

ALASKA DEPARTMENT OF FISH AND GAME
FISHERIES REPORT

HERRING SEASON CATCH SUMMARY

The total commercial harvest of herring throughout Alaska from July 1, 1986 through June 30, 1987 was 50,882 tons. Ex-vessel value was more than \$41 million. The value of the harvest was about \$3.2 million greater than last season. The overall harvest was about 10 percent less than last year. A report detailing this fishery is attached under B-2(a).

TROLL SALMON

The 1987 Southeast Alaska all gear chinook salmon catch is projected to be 278,000. Preliminary catches by gear are: troll - 242,000 (87%); net - 14,000 (5%); and sport - 22,000 (8%). The projected all gear catch of 278,000 approximately equals the target catch ceiling of 278,600 chinook established by the Pacific Salmon Commission. A preliminary in-season summary report is enclosed under B-2(b).

WESTWARD REGION KING CRAB

The department and National Marine Fisheries Service have completed their king crab assessment surveys. Based on these surveys and established harvest strategies, the following guideline harvest levels have been set for the 1987-88 Westward king crab fisheries.

begin Fri

<u>Area</u>	<u>Opening Date</u>	<u>Guideline Harvest Level (lbs)</u>
Kodiak	Closed	0
Alaska Peninsula	Closed	0
Dutch Harbor	Closed	0
St. Matthew	September 1	600,000 - 1,000,000
Pribilof Islands	September 25	300,000 - 1,700,000
Bristol Bay	September 25	8,500,000 - 17,700,000
Adak	November 1	500,000 - 1,500,000

A copy of the news release is attached under B-2(c).

1986/87 HERRING SEASON CATCH SUMMARY^{1/}

STATEWIDE

The total commercial harvest of herring throughout Alaska from July 1, 1986 through June 30, 1987 was 50,882 tons amounting to an approximate ex-vessel value of \$41,568,000 to the fishermen. The value this season was about 3.2 million dollars greater than last season. The overall harvest was about 5,100 tons less, about a 10 percent decrease from last season. The value of the fishery increased about 8 percent due to generally higher prices. Statewide harvests for the 1986/87 season are summarized in Table 1 for each region. Table 2 presents comparisons of herring sac-roe harvests for 1984 through 1987.

The 1986 food and bait fisheries started with Cook Inlet on July 1. Dutch Harbor (July 15), Kodiak (Aug. 15), and Prince William Sound (Sept. 15) followed. In Southeast Alaska, the opening was delayed until January 1987. The Southeast and Westward Regions accounted for a majority of the food/bait harvest, 2,374 and 2,595 tons respectively, out of a total statewide food/bait harvest of 7,271 tons, a slight decrease from last season's harvest. The estimated ex-vessel value of the 1986/87 food and bait fisheries was \$1,683,406, a slight increase of about \$200,000 above last season's value.

The herring sac-roe fishery was worth \$37,756,496 to the fishermen and produced a harvest of 43,611 tons. The fisheries started on March 26 at Kah Shakes in Southeast Alaska. Both the Westward Region and portions of Cook Inlet followed the Southeast fisheries with regulatory openings on April 15, although significant harvests did not occur until late April and May. The Prince William Sound sac-roe harvest occurred between April 8 and

^{1/} All figures are preliminary.

April 11. In the Bering Sea, Bristol Bay led off the sac-roe harvests with the fishery occurring between April 27 and May 6. Openings proceeded northward through Goodnews Bay and Security Cove, Nelson and Nunivak Islands, Cape Romanzof, concluding on June 19 in Port Clarence. Fisheries in the Westward Region were the last to close on June 30, although effort throughout June was very limited. Once again, the largest and most valuable sac-roe fishery was Bristol Bay, where 15,107 tons were taken with an ex-vessel value of \$8,614,048 with Lower Cook Inlet a close second at \$8,250,000 for a harvest of 7,060 tons.

The spawn-on-kelp fisheries harvested 302 tons of product in Prince William Sound and Bristol Bay, providing about \$2,249,946 to the fishermen. Of this value, the majority (\$1.8 million) came from the Prince William Sound pound fishery.

SOUTHEAST REGION

The total Southeast Region 1986/1987 herring season harvest was 8,333 tons, down from 9,761 tons taken in 1985/1986. The sac-roe harvest contributed 5,958 tons to this harvest. Total value to the fishermen was \$6,849,800, of which \$6,327,800 was for the sac-roe fisheries.

Food and Bait Fishery

Estimated Harvest = 2,374 tons

Price Paid Fishermen = \$220/ton

Total Estimated Value to Fishermen = \$522,000

Number of Participating Permittees = 24 seiners/1 pound operator

Notes: This year's harvest was below that of the past two years. The Southeastern fishery opened by emergency order on January 10 and concluded on January 18. Portions of Districts 3-B, 4, and 12 were open. A herring bait pound was also operate

near Sitka in April and May. The Yakutat Area produced a small harvest of about 20 tons of bait herring.

Kah Shakes Gillnet Sac-Roe

Estimated Harvest = 1,439 tons
Avg. Roe Percentage = 12%
Price Paid Fishermen = \$1,000/ton for 10%
Total Estimated Value to Fishermen = \$1,726,800
Number of Participating Permittees = 118 gillnetters

Notes: Kah Shakes was the first sac-roo fishery of the 1987 herring sac-roo season. The fishery occurred during two open periods, one on March 26 for 8 hours and one on March 27 for 5 hours and 45 minutes. Fishermen were limited to one 50-fathom net due to the large number of expected participants and the reduced harvest target. The exploitation rate, based on the 1987 spawn deposition surveys, was approximately 10.6 percent.

Seymour Canal Gillnet Sac-Roe

Estimated Harvest = 302 tons
Avg. Roe Percentage = 12.8%
Price Paid Fishermen = \$1,000/ton for 10%
Total Estimated Value to Fishermen = \$385,000
Number of Participating Permittees = 89 gillnetters

Notes: This fishery was open for three hours on May 6. The fishery took about 6 percent of the available herring stock.

Sitka Sound Purse Seine Sac-Roe

Estimated Harvest = 4,216 tons
Avg. Roe Percentage = 9.8%
Price Paid Fishermen = \$1,000/ton for 10%
Total Estimated Value to Fishermen = \$4,216,000

Number of Participating Permittees = 52 seiners

Notes: The entire harvest was taken during a single 4 hour and 10 minute opening on March 31. The exploitation rate, based on spawn deposition surveys, was 8.0 percent. A very large recruitment of three-year-old herring were present in the fishery.

CENTRAL REGION

The Central Region 1986/1987 herring harvest totaled 29,285 tons, of which 1,689 tons were food/bait and the balance was sac roe. In addition, the herring spawn-on-kelp fishery produced 302 tons of product. The ex-vessel value of the Central Region herring fisheries this season totaled \$25,800,152, of which \$23,269,246 was from the sac roe fisheries, \$446,906 was from the food/bait fisheries, and \$2,084,000 was from the spawn-on-kelp fisheries.

Prince William Sound Bait Fishery

Estimated Harvest = 1,276 tons
Price Paid Fishermen = \$275/ton
Total Estimated Value to Fishermen = \$350,900
Number of Participating Permittees = 5 seiners

Notes: The fishery opened September 1, 1986 and closed on October 24, 1986.

Prince William Sound Purse Seine Sac-Roe

Estimated Harvest = 4,886 tons
Avg. Roe Percentage = 11%
Price Paid Fishermen = 1,100/ton
Total Estimated Value to Fishermen = 5,300,000
Number of Participating Permittees = 98 seiners

Notes: The fishery opened on April 8 for a one-hour period. This was followed by a 30-minute opening on April 9. The 1980 and 1981 brood classes dominated the fishery again; however, there was an encouraging show of three year olds in the fishery.

Prince William Sound Gillnet Sac-Roe

Estimated Harvest = 543 tons
Avg. Roe Percentage = 9.5%
Price Paid Fishermen = \$950/ton
Total Estimated Value to Fishermen = \$516,000
Number of Participating Permittees = 24 gillnetters

Notes: The fishery opened on April 10 and lasted only 24 hours. The upper end of the harvest range was exceeded, in part because of the increased use of herring skiffs equipped with shakers.

Prince William Sound Pound Kelp

Estimated Harvest = 60 tons of spawn-on-kelp
Prices Paid Fishermen = \$15/lb.
Total Estimated Value to Fishermen = \$1,800,000
Number of Participating Permit Holders = 109

Notes: The value of the fishery was almost twice last year's. Herring were taken for introduction into the pounds beginning April 10 with the last harvest of roe-on-kelp occurring on April 27. The pounds were located in Galena Bay, Virgin Bay, Boulder Bay, Landlocked Bay, and Moon Bay. The majority of kelp used was Macrocystis from Southeast Alaska, and the resulting product quality was good. This was the first season this fishery was under limited entry. Participation was limited to those who had previously participated in the fishery.

Prince William Sound Wild Kelp

Estimated Harvest = 88 tons

Prices Paid Fishermen = \$1.70/lb. for ribbon kelp

\$0.85/lb. for sieve kelp

\$0.80/lb. for hair kelp

Total Estimated Value to Fishermen = \$284,000

Number of Participating Divers = 69

Notes: The number of participating fishermen was over twice last year's. The value of the fishery was twice last year's. Most of the harvest occurred between April 15 and 17.

Cook Inlet Food and Bait

Estimated Harvest = 95 tons

Price Paid Fishermen = highly variable (about \$500/ton average)

Total Estimated Value to Fishermen = \$47,500

Number of Participating Permittees = up to 50
gillnetters

Notes: The Upper Cook Inlet food and bait fishery opened on April 15, 1987 and closed on May 31, 1987. Catches were below preseason expectations. The major age groups present in the fishery were the 4, 7, and 8 year olds. The Lower Cook Inlet food and bait fishery was not opened on July 1, 1986 due to the very large catch during the previous sac-roe season.

Upper Cook Inlet Sac-Roe

Estimated Harvest = 210 tons
Avg. Roe Percentage = 10.5%
Price Paid Fishermen = \$1,000/ton for 10%
Total Estimated Value to Fishermen = \$220,500
Number of Participating Permittees = about 65
gillnetters

Notes: The sac-roe season opened on April 20, 1987. About 75 tons were harvested in Chinitna Bay which closed on May 7. The total harvest from Tuxedni Bay was 135 tons taken during two openings. Ninety-three tons were taken during the period from May 20 through May 24. Major age groups were the 4, 6, 7, and 8 year olds.

Lower Cook Inlet Sac-Roe

Estimated Harvest = 6,850 tons
Avg. Roe Percentage = 11.5%
Price Paid Fishermen = Kamashak - \$1,000/ton for 10%
Outer/Eastern - \$800/ton for 10%
Total Estimated Value to Fishermen = \$8,250,000
Number of participating Permittees = about 70 seiners

Notes: The majority of the catch came from the Kamashak District (about 6100 tons of the 6900 ton total). Fish were ripe when the fishery opened on April 21 and fishing started immediately. The area was closed on April 23. Catches came from the Iniskin Bay, Fortification Bluff, and Bruin Bay areas. Age composition during the fishery was well balanced with roughly equal proportions of all ages 3 through 11, except that 5 year olds were quite weak and 6, 7, and 8 year olds were slightly stronger than other age classes. Total spawning biomass was about 29,200 tons with 37 miles of spawn observed. Adding the

catch brings the total biomass to 35,300 tons. An additional 87 tons came from the Outer and Eastern Districts, mainly from Aialik Bay, Day Harbor, and Harris Bay. Most of the catch was taken between April 25 and May 6. Samples of the Aialik Bay catch indicated that 93% of the fish were 3 years old.

Bristol Bay Gillnet Sac-Roe

Estimated Harvest = 2,689 tons (includes 318 tons sold as food/bait)

Avg. Roe Percentage = 8.6%

Price Paid Fishermen = \$569/ton for 8.6% roe content

Total Estimated Value to Fishermen = \$1,529,984
(includes \$48,506 for food/bait)

Number of Participating Permittees = 148 gillnetters

Notes: Five gillnet openings totaling 36 hours occurred between April 27 and May 6. The gillnet take made up 1 percent of the total sac-roe harvest compared to 21 percent last year.

Bristol Bay Purse Seine Sac-Roe

Estimated Harvest = 12,736 tons

Avg. Roe Percentage = 8.9%

Price Paid Fishermen = \$589/ton for 8.9% roe content

Total Estimated Value to Fishermen = \$7,501,268

Number of Participating Permittees = 111 seiners

Notes: Five separate purse seine openings between April 27 and May 6 provided the seiners 83 percent of the total Bristol Bay sac roe-harvest. The estimated exploitation rate for all the Bristol Bay herring fisheries was 19.3%.

Bristol Bay Spawn-on-Kelp

Estimated Harvest = 154 tons of spawn-on-kelp
Prices Paid Fishermen = \$0.54/lb.
Total Estimated Value to Fishermen = \$165,945
Number of Participating Permittees = 187

Notes: The fishery occurred between April 29 and May 4. There were five separate openings, totaling 26 hours. Quality of the product was fair to good.

WESTWARD REGION

The total 1986/1987 herring harvest in the Westward Region was 5,665 tons. The sac-roe fisheries yielded 3,070 tons compared to 2,595 tons in the food/bait fisheries. No herring spawn-on-kelp permits were requested for the Shumagin Islands pound fishery. Total ex-vessel value of the Westward herring fisheries amounted to \$3,827,250 this year, of which \$3,112,750 was for the sac-roe fisheries and \$714,500 was for the food and bait fisheries.

Westward Food/Bait

Estimated Harvest = 2,595 short tons
Price Paid Fishermen = \$265/ton (Dutch Harbor) and
\$400/ton (Kodiak)
Total Estimated Value to Fishermen = \$714,500
Number of Participating Permittees = 10

Notes: The Kodiak season ran from August 15, 1986 through its scheduled closure on February 28, 1987 and harvested only 201 tons. One seiner and two trawlers participated in the fishery. No harvest was reported in the Chignik area where the season ran from August 15, 1986 through February 28, 1987. The Alaska Peninsula season ran from July 16 through July 28, 1986 and produced 2,394 tons. Seven seiners participated.

Kodiak Sac-Roe Fishery

Estimated Harvest = 2,161 tons

Avg. Roe Percentage = 10%

Price Paid Fishermen = \$1,150/ton for 10%

Total Estimated Value to Fishermen = \$2,485,150

Number of Participating Vessels = up to 112 seiners and
gillnetters

Notes: All management units opened April 15 on a closed every-other-day basis. Most of the harvest (96%) occurred between April 16 and the end of May. The season closed by regulation June 30. Of the 60 management units, 50 were fished during the season. The indexed exploitation rate, based on preliminary 1987 spawning biomass estimates, was approximately 19.4 percent.

Chignik Sac-Roe Fishery

Estimated Harvest = 78 tons

Avg. Roe Percentage = 10%

Price Paid Fishermen = \$700/ton

Total Estimated Value to Fishermen = \$54,600

Number of Participating Vessels = 6 seiners

Notes: About 95% of the harvest traditionally comes from Amber Bay. Due to weak stock conditions, this area was closed for the second consecutive year. The season extended from April 15 through June 30 on an open every-other-day basis. The harvest occurred between May 4 and June 4 in five areas, four of which were subsequently closed by emergency order. The exploitation rate is unknown, since biomass estimates from aerial surveys were hampered by inclement weather and budget restrictions.

Alaska Peninsula Sac-Roe Fishery

Estimated Harvest = 831 tons

Avg. Roe Percentage = 10.6%

Prices Paid Fishermen = \$650/ton for 10% roe content

Total Estimated Value to Fishermen = \$573,000

Number of Participating Vessels = up to 40 seiners

Notes: All areas opened on April 15, but harvests occurred primarily from May 5 to June 19. Harvests from the south Peninsula accounted for 319 tons, while the north Peninsula produced 512 tons. The exploitation rate, based on 1986 biomass estimates on the north Peninsula, was about 10%. The exploitation rate on the south Peninsula is unknown due to inclement weather during aerial surveys, logistics and budget restrictions. Although the actual exploitation rate has not been estimated, none of the preseason guideline harvest levels in the south Peninsula were substantially exceeded during the 1987 season.

A-Y-K REGION

The A-Y-K Region total herring harvest for 1987 was approximately 7,601 tons with a total estimated value to the fishermen of \$5,091,000, of which \$44,314 was food/bait and \$5,046,700 was sac-roe. The only food/bait fishery in this region occurs during the sac-roe fishery when the roe content is below the processors' acceptable minimums. A very small portion of the harvest is sold in this manner. The food/bait sales totalled 592 tons, while the sac roe harvest was 7,009 tons.

A regulatory action which affected A-Y-K herring fisheries during 1987 season was the readoption of super exclusive use area regulations by the Board of Fisheries. The super exclusive status for Goodnews Bay, Nelson Island, and Nunivak Island ended by regulation on January 1; however, the board during its April meeting reinstated super exclusive registration for vessels and

permit holders. Due to the early timing of western Alaska herring fisheries in 1987, the board used an emergency regulation to implement these regulations prior to opening of the fishery. The Norton Sound and Cape Romanzof herring fisheries are also designated as super exclusive use areas.

Goodnews Bay Sac-Roe

Estimated Harvest = 321 tons (includes 141.7 tons sold
as bait herring)

Avg. Roe Percentage = 8.9%

Price Paid Fishermen = \$600/ton for 10% roe content

Total Estimated Value to Fishermen = \$180,320 (includes
\$7,085 for bait herring)

Number of Participating Permittees = 100 gillnetters

Notes: Fishing started on May 5, with a test opening of 4 hours, and continued on May 7 for 53 additional hours of fishing. No biomass estimate was available this year due to poor survey conditions, and management was based on the guideline from 1984 biomass estimates. Unlike most years, processors were on the grounds before the opening, thus providing an opportunity for commercial fishermen and industry representatives to participate in preopening meetings where roe quality samples were evaluated. A large catch of bait herring (142 tons) was harvested by fishermen due primarily to gear selectivity and the highly variable quality of herring available in the bay during the season.

Security Cove Sac-Roe

Estimated Harvest = 313 tons

Avg. Roe Percentage = 9.7%

Price Paid Fishermen = \$700/ton for 10% roe content

Total Estimated Value to Fishermen = \$242,965

Number of Participating Permittees = 109 gillnetters

Notes: The district opened on May 2 and closed on May 14, with a total of 13 hours of fishing. No biomass estimates were made due to poor survey conditions. The entire harvest guideline was not taken because the remaining 37 tons could not be harvested by a fleet of 50 boats averaging 78 tons an hour without exceeding the harvest guideline.

Nelson Island Sac-Roe

Estimated Harvest = 923 tons (includes 8 tons sold as food/bait)

Avg. Roe Percentage = 9.2%

Price Paid Fishermen = \$800/ton for 10% roe content

Total Estimated Value to Fishermen = \$673,790

(includes \$420 food/bait)

Number of Participating Permittees = 178 gillnetters

Notes: Nelson Island was opened for three hour periods on both May 23 and May 24. Because aerial surveys prior to the fishery observed a higher available biomass than earlier projected, the harvest guideline was increased from 550 tons to 810 tons.

Nunivak Island Sac-Roe

Estimated Harvest = 413 tons (includes 139 tons sold as food/bait)

Avg. Roe Percentage = 9.4%

Price Paid Fishermen = \$800/ton for 10% roe content

Total Estimated Value to Fishermen = \$203,679

(includes \$6,950 food/bait)

Number of Participating Permittees = 50 gillnetters

Notes: Nunivak Island was opened for 39 hours, distributed over six fishing periods, between May 13 and May 26.

The fishery was opened when extensive spawn was observed (32 miles). The fishery was closed before the harvest guideline of 440 tons was taken because roe quality was decreasing and the potential for an overharvest was high.

Cape Romanzof Sac-Roe

Estimated Harvest = 1,403 tons (includes 21 tons sold as food/bait)

Avg. Roe Percentage = 9.0%

Price Paid Fishermen = \$700/ton for 10% roe content

Total Estimated Value to Fishermen = \$1,100,000

(includes \$1,680 food/bait)

Number of Participating Permittees = 157 gillnetters

Notes: During the 1987 season, 8 hours of fishing time (two 3 hour periods and one 2 hour period) was allowed from May 23 to 27. It is estimated that local fishermen accounted for approximately 70 percent of the effort and 45 percent of the harvest.

Norton Sound Sac-Roe

Estimated Harvest = 3,779 tons (includes 303 tons sold as food/bait herring)

Avg. Roe Percentage = 8.6%

Price Paid Fishermen = \$806/ton for 10% roe content

Total Estimated Value to Fishermen = \$2,612,781

(includes \$28,179 food/bait)

Number of Participating Permittees = 22 beach seiners and 559 gillnetters

Notes: The 1987 Norton Sound herring season was closed by emergency order on the regulatory opening date of May 15 to prevent the harvest of unmarketable herring. The fishery opened on June 7 and closed on June 8. There were two gill net periods

of 6 and 1 hours duration and two beach seine periods of 3 and 2 hours duration. A department aerial survey conducted on June 8 documented the peak observed biomass of 28,383 tons. The fishery was not reopened due to the high probability of spawned-out fish being present. The postseason biomass estimate of 32,370 tons is the largest biomass ever documented in the history of the fishery.

Port Clarence Sac-Roe

Estimated Harvest = 145 tons

Avg. Roe Percentage = 6.6%

Price Paid to Fishermen = \$800/ton for 10% roe content

Total Estimated Value to Fishermen = \$77,466

Number of Participating Permittees = 3 purse seiners
and 3 gillnetters

Notes: The Port Clarence District was fished this season. The season opens by regulation on April 15 and closes by regulation on November 15 and is open to both seiners and gillnetters. On June 13 a fishing schedule was established via emergency order that allowed the seiners two hours of fishing time for each 6 hours allowed for gillnetters. The fishery was closed on June 19. The seiners and all three tenders departed Port Clarence District on June 19. Because there were still 20 tons of the 165 ton guideline harvest unfilled and only two local gill net boats on the grounds, the season was reopened on June 22. A market for additional Port Clarence sac-roe was not found. The peak biomass observation was made on June 24 when 786 tons were observed in Grantly Harbor and near Brevig Mission.

Table 1. Alaska herring harvest in tons for 1986/87 season.^{1/}

<u>Region/Area</u>	<u>Bait</u>	<u>Sac-Roe</u>	<u>Total</u>	<u>Roe-on-Kelp</u>
<u>Southeastern Region</u>				
Seymour Canal	--	302	302	--
Sitka Sound	--	4,216	4,216	--
Kah Shakes	--	1,439	1,439	--
Other locations	2,374	--	2,374	--
Totals	<u>2,374</u>	<u>5,957</u>	<u>8,331</u>	<u>--</u>
<u>Central Region</u>				
Prince William S.	1,276	5,429	6,705	148
Cook Inlet	95	7,060	7,155	--
Bristol Bay	318	15,107	15,425	154
Totals	<u>1,689</u>	<u>27,596</u>	<u>29,285</u>	<u>302</u>
<u>A-Y-K Region</u>				
Goodnews Bay	142	179	321	--
Security Cove	t	313	313	--
Nelson Island	8	915	923	--
Nunivak Island	139	274	413	--
Cape Romanzof	21	1,382	1,403	--
Norton Sound	303	3,779	4,082	--
Port Clarence	t	146	146	--
Totals	<u>613</u>	<u>6,988</u>	<u>7,601</u>	<u>--</u>
<u>Westward Region</u>				
Kodiak	201	2,161	2,362	--
Chignik	--	78	78	--
Alaska Peninsula	2,394	831	3,225	--
Totals	<u>2,595</u>	<u>3,070</u>	<u>5,665</u>	<u>--</u>
STATEWIDE TOTAL	<u>7,271</u>	<u>43,611</u>	<u>50,882</u>	<u>302</u>

^{1/} All figures are preliminary.
t = trace or small amounts of landings

Table 2. 1984-87 Alaska Sac-Roe Herring Catch Comparisons (in tons)

	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u> ^{1/}
<u>Southeast Region</u>				
Kah Shakes	2,182	2,161	1,537	1,439
Sitka Sound	5,711	7,475	5,443	4,216
Seymour Canal	518	---	339	302
Totals	<u>8,411</u>	<u>9,636</u>	<u>7,319</u>	<u>5,957</u>
<u>Central Region</u>				
Prince William S.	6,180	7,493	10,448	5,429
Upper Cook Inlet	250	268	308	210
Lower Cook Inlet	---	1,365	2,154	6,850
Bristol Bay	19,470	25,866	16,254	15,107
Totals	<u>25,900</u>	<u>34,992</u>	<u>29,164</u>	<u>27,596</u>
<u>A-Y-K Region</u>				
Security Cove	325	733	752	313
Goodnews Bay	717	724	544	179
Nunivak Island	---	358	511	274
Nelson Island	---	977	885	915
Cape Romanzof	1,185	1,299	1,865	1,382
Norton Sound	3,662	3,548	4,979	3,779
Port Clarence	---	---	---	146
Totals	<u>5,889</u>	<u>7,639</u>	<u>9,536</u>	<u>6,988</u>
<u>Westward Region</u>				
Kodiak	2,163	1,968	1,558	2,161
Chignik	31	26	9	78
South Peninsula	211	345	282	319
North Peninsula	431	716	889	512
Totals	<u>2,836</u>	<u>3,055</u>	<u>2,738</u>	<u>3,070</u>
STATEWIDE TOTALS	43,036	55,322	48,757	43,611

^{1/} All harvest figures for 1987 are preliminary.

**PRELIMINARY
INSEASON SUMMARY OF 1987 CHINOOK SALMON CATCHES
BY SOUTHEAST ALASKA FISHERIES
(ADF&G: AUGUST 31, 1987)**

[NOTE: ALL DATA PRELIMINARY.]

ALL GEAR CATCH

The 1987 Southeast Alaska all gear chinook salmon catch is projected to be 278,000 based on preliminary data available through August 31 (Table 1). Preliminary catches by gear are: troll - 242,000 (87%); net - 14,000 (5%); sport - 22,000 (8%).

The projected 1987 all gear catch of 278,000 approximately equals the target catch ceiling of 278,600 chinook established by the Pacific Salmon Commission. [Beginning in 1987, the Commission established a +7.5 percent management range within which annual deviations from catch ceilings, plus or minus, can be accumulated from year to year.] The 1987 target catch ceiling consisted of a base catch ceiling of 263,000 chinook, plus an inseason estimated Alaska hatchery addon of 15,600 chinook salmon.

TROLL FISHERY

The 1987 troll fishery harvest of 242,000 chinook occurred as follows: Oct. 1 - April 14 winter season - 28,400 (12%); June experimental hatchery fisheries - 4,500 (2%); summer fishery - 209,000 (86%). The 1987 winter catch of 28,400 chinook was about 5,400 or 23 percent above the catch of approximately 23,000 in both 1985 and 1986, but below the 1984 catch of 33,000. June experimental fisheries were conducted near several hatcheries to determine the feasibility of increasing targeting on mature Alaska hatchery chinook.

The 1987 summer chinook season consisted of 23 days from June 20 through July 12. This was 18 days less than the 41-day season in 1986, and was the shortest summer season on record (Figure 1). Troll summer season chinook catch rates continued to increase in 1987, with an average of 9,100 chinook per fleet day during the 23-day season. This was an increase of about 50 percent over the 1986 rate (6,000); 62 percent over 1985 (5,600); and 98 percent over 1984 (4,600) for comparable time periods (Figure 2 and Table 2).

NET FISHERIES

Net fisheries harvested an estimated 14,000 chinook salmon incidental to the harvest of targeted species in 1987 (Table 1). This was below the guideline harvest level of 20,000 chinook (excluding hatchery addon) established for net fisheries by the

Alaska Board of Fisheries. Gillnet fisheries harvested about 9,000 chinook salmon (season projection), with drift gillnet fisheries taking about 7,000 and Yakutat set gillnet fisheries about 2,000. Purse seine fisheries harvested an estimated 5,000 chinook salmon. (Approx. 1,600 chinook less than 5 pounds reported on purse seine fish tickets are not included in chinook catch ceiling tabulations.) The incidental harvest of chinook salmon by purse seine fisheries declined in 1987 as extensive restrictions were required to conserve weak pink salmon returns.

SPORT FISHERIES

The projected 1987 season sport harvest of approximately 22,000 chinook salmon is comparable to the 1986 catch of 20,600, but below the 1985 catch of 24,900 chinook salmon.

ALASKA HATCHERY CONTRIBUTIONS

Based on inseason analysis of coded wire tag recoveries, Alaska hatcheries contributed an estimated 22,900 chinook salmon to Southeast Alaska commercial and recreational fisheries in 1987. Although this was 7,100 chinook or 24 percent below the preseason projection of 30,000, it continued the recent trend of increasing hatchery contributions: 1984 - 5,000; 1985 - 13,000; 1986 - 16,800. Nine Alaska hatcheries contributed chinook to 1987 fisheries, although approximately 80 percent was contributed by three hatcheries: Crystal Lake, Little Port Walter, and Whitman Lake (Table 2).

Provisions of the Pacific Salmon Treaty allow the harvest of new Alaska hatchery production to be taken in addition to Commission established base catch ceilings. Using procedures established by the Commission, a 1987 add-on of 15,600 chinook resulted after subtracting 5,000 chinook as "old" or pre-treaty (1984) hatchery harvest and 2,200 chinook as a risk adjustment for potential estimation error from the 22,900 total hatchery harvest.

NATURAL CHINOOK SALMON ESCAPEMENTS

Natural chinook salmon spawning escapements to Southeast Alaska and transboundary rivers in 1987 were generally similar to 1986. The most notable exception was the Stikine River where the 1987 escapement was more than double the 1986 level, and the third largest escapement recorded. Consistent with patterns of recent years, escapements to southern and central systems continued to show the greatest improvements compared to the pre-rebuilding period prior to 1981, while northern systems generally showed less improvement.

TABLE 1. PRELIMINARY 1987 INSEASON SUMMARY OF CHINOOK SALMON CATCHES
 BY SOUTHEAST ALASKA FISHERIES
 (FILE: CHIN0831.WK1; DISK: 1987 SEASON CHINOOK)

REVISION DATE: AUGUST 31, 1987

(ALL NUMBERS OF FISH IN THOUSANDS)

FISHERY	PRELIMINARY CATCH TO DATE		SEASON PROJECTIONS	
			NUMBER	PERCENT
TROLL	241.9		242.0	87%
WINTER		28.4		
JUNE EXPER.		4.5		
SUMMER		209.0		
GILLNET	8.6		9.0	3%
DRIFT		6.8		
SET		1.8		
SEINE (> 5 LB.)	4.5		5.0	2%
COMMERCIAL				
SUBTOTAL	255.0		256.0	92%
SPORT	22.0		22.0	8%
(SEASON PROJ.)				
TOTAL	277.0		278.0	100%

PRELIM. 1987 ALL GEAR TARGET CEILING (263.0 + ADDON) = 278.6

HATCHERY ADDON (PRELIMINARY PROJECTIONS)

=====

22.9 = PROJECTED TOTAL HATCHERY HARVEST

LESS 5.0 = MINUS "OLD" (1984) HATCHERY HARVEST

17.9 = PROJECTED "NEW" HATCHERY HARVEST

LESS 2.3 = MINUS POTENTIAL ESTIMATION ERROR RISK ADJUSTMENT

15.6 = PROJECTED HATCHERY ADDON

TABLE 2. SOUTHEAST ALASKA SUMMER TROLL FISHERY CHINOOK SALMON CATCH RATES DURING COMPARABLE TIME PERIODS, 1984-87.
(FILE: RATES.WK1; DISK: 1987 SEASON CHINOOK)

NUMBERS OF FISH IN THOUSANDS				
YEAR	FISHING PERIOD	NO. OF DAYS	CHINOOK CATCH	FISH PER FLEET DAY
1984	(FISHERY CLOSED APRIL 15 THROUGH JUNE 4.)			
	JUN 5-30	26	130	5.0
	JUL 11-29	19	77	4.1
	COMBINED	45	207	4.6
1985	(FISHERY CLOSED APRIL 15 THROUGH JUNE 2.)			
	JUN 3-12	10	66	6.6
	JUL 1-22	22	114	5.2
	COMBINED	32	180	5.6
1986	(FISHERY CLOSED APRIL 15 THROUGH JUNE 19.)			
	JUN 20 - JUL 15	26	155	6.0
1987	(FISHERY CLOSED APRIL 15 THROUGH JUNE 19.)			
	JUN 20 - JUL 12	23	209	9.1

TABLE 3. PRELIMINARY INSEASON ESTIMATES OF ALASKA HATCHERY CHINOOK SALMON CONTRIBUTIONS TO 1987 SOUTHEAST ALASKA FISHERIES.
(FILE: HATSUM3.WK1; DISK: 1987 SEASON HATCHERY)

REVISED: SEPTEMBER 1, 1987

TROLL FISHERY								
HATCHERY	WINTER FISHERY		EXPER. FISHERIES		SUMMER FISHERY		TROLL TOTALS	
	NUMBERS	PERCENT	NUMBERS	PERCENT	NUMBERS	PERCENT	NUMBERS	PERCENT
CRYSTAL L. (ADF&G)	1416	40.7%	640	41.7%	6498	56.1%	8554	51.5%
DEER MTN. (ADF&G)	37	1.1%	6	0.4%	26	0.2%	69	0.4%
HIDDEN FALLS (ADF&G)	34	1.0%	13	0.8%	243	2.1%	290	1.7%
LITTLE PORT (NMFS)	814	23.4%	554	36.1%	2354	20.3%	3722	22.4%
MEDVEJIE (NSRAA)	33	0.9%	0	0.0%	26	0.2%	59	0.4%
NEETS BAY (SSRAA)	46	1.3%	38	2.5%	364	3.1%	448	2.7%
SNETTISHAM (ADF&G)	58	1.7%	63	4.1%	747	6.4%	868	5.2%
TANGAS CR. (BIA)	7	0.2%	79	5.2%	465	4.0%	551	3.3%
WHITMAN (SSRAA)	1036	29.8%	140	9.1%	865	7.5%	2041	12.3%
GEAR TOTALS	3481	100.0%	1533	100.0%	11588	100.0%	16602	100.0%

HATCHERY	NET FISHERIES				SPORT FISHERIES 1/		ALL GEAR TOTALS	
	GILLNET NUMBERS	SEINE NUMBERS	NET SUBTOTALS NUMBERS PERCENT		NUMBERS	PERCENT	NUMBERS	PERCENT
CRYSTAL L. (ADF&G)	242	54	296	15.5%	1281	29.1%	10131	44.2%
DEER MTN. (ADF&G)	10	1	11	0.6%	486	11.0%	566	2.5%
HIDDEN FALLS (ADF&G)	23	52	75	3.9%	64	1.5%	429	1.9%
LITTLE PORT (NMFS)	63	71	134	7.0%	322	7.3%	4178	18.2%
MEDVEJIE (NSRAA)	0	0	0	0.0%	1	+	60	0.3%
NEETS BAY (SSRAA)	92	4	96	5.0%	488	11.1%	1032	4.5%
SNETTISHAM (ADF&G)	301	15	316	16.5%	170	3.9%	1354	5.9%
TANGAS CR. (BIA)	643	0	643	33.6%	45	1.0%	1239	5.4%
WHITMAN (SSRAA)	294	46	340	17.8%	1544	35.1%	3925	17.1%
GEAR TOTALS	1668	243	1911	100.0%	4400	100.0%	22914	100.0%

1/ 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.

S.E. ALASKA SUMMER TROLL SEASON
DAYS OPEN FOR CHINOOK FISHING

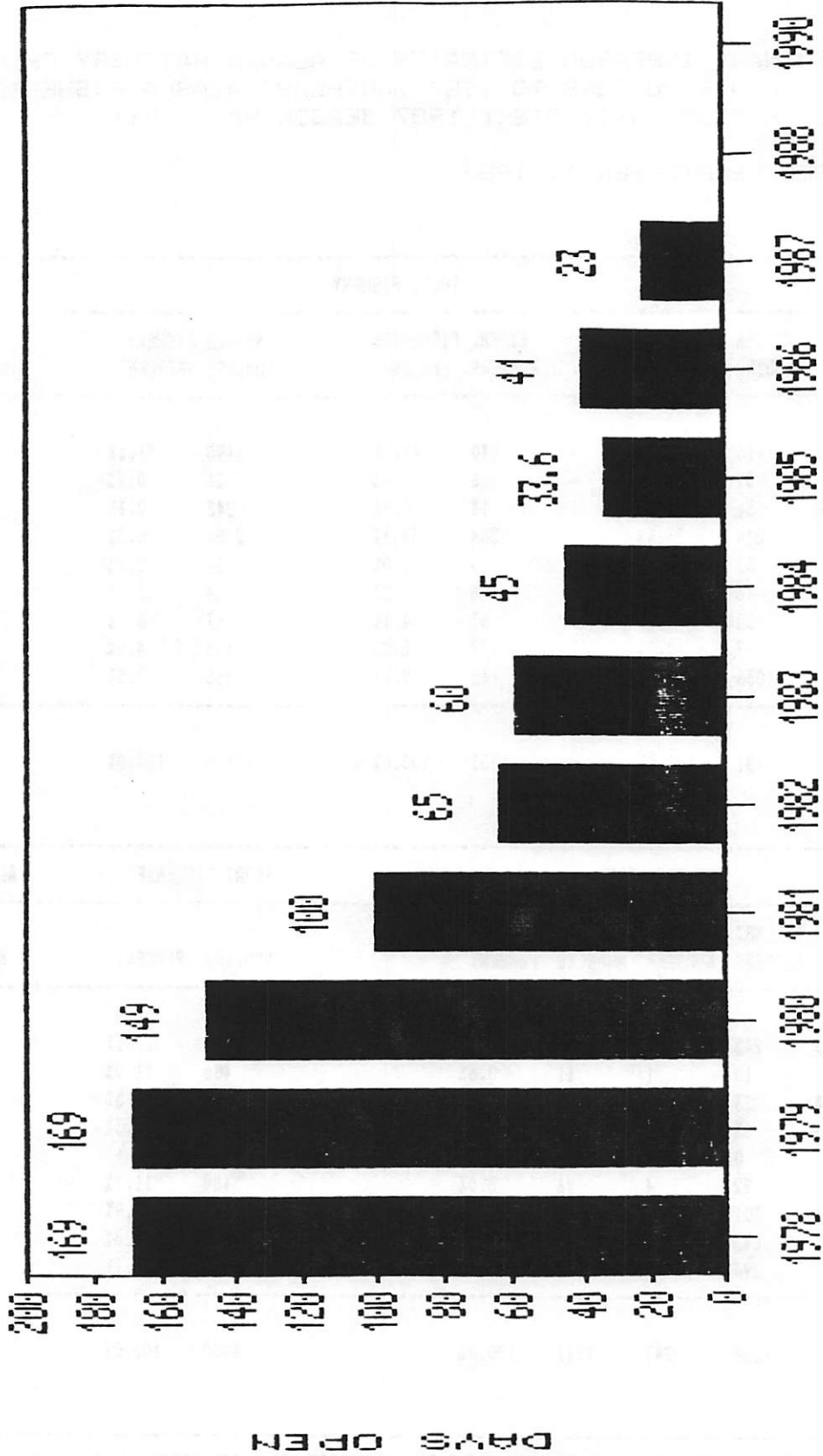


FIGURE 1. NUMBER OF DAYS SOUTHEAST ALASKA SUMMER TROLL FISHERY WAS OPEN TO CHINOOK SALMON FISHING, 1978-87.

S.E. ALASKA SUMMER TROLL FISHERY
CHINOOK CATCH RATES PER FLEET DAY

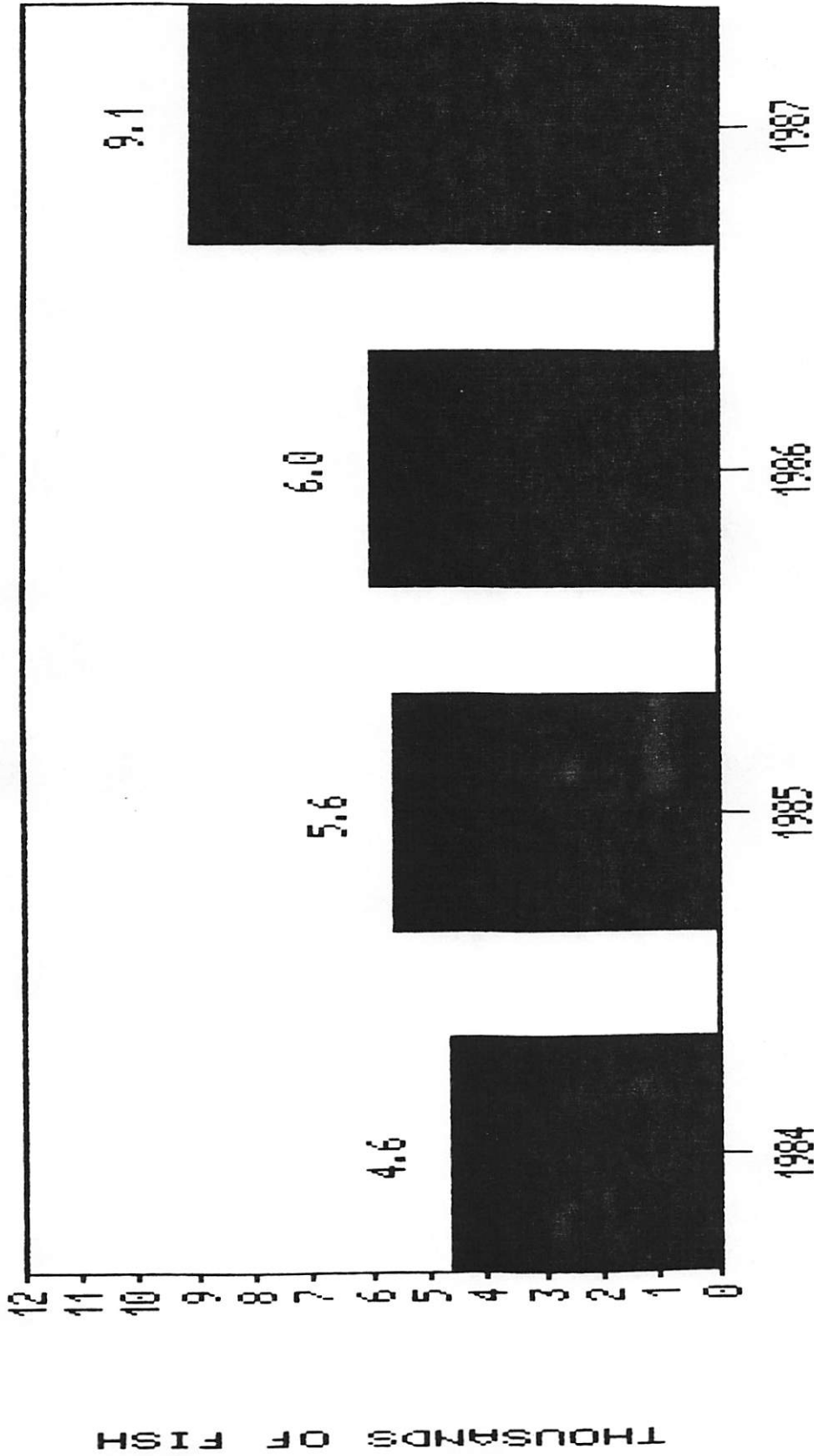


FIGURE 2. CHINOOK SALMON CATCH RATES PER FLEET DAY DURING COMPARABLE PERIODS IN JUNE AND JULY FOR THE SOUTHEAST ALASKA TROLL FISHERY, 1984-87.

COMMERCIAL FISHERIES



NEWS RELEASE

ALASKA DEPARTMENT
OF FISH & GAME



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

Westward Region
211 Mission Road
Kodiak, AK 99615-9988

Ken Parker, Director
Division of Commercial Fisheries

Contact: William E. Nippes
Acting Reg. Shellfish
Mgmt. Biologist

IMMEDIATE RELEASE

Date: August 25, 1987

ATTENTION WESTWARD KING CRAB FISHERMEN

The Alaska Department of Fish and Game and National Marine Fisheries Service have completed their king crab assessment surveys. Based on these surveys and the Alaska Board of Fisheries Harvest Strategy (5 AAC 34.080) the following harvest levels have been set for the 1987-88 Westward King Crab Fisheries.

1987-88 RED AND BLUE KING CRAB SEASONS AND GUIDELINES

<u>Area</u>	<u>Opening Date</u>	<u>Midpoint Guideline Harvest</u>
Kodiak	Closed	0
Alaska Peninsula	Closed	0
Dutch Harbor	Closed	0
St. Matthew	September 1 - 5	950,000
Pribilofs	September 25	1,000,000
Bristol Bay	September 25	13,100,000
Adak	November 1	1,000,000

The Kodiak, Alaska Peninsula and Dutch Harbor surveys continued to show very low stocks of crab and do not warrant an opening at this time. Further survey results will be released as they become available. The St. Matthew survey showed an increase over last year's survey, but not significant enough for this area to be considered anything but depressed on a historical basis. The post-recruit population is low, making up less than 1/3 of the population. Pre-recruit abundance, while extremely hard to assess for this stock due to survey problems, is considered stable. Using these stock indicators, an exploitation rate of 30% was used to determine the harvest guideline. The legal biomass estimate for St. Matthews is 1.93 to 4.19 million

pounds, with a 30% exploitation a range of .6 to 1.3 million pounds is projected.

The Pribilof survey also showed a slight increase. This population is considered depressed with declining pre-recruitment and a low level of post-recruit crab (less than 1/3 of the total population). Using these stock conditions a 20% exploitation rate was applied to the legal biomass estimate of 1.67 to 8.33 million pounds a range of .3 to 1.7 is projected.

The Bristol Bay survey also showed an increase over last year. This stock while increasing in size is still considered depressed. Pre-recruit abundance is considered stable while post-recruits make up less than 1/3 of the stock and are considered low. These stock indicators justify an exploitation rate of 30%. When this is applied to the legal biomass estimate of 28.39 to 59.09 million pounds a guideline range of 8.5 to 17.7 million pounds is obtained.

The Adak guideline is .5 - 1.5 million pounds (Red King Crab) and is based on historic harvest, not survey results.