected in landings, were generally stable from 1970-82, with catches ranging between 4,300 and 12,600 and averaging about 8,000 chinook. Effort and catches increased significantly beginning in 1983, with 1983-87 catches ranging from 22,500 to 33,000 and averaging 27,600 chinook. The percentage of the total annual troll chinook catch occuring during the winter fishery increased from about 3 percent during 1970-82 to about 11.5 percent during 1983-87. The projected 1987/88 winter catch of 70,000 is expected to represent about 25-30 percent of the 1988 troll chinook harvest.

The majority of the winter troll chinook catch normally occurs during the first month of the fishery in October, and the last month and a half from March through mid-April. During the 1986/87 winter season, nearly half (48.4%) of the catch occurred in October, and about a fourth (25.6%) from March through mid-April (Fig. 9). A similar pattern is expected for the current winter season.

Chinook catches by district during the previous 1986/87 season are shown in Figure 10. The largest percentage occurred in District 13 (Sitka Sound) with 22 percent, followed by District 10 (Frederick Sound) with 15.3 percent (Fig. 9). Approximately 10 percent occurred in each of Districts 14 (Icy Straits), 8 (Petersburg/ Wrangell area) and 9 (lower Chatham Strait). Three districts (1,2 and 5) each had from 5 to 7 percent of the catch. Remaining districts combined contributed about 10 percent.

While the catch distribution during the current 1987/88 winter season is generally similar to last year, some changes did occur. In districts contributing most of the winter catch, the District 13 percentage increased from 22 to 32.2 percent; District 10 increased from 15.3 to 20.1 percent; and District 9 increased from 9.4 to 15.1%. The District 14 percentage remained about the same at 11-12 percent, while catches percentages in other districts generally declined (Fig. 11).

The percentage contribution of Alaska hatchery chinook to the winter fishery is substantially higher than in the summer fishery. This appears to be primarily due to the fact that a higher proportion of chinook in inside waters, where the majority of the winter fishery occurs, are of Alaska hatchery origin than in outside areas (refer to Fig. 7). As shown previously, about 12 percent of the 1986/87 winter catch was of Alaska hatchery

origin compared to half that percentage, or 6 percent, in the 1987 summer fishery (Fig. 5). Preliminary data indicates that Alaska hatcheries have contributed approximately 15 percent or 6,600 chinook to the first half of the 1987/88 winter fishery.

Percentage contributions of Alaska hatchery chinook varies substantially between areas in the winter fishery. Figure 12 shows some preliminary catch data, including Alaska hatchery contributions, by area for the first half of the 1987/88 winter fishery. (These data should be considered very preliminary, however basic trends are considered reliable.) Percentages of Alaska hatchery contributions were highest in Districts 11 (61%), District 12 (39%), District 10 (26%), District 9 (17%), and District 14 (16%).

It should be noted here that preliminary inseason information from the winter fishery indicates that contributions of Alaska hatchery chinook to 1988 fisheries may be somewhat less than initial preseason projections. Preliminary contributions by hatchery during the first half of the winter fishery are shown in Table 8 compared to preseason projected total contributions. It is noted that a relatively low percentage contribution, about 6 percent of the total contribution to date, has occurred from the Neets Bay hatchery which was projected to contribute nearly half of the total hatchery harvest.

In reviewing these preliminary results with Neets Bay hatchery managers, it appears that a major percentage of the projected 1988 Neets Bay contributions were expected to be 2-ocean chinook which would not begin to recruit to the legal 28-inch size limit until sometime during the summer. Given the current shortened troll summer chinook season, it is likely that significant contributions of this brood class will not occur until the 1988/89 winter fishery.

A factor which could offset the shortfall in the Neets Bay projection to some extent however, is the larger 1987/88 winter troll catch with a higher percentage of Alaska hatchery chinook than would occur in the summer catch. Thus, until further information is available, the preseason projection will be used.

As noted above, chinook salmon harvested during the winter fishery are included in the total chinook catch ceiling. Alaska hatchery contributions to the current winter troll catch will also be included when calculating the 1988 Alaska hatchery addon.

### 4.5 1988 June Experimental Troll Fisheries

Experimental troll fisheries will be conducted again during June 1988 in areas adjacent to several hatcheries to increase opportunities to harvest mature chinook salmon returning to these hatcheries. Experimental fisheries conducted in 1987 resulted in a harvest of about 4,400 chinook salmon of which 32 percent were

from Alaska hatcheries (Table 4). As indicated above, this percentage of Alaska hatchery chinook was nearly 3 times higher than in the winter fishery (12%) and over 5 times higher than the summer fishery (6%).

Experimental fisheries are expected to be conducted in areas adjacent to Crystal Lake, Little Port Walter, Medvejie and Whitman/Neets Bay hatcheries again in 1988. Specific areas to be opened to fishing in 1988 will be determined at the mid-April Board meeting based on recommendations by fishery and hatchery managers and local fishermen. (Initial area openings in 1987 are described in Appendix 2.)

The first weekly openings in 1987 was limited to two days and adjusted in the two subsequent weeks depending on fishing effort, catch rates, and percentages of Alaska hatchery chinook. In 1988, only two full weeks occur in June prior to the week of June 20 and the length of the weekly fishing periods could be expanded to take this into account. (Refer to the 1988 calendar on the back inside cover of this report.)

In 1987, the Board specified that catches of chinook, excluding Alaska hatchery fish, should be limited to 1000 fish in each experimental area unless more than half of the fish were from Alaska hatcheries, in which case the limit could be increased to 2000. The limit was increased only for the Little Port Walter fishery. Specific limits for the 1988 fisheries will be established by the Board in April. Chinook salmon catches in the experimental fisheries are included in the catch ceiling accounting, and in the Alaska hatchery addon calculations.

### 4.6 1988 Summer Troll Chinook Season

The Board has received public proposals recommending starting dates for the 1988 summer troll season ranging from June 20 to July 10. Some proposals have also suggested alternative ways of extending the chinook fishery such as daily or weekly fishing periods, and effort limitations. In the following section, effects of some of the proposed changes, in particular changes in general opening dates, will be discussed relative to expected impacts on extending the summer chinook fishery.

An allowable harvest of approximately 170,000 chinook salmon is expected for the 1988 summer troll season (Table 9). This preseason projection is based on the following assumptions:

1.) an all-gear base chinook catch ceiling of 263,000;

2.) an Alaska hatchery addon of approximately 27,000 of which approximately 70% will accrue to the troll fishery similar to 1987, (actual addon will be determined inseason on the basis of coded wire tag recoveries);

3.) an incidental net catch of 20,000, excluding Alaska hatchery chinook, as previously specified by the Board;

4.) a recreational harvest of approximately 22,000 chinook, excluding Alaska hatchery chinook, (this is a recent average level; because of the relative stability of recreational catches in recent years the Board has not established a catch limit for the recreational fisheries);

5.) a winter troll catch of approximately 70,000 chinook with an Alaska hatchery contribution of 15 percent; and

6.) a catch of approximately 5,000 chinook during the June experimental fisheries with an Alaska hatchery contribution of about one third similar to 1987.

Several additional assumptions are required to estimate effects of various opening dates and strategies for the summer troll chinook fishery:

7.) an average fleet catch rate of 9,000 chinook per day is assumed for 1988 when the majority of the region is open to trolling during the period from June 20 through mid-July (this was the catch rate during the 1987 season);

8.) an average fleet catch rate of approximately 4,500 chinook per day is assumed if trolling is limited to inside areas during the period June 20-30.

It should be emphasized that the last assumption represents a first, rough approximation since there have been no previous inside area openings of the troll fishery in late June. It is assumed that a significant reduction of catch rates, compared to a general regionwide opening, would occur due to some reductions in effort combined with lower inside area catch rates compared to outside area rates. The assumption that fleet catch rates would be reduced by half has been made to allow some initial estimates of the relative effect of such a strategy on the duration of the summer chinook season. Actual catch rates in such an opening would also be dependent on boundaries selected to designate "inside" open areas.

Options of inside area openings during June 20-30 are being considered here as one approach to providing continued access to Alaska hatchery chinook in inside waters during late June when availability remains relatively high. (Refer to Fig. 7 for percentages of Alaska hatchery chinook occurring in inside and outside areas during the 1987 summer chinook season.) In addition to providing access to Alaska hatchery chinook during late June, such a strategy would lower fleet catch rates compared to a regionwide opening, thereby extending the summer chinook season, and reducing chinook non-retention.

To provide some general idea of possible effects of various opening dates and strategies on the duration of the 1988 summer troll chinook season, the above assumptions were applied to six different options. The options were selected to encompass the range of opening dates proposed, and the alternatives of inside area versus regionwide openings during June 20-30.

There are, of course, a large number of intermediate options, and approximate effects can be estimated by interpolating between the specific options selected here for illustration. However, no attempts were made to estimate potential effects of various proposed options for daily and/or weekly fishing periods or selective effort reductions due to the lack of any previous information and the complexity of possible effects on fleet performance. Such options could be implemented on an experimental basis to obtain information on possible effects.

Preliminary preseason projections for possible effects of the six options chosen for illustration on the duration of the summer troll chinook season are presented in Figure 13 and Table 10. Options 1-3 are for regionwide openings on June 20, July 1 or July 10, with only limited experimental fisheries prior to those dates. Options 4-6 are for initial inside area openings June 20-30, with subsequent regionwide openings July 1, July 5 or July 10. Results are also summarized below:

REGIONWIDE OPENINGS

| OPTIONS | OPENING DATE | NO. OF OPEN DAYS | CLOSING DATE |
|---|---|---|---|
| 1 | JUNE 20 | 19 | JULY 9 |
| 2 | JULY 1 | 19 | JULY 20 |
| 3 | JULY 10 | 19 | JULY 29 |

INITIAL INSIDE AREA OPENINGS JUNE 20-30
FOLLOWED BY
REGIONWIDE OPENINGS

| | | | |
|---|---|---|---|
| 4 | JUNE 20-30 (INSIDE) | 11 | |
| | JULY 1 (REGIONWIDE) | 13 | JULY 14 |
| 5 | JUNE 20-30 (INSIDE) | 11 | |
| | JULY 5 (REGIONWIDE) | 13 | JULY 18 |
| 6 | JUNE 20-30 (INSIDE) | 11 | |
| | JULY 10(REGIONWIDE) | 13 | JULY 23 |

Projected chinook closing dates for the six options range from July 9 for Option 1 (regionwide opening June 20) to July 29 for Option 3 (regionwide opening July 10). Closing dates for Options 4-6 (inside area openings June 20-30 followed by regionwide openings July 1, 5 or 10) range from July 14 to July 23.

Summer chinook season closing dates in 1986 and 1987 were July 16 and July 13 respectively. All options except Option 1 (June 20 regionwide opening) and Option 4 (June 20-30 inside area opening plus July 1 regionwide opening) would resulted in a projected 1988 summer chinook season extending later than in 1986 or 1987.

Options 4-6, which include the initial June 20-30 inside area openings, result in a projected total of 24 chinook fishing days, or six more than the 19 days projected for the regionwide openings in Options 1-3.

It should be emphasized again that the options above were selected to illustrate the possible range of impacts of various options expected to be considered at the mid-April Board meeting. Projected impacts on the duration of the summer troll chinook season should be considered first approximations under the assumptions used. Actual impacts of the various management strategies will depend on chinook availability, fleet effort and performance, and other factors. However, the above illustrations and information provided in this report should assist fishermen and advisory committees in considering management options for the 1988 season.

FIGURES AND TABLES

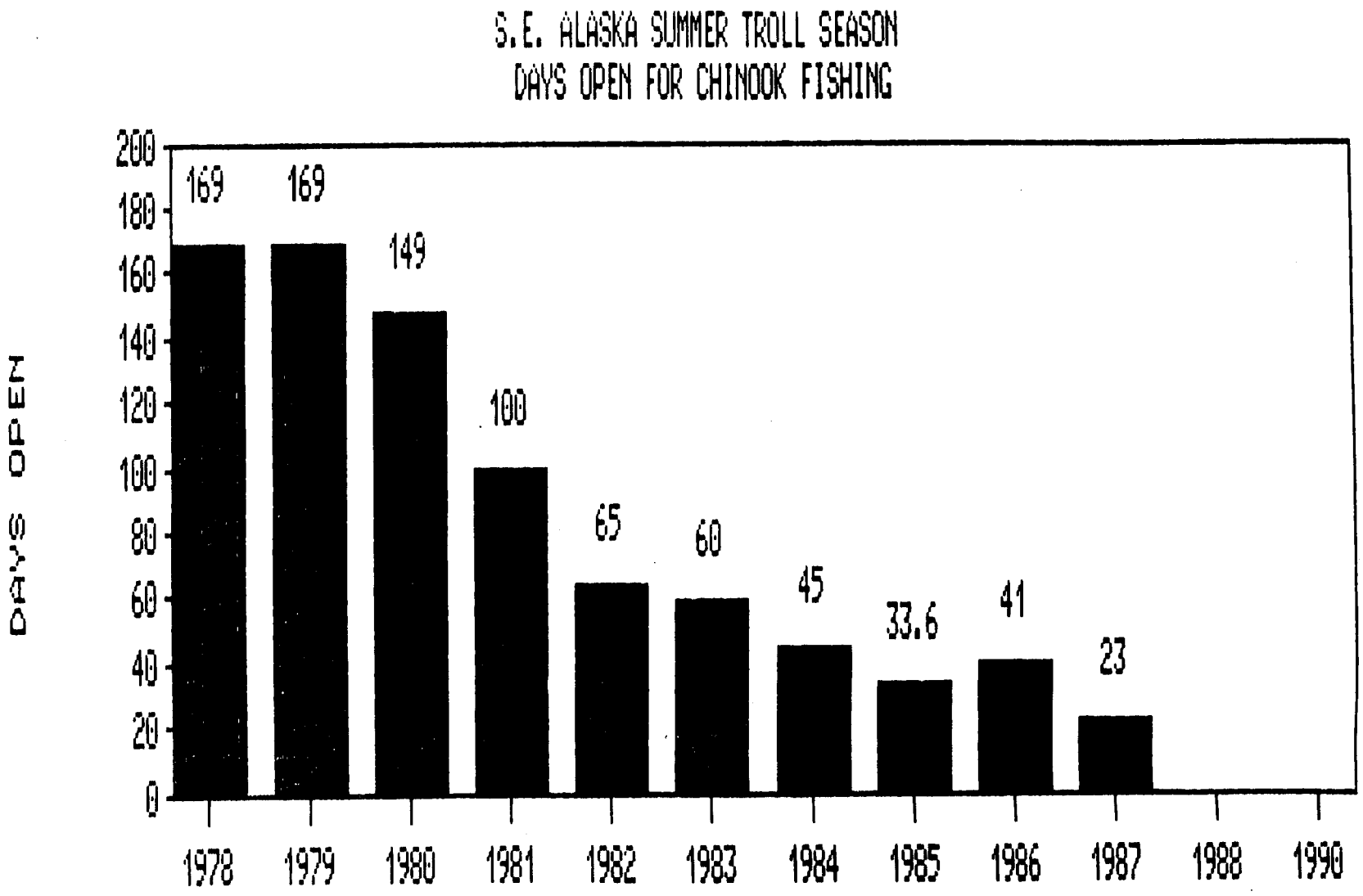



FIGURE 1. NUMBER OF DAYS SOUTHEAST ALASKA SUMMER TROLL FISHERY WAS OPEN TO CHINOOK SALMON FISHING, 1978-87.

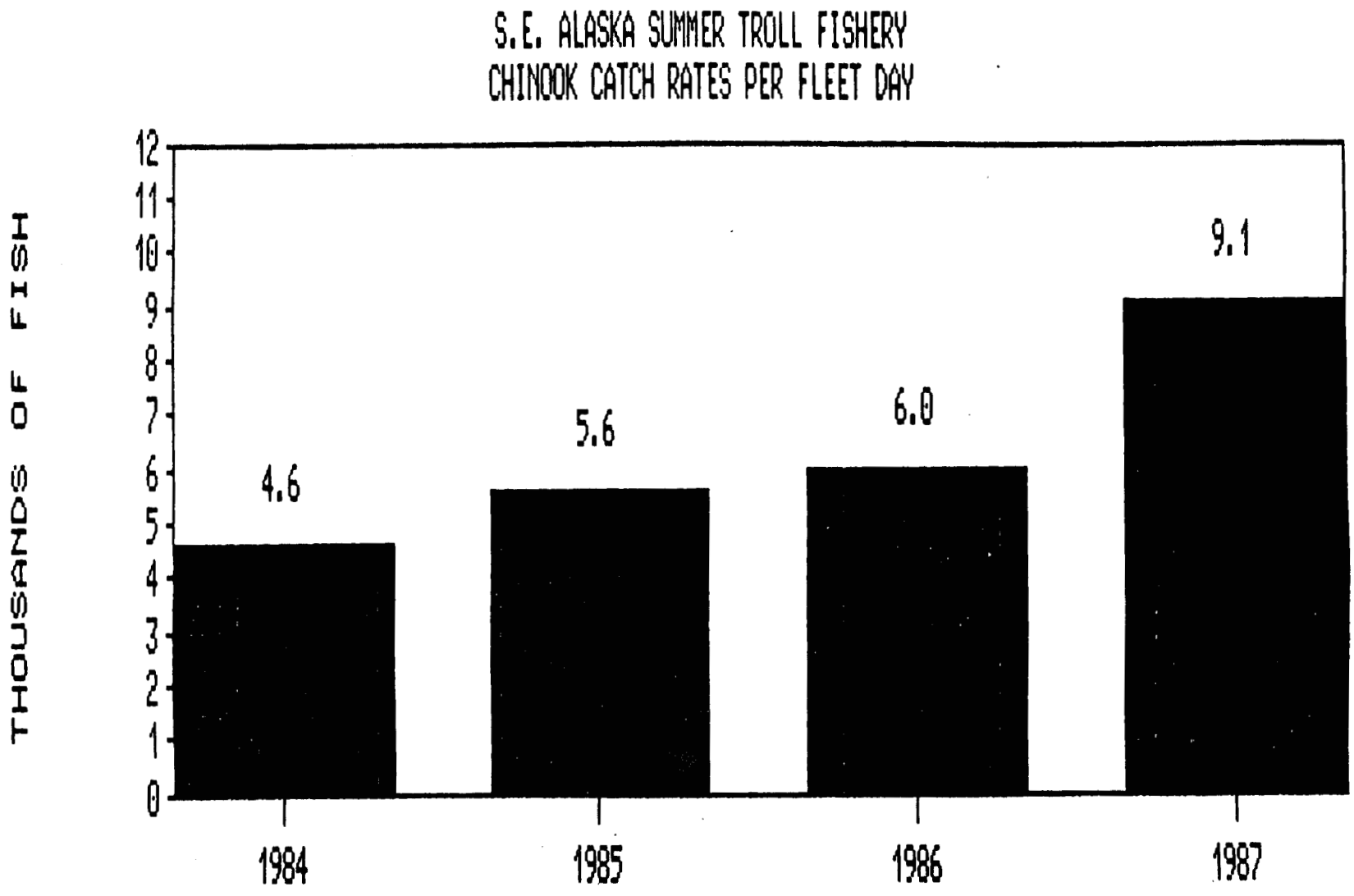
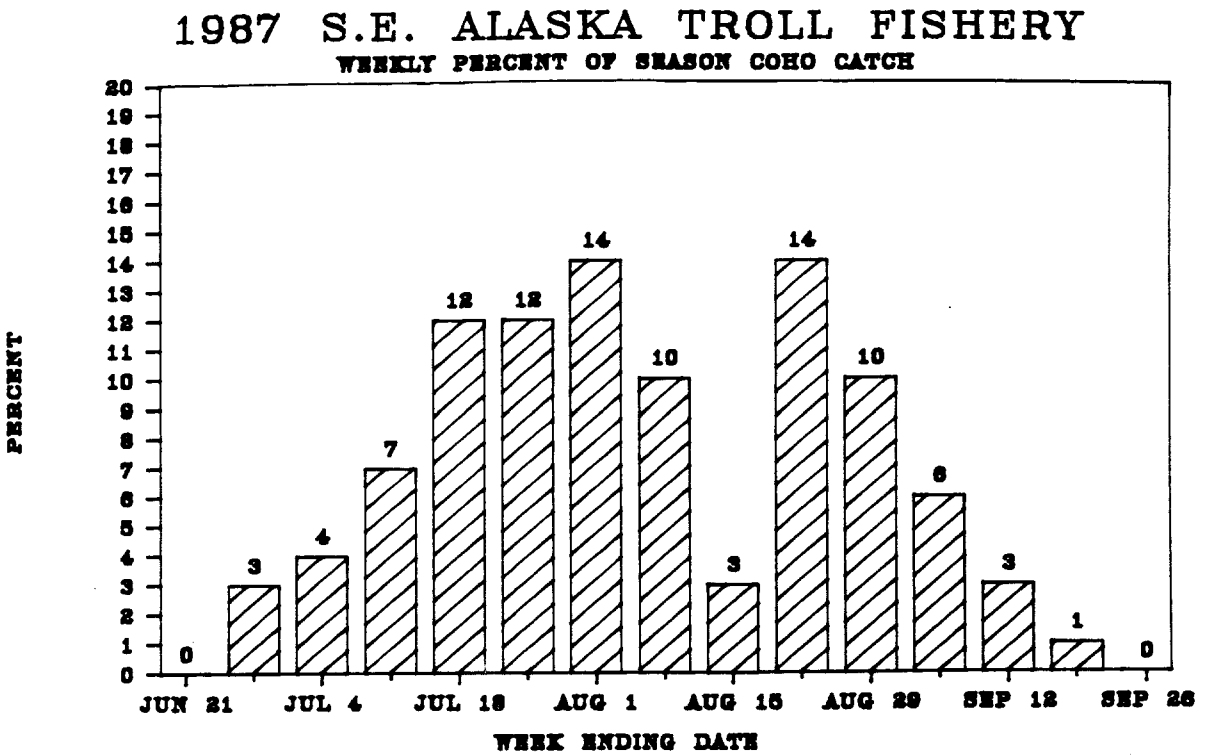



FIGURE 2. CHINOOK SALMON CATCH RATES PER FLEET DAY DURING COMPARABLE PERIODS IN JUNE AND JULY FOR THE SOUTHEAST ALASKA TROLL FISHERY, 1984-87.



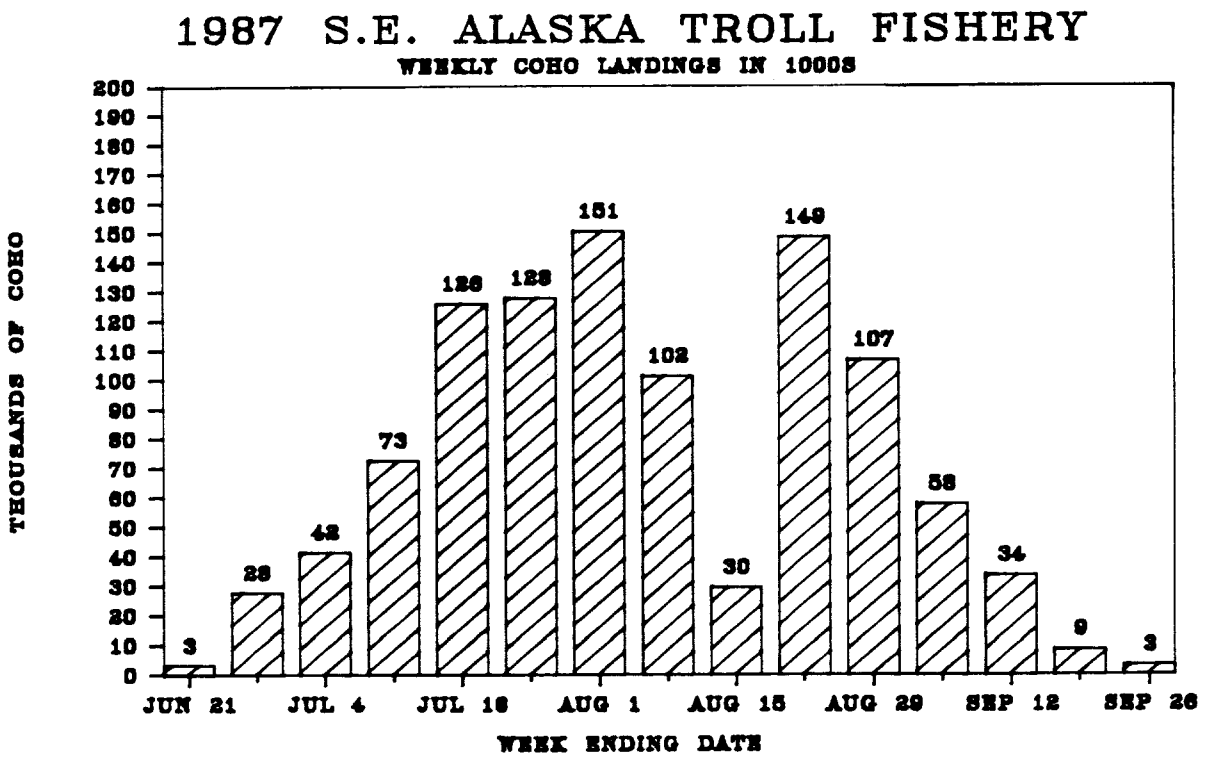




Figure 3. Weekly numbers (below) and percentages (above) of coho salmon catches in the 1987 Southeast Alaska troll fishery.

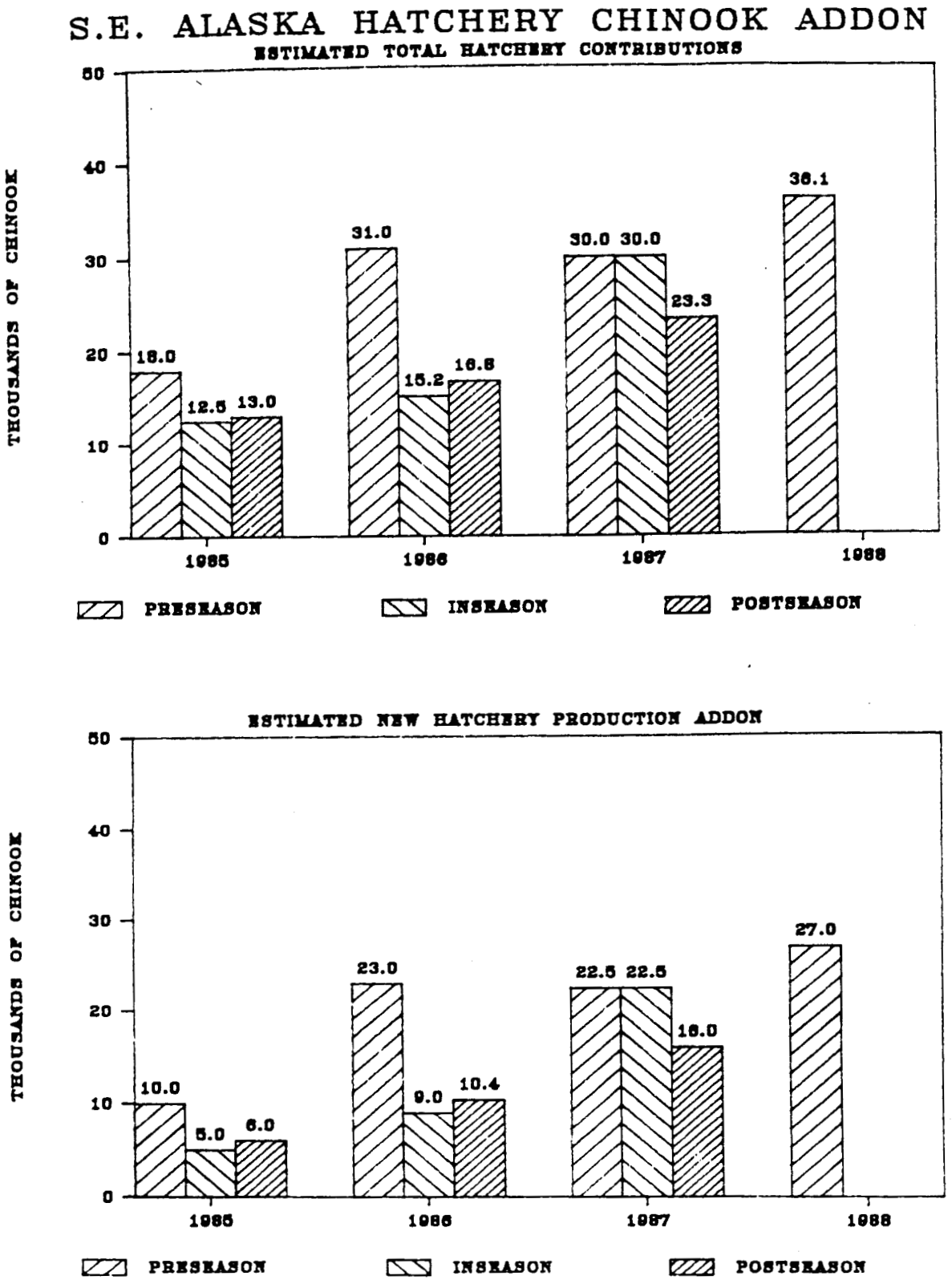



Figure 4. Estimated contributions of Alaska hatchery chinook salmon to Southeast Alaska fisheries (above) and estimated new production addon (below), 1985-88. (Inseason estimates at time of final troll fishery chinook closures. ADF&G 12/87.)

FIGURE 5

# ALASKA HATCHERY CHINOOK IN CATCH

**1987 S.E. ALASKA TROLL FISHERY**

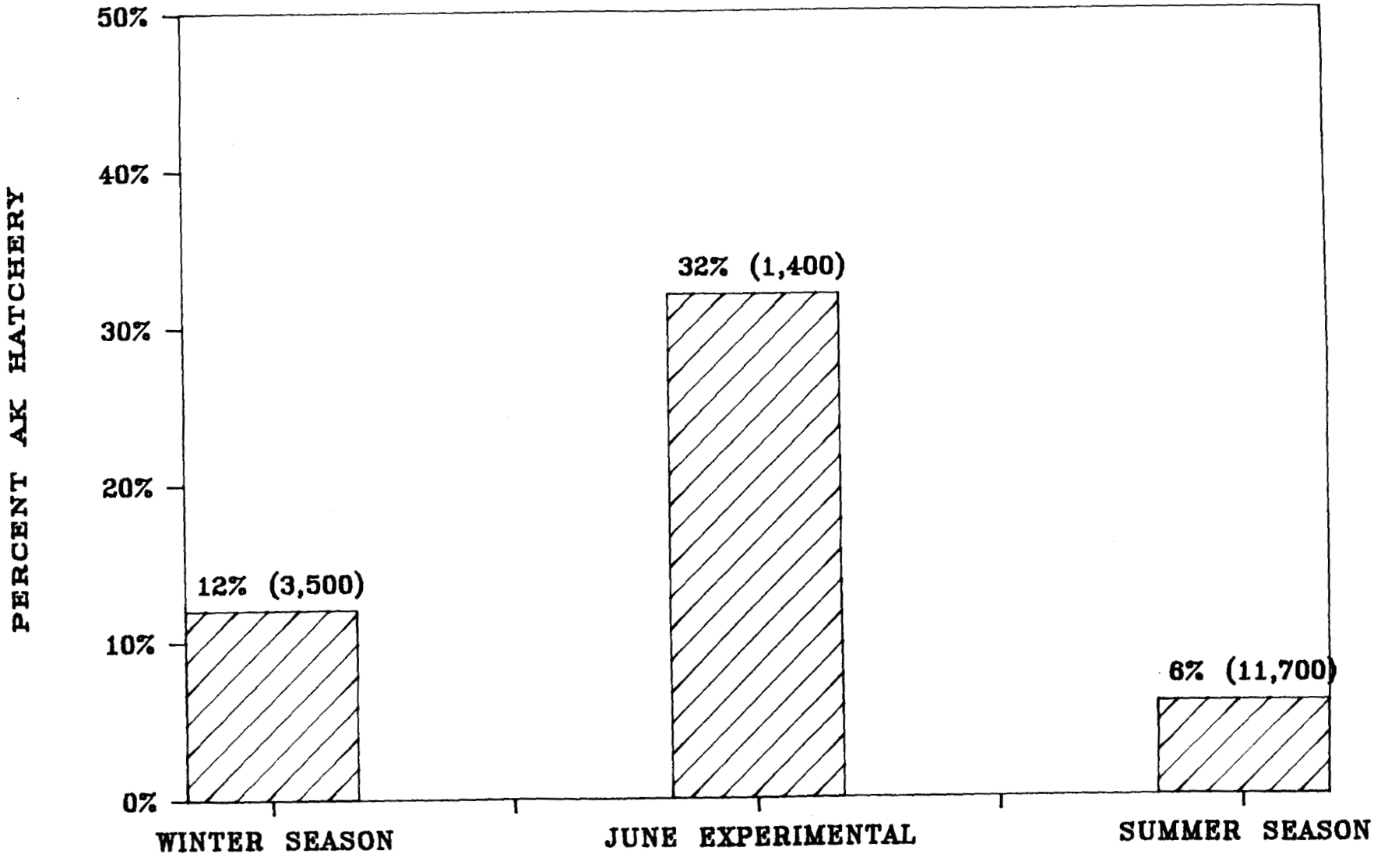


FIGURE 6

# 1987 JUNE EXPERIM. TROLL FISHERIES

## ALASKA HATCHERY CHINOOK CONTRIBUTIONS

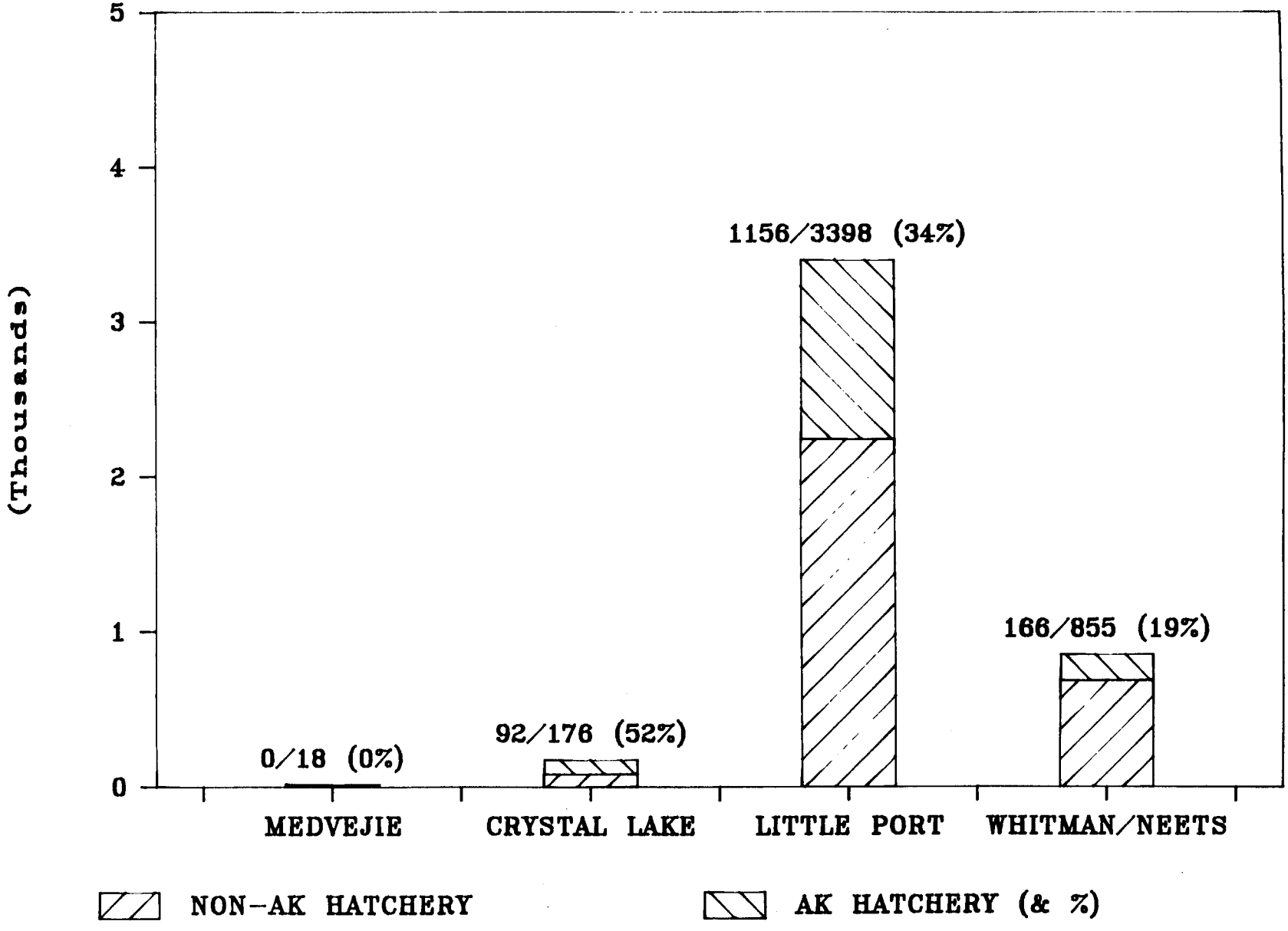


FIGURE 7

# ALASKA HATCHERY CHINOOK IN CATCH

## 1987 S.E. AK SUMMER TROLL FISHERY

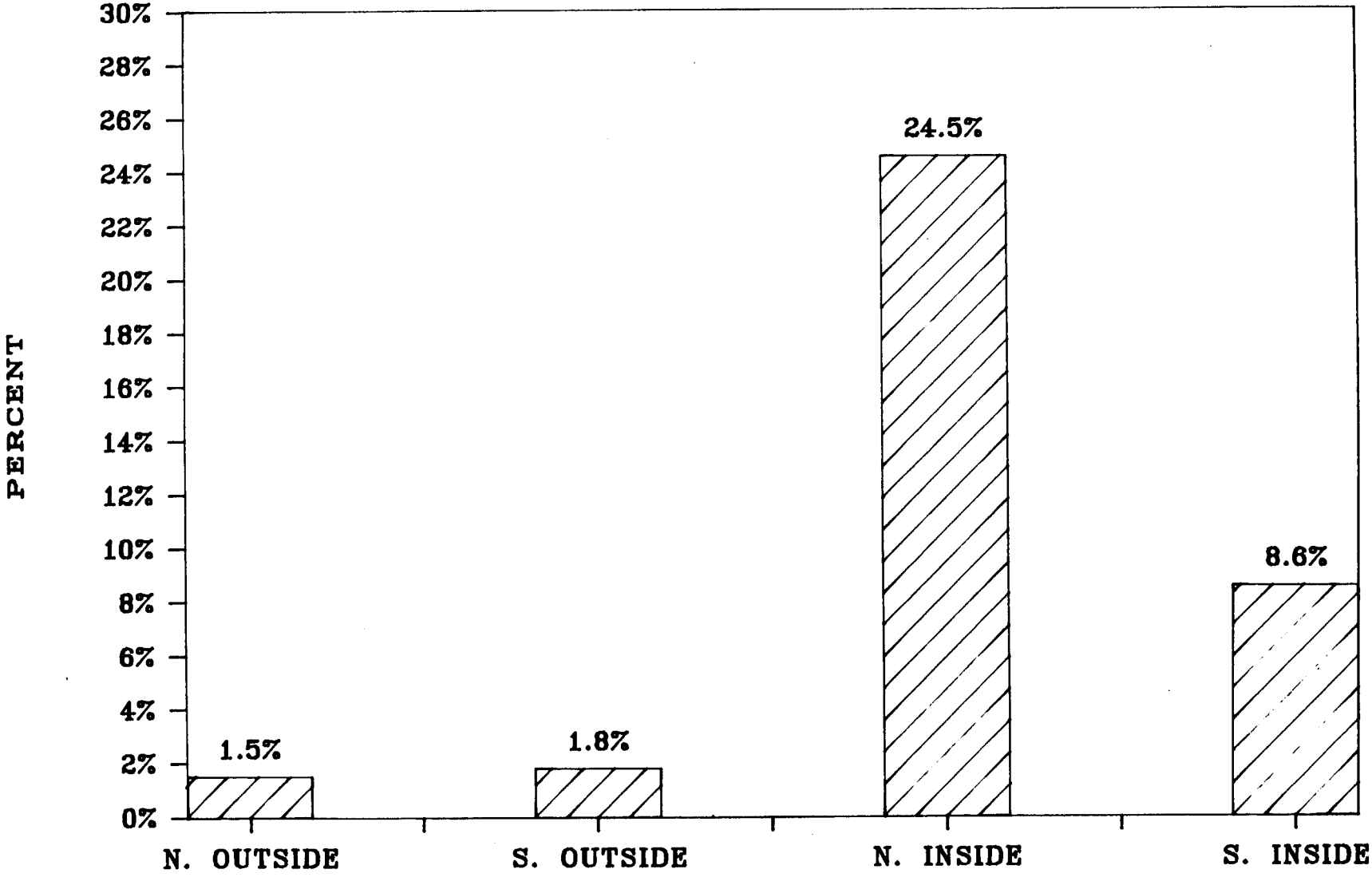


FIGURE 8

# S.E. ALASKA WINTER TROLL FISHERY CHINOOK CATCH AND LANDINGS (X 10)

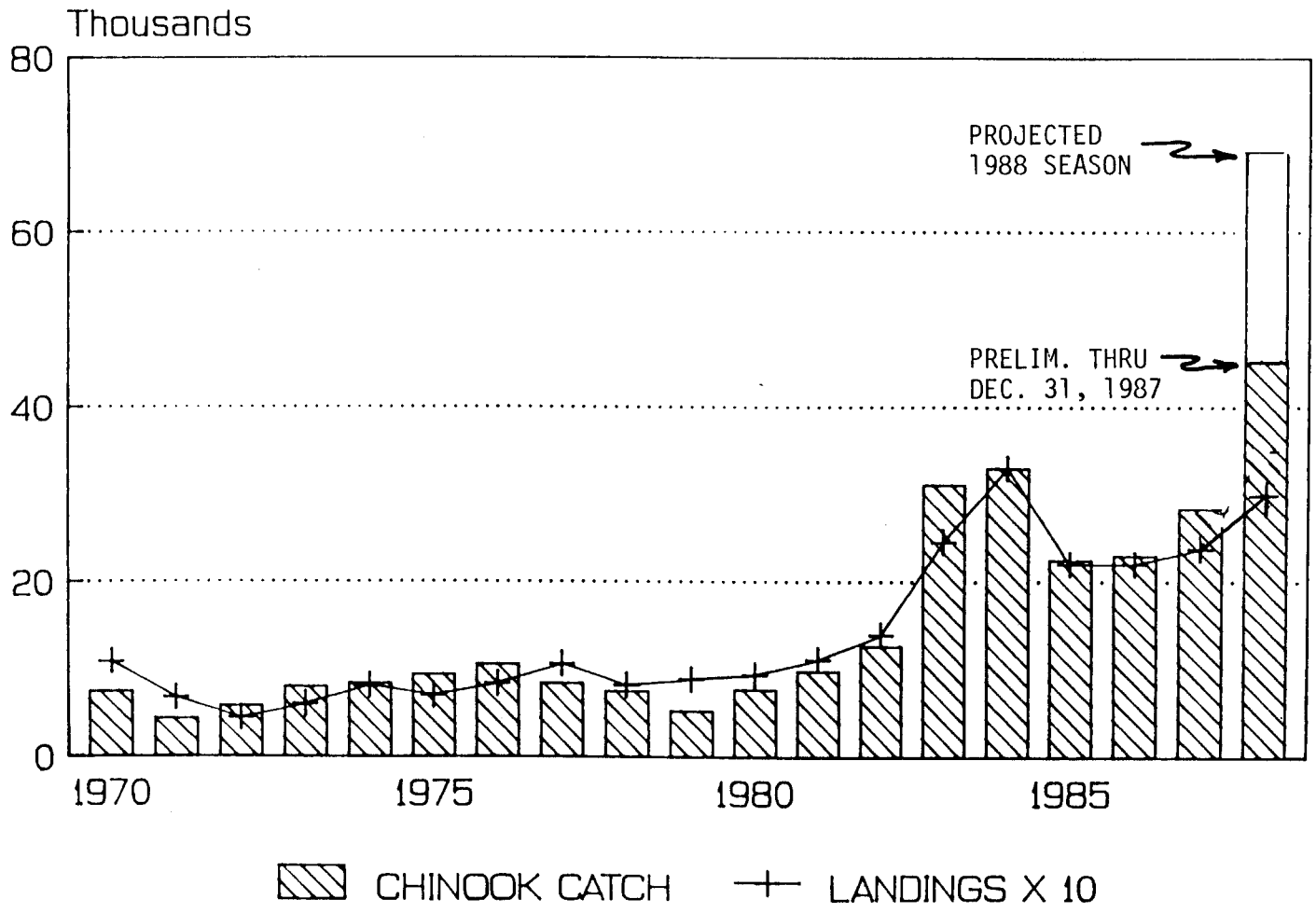


FIGURE 9

1986/87 S.E. ALASKA WINTER TROLL
PERCENT CHINOOK CATCHES BY MONTH

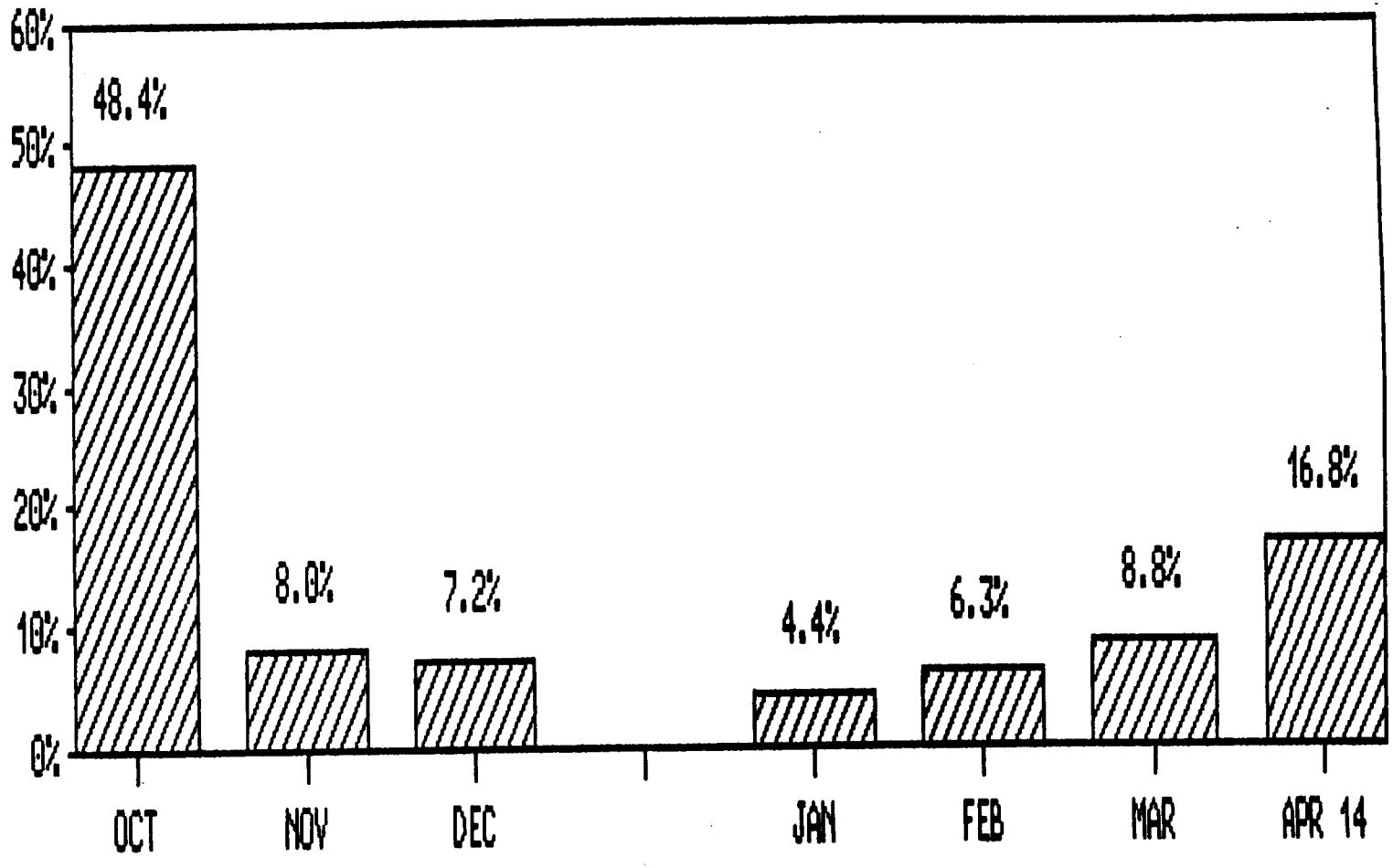


FIGURE 10

CHINOOK SALMON CATCH BY AREA
1986/87 S.E. ALASKA WINTER TROLL

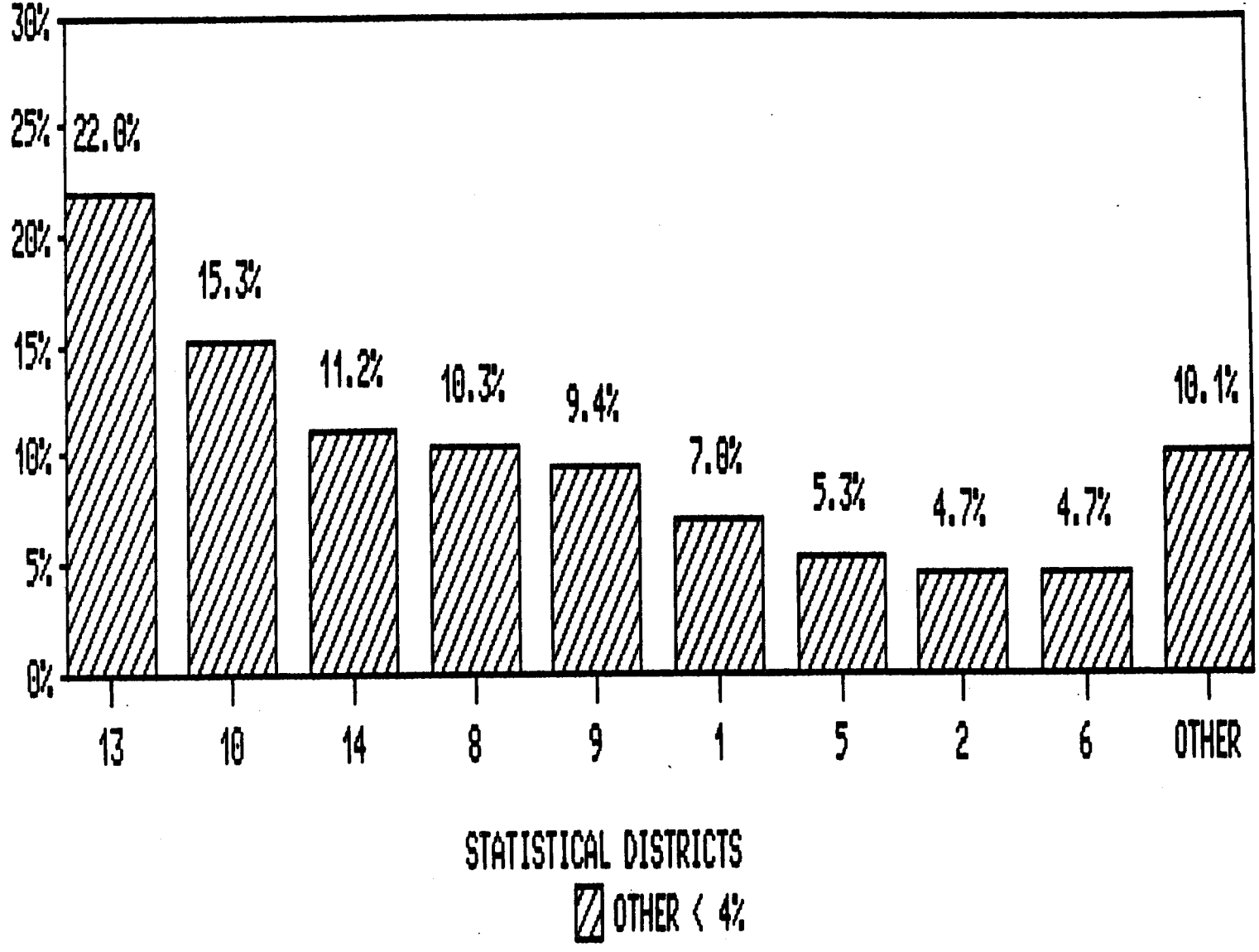


FIGURE 11

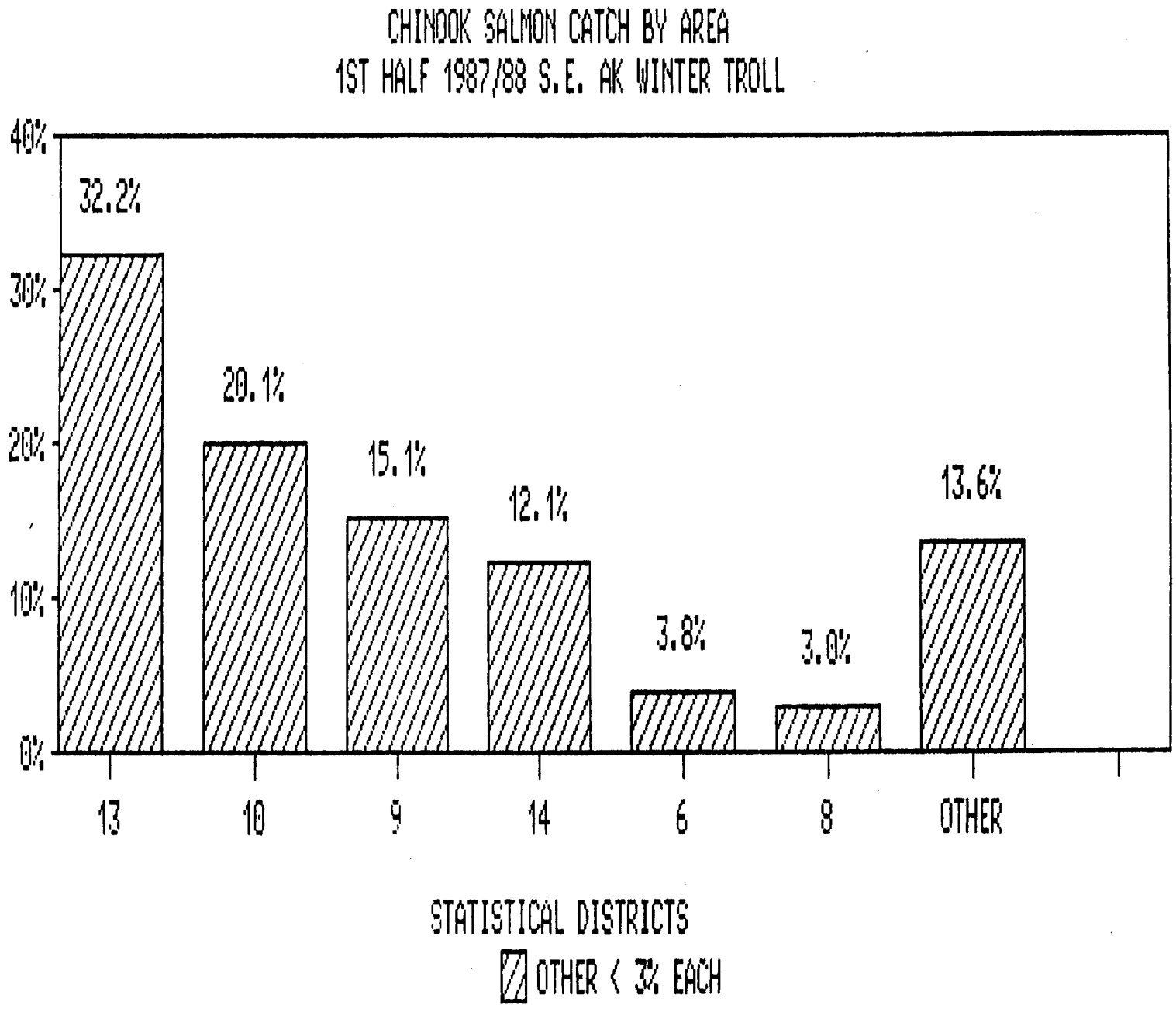

CHINOOK SALMON CATCH BY AREA
1ST HALF 1987/88 S.E. AK WINTER TROLL
40%
30%
20%
10%
0%
32.2%
20.1%
15.1%
12.1%
3.8%
3.0%
13.6%
13
10
9
14
6
8
OTHER
STATISTICAL DISTRICTS
OTHER < 3% EACH

FIGURE 12

OCT-DEC 1987 WINTER TROLL CHINOOK CATCH
AK HATCHERY CONTRIBUTIONS BY AREA

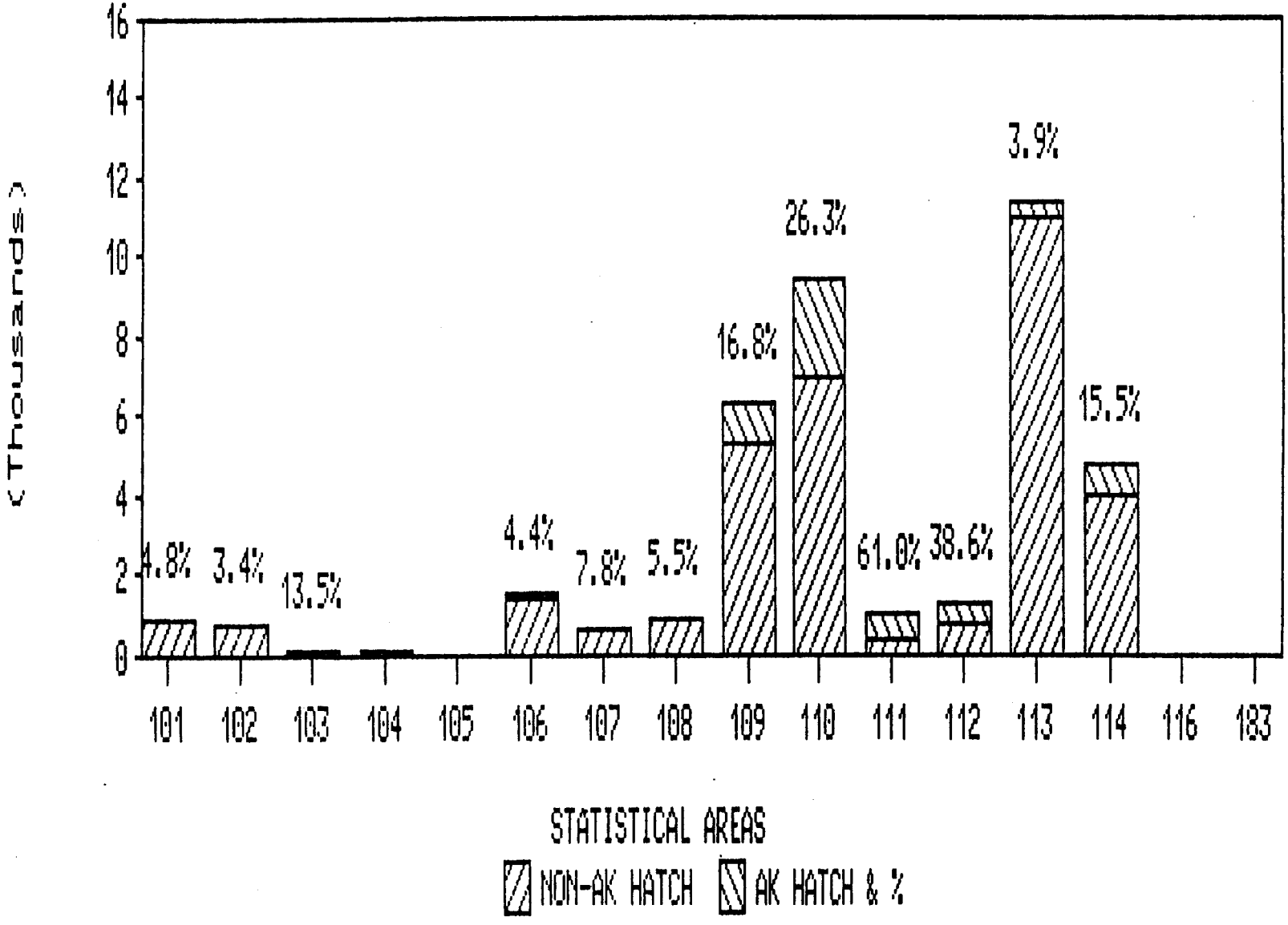
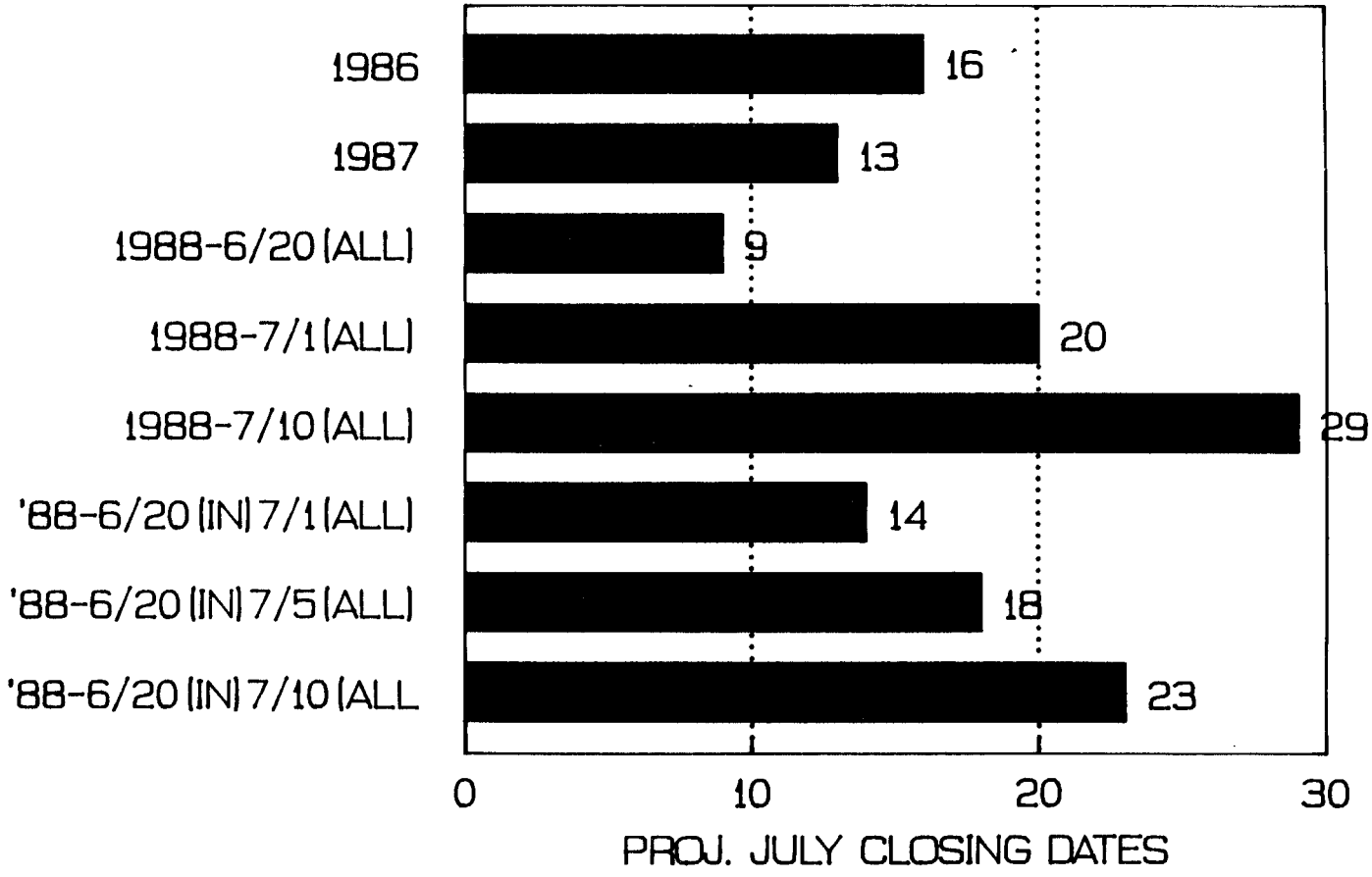


FIGURE 13

# PROJECTED CLOSING DATES
## S.E. AK SUMMER TROLL CHINOOK




FILE: OPTION88

NOTE: 'ALL' refers to regionwide opening
'IN' refers to inside areas opening
'6/20(IN)' refers to 6/20-30 inside areas opening

TABLE 1. PRELIMINARY SUMMARY OF 1987 CHINOOK SALMON CATCHES BY SOUTHEAST ALASKA FISHERIES. (REVISION DATE: OCT. 16, 1987) (FILE: CHIN1016.WK1; DISK: 1987 SEASON CHINOOK)

| FISHERY | PRELIMINARY CATCHES NUMBER | | PERCENT |
|---|---|---|---|
| TROLL FISHERY | 242,300 | | 86.6% |
| WINTER (OCT 1 - APR 14) | | 28,400 | |
| JUNE EXPERIM. HATCHERY | | 4,400 | |
| GENERAL SUMMER (JUN 20 - JUL 12) | | 209,500 | |
| NET FISHERIES | 15,400 | | 5.5% |
| DRIFT GILLNET | | 8,800 | |
| SET GILLNET | | 1,800 | |
| PURSE SEINE (> 5 LB.) | | 4,600 | |
| TRAP/ANNETTE IS. (PROJECTED) | | 200 | |
| COMMERCIAL FISHERIES SUBTOTALS | 257,700 | | 92.1% |
| RECREATIONAL FISHERIES (SEASON PROJ.) | 22,000 | | 7.9% |
| ALL GEAR TOTALS | 279,700 | | 100.0% |

1987 SOUTHEAST ALASKA ALL GEAR CATCH CEILING:

| | | |
|---|---|---|
| BASE | = | 263,000 |
| ADDON | = | 16,000 |
| TOTAL | = | 279,000 |

DEVIATION FROM CATCH CEILING = 700 0.3%

PRELIMINARY 1987 ALASKA HATCHERY ADDON COMPUTATIONS

| | | |
|---|---|---|
| | 23,300 | = ESTIMATED 1987 TOTAL ALASKA HATCHERY HARVEST |
| LESS | 5,000 | = "OLD" (1984) HATCHERY HARVEST |
| | 18,300 | = ESTIMATED "NEW" HATCHERY HARVEST IN 1987 |
| LESS | 2,300 | = POTENTIAL ESTIMATION ERROR RISK ADJUSTMENT |
| | 16,000 | = ESTIMATED 1987 HATCHERY ADDON |

TABLE 2. PRELIMINARY POST-SEASON ESTIMATES OF ALASKA HATCHERY CHINOOK SALMON CONTRIBUTIONS TO 1987 SOUTHEAST ALASKA FISHERIES. (FILE: HATSUM4.WK1; DISK: 1987 SEASON HATCHERY)

REVISED: OCTOBER 16, 1987

| | TROLL FISHERY | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | WINTER FISHERY | | EXPER. FISHERIES | | SUMMER FISHERY | | TROLL TOTALS | |
| HATCHERY | NUMBERS | PERCENT | NUMBERS | PERCENT | NUMBERS | PERCENT | NUMBERS | PERCENT |
| CRYSTAL L. (ADF&G) | 1416 | 40.7% | 614 | 43.4% | 6524 | 55.7% | 8554 | 51.5% |
| DEER MTN. (ADF&G) | 37 | 1.1% | 6 | 0.4% | 26 | 0.2% | 69 | 0.4% |
| HIDDEN FALLS (ADF& | 34 | 1.0% | 13 | 0.9% | 243 | 2.1% | 290 | 1.7% |
| LITTLE PORT (NMFS) | 814 | 23.4% | 509 | 36.0% | 2399 | 20.5% | 3722 | 22.4% |
| MEDVEJIE (NSRAA) | 33 | 0.9% | 0 | 0.0% | 26 | 0.2% | 59 | 0.4% |
| NEETS B. (SSRAA) | 46 | 1.3% | 33 | 2.4% | 375 | 3.2% 1/ | 454 | 2.7% |
| SNETTISHAM (ADF&G) | 58 | 1.7% | 63 | 4.5% | 747 | 6.4% | 868 | 5.2% |
| TAMBAS CR. (BIA) | 7 | 0.2% | 58 | 4.1% | 486 | 4.1% | 551 | 3.3% |
| WHITMAN (SSRAA) | 1036 | 29.8% | 118 | 8.3% | 887 | 7.6% | 2041 | 12.3% |
| GEAR TOTALS | 3481 | 100.0% | 1414 | 100.0% | 11713 | 100.0% | 16608 | 100.0% |
| GEAR PERCENTAGES | 14.9% | | 6.1% | | 50.2% | | 71.2% | |

| | NET FISHERIES | | | | | SPORT FISHERIES 3/ | | ALL GEAR TOTALS | |
|---|---|---|---|---|---|---|---|---|---|
| HATCHERY | GILLNET NUMBERS | SEINE NUMBERS | TRAP 2/ NUMBERS | NET SUBTOTALS NUMBERS | PERCENT | NUMBERS | PERCENT | NUMBERS | PERCENT |
| CRYSTAL L. (ADF&G) | 242 | 54 | 0 | 296 | 12.8% | 1281 | 29.1% | 10131 | 43.4% |
| DEER MTN. (ADF&G) | 10 | 1 | 0 | 11 | 0.5% | 486 | 11.0% | 566 | 2.4% |
| HIDDEN FALLS (ADF& | 23 | 52 | 0 | 75 | 3.2% | 64 | 1.5% | 429 | 1.8% |
| LITTLE PORT (NMFS) | 63 | 71 | 0 | 134 | 5.8% | 322 | 7.3% | 4178 | 17.9% |
| MEDVEJIE (NSRAA) | 0 | 0 | 0 | 0 | 0.0% | 1 | + | 60 | 0.3% |
| NEETS BAY (SSRAA) | 379 | 67 | 0 | 446 | 19.3% 1/ | 488 | 11.1% | 1388 | 6.0% |
| SNETTISHAM (ADF&G) | 301 | 15 | 0 | 316 | 13.6% | 170 | 3.9% | 1354 | 5.8% |
| TAMBAS CR. (BIA) | 643 | 0 | 39 | 682 | 29.4% | 45 | 1.0% | 1278 | 5.5% |
| WHITMAN (SSRAA) | 294 | 46 | 16 | 356 | 15.4% | 1544 | 35.1% | 3941 | 16.9% |
| GEAR TOTALS | 1955 | 306 | 55 | 2316 | 100.0% | 4400 | 100.0% | 23325 | 100.0% |
| GEAR PERCENTAGES | 8.4% | 1.3% | 0.2% | 9.9% | | 18.9% | | 100.0% | |

1/ NEETS BAY CONTRIBUTIONS INCLUDE STAT. AREA 101-95 TERMINAL CATCHES: TROLL - 6; SEINE - 63; GILLNET - 287.

2/ PRELIMINARY ESTIMATES OF ALASKA HATCHERY CONTRIBUTIONS TO ANNETTE ISLAND TRAP GEAR BASED ON PROJECTED TOTAL SEASON TRAP CATCH OF 200 CHINOOK SALMON.

3/ PRELIMINARY ESTIMATES OF TOTAL ALASKA HATCHERY CONTRIBUTIONS TO 1987 SPORT FISHERIES BASED ON 1986 TOTAL PERCENTAGE CONTRIBUTION (20%); TOTAL CONTRIBUTION ALLOCATED TO HATCHERIES BASED ON 1986 PROPORTIONS.

TABLE 3. PRELIMINARY POST-SEASON ESTIMATE OF 1987 ALASKA HATCHERY ADDON OF CHINOOK SALMON FOR SOUTHEAST ALASKA FISHERIES. (FILE: ADDON87B.WK1; DISK: 1987/88 ADDON)

REVISION DATE: DECEMBER 10, 1987

NEW HATCHERY PRODUCTION ADD-ON COMPUTATIONS

| | | | |
|---|---|---|---|
| TOTAL | = EST. TOTAL '87 HATCHERY CONTRIB. | = | 23,300 |
| MINUS OLD | = EST. 1984 HATCHERY HARVEST | = | 5,000 |
| NEW | = TOTAL - OLD (= EST. NEW HATCHERY HARVEST) | = | 18,300 |
| MINUS RISK ADJ | = SEE CALCULATIONS BELOW | = | 2,300 |
| ADD-ON | = NEW - RISK ADJ | = | 16,000 |

RISK ADJUSTMENT COMPUTATION

Risk Adjustment = (Coeff. of Variation of Total Hatchery Harvest Est.)
X (Est. Total Hatchery Harvest)
X (One-sided Normal Variate Value for 1 in 20 Risk)

= 6% X 23300 X 1.64

= 2293

= 2300 (Rounded)

TABLE 4. PRELIMINARY CHINOOK SALMON CATCHES AND ESTIMATED CONTRIBUTIONS FROM ALASKA HATCHERIES TO SOUTHEAST ALASKA EXPERIMENTAL TROLL FISHERIES IN NEAR-TERMINAL HATCHERY AREAS, JUNE 1987. (FILE: EXPER87.WK1; DISK: 1987 HATCHERY)

REVISION DATE: DECEMBER 10, 1987

| NEAR-TERMINAL HATCHERY AREA | PERIOD 1/ JUNE 1-6 | 7-13 | 14-18 | TOTAL | ALASKA HATCHERY CONTRIBUTIONS 2/ NO. | PERCENT |
|---|---|---|---|---|---|---|
| MEDVEJIE | 9 | 3 | 6 | 18 | 0 | 0% |
| CRYSTAL LAKE | 23 | 66 | 87 | 176 | 92 | 52% |
| LITTLE PORT | 255 | 854 | 2,289 | 3,398 | 1,156 | 34% |
| NEETS BAY | 187 | 304 | 364 | 855 | 166 | 19% |
| | 474 | 1,227 | 2,746 | 4,447 | 1,414 | 32% |

DATA SOURCES: CATCHES: ADF&G CWT LAB REPORT OF 10 OCT 1987.
ALASKA HATCHERY CONTRIBUTIONS:
ADF&G CWT LAB REPORT OF 10 SEPT 1987

1/ LENGTH OF WEEKLY FISHING PERIODS VARIED BY AREA.
2/ ESTIMATED CONTRIBUTIONS FROM ALL SOUTHEAST ALASKA HATCHERIES.

TABLE 5. PRELIMINARY 1988 PRESEASON PROJECTIONS FOR CHINOOK SALMON PRODUCTION FROM SOUTHEAST ALASKA HATCHERIES.
(FILE: PROJ88.WK1; DISK: 1987/88 HATCHERY)

REVISION DATE: NOVEMBER 12, 1987

| FACILITY | PROJECTED TOTAL PRODUCTION | PROJECTED HARVEST BY MIXED-STOCK FISHERIES | POTENTIAL TERMINAL HARVEST | BROOD STOCK |
|---|---|---|---|---|
| CARROL INLET 1/ | 2,400 | 800 | 1,600 | 0 |
| CRYSTAL LAKE | 16,355 | 6,320 | 7,535 | 2,500 |
| DEER MOUNTAIN | 3,223 | 2,148 | 0 | 1,075 |
| EARL WEST COVE 1/ | 1,385 | 120 | 1,265 | 0 |
| HIDDEN FALLS | 1,550 | 1,100 | 300 | 150 |
| LITTLE PORT WALTER | 7,300 | 3,400 | 1,400 | 2,500 |
| MEDVEJIE | 450 | 250 | 0 | 200 |
| NEETS BAY | 32,000 | 16,000 | 14,000 | 2,000 |
| SHELDON JACKSON 2/ | 300 | 100 | 200 | 0 |
| SNETTISHAM | 1,860 | 1,110 | 0 | 750 |
| TAMGAS | 7,200 | 3,600 | 3,100 | 500 |
| WHITMAN LAKE | 3,400 | 1,200 | 1,500 | 200 |
| TOTALS | 77,423 | 36,148 | 30,900 | 9,875 |

1/ REARING/RELEASE FACILITIES ONLY.
2/ POTENTIAL TERMINAL HARVEST OF JACKS AND EXCESS MALES ONLY.

TABLE 6. PRELIMINARY PRE-SEASON ESTIMATE OF 1988 ALASKA HATCHERY ADDON OF CHINOOK SALMON FOR SOUTHEAST ALASKA FISHERIES. (FILE: ADDON88.WK1; DISK: 1986/87 ADDON)

REVISION DATE: DECEMBER 12, 1987

NEW HATCHERY HARVEST ADD-ON COMPUTATIONS

| | | | |
|---|---|---|---|
| TOTAL | = EST. TOTAL '88 HATCHERY CONTRIB. | = | 36,100 |
| MINUS OLD | = EST. 1984 HATCHERY HARVEST | = | 5,000 |
| NEW | = TOTAL - OLD (= EST. NEW HATCHERY HARVEST) | = | 31,100 |
| MINUS RISK ADJ | = SEE CALCULATIONS BELOW | = | 4,100 |
| ADD-ON | = NEW - RISK ADJ | = | 27,000 |

RISK ADJUSTMENT COMPUTATION

Risk Adjustment = (Coeff. of Variation of Total Hatchery Harvest Est.)
X (Est. Total Hatchery Harvest)
X (One-sided Normal Variate Value for 1 in 20 Risk)

= 7% X 36100 X 1.64

= 4144

= 4100 (Rounded)

Note: The pre-season estimated 1988 Alaska hatchery harvest of 36,100 chinook salmon is for non-terminal common property fisheries. Some additional terminal area harvest may occur at some hatcheries.

Table 7. Southeast Alaska winter troll fishery vessel landings and chinook salmon catches, and comparison with total season troll chinook catches, 1970 to present. (Rev. ADF&G 3/88) (File: winter.wk1; disk: 1988 spring board)

| Year | >>>>>>>>>>>> Winter Fishery >>>>>>>>>>>>>>>>> Vessel Landings | No. of Chinook | Chin. Per Landing | Percent of Total | Total Season Catch |
|---|---|---|---|---|---|
| 1970 | 1,085 | 7,400 | 6.8 | 2.4% | 305,000 |
| 1971 | 668 | 4,300 | 6.4 | 1.3% | 334,000 |
| 1972 | 434 | 5,700 | 13.1 | 2.4% | 242,000 |
| 1973 | 593 | 7,900 | 13.3 | 2.6% | 308,000 |
| 1974 | 804 | 8,300 | 10.3 | 2.6% | 322,000 |
| 1975 | 691 | 9,300 | 13.5 | 3.2% | 287,000 |
| 1976 | 825 | 10,500 | 12.7 | 4.5% | 231,000 |
| 1977 | 1,054 | 8,300 | 7.9 | 3.1% | 272,000 |
| 1978 | 807 | 7,400 | 9.2 | 2.0% | 376,000 |
| 1979 | 878 | 5,200 | 5.9 | 1.5% | 338,000 |
| Ave. 1970-79 | 784 | 7,400 | 9.9 | 2.5% | 302,000 |
| 1980 | 927 | 7,600 | 8.2 | 2.5% | 300,000 |
| 1981 | 1,104 | 9,700 | 8.8 | 3.9% | 248,000 |
| 1982 | 1,385 | 12,600 | 9.1 | 5.2% | 242,000 |
| 1983 | 2,455 | 31,100 | 12.7 | 11.5% | 271,000 |
| 1984 | 3,300 | 33,000 | 10.0 | 14.0% | 236,000 |
| 1985 | 2,200 | 22,500 | 10.2 | 10.4% | 217,000 |
| 1986 | 2,200 | 23,000 | 10.5 | 9.7% | 236,000 |
| 1987 | 2,379 | 28,400 | 11.9 | 11.7% | 242,000 |
| 1988 PRELIMINARY AND PROJECTED SEASON | | | | | |
| PRELIM. THROUGH DEC. 31, 1987 | 2,600 | 45,000 | 17.3 | NA | NA |
| PROJ. THROUGH APRIL 14, 1988 1/ | | 70,000 | NA | NA | NA |

Note: Troll winter season dates are Oct. 1 through April 14. Total season catches for 1970-80 are for calendar year; catches from 1981 to present are for chinook catch accounting year Oct. 1 through Sept. 30.

1/ 1987/88 Projection calculated assuming same percentage (35%) of total winter catch after Jan. 1 as in the 1986/87 season.

TABLE 8. 1988 PRESEASON PROJECTIONS OF ALASKA HATCHERY CONTRIBUTIONS OF CHINOOK SALMON TO ALL S.E. ALASKA FISHERIES, AND PRELIMINARY ESTIMATED CONTRIBUTIONS TO THE WINTER TROLL FISHERY FROM OCTOBER 1 THROUGH DECEMBER 31, 1987.
(FILE: HATSUM1.WK1; DISK: 1988 CHINOOK I)

REVISED: MARCH 11, 1988

| | TOTAL 1988 PRESEASON PROJECTED CONTRIBUTIONS TO ALL FISHERIES 1/ | | EST. CONTRIBUTIONS WINTER TROLL 2/ OCT. 1 - DEC. 31 | |
|---|---|---|---|---|
| FACILITY | NUMBERS | PERCENT | NUMBER | PERCENT |
| CRYSTAL L. (ADF&G) | 7,730 | 20.7% | 3,467 | 52.4% |
| DEER MTN. (ADF&G) | 2,148 | 5.8% | 0 | 0.0% |
| HIDDEN FALLS (ADF&G) | 1,100 | 2.9% | 129 | 1.9% |
| LITTLE PORT (NMFS) | 3,400 | 9.1% | 1,209 | 18.3% |
| MEDVEJIE (NSRAA) | 250 | 0.7% | 70 | 1.1% |
| NEETS B. (SSRAA) | 16,000 | 42.9% | 424 | 6.4% |
| SNETTISHAM (ADF&G) | 1,100 | 2.9% | 625 | 9.4% |
| TAMGAS CR. (BIA) | 3,600 | 9.6% | 357 | 5.4% |
| WHITMAN (SSRAA) | 2,000 | 5.4% | 337 | 5.1% |
| TOTALS | 37,328 | 100.0% | 6,618 | 100.0% |

1/ PROJECTED 1988 CONTRIBUTIONS TO ALL SOUTHEAST ALASKA FISHERIES AS REVISED 12/18/87; CRYSTAL L. PROJECTION INCREASED FROM 6,400 TO 7,730 PROJECTED RETURN OF 800 TO CARROL INLET INCLUDED IN WHITMAN; TERMINAL HARVEST, INCLUDING COST RECOVERY, NOT INCLUDED IN ABOVE PROJECTIONS (REFER TO TABLE 5 OF THIS REPORT).

2/ ESTIMATED HATCHERY CONTRIBUTIONS FROM ADF&G FRED CWT LAB REPORT DATED 2/5/87.

TABLE 9.. PRELIMINARY 1988 PRESEASON PROJECTIONS FOR CHINOOK SALMON CATCHES BY SOUTHEAST ALASKA FISHERIES (FILE: PROJ88B.WK1; DISK: 1988 CHINOOK I)

REVISION DATE: MARCH 11, 1988

NUMBERS OF FISH IN THOUSANDS

| FISHERY | PRELIMINARY BASE CATCH CEILING | PROJECTED HATCHERY ADDON PERCENT | NO. | TOTAL PROJECTED CATCH |
|---|---|---|---|---|
| TROLL | 221 | 1/ 70% | 19 | 240 |
| NET | 20 | 10% | 3 | 23 |
| RECREATIONAL | 22 | 20% | 5 | 27 |
| TOTALS | 263 | | 27 | 290 |

1/ BASED ON RECENT YEARS AVERAGES.

PROJECTED 1988 TROLL FISHERY CHINOOK CATCHES

NUMBERS OF CHINOOK IN THOUSANDS

| SEASON | TOTAL | HATCHERY ADDON PERCENT | NO. | BASE |
|---|---|---|---|---|
| WINTER 2/ | 70 | 16% | 11 | 59 |
| JUNE EXPER. 3/ | 5 | 33% | 2 | 3 |
| SUMMER 4/ | 170 | 4% | 6 | 159 |
| TOTALS | 240 | 8% | 19 | 221 |

2/ PROJECTED TOTAL WINTER CATCH BASED ON EXPECTED CATCH OF APPROX. 45,000 THROUGH DEC. 31, AND THE 1986/87 PERCENTAGE OF 65% THROUGH THAT DATE; HATCHERY PERCENTAGE BASED ON 1987/88 DATA.
3/ PROJECTED 1988 JUNE EXPERIMENTAL CATCHES BASED ON 1987 FISHERY.
4/ PROJECTED SUMMER CATCH CALCULATED AS SUM OF REMAINING BASE TROLL CATCH CEILING PLUS REMAINING TROLL HATCHERY HARVEST.

TABLE 10. PRELIMINARY PRESEASON PROJECTIONS FOR DURATION OF 1988 SOUTHEAST ALASKA SUMMER TROLL CHINOOK SEASON UNDER DIFFERENT MANAGEMENT OPTIONS FOR OPENING DATES AND AREAS. (FILE: PROJECT.WK1; DISK: 1988 SPRING BOARD)

ASSUMED FLEET CATCH RATE IN CHINOOK PER DAY:
9,000 = REGIONWIDE OPENINGS
4,500 = INSIDE AREAS OPENINGS (JUNE 20-30)

ASSUMED SUMMER TROLL CHINOOK CATCH TARGET:
170,000 = ALL CHINOOK INCLUDING ALASKA HATCHERY FISH (SEE TABLE 10 OF THIS REPORT.)

| | | | PRESEASON PROJECTIONS | |
|---|---|---|---|---|
| OPTIONS | OPENING DATE | AREAS OPEN | NO. OF OPEN DAYS | CLOSING DATE |
| | | | | JULY |
| 1 | JUNE 20 | ALL 1/ | 19 | 9 |
| 2 | JULY 1 | ALL | 19 | 20 |
| 3 | JULY 10 | ALL | 19 | 29 |
| 4 | JUNE 20-30 | INSIDE | 11 | |
| | JULY 1 | ALL | 13 | 14 |
| 5 | JUNE 20-30 | INSIDE | 11 | |
| | JULY 5 | ALL | 13 | 18 |
| 6 | JUNE 20-30 | INSIDE | 11 | |
| | JULY 10 | ALL | 13 | 23 |

NOTES:

(1) PROJECTED CLOSING DATES HAVE NOT BEEN ADJUSTED FOR POTENTIAL DECREASES IN DAILY CATCH RATES WHICH WOULD BE EXPECTED TO OCCUR AFTER MID-JULY BASED ON FISHERY PERFORMANCE IN PREVIOUS YEARS.

(2) THE DAILY CATCH RATE OF 9,000 CHINOOK OBSERVED IN 1987, AND USED FOR THE ABOVE PROJECTIONS, INCLUDED THE EFFECT OF AREA CLOSURES IMPLEMENTED BEGINNING JULY 4, 1987 TO EXTEND THE CHINOOK SEASON.

(3) FOR REFERENCE, PREVIOUS CHINOOK SEASON CLOSING DATES WERE:

| | OPEN | CLOSE |
|---|---|---|
| 1986 | JUNE 20 | JULY 16 |
| 1987 | JUNE 20 | JULY 13 |

# APPENDIX 1

## PRELIMINARY 1988 CHINOOK SALMON CATCHES AND ESCAPEMENTS REPORTED TO THE U.S./CANADA PACIFIC SALMON COMMISSION

JOINT CHINOOK SALMON
TECHNICAL COMMITTEE

PACIFIC SALMON COMMISSION
600 - 1155 ROBSON STREET
VANCOUVER, B.C.
CANADA, V6E 1B9
(604) 684 - 8081

February 11, 1988

TO: Mr. Ian Todd
FROM: Terry Wright TW
SUBJECT: UPDATE OF 1987 CHINOOK CATCH AND ESCAPEMENT DATA

I was assigned the task of compiling the updates of catch and escapement data for the Chinook Technical Committee (CTC) and making these updates available to the PSC for distribution at the February 13 - 19, 1988 annual meeting.

I am enclosing the following information for distribution:

- PRELIMINARY 1987 CHINOOK SALMON CATCHES IN CEILINGED FISHERIES

- Table 1. PRELIMINARY 1987 CHINOOK CATCHES FROM STOCKS CONTIBUTING TO U.S./CANADA SALMON TREATY AREAS, COMPARED WITH 1984 - 1986.

- Table 2. SUMMARY OF THE ESCAPEMENT, OF ESCAPEMENT INDICATOR STOCKS, 1985 THRU 1987.

C.C. Mike Fraidenburg
Brian Riddell

## PRELIMINARY 1987 CHINOOK SALMON CATCHES IN CEILINGED FISHERIES

Preliminary estimates of 1987 catch for each fishery managed under a harvest ceiling established by the Treaty are provided in the following table. These data are very preliminary and can be expected to change as fish ticket data replace in-season projections, errors are detected and corrected, and as the final landings are included in the catch. Conclusions drawn from these data are, therefore, tentative. Please consult Table 1 for a summary of available coastwide catch statistics.

(Compiled with information available as of 10/21/87)

(THOUSAND FISH)

| AREA AND FISHERY | CEILING | CATCH | DIFFERENCE #'s | DIFFERENCE % |
|---|---|---|---|---|
| SE Alaska (T,N,S) a/ b/ | 279 | 279.7 | 0.7 | +0.3 |
| North/Central B.C. (T,N,S) | 263 | 287.5 | 24.5 | +9.3 |
| West Coast Vancouver I. (T) | 360 | 377.0 | 17.0 | +4.7 |
| Georgia Strait (T,S) | 275 | 159.0 | -116.0 | -42.2 |

a/ T=Troll; N=Net; S=Sport

b/ 263,000 base plus 16,000 hatchery addon.

Catches in all fisheries of interest to the PSC are documented in Table 1.

TABLE 1. PRELIMINARY 1987 CHINOOK CATCHES FROM STOCKS CONTRIBUTING TO U.S./CANADA SALMON TREATY AREAS, COMPARED WITH 1984 - 1986 (numbers of fish in 1,000's).

11-Feb-88 - PRELIMINARY DATA

| | TROLL | | | | NET | | | | SPORT | | | | TOTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AREA | 1987 | 1986 | 1985 | 1984 | 1987 | 1986 | 1985 | 1984 | 1987 | 1986 | 1985 | 1984 | 1987 | 1986 | 1985 | 1984 |
| S.E. ALASKA a/ | 242 | 236 | 217 | 236 | 15 | 22 | 36 | 32 | 22 | 21 | 25 | 22 | 279 | 279 | 278 | 290 |
| BRITISH COLUMBIA | | | | | | b/ | | | | c/ | | | | | | |
| North/Cent. Coast | 244 | 202 | 215 | 254 | 30 | 47 | 51 | 36 | 14 | 12 | 9 | 20 | 288 | 261 | 275 | 310 |
| W. Vanc. Island | 377 | 342 | 358 | 460 | 0.5 | 3.3 | 11 | 44 | d/ 32 | 13 | 14 | 44 | 410 | 358 | 383 | 548 |
| Georgia Strait/Fraser | 38 | 44 | 52 | 88 | 13 | 32 | 31 | 20 | e/ 121 | 182 | 235 | 369 | 172 | 258 | 318 | 477 |
| Johnstone Strait | 2 | 4 | 5 | 9 | 13 | 18 | 38 | 18 | 10 | 10 | 10 | 10 | 25 | 32 | 53 | 37 |
| Juan de Fuca Strait | 0 | 0 | 0.4 | 0.3 | 7 | 18 | 17 | 6 | e/ | | | | 7 | 18 | 17 | 6 |
| sub-total | 661 | 592 | 630 | 811 | 63 | 118 | 148 | 124 | 177 | 217 | 268 | 443 | 901 | 927 | 1,046 | 1,378 |
| WASHINGTON | | | | | | | | | | f/ | | | | | | |
| Strait g/ | 45 | 30 | 13 | 16 | 11 | 17 | 13 | 12 | h/ N/A | 69 | 44 | 48 | 56 | 116 | 70 | 76 |
| San Juans | 0 | 0 | 0 | 0 | 29 | 34 | 33 | 32 | h/ N/A | 17 | 13 | 26 | 29 | 51 | 46 | 58 |
| Other PS | 0 | 0 | 0 | 0 | 107 | 140 | 185 | 181 | h/ N/A | 88 | 110 | 125 | 107 | 228 | 295 | 306 |
| Coast | 82 | 46 | 48 | 12 | 51 | 15 | 25 | 16 | 40 | 24 | 31 | 16 | 173 | 85 | 104 | 44 |
| sub-total | 127 | 76 | 61 | 28 | 198 | 206 | 256 | 241 | 40 | 198 | 198 | 215 | 238 | 404 | 454 | 456 |
| COLUMBIA RIVER | - | - | - | - i/ | 453 | 283 | 151 | 128 | j/ 99 | 66 | 48 | 56 | 552 | 349 | 199 | 184 |
| OREGON | | | | | | | | | | | | | | | | |
| N. Cape Falcon | 8 | 6 | 5 | 9 | - | - | - | - | 4 | 2 | 4 | 0 | 12 | 8 | 9 | 9 |
| Central Coast k/ | 7 | 2 | 3 | 3 | - | - | - | - | 40 | 35 | 30 | 29 | 47 | 37 | 33 | 32 |
| sub-total | 15 | 8 | 8 | 12 | - | - | - | - | 44 | 37 | 34 | 29 | 59 | 45 | 42 | 41 |
| GRAND TOTAL | 1045 | 912 | 916 | 1087 | 729 | 629 | 591 | 525 | 382 | 539 | 573 | 765 | 2,156 | 2,080 | 2,080 | 2,377 |

a/ Southeast Alaska troll chinook catches shown for Oct. 1- Sept. 30 catch counting year.
b/ British Columbia net catches includes only fish over 5 lb. round weight. Native food fishery catches are not included.
c/ Sport catches are for tidal waters only, catch updates will be provided as available.
d/ Estimates of tidal sport catches are from creel surveys in Barkley Sound only. Survey times and areas may vary from year to year.
e/ Georgia Strait sport catches include Juan de Fuca Strait sport catches. 1986 estimate includes projected catch through remainder of year.
f/ Sport catches include both marine and freshwater catches, but only adults in freshwater.
g/ Includes areas 5, 6c and area 4B troll catches outside of the PFMC management period (May - September) in the Juan de Fuca Strait total.
h/ Adjusted for punch card bias by multiplying punch card estimate by 0.833
This bias adjustment methodology is currently under review and may result in future adjustment to these numbers.
i/ Columbia River net catches include Oregon, Washington and treaty catches, but not treaty ceremonial.
j/ Columbia River sport catches are for adults only and include Washington, Oregon and Idaho anglers, including Buoy
k/ *Includes only terminal ocean troll and estuary/inriver sport catches from Cape Falcon to Cape Blanco.*
1986 inriver sport projections based on estimates from 1985 sport tag data.

Table 2. Summary of the escapement of Escapement Indicator Stocks, 1985 thru 1987. (1987 data is very preliminary)

11-Feb-88

| Production Unit | Stock Type | Avg. Esc. Base 1/ | Esc. Goal | 1985 Esc. | 1986 Esc. | 1987 Esc. | 1986-87 % Base | 1986-87 % Goal |
|---|---|---|---|---|---|---|---|---|
| Southeast Alaska | | | | | | | | |
| Situk | Spring | 1,557 | 2,100 | 1,521 | 2,067 | 1,884 | 127 | 94 |
| King Salmon | Spring | 95 | 250 | 146 | 249 | 228 | 251 | 95 |
| Andrews Creek | Spring | 371 | 750 | 510 | 1,131 | 1,042 | 293 | 145 |
| Blossom | Spring | 165 | 1,300 | 1,134 | 2,045 | 2,158 | 1274 | 162 |
| Keta | Spring | 407 | 800 | 998 | 1,104 | 1,229 | 286 | 146 |
| Transboundary Rivers Not Addressed in Treaty Annexes | | | | | | | | |
| Chilkat (U.S.) | Spring | 213 | 2,000 | 625 | 170 | 875 | 246 | 26 |
| Unuk (U.S.) | Spring | 1,283 | 2,900 | 1,862 | 3,402 | 3,157 | 256 | 113 |
| Chickamin (U.S.) | Spring | 344 | 1,400 | 1,531 | 2,683 | 1,560 | 616 | 152 |
| Transboundary Rivers Addressed in Treaty Annexes | | | | | | | | |
| Alsek (U.S.) | Spring | 4,501 | 5,000 | 2,227 | 4,231 | 4,086 | 92 | 83 |
| Alsek (Canada) | Spring | 5,780 | 12,500 | 2,900 | 5,400 | 5,200 | 92 | 42 |
| Taku (U.S.) | Spring | 7,978 | 25,600 | 10,851 | 12,178 | 8,951 | 132 | 41 |
| Taku (Canada) | Spring | 9,967 | 30,000 | 13,600 | 15,200 | 11,200 | 132 | 44 |
| Stikine (U.S.) | Spring | 6,224 | 13,700 | 10,227 | 8,026 | 17,318 | 204 | 92 |
| Stikine (Canada) | Spring | 8,283 | 25,000 | 13,600 | 10,700 | 23,000 | 203 | 67 |
| Canada | | | | | | | | |
| North Coast | Spr/Summer | 27,361 | 72,300 | 63,300 | 78,000 | 65,500 | 262 | 99 |
| Central Coast | Summer | 19,415 | 45,200 | 30,219 | 44,510 | 45,100 | 231 | 99 |
| Fraser | Spr/Summer | 43,480 | 93,700 | 95,500 | 117,000 | 92,200 | 241 | 112 |
| U. Georgia Str. 2/ | Fall | 11,655 | 23,300 | 10,435 | 25,856 | 24,250 | 215 | 108 |
| L. Georgia Str. | Fall | 15,734 | 31,500 | 10,050 | 5,940 | 4,260 | 32 | 16 |
| Lower Fraser | Fall | 83,750 | 175,000 | 147,600 | 162,393 | 78,700 | 144 | 69 |
| WCVI | Fall | 48,103 | 91,700 | 48,135 | 46,976 | N/A * | 98 | 26 |
| Puget Sound | | | | | | | | |
| Skagit | Spring | 1,217 | 3,000 | 3,265 | 1,995 | 2,108 | 169 | 68 |
| Skagit | Summer | 13,265 | 14,900 | 16,298 | 18,127 | N/A | 137 | 61 |
| Stillaguamish | Summer | 817 | 2,000 | 1,409 | 1,230 | N/A | 151 | 31 |
| Snohomish | Summer | 5,028 | 5,250 | 6,342 | 4,443 | N/A | 88 | 42 |
| Green | Fall | 5,723 | 5,800 | 2,908 | 4,792 | N/A | 84 | 41 |
| Dungeness 3/ | Spring | N/A | N/A | N/A | 195 | N/A | N/A | N/A |
| Nooksack 3/ | Spring | N/A | 4,000 | N/A | N/A | N/A | N/A | N/A |
| White 3/ | Spring | N/A | N/A | N/A | N/A | 105 | N/A | N/A |
| Skokomish 3/ | Spring | N/A | N/A | N/A | 0 | N/A | N/A | N/A |
| Hoko 3/ | Fall | N/A | 850 | N/A | 800 | N/A | N/A | N/A |
| Dungeness 3/ | Fall | N/A | 400 | N/A | 39 | N/A | N/A | N/A |

Table 2. (Continued)

| Production Unit | Stock Type | Avg. Esc. Base 1/ | Esc. Goal | 1985 Esc. | 1986 Esc. | 1987 Esc. | 1986-87 % Base | 1986-87 % Goal |
|---|---|---|---|---|---|---|---|---|
| Washington Coast | | | | | | | | |
| Hoh | Spr/Summer | 1,325 | NA 4/ | 1,000 | 1,500 | N/A | N/A | NA 4/ |
| Queets | Spring | 925 | NA 4/ | 700 | 900 | N/A | N/A | NA 4/ |
| Grays Harbor | Spring | 450 | 1,400 | 1,150 | 1,800 | 800 | 289 | 93 |
| Grays Harbor | Fall | 8,575 | 14,600 | 9,400 | 10,500 | N/A | N/A | N/A |
| Quillayute | Summer | 1,250 | NA 4/ | 600 | 600 | N/A | N/A | NA 4/ |
| Quillayute | Fall | 5,850 | NA 4/ | 6,100 | 10,000 | N/A | N/A | NA 4/ |
| Hoh | Fall | 2,875 | NA 4/ | 1,700 | 5,000 | N/A | N/A | NA 4/ |
| Queets | Fall | 3,875 | NA 4/ | 3,900 | 7,900 | N/A | N/A | NA 4/ |
| Columbia River | | | | | | | | |
| Upper River 5/ | Spring | 28,955 | 84,000 | 28,254 | 38,973 | N/A | N/A | N/A |
| Willamette | Spring | 33,450 | 30,000 | 34,500 | 39,200 | 52,800 | 138 | 153 |
| Upper River | Summer | 24,275 | 85,000 | 23,400 | 25,900 | 33,043 | 121 | 35 |
| Lewis River 5/ | Fall | 11,801 | 10,000 | 7,500 | 14,500 | 11,200 | 109 | 129 |
| Upriver Bright 6/ | Fall | 28,325 | 40,000 | 93,300 | 113,200 | 155,300 | 474 | 336 |
| Oregon Coast | | | | | | | | |
| Aggregate Index 7/ | Fall | 83 | N/A | 117 | 97 | 116 | 128 | N/A |

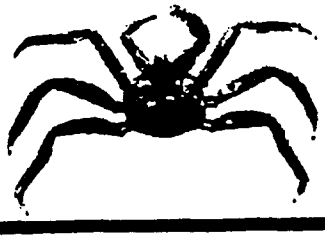
1/ Base period for Alaskan and Transboundary stocks 1975-80; base for all other stocks 1979-82.
2/ Increased 1986 escapement estimate for Upper Georgia Strait reflects unusual survey conditio
3/ Little or no comparative data are available for these stocks.
4/ Stocks managed on the basis of floor minimum and fixed harvest rates.
5/ Only includes naturally spawning component.
6/ The count reported for 1987 is only through October 15 at McNary Dam.
7/ Oregon coastal north-migrating chinook stocks are presently assessed via standard spawning escapement surveys and expressed as an overall aggregate count of average adult spawners per mile. This indice represents standard surveys on 10 of the approximately 20 systems supporting this stock group.

* Estimate not complete, but number of females which spawned naturally will be less than 5,000.

APPENDIX 2

ADF&G NEWS RELEASE FOR INITIAL OPENINGS OF 1987 SOUTHEAST ALASKA EXPERIMENTAL JUNE TROLL FISHERIES

# COMMERCIAL FISHERIES



## NEWS RELEASE

**ALASKA DEPARTMENT OF FISH & GAME**

STATE OF ALASKA
Department of Fish and Game
Don W. Collinsworth, Commissioner

Ken Parker
Director

Southeast Regional Office
P.O. Box 20
Douglas, Alaska 99824

Contact: Paul Larson
(907) 465-4250

FOR IMMEDIATE RELEASE

May 21, 1987

TERMINAL AREA CHINOOK SALMON TROLL FISHERIES

Juneau . . . The Alaska Department of Fish and Game announced today the opening of four limited experimental commercial troll fisheries.

The fisheries will open prior to the beginning of the general summer trolling season on June 20. They are intended to allow evaluation of harvest opportunities for mature chinook salmon returning to the Crystal Lake, Little Port Walter, Medvejie Creek and Neets Bay hatcheries.

The initial open fishing areas and fishing periods are being established as follows:

1. For harvesting Little Port Walter returns, the waters of Section 9-A between the latitude of Patterson Point and Point Armstrong Light, including Patterson Bay, Deep Cove, Port Herbert, Port Walter and Port Lucy will be open from 12:01 a.m., Monday June 1 through 11:59 p.m., Tuesday June 2. The next fishing period will begin on Monday, June 8. The duration of this and subsequent fishing periods will be based on the availability of Little Port Walter chinook salmon returns and will be announced after the initial period.

2. For harvesting Crystal Lake returns the waters of Wrangell Narrows south of 56°46' north latitude and north of a line from North Point to Spruce Point will be open for two days each week from 12:01 a.m., Monday through 11:59 p.m., Tuesday, between June 1-18.

3. For harvesting Neets Bay returns the waters of Clarence Strait will be open for two days each week, from 12:01 a.m., Monday through 11:59 p.m., Tuesday, between June 1-18 in the following areas:

   A. The waters of Section 1-F within two nautical miles of the western shore of Gravina Island north of the latitude of the northernmost entrance to Nehenta Bay and south of the latitude of the northernmost entrance to Grant Cove.

   B. The waters of the District 2 north of a line from the northernmost tip of Street Island to the northernmost tip of Niblack Point and south of the latitude of the northernmost tip of Tolstol Point.

4. For harvesting Medvejie Creek returns the waters of Silver Bay east of a line from Entry Point to a point at 57°01'43" north latitude, 135°14'17" west longitude for two days each week, from 12:01 a.m. Monday through 11:50 p.m. Tuesday, between June 1-18. The waters of Bear Cove east of 135°09'42" west longitude will be closed.

To further investigate the feasibility of harvesting chinook salmon returns to Neets Bay, portions of Section 1-F (west Behm Canal) may be open during the week beginning June 14. Any opening would be dependent on the availability of mature natural and hatchery chinook salmon in the area and will be announced at a later date. The open area would be limited to the immediate vicinity of Neets Bay and the harvest would be considered with the Clarence Strait fisheries for purposes of caculating the allowable catch limit.

These fisheries are considered experimental and trollers will be required to obtain a permit prior to fishing in any of the areas. The permit may be obtained at Division of Commercial Fisheries offices located in Douglas, Haines, Sitka, Petersburg, Wrangell and Ketchikan during normal working hours. The permit stipulations will allow the department to assess potential fishing effort in each area, monitor catch levels and ensure sampling of the landed catches for coded wire tags and other biological data.

Each of these hatcheries is anticipating returns of mature chinook salmon in excess of brood stock needs which may be available for harvest. However, if it is determined that brood stock needs are not being obtained, the fisheries will be limited as needed.

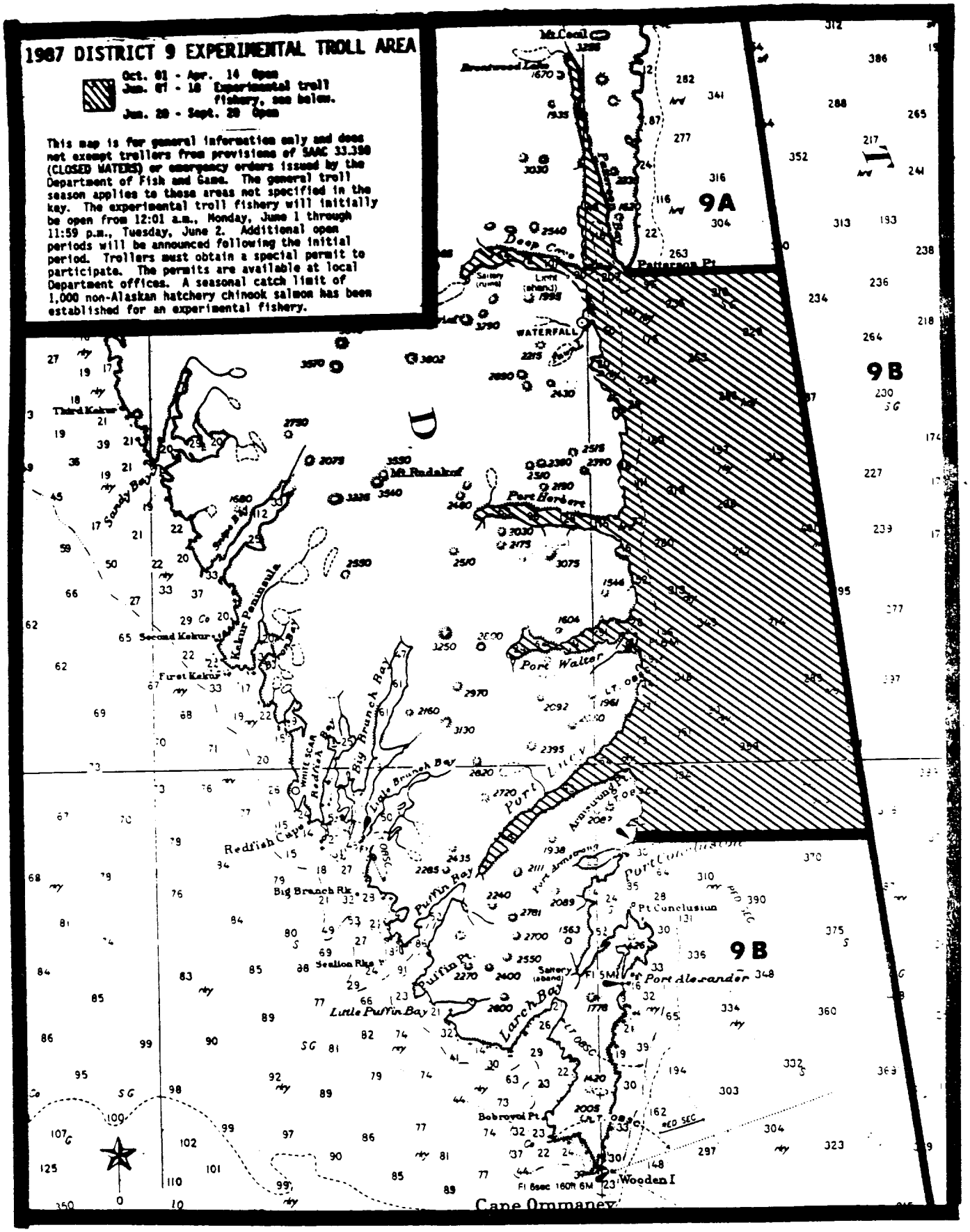
A major goal of each fishery will be to harvest surplus hatchery returns while minimizing the impact on mature Alaskan chinook salmon stocks. Each fishery will be closed if the harvest of legal size chinook salmon, excluding Alaska hatchery fish, reaches 1,000 fish. However, if more than 50 percent of the chinook salmon harvested in an area are Alaskan hatchery fish, the limit for that area of non-Alaskan hatchery chinook may be raised to 2,000 fish. The catch in both of the open areas in Clarence Strait will count toward the allowable catch for the Neets Bay chinook salmon experimental fishery.

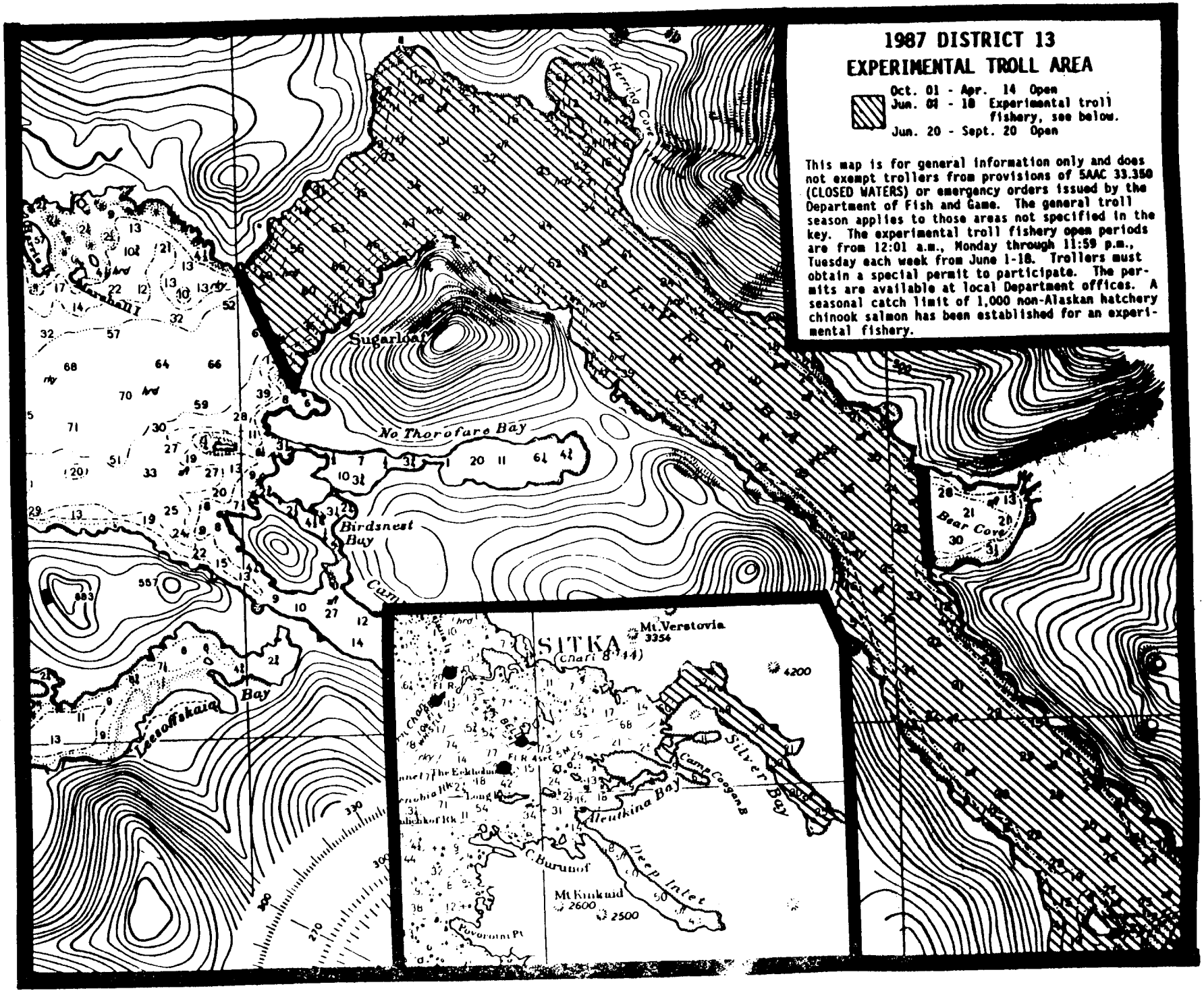
The chinook salmon catches from the experimental fisheries will be included as appropriate in tabulation of catches for compliance with the chinook salmon catch ceiling established by the Pacific Salmon Commission.

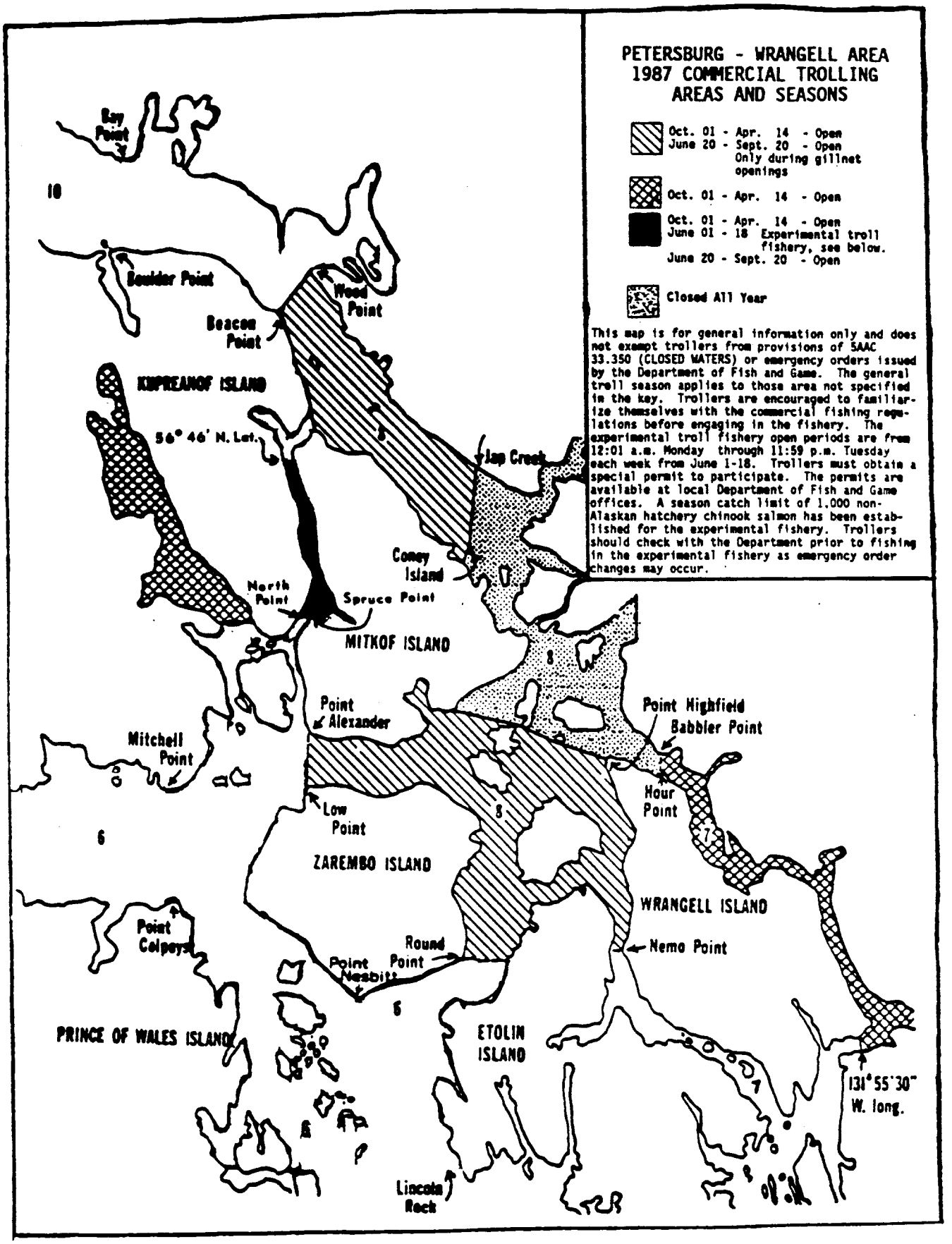
The Crystal Lake, Neets Bay and Medvejie Creek experimental fisheries are in the immediate vicinity of processing facilities and the landed catch is expected to be available for sampling in a timely manner. However, for the Little Port Walter experimental fishery, which is more remote, the department will require trollers to check out of the area. This is to ensure timely catch reporting and allow or arrange for the catch to be sampled for the presence of coded-wire tagged fish. This will include the removal of the upper jaw of adipose clipped fish which indicates presence of a coded-wire tag. For the Section 9-A fishery, check out can be accomplished with ADF&G personnel at the Little Port Walter research facility of the National Marine Fisheries Service. Radio contact can be made on VHF channel 16 to arrange for check out and catch sampling prior to leaving the fishing grounds.

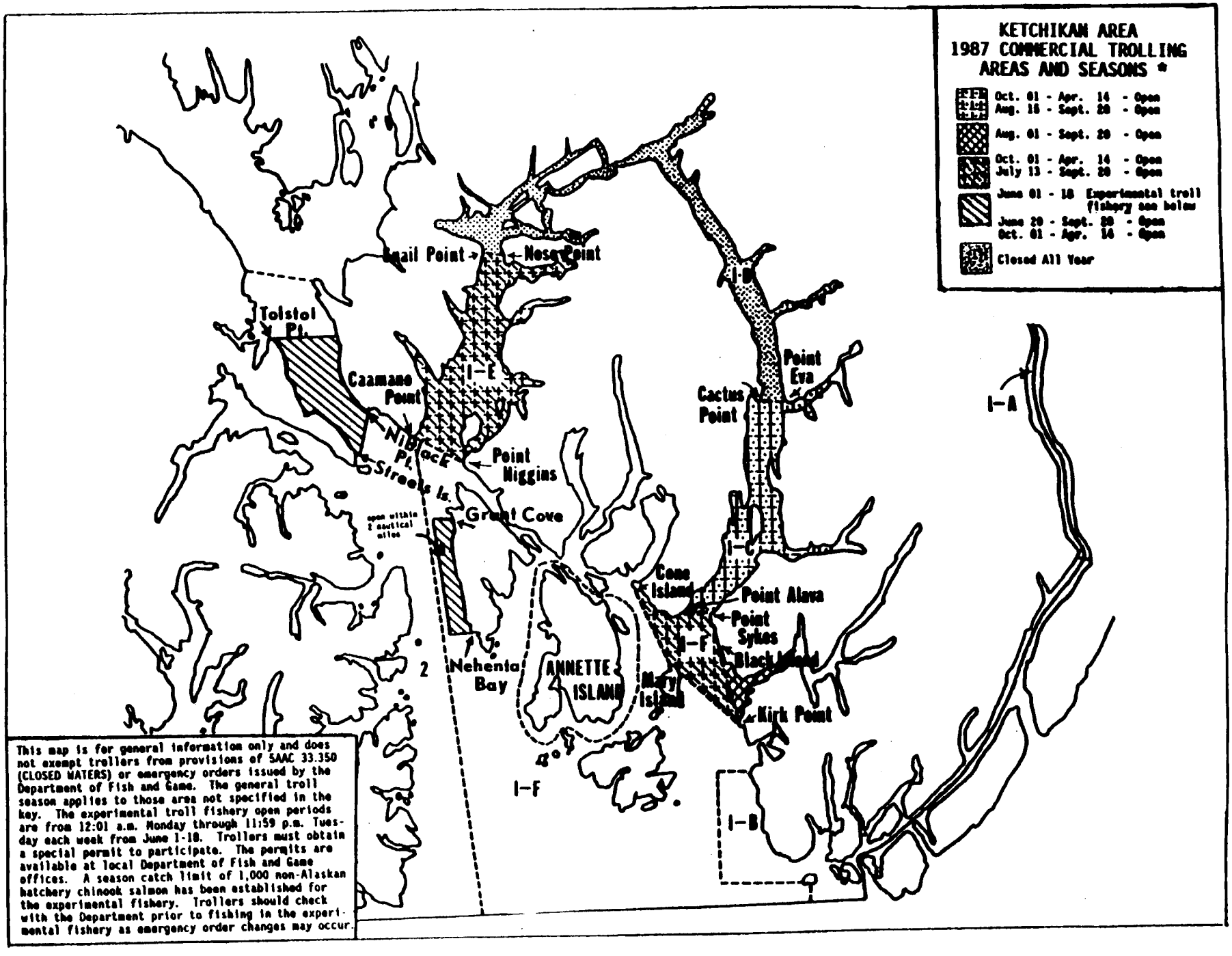
Additional fishing stipulations are described on the required permits. Trollers are encouraged to utilize log books to document fishing activities during the experimental fisheries. Log books are available at local Department of Fish and Game offices.

Phone numbers for the area offices are Juneau 465-4250, Sitka 747-6688, Ketchikan 225-5195, Petersburg 772-3801, and Wrangell 874-3822.


1987 DISTRICT 9 EXPERIMENTAL TROLL AREA
Oct. 01 - Apr. 14 Open
Jun. 01 - 18 Experimental troll fishery, see below.
Jun. 20 - Sept. 20 Open
This map is for general information only and does not exempt trollers from provisions of SAAC 33.350 (CLOSED WATERS) or emergency orders issued by the Department of Fish and Game. The general troll season applies to these areas not specified in the key. The experimental troll fishery will initially be open from 12:01 a.m., Monday, June 1 through 11:59 p.m., Tuesday, June 2. Additional open periods will be announced following the initial period. Trollers must obtain a special permit to participate. The permits are available at local Department offices. A seasonal catch limit of 1,000 non-Alaskan hatchery chinook salmon has been established for an experimental fishery.
9A
9B
9B
D
Mt. Cecil
Patterson Pt
WATERFALL
Mt. Radakof
Pure Berkeley
Pure Walter
Third Kekur
Second Kekur
First Kekur
Kekur Peninsula
Sandy Bay
Redfish Cove
Big Branch Bay
Little Branch Bay
Big Branch Rk
Sealion Rks
Little Puffin Bay
Puffin Bay
Puffin Pt.
Larch Bay
Bobrovof Pt.
Pt Conclusion
Port Alexander
Wooden I
Cape Ommaney
Fl 6sec 160ft 6M


1987 DISTRICT 13
EXPERIMENTAL TROLL AREA
Oct. 01 - Apr. 14 Open
Jun. 04 - 18 Experimental troll fishery, see below.
Jun. 20 - Sept. 20 Open
This map is for general information only and does not exempt trollers from provisions of 5AAC 33.350 (CLOSED WATERS) or emergency orders issued by the Department of Fish and Game. The general troll season applies to those areas not specified in the key. The experimental troll fishery open periods are from 12:01 a.m., Monday through 11:59 p.m., Tuesday each week from June 1-18. Trollers must obtain a special permit to participate. The permits are available at local Department offices. A seasonal catch limit of 1,000 non-Alaskan hatchery chinook salmon has been established for an experimental fishery.
Herring Cove
Sugarloaf
No Thoroughfare Bay
Birdsnest Bay
Bear Cove
Tecoaffskaia Bay
SITKA
Mt. Verstovia
3354
4200
Silver Bay
Camp Coogan B
Deep Inlet
C. Burunof
Mt Kimkaid
2600
2500


PETERSBURG - WRANGELL AREA
1987 COMMERCIAL TROLLING
AREAS AND SEASONS
Oct. 01 - Apr. 14 - Open
June 20 - Sept. 20 - Open
Only during gillnet openings
Oct. 01 - Apr. 14 - Open
Oct. 01 - Apr. 14 - Open
June 01 - 18 Experimental troll fishery, see below.
June 20 - Sept. 20 - Open
Closed All Year
This map is for general information only and does not exempt trollers from provisions of 5AAC 33.350 (CLOSED WATERS) or emergency orders issued by the Department of Fish and Game. The general troll season applies to those area not specified in the key. Trollers are encouraged to familiarize themselves with the commercial fishing regulations before engaging in the fishery. The experimental troll fishery open periods are from 12:01 a.m. Monday through 11:59 p.m. Tuesday each week from June 1-18. Trollers must obtain a special permit to participate. The permits are available at local Department of Fish and Game offices. A season catch limit of 1,000 non-Alaskan hatchery chinook salmon has been established for the experimental fishery. Trollers should check with the Department prior to fishing in the experimental fishery as emergency order changes may occur.
Bay Point
10
Boulder Point
Wood Point
Beacon Point
KUPREANOF ISLAND
56° 46' N. Lat.
Jap Creek
Coney Island
North Point
Spruce Point
MITKOF ISLAND
Point Alexander
Point Highfield
Babbler Point
Mitchell Point
Hour Point
Low Point
ZAREMBO ISLAND
WRANGELL ISLAND
Point Colpoys
Round Point
Nemo Point
Point Nesbitt
PRINCE OF WALES ISLAND
ETOLIN ISLAND
131°55'30" W. long.
Lincoln Rock


KETCHIKAN AREA
1987 COMMERCIAL TROLLING
AREAS AND SEASONS *
Oct. 01 - Apr. 14 - Open
Aug. 16 - Sept. 20 - Open
Aug. 01 - Sept. 20 - Open
Oct. 01 - Apr. 14 - Open
July 13 - Sept. 20 - Open
June 01 - 18 Experimental troll fishery see below
June 20 - Sept. 20 - Open
Oct. 01 - Apr. 14 - Open
Closed All Year
Snail Point
Nose Point
Tolstol Pt.
Caamano Point
Nibbace Pt.
Streets Is.
Point Higgins
Grant Cove
open within 2 nautical miles
Nehenta Bay
ANNETTE ISLAND
Mary Island
Cone Island
Point Alava
Point Sykes
Black Island
Kirk Point
Cactus Point
Point Eva
I-A
I-B
I-C
I-E
I-F
2
4
This map is for general information only and does not exempt trollers from provisions of 5AAC 33.350 (CLOSED WATERS) or emergency orders issued by the Department of Fish and Game. The general troll season applies to those area not specified in the key. The experimental troll fishery open periods are from 12:01 a.m. Monday through 11:59 p.m. Tuesday each week from June 1-18. Trollers must obtain a special permit to participate. The permits are available at local Department of Fish and Game offices. A season catch limit of 1,000 non-Alaskan hatchery chinook salmon has been established for the experimental fishery. Trollers should check with the Department prior to fishing in the experimental fishery as emergency order changes may occur.

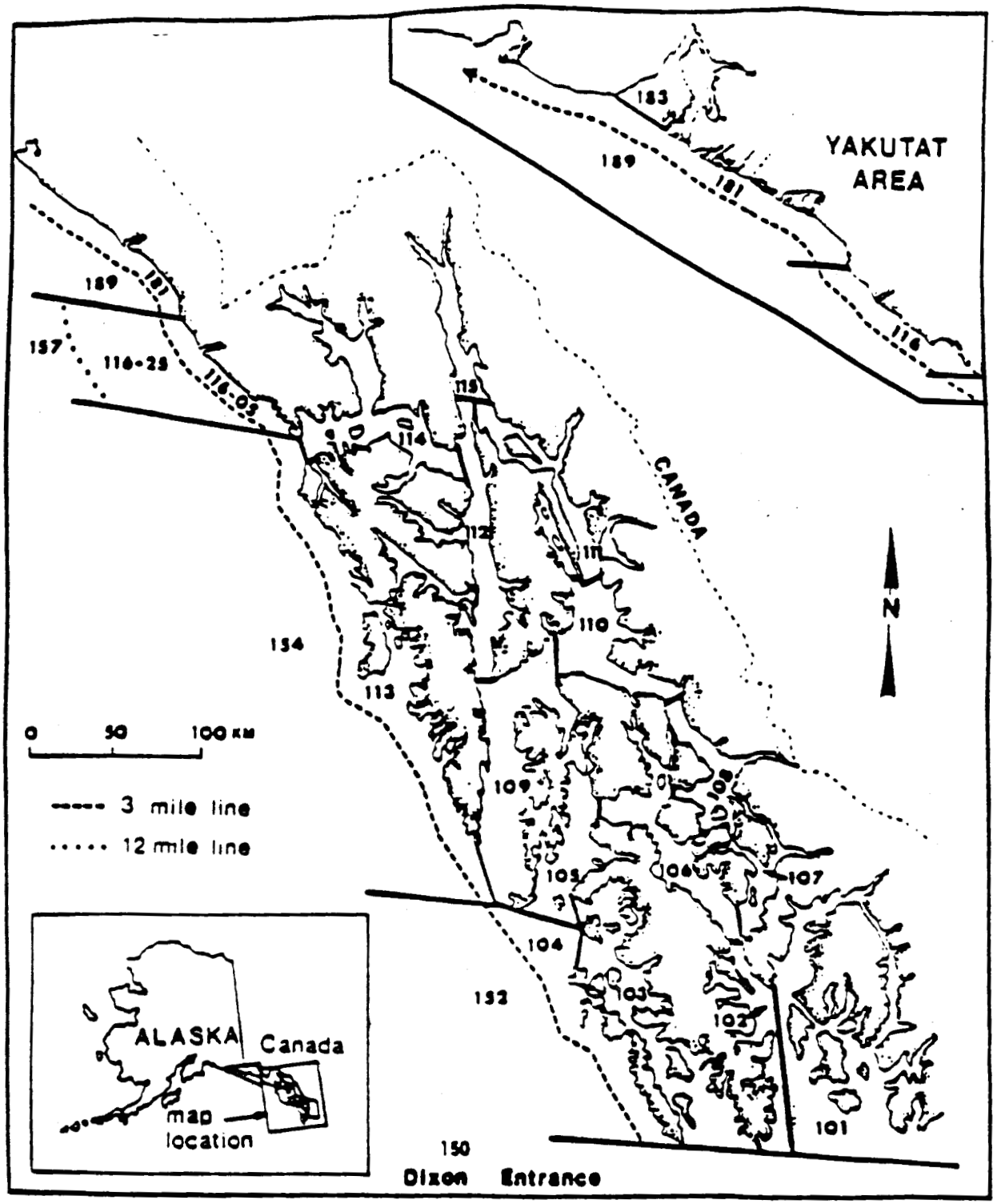



Figure Commercial fishing statistical areas in Southeast Alaska. Fishing districts designated by last two digits of statistical area number.

# 1987 CALENDAR

| January 1987 | February 1987 | March 1987 | April 1987 |
|---|---|---|---|
| S M T W T F S<br>1 2 3<br>4 5 6 7 8 9 10<br>11 12 13 14 15 16 17<br>18 19 20 21 22 23 24<br>25 26 27 28 29 30 31 | S M T W T F S<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28 | S M T W T F S<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | S M T W T F S<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 |
| **May 1987** | **June 1987** | **July 1987** | **August 1987** |
| S M T W T F S<br>1 2<br>3 4 5 6 7 8 9<br>10 11 12 13 14 15 16<br>17 18 19 20 21 22 23<br>24 25 26 27 28 29 30<br>31 | S M T W T F S<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 | S M T W T F S<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 31 | S M T W T F S<br>1<br>2 3 4 5 6 7 8<br>9 10 11 12 13 14 15<br>16 17 18 19 20 21 22<br>23 24 25 26 27 28 29<br>30 31 |
| **September 1987** | **October 1987** | **November 1987** | **December 1987** |
| S M T W T F S<br>1 2 3 4 5<br>6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30 | S M T W T F S<br>1 2 3<br>4 5 6 7 8 9 10<br>11 12 13 14 15 16 17<br>18 19 20 21 22 23 24<br>25 26 27 28 29 30 31 | S M T W T F S<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 | S M T W T F S<br>1 2 3 4 5<br>6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30 31 |

# 1988 CALENDAR

| January 1988 | February 1988 | March 1988 | April 1988 |
|---|---|---|---|
| S M T W T F S<br>1 2<br>3 4 5 6 7 8 9<br>10 11 12 13 14 15 16<br>17 18 19 20 21 22 23<br>24 25 26 27 28 29 30<br>31 | S M T W T F S<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 | S M T W T F S<br>1 2 3 4 5<br>6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30 31 | S M T W T F S<br>1 2<br>3 4 5 6 7 8 9<br>10 11 12 13 14 15 16<br>17 18 19 20 21 22 23<br>24 25 26 27 28 29 30 |
| **May 1988** | **June 1988** | **July 1988** | **August 1988** |
| S M T W T F S<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | S M T W T F S<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 | S M T W T F S<br>1 2<br>3 4 5 6 7 8 9<br>10 11 12 13 14 15 16<br>17 18 19 20 21 22 23<br>24 25 26 27 28 29 30<br>31 | S M T W T F S<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 |
| **September 1988** | **October 1988** | **November 1988** | **December 1988** |
| S M T W T F S<br>1 2 3<br>4 5 6 7 8 9 10<br>11 12 13 14 15 16 17<br>18 19 20 21 22 23 24<br>25 26 27 28 29 30 | S M T W T F S<br>1<br>2 3 4 5 6 7 8<br>9 10 11 12 13 14 15<br>16 17 18 19 20 21 22<br>23 24 25 26 27 28 29<br>30 31 | S M T W T F S<br>1 2 3 4 5<br>6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30 | S M T W T F S<br>1 2 3<br>4 5 6 7 8 9 10<br>11 12 13 14 15 16 17<br>18 19 20 21 22 23 24<br>25 26 27 28 29 30 31 |

# 1989 CALENDAR

| January 1989 | February 1989 | March 1989 | April 1989 |
|---|---|---|---|
| S M T W T F S<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | S M T W T F S<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 | S M T W T F S<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 31 | S M T W T F S<br>1<br>2 3 4 5 6 7 8<br>9 10 11 12 13 14 15<br>16 17 18 19 20 21 22<br>23 24 25 26 27 28 29<br>30 |
| **May 1989** | **June 1989** | **July 1989** | **August 1989** |
| S M T W T F S<br>1 2 3 4 5 6<br>7 8 9 10 11 12 13<br>14 15 16 17 18 19 20<br>21 22 23 24 25 26 27<br>28 29 30 31 | S M T W T F S<br>1 2 3<br>4 5 6 7 8 9 10<br>11 12 13 14 15 16 17<br>18 19 20 21 22 23 24<br>25 26 27 28 29 30 | S M T W T F S<br>1<br>2 3 4 5 6 7 8<br>9 10 11 12 13 14 15<br>16 17 18 19 20 21 22<br>23 24 25 26 27 28 29<br>30 31 | S M T W T F S<br>1 2 3 4 5<br>6 7 8 9 10 11 12<br>13 14 15 16 17 18 19<br>20 21 22 23 24 25 26<br>27 28 29 30 31 |
| **September 1989** | **October 1989** | **November 1989** | **December 1989** |
| S M T W T F S<br>1 2<br>3 4 5 6 7 8 9<br>10 11 12 13 14 15 16<br>17 18 19 20 21 22 23<br>24 25 26 27 28 29 30 | S M T W T F S<br>1 2 3 4 5 6 7<br>8 9 10 11 12 13 14<br>15 16 17 18 19 20 21<br>22 23 24 25 26 27 28<br>29 30 31 | S M T W T F S<br>1 2 3 4<br>5 6 7 8 9 10 11<br>12 13 14 15 16 17 18<br>19 20 21 22 23 24 25<br>26 27 28 29 30 | S M T W T F S<br>1 2<br>3 4 5 6 7 8 9<br>10 11 12 13 14 15 16<br>17 18 19 20 21 22 23<br>24 25 26 27 28 29 30<br>31 |