

ANNUAL REPORT 1960

COOK INLET AREA

COMMERCIAL FISHERIES DIVISION

ALASKA DEPARTMENT OF FISH AND GAME

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## CHANGES FROM FEDERAL TO STATE MANAGEMENT

### 1. Location of Headquarters

In Cook Inlet a number of basic changes were made when responsibility for management of the fishery shifted from the Bureau of Commercial Fisheries, Fish and Wildlife Service, to the Alaska Department of Fish and Game. Headquarters for the Cook Inlet Area were shifted from Anchorage to Homer. Homer is centrally located in the Area. It is closer to the bulk of the salt water fishing activity. This is more practical from the management standpoint, for constant contact can be maintained with fishing activities. The Homer office is more convenient for those involved in fishing operations -- fishermen, and packers alike. Transportation and radio communications both are cheaper and better with the centrally located Area office than it would be with the office in Anchorage, which is located at the extreme upper end of the fishery.

A year-round fishery exists on the lower end of the Kenai Peninsula, whereas the upper Inlet which adjoins Anchorage, sustains an active fishery only during the summer months.

### 2. Handling of Fishery Statistics

Statistical areas established by the Fish and Wildlife Service are to be continued with but minor changes. This should give a continuous record of catches made in each statistical area over a fair period of time.

### 3. Flexibility of Management

Field authority to open, extend, or change commercial fishing regulations is the greatest basic change that occurred when responsibility was transferred from Federal to State authority. Use of this authority met with almost universal approval by commercial fishermen of the Area in 1960. This simple and basic tool should bring a definite improvement to salmon and other fisheries within a very few years.

### 4. Advisory Boards

Fish and Game advisory boards are active in the following communities and personnel from the Homer Office met with all of them, some a number of times, during 1960.

Homer - Seldovia  
Anchorage  
Clam Gulch  
Kenai  
Seward  
Palmer

TRANSFER OF PROPERTY AND RECORDS TO THE STATE FROM  
THE FEDERAL GOVERNMENT

On January 1, 1960, the State of Alaska assumed control of the fish and game resources of the state, bringing to an end federal management (or at least control) that existed from the purchase of Alaska from Russia.

The enabling act passed by Congress stipulated that properties and equipment used by the Fish and Wildlife Service in management of Alaska's fish and game was to be transferred to the State of Alaska on January 1, 1960.

The Commercial Fisheries Division (state) for Cook Inlet had headquarters at Homer in 1957 when biologist C. A. Weberg was assigned to the area. The Cook Inlet office of the U. S. Bureau of Commercial Fisheries was in Anchorage.

The state was ready for transfer of equipment and records in January of 1960. However, it was March 19 before the Fish and Wildlife Service, Bureau of Commercial Fisheries, was ready to transfer.

The Commercial Fisheries Division accepted everything that was offered for transfer by the former managing agency. Most of the equipment was assumed by the Protection Division at Anchorage and Homer.

On Sunday, March 20, four trucks (three of which were transfer items) hauled paraphernalia from Anchorage to Homer. One truck did not break down on the trip. On March 24 another truck-

load was hauled to Homer. Items involved included hardware such as outboard motors, tools, cabinets, batteries, skiffs. Most of the miscellany was not on inventory.

A number of items of equipment that had been purchased and used for management by the Bureau of Commercial Fisheries and according to law were presumed to be transferred to the state were retained by the Federal Government. A provision in this law allowed five years for the transfer to take place. Much transferring of equipment within various divisions of the Fish and Wildlife Service went on prior to the transfer of property to the state.

The commercial fishery management records transferred to the state proved to be a disappointment. They had been thoroughly rifled. Some items had apparently been removed, for some records were incomplete. There was little order to these records, and obviously they had been hastily scanned and stuffed back into the files at random.

During the winter of 1960-61 it required about two weeks for one biologist to study these files in detail and to incorporate them into the files the state already had. These federal records were presumably the result of 40 or more years of management of the Cook Inlet Commercial Fisheries District. Files are not a mark of achievement, but continuous records are. The Federal

Government's records, with some exceptions, are almost worthless.

Some of the more obvious weaknesses in the federal records include:

No budgetary information on costs for managing the District;

Only casual mention of several tagging and racial studies with no final reports on results;

Little or no biological information on various runs or races of salmon that originate in Cook Inlet;

No complete stream and lake catalogue (stream survey data was based largely on work of F.R.I.);

Aerial stream surveys were spotty, and the timing was wrong on many of them. They were made largely from a Gruman Goose, which is not a satisfactory aircraft for this work;

Some major runs of fish were completely ignored, for there is little or no mention of many of them;

Shellfish data, including king crab, shrimp, and razor clams, is hardly mentioned despite the fact that at one time a fairly important razor clam fishery existed on the west side of the Inlet, and since 1950 a king crab fishery has existed in Kachemak Bay. A recent shrimp fishery which appears to have a good potential is scarcely mentioned.

COOK INLET - RESURRECTION BAY AREA

SALMON PROCESSORS

<u>Name and Business Address</u>	<u>Superintendent</u>	<u>Plant Location</u>	<u>No. Lines</u>
Alaska Packers Association* 412 Bell Street Terminal Seattle 1, Washington	Vernon Hilliker	Larsen Bay	2 - 1 lb. 1 - $\frac{1}{2}$ lb.
Alaska Seafoods Kasilof, Alaska	Vernon J. Savage	Kasilof	1 - 1 lb.
Berman Packing Company 6518 - 27th Ave., N. W. Seattle, Washington	O. R. Bertson	Ninilchik	1 - 1 lb. 1 - $\frac{1}{2}$ lb.
Columbia-Wards Fisheries 303 East Northlake Way Seattle 5, Washington	A. R. Permain	Kenai	1 - 1 lb.
Emard Packing Company, Inc. 611 Lowman Bldg. Seattle, Washington	S. T. Olson	Anchorage	1 - 1 lb. 1 - $\frac{1}{2}$ lb.
Hoekzema Canning Company Box 37 Kasilof, Alaska	Jack H. Hoekzema	Kasilof	1 - $\frac{1}{2}$ lb.
Inlet Queen Packing Company Homer, Alaska	Earl Hallstead	McDonald Spit	Hand Pack
Kalgin Island Sea Food P. O. Box 139 Kenai, Alaska	Frederick J. Miller	Kalgin Island	1 - $\frac{1}{4}$ lb. Hand Pack
Kenai Packers 2601 42nd Ave. West Seattle 99, Washington	H. A. Daubenspeck	Kenai	1 - 1 lb. 1 - $\frac{1}{2}$ lb.
Munson Packing Company Kenai, Alaska	Albert Munson	Kenai	Hand Pack
Seldovia-Port Graham Consolidation ** Seldovia, Alaska	J. J. Lind	Seldovia	1 - 1 lb. 1 - $\frac{1}{2}$ lb.

Salmon Processors (Continued)

<u>Name and business Address</u>	<u>Superintendent</u>	<u>Plant Location</u>	<u>No. Lines</u>
(Pacific American Fisheries (Incorporated)**	Victor W. Olsen		
(Port Chatham Packing Com- pany Incorporated)**			
(Fidalgo Island Packing Company)**			
(Cook Inlet Packing Company)**			
(Whitney and Company)**			
(Alaska Year-Round Company)**			
Charles L. Simon Seafoods	Charles L. Simon, Sr.	Kasilof	1 - all
Snug Harbor Packing Company	J. R. Fribrock	Snug Harbor	2 - 1 lb.
Tidewater Packing Company P. O. Box 1842 Anchorage, Alaska	Ray Coffin	Anchorage	1 - $\frac{1}{2}$ lb.

\* Processed in Kodiak

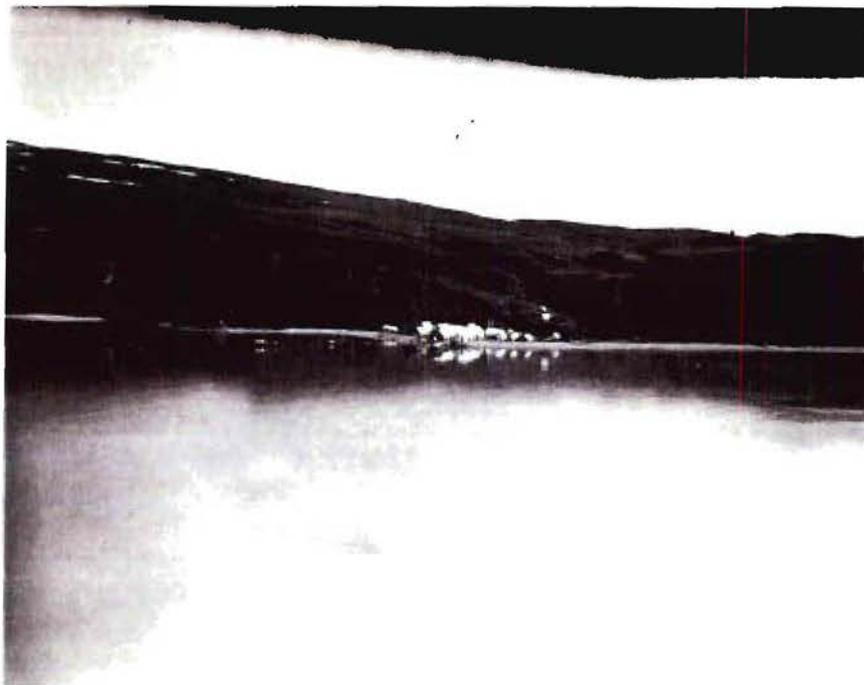
\*\* Consolidation

Fresh, Frozen, Smoked, and Canned  
Fishery Products Processors

<u>Name and Business Address</u>	<u>Superintendent</u>	<u>Plant Location</u>	<u>Product</u>
Alaska Fish and Farm Products Incorporated Box 74 Anchorage, Alaska	K. C. Britt	Anchorage	Salmon Halibut Cod Shrimp Crab
Alaska Marine Foods, Incorporated Box 3698 Eastchester Branch Anchorage, Alaska	R. C. Sweezey (Treasurer)	Seward	Shrimp
Alaskan Sea Foods Box 152 Homer, Alaska	Eugene V. Browning	Homer	Shrimp Crab

Fresh, Frozen, Smoked, and Canned  
Fishery Products Processors (Continued)

<u>Name and Business Address</u>	<u>Superintendent</u>	<u>Plant Location</u>	<u>Product</u>
Halibut Producers Cooperative Box 796 Seward, Alaska	Hal M. Drinkall	Seward	Salmon Halibut Shrimp Crab Bottom fish
Henry J. Hunter Box 313 Homer, Alaska	Henry J. Hunter	Homer	Halibut Clams Shrimp Crab
Resoff and Springer Seward, Alaska	P. M. Resoff	Seward	Halibut
Narrows Packing Company Halibut Cove, Alaska	Clem Tillion	Halibut Cove	Shrimp
Seward Seafoods, Incorporated Box 217 Seward, Alaska	Vance Hitt	Seward	Shrimp
Smokey Joe's, Incorporated Mile 7, Seward Highway Anchorage, Alaska	Joe Kinkade	Mile 7 Seward Highway	Salmon
Sportman's Cannery Clam Gulch, Alaska	John Rolcik	Clam Gulch	Salmon
Sutterlin and Wendt Seldovia, Alaska	R. Sutterlin	Seldovia	Shrimp
Ursins Seafoods Seldovia, Alaska	Norman Ursin	Seldovia	Crab
Wakefield Fisheries Seldovia, Alaska	Chas. S. Hendrix	Seldovia	Crab



Snug Harbor Cannery, on Chisik Island, west side of Cook Inlet. This cannery operated continually through 1960. Did not operate in 1961.

TABLE  
COOK INLET PACK BY WEEK - 1960 \*

Emerald Packing Company

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
May 29	394	11				405
June 5	947	99				1,046
June 12	1,364	163				1,527
June 19	544	73				617
June 26	450	33				483
July 3	43	235	21		11	310
July 10	22	1,374	493		1,263	3,152
July 17	2	3,517	1,921	724	2,176	8,340
July 24		1,865	1,877	3,338	953	8,033
July 31		1,398	4,164	8,812	2,741	17,115
August 7		314	1,544	3,255	694	5,807
August 14		74	569	412	331	1,386
August 21			229	79	197	505
Total	3,766	9,156	10,818	16,620	8,366	48,726

\* All weekly packs based on 48 - 1# talls, unless otherwise indicated.

TABLE  
COOK INLEFT PACK BY WEEK - 1960

Berman Packing Company

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
June 26		105				105
July 3		294				294
July 10		1,029			212	1,241
July 17		1,971		45	703	2,719
July 24		1,015	29	221	672	1,937
July 31		256	179	385	275	1,095
August 7		48	362	1,111	262	1,783
August 14		7	137	1,055		1,199
August 21		212	1,248			1,460
August 28		14	156	216		386
Total	-0-	4,951	2,111	3,033	2,124	12,219

TABLE  
COOK INLET PACK BY WEEK - 1960

Columbia Ward Fishery

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
May 29	57	17				74
June 5	107	151				258
June 12	154	540				694
June 19	92	277				369
June 26	84	182				266
July 3	22	487	2		153	664
July 10	59	2,900	67	12	1,431	4,469
July 17	49	4,788	253	81	3,632	8,803
July 24	139	3,979	431	1,155	2,648	8,352
July 31	66	1,057	659	1,774	1,644	5,200
August 7	77	346	408	4,530	294	5,655
August 14	61	113	458	8,293	5	8,930
August 21	31	42	273	3,735	3	4,084
Total	998	14,879	2,551	19,580	9,810	47,818

TABLE  
COOK INLET PACK BY WEEK - 1960  
Alaska Packers Association

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
July 17		740	18	77	1,671	2,506
July 24		438	28	785	1,864	3,115
July 31		11		572	682	1,265
August 7				383	71	454
August 14			3	1,114	22	1,139
August 21			1	189	1	191
August 28		30		18	18	66
September 4				4	919	923
Total		1,219	50	3,142	5,248	9,659

## TABLE

COOK INLET PACK BY WEEK - 1960Kenai Packers

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
May 29	266	28				294
June 5	301	51				352
June 12	821	742				1,563
June 19	18	337				355
June 26	306	312				618
July 3	26	714	12		50	802
July 10	11	3,478	235	21	2,012	5,757
July 17	44	7,515	737	520	4,981	13,797
July 24	130	3,876	1,021	2,077	2,549	9,653
July 31	80	1,878	1,525	3,327	1,936	8,746
August 7	100	584	1,150	4,139	420	6,393
August 14	18	26	880	7,375	138	8,437
August 21	8	212	520	3,358	39	4,137
August 28		99	300	753	71	1,223
Total	2,129	19,852	6,380	21,570	12,196	62,127

TABLE

COOK INLET PACK BY WEEK - 1960

Seldovia-Port Graham Consolidation

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
June 18					41	41
June 26	10	28	1	6	69	114
July 3		202	1	101	1,514	1,818
July 10		2,055	54	284	4,436	6,829
July 17		4,727	283	1,241	7,399	13,650
July 24	2	1,806	447	2,798	4,510	9,563
July 31		235	290	5,298	2,161	7,984
August 7		10	45	3,467	210	3,732
August 14		5	38	5,053	597	5,693
August 21		1	1	654	379	1,035
<b>Total</b>	12	9,069	1,160	18,902	21,316	50,459

TABLE  
COOK INLET PACK BY WEEK - 1960  
Alaska Fish and Farm Products  
(Frozen Fish)

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
May 29	44					44
June 5	37					37
June 12	79					79
June 19	12					12
July 10	60					60
Total	232					232

TABLE  
COOK INLET PACK BY WEEK - 1960  
Halibut Producers Co-op  
(Frozen Fish - pounds)

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
July 3	262					262
July 17	146	15,564	12	3,868	2,490	22,080
July 24	6,376	652	4,078	12,200		23,306
July 31	65	3,757	8,645	12,924		25,391
August 7			6,823	7,452	865	15,140
August 14	1,160		21,736	2,081	7	24,984
August 21	171	4,369	23,261	9,558	2,321	39,680
August 28	72	23	10,380	1,185		11,660
September 4		164	4,147	12,654	16	16,981
September 11			5,245	2,877		8,122
September 25				3,620		3,620
<b>Total</b>	<b>8,252</b>	<b>24,529</b>	<b>84,327</b>	<b>68,419</b>	<b>5,699</b>	<b>191,226</b>

## TABLE

COOK INLET PACK BY WEEK - 1960Hoekzema Canning Company

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
June 13	1½	12				13½
June 19	2½	10				12½
July 3		7				7
July 10	3	7				10
July 17		3				3
July 24	4	4				8
August 7	1	4				5
August 14	1		5			6
Total	13	47	5			65

TABLE  
COOK INLET PACK BY WEEK - 1960  
Inlet Queen Packing Company

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
June 19		1½				1½
June 26		½				½
July 3	½	½				1
July 10	2			1		3
July 16	2	1		1		4
July 24		4		1		5
July 31		½				½
August 7		½				½
August 14		½		½		1
<b>Total</b>	4½	9		3½		17

TABLE

COOK INLET PACK BY WEEK - 1960

Sportsman Cannery

(Smoked Fish)

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Totals</u>
August 7					545	545
August 14	13		73			86
August 21	2		107	2		111
August 28		43				43
September 4			12	4		16
September 11			50			50
September 18			49			49
September 25			19			19
Total	15	43	310	6	545	919

TABLE

COOK INLET PACK BY WEEK - 1960

Charles L. Simon Seafoods

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
July 31	5	15				20
Total	5	15				20

TABLE  
COOK INLET PACK BY WEEK - 1960  
Snug Harbor Packing Company

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
June 26		10	184		16	210
July 3	5	908	24	1	326	1,264
July 10		1,478	100	7	747	2,332
July 17		2,482	282	125	2,627	5,516
July 24		684	334	304	882	2,204
July 31		449	625	1,820	2,368	5,262
August 7		200	585	1,743	1,234	3,762
August 14	3	161	414	3,029	362	3,969
August 21		116	541	193	379	1,229
Total	8	6,488	3,089	7,222	8,941	25,748

TABLE

SALMON CATCH BY STATISTICAL AREA AND GEAR

1960

<u>Area</u>	<u>Gear</u>	<u>Maximum Units</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>
31	Hand Purse Seines <sup>East</sup>	5		105	853	5,792	467-
32 <sup>Out</sup>	Hand Purse Seines <sup>Out</sup>	10	3	931	1	25	2,247 ✓
33	Hand Purse Seines <sup>East</sup>					2,928	-
41	Hand Purse Seines <sup>South</sup>	54	6	5,285	839	207,924	3,259
	Set Nets <sup>South</sup>	15	6	7,007	398	3,894	347
42 <sup>Out</sup>	Hand Purse Seines <sup>Out</sup>	61	1	431	532	328,476	64,940 ✓
43	Hand Purse Seines <sup>Kam</sup>	3		762	3	2,958	360 ✓
44	Drift Nets	255	291	242,155	35,753	199,044	392,084
	Set Nets	156	8,790	366,608	63,526	698,818	5,446
45	Drift Nets	164	2,869	69,472	6,780	3,434	93,215
	Set Nets	69	4,872	48,430	45,034	45,174	36,914
46	Drift Nets	18	122	3,382	166	206	4,415
	Set Nets	36	2,350	44,520	15,825	22,744	4,447
47	Set Nets	166	8,218	148,247	144,377	442,185	117,739
48	Hand Purse Seines <sup>Kam</sup>	7		6	25	8,605	43,968
	Set Nets	2	11				
<u>Total all gear and areas:</u>			27,539	937,341	314,112	1,972,207	769,848



The Cook Inlet drift fleet between Kalgin Island and the east side of Cook Inlet



A drift boat, its gear, and a picking skiff in mid-Inlet.

TABLE  
1960 SALMON PACK BY COMPANIES  
 (Basis 48/1# per Case)

<u>Name of Company</u>	<u>Reds</u>	<u>Kings</u>	<u>Pinks</u>	<u>Chums</u>	<u>Cohos</u>	<u>TOTAL</u>
Alaska Packers Assn.	1,129	0	3,142	4,248	50	8,659
Berman Packing Co.	4,739	0	4,281	2,124	1,075	12,219
Columbia-Wards Fisheries	14,879	998	19,580	9,810	2,551	47,818
Emard Packing Company	9,156	3,766	16,620	8,366	10,818	48,726
Hoekzema Canning Co.	47	13	0	0	5	65
Inlet Queen Packing Co.	8½	3	3½	0	0	15
Kenai Packers	19,852	2,129	21,570	12,196	6,380	62,127
Seldovia-Port Graham	9,069	12	18,902	21,316	1,160	50,459
Charles L. Simon Seafoods	15	5	0	0	0	20
Snug Harbor Packing Co.	6,670	10	7,222	8,941	2,905	25,748
GRAND TOTAL (cases)	65,654½	6,936	91,320½	67,001	24,944	255,856

FREEZER AND SMOKING OPERATIONS - INDIVIDUAL FISH

Alaska Fish & Farm Prod.	0	232	0	0	0	232
Berman Packing Company	5,074	1,047	11	174	2	6,308
Inlet Queen Packing Co.	4	0	1	0	0	5
Seldovia-Port Graham	6,440	919	0	0	0	7,359
Sportsman's Cannery	0	15	6	545	353	919
GRAND TOTAL (Ind. Fish)	11,518	2,213	18	719	355	14,823

FREEZER OPERATIONS - POUNDS OF FISH

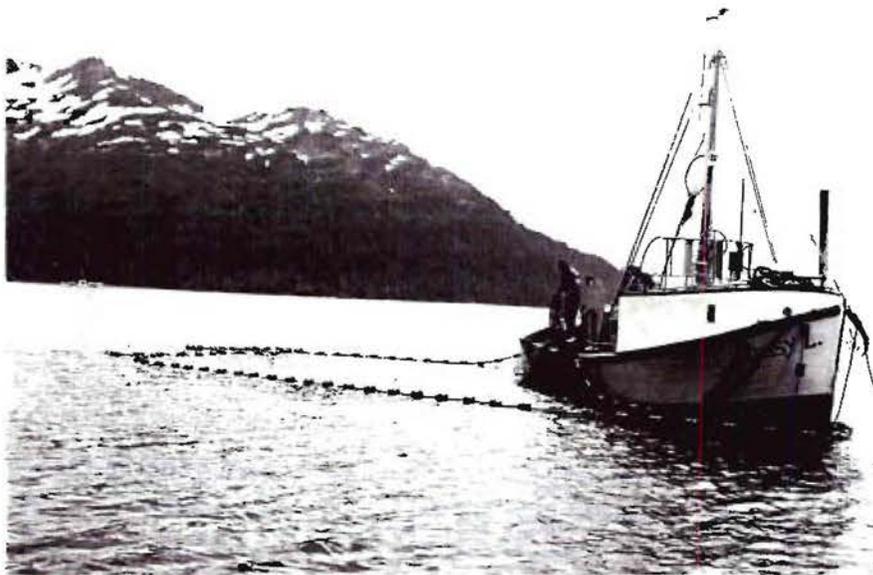
Halibut Producers Coop.	24,529	7,973	64,799	5,699	87,951	190,951
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TABLE  
 TOTAL CUMULATIVE PACK  
 COOK INLET - - - 1960  
 (48 - 1# talls)

<u>Week Ending</u>	<u>Kings</u>	<u>Reds</u>	<u>Cohos</u>	<u>Pinks</u>	<u>Chums</u>	<u>Total</u>
May 29	717	56				773
June 5	2,072	357				2,429
June 12	4,411	1,802				6,213
June 19	5,066½	2,502½				7,569
June 26	5,929½	3,356½	1	6	126	9,419
July 3	6,026	6,204	61	108	2,180	14,579
July 10 -	6,120	18,518	1,010	433	12,281	38,362
July 17 -	6,210	43,537	4,486	3,170	33,799	91,202
July 24	6,481	57,944	8,671	13,926	48,548	135,570
July 31	6,636	63,236½	16,113	35,342	59,673	181,000½
August 7	6,814	64,754	20,207	54,159	63,469	209,403
August 14	6,897	65,140½	22,711	80,873½	64,995	240,617
August 21	6,936	65,511½	24,488	90,329½	65,993	253,258
August 28	6,936	65,654½	24,944	91,316½	66,082	254,933
September 4	6,936	65,654½	24,944	91,320½	67,001	255,856
September 11	6,936	65,654½	24,944	91,320½	67,001	255,856



A seiner at Port Dick with chum salmon  
in the "money bag."



The Daisy L. with her net pursed. Port Dick

## SHELLFISH

The Alaska Department of Fish and Game, Commercial Fisheries Division, was interested primarily in the management of three different shellfish species during 1960. These three species were being taken in commercial quantities from the waters of Cook Inlet and Kachemak Bay and were the razor clam, shrimp and king crab.

Two other shellfish species that were taken, or in which some interest was shown, were the dungeness crab and the scallop. These shellfish were not taken in significant quantities, but may prove to be a valuable commercial fishery resource in the future.

During 1960 in the Cook Inlet, Resurrection Bay area, the three commercially significant shellfish in numbers taken were the razor clam, shrimp, and king crab.

### RAZOR CLAM

The commercial razor clam fishery was confined to the west shore of Cook Inlet in the Polly Creek area. All the clams taken from the Polly Creek beach were processed at Kodiak, Alaska.

This fishery was conducted during the late spring and early summer months. With the peak of the fishery operation conducted in April, May, and June.

During this time a total of 91,530 pounds of razor clams were taken and transported to Kodiak for processing.

The department registered a total of 82 commercial clam

digger licenses for the Cook Inlet, Resurrection Bay district.

#### SHRIMP

The Cook Inlet district shrimp fishery was conducted, for the most part, in Kachemak Bay and the Nuka Passage area near Seward. During 1960 the Department of Fish and Game registered only three beam trawl licenses. In all, only five boats were engaged in the shrimp fishery in this area. A few boats fished with pots for the "spot" or "prawn" which were sold on the fresh markets throughout the Kenai Peninsula. The majority of the shrimp, however, were processed and canned in Seward for the stateside market.

In 1960 a total of 711,355 pounds of shrimp were taken in the Cook Inlet district.

#### KING CRAB

King crab is the most important shellfish fishery in the Cook Inlet, Resurrection Bay district. This fishery is located almost exclusively in Kachemak Bay although king crab have been taken throughout the district from Seward in the east to Cape Douglas on the west. In most instances where king crab were taken outside of Kachemak Bay in 1960, it was incidental to another type of commercial fishery such as halibut fishery or along with shrimp trawling. These findings were reported to representatives of the department to supply additional information on king crab distribution and abundance. Although there were limited crab fishery efforts in Kamishak Bay, on the west side of Cook Inlet, and in the Gulf of Alaska near Nuka Passage during 1960, the preponderance of the crab

fishery was conducted in Kachemak Bay.

The total king crab catch in the Cook Inlet, Resurrection Bay district last year was 4,080,000 pounds. This catch was recorded by a total of 66 registered crab boats.

There were five plants located on the Kenai Peninsula which processed king crab. The plants were located in Seldovia (2), Homer (2), and Seward (1), with Seldovia processing the largest number of crab.

The largest poundage of crab was taken during the month of February, followed by May, July, April, March, January, August, June, September, October, and December. There was no fishing effort during the month of November and the first half of December.

In the best week of 1960, 275,000 pounds of king crab were taken. This was the week of February 22 to 27. During the month of February and the week of May 9 through 15, approximately one-fourth of the 1960 king crab catch was taken. At no time during the 1960 fishing season did the fleet number over 28 boats, although as stated previously there were a total of 66 crab boats registered in Cook Inlet.

The U. S. Fish & Wildlife Service and biologists from the Alaska Department of Fish and Game conducted a tagging program in Kachemak Bay during June of 1960. This was the first year of a two-year program which will supply information on the Cook Inlet-Kachemak Bay king crab population.

At this time approximately 3,000 male king crabs were tagged,

ranging in size and age from the largest crab down to the males just under legal size.

Crab tagging data is being worked up now by the Fish & Wildlife Service biologists. Already much needed migration information has been recorded. In the years to follow, this program is intended not only to reveal knowledge on the growth, migration, and distribution of the Cook Inlet king crabs but to supply management biologists with the information to help insure the wisest use and proper utilization of this valuable fishery resource.

#### HERRING

Thirty and more years ago Kachemak Bay was famed for its tremendous herring schools. These herring were reputedly unusually large and fine, and brought premium prices in markets throughout the world. The name of the town of Seldovia is said to mean "herring" in Russian. Herring selteries existed in large numbers in the various bays and coves on the south side of Kachemak Bay, and remnants of these still may be found in Halibut Cove, Halibut Cove Lagoon, Seldovia, Bear Cove, and elsewhere. At one time approximately 2,000 persons resided at Halibut Cove because of the herring fishery; today but about 50 persons are there.

The herring decreased markedly. The markets for herring also decreased, and the bulk of herring taken in Alaska today are used in the manufacture of meal.

The Fish and Wildlife Service, in 1956, inaugurated annual

aerial surveys of herring spawning grounds in Alaska. Charts were printed so information could be recorded on them, and blank forms were prepared for keeping data noted.

The Cook Inlet office of the State Department of Fish and Game is continuing the herring spawning ground aerial surveys. A chart showing data collected on one flight in 1960 will be found following this page. Dates found best for specific areas in Kachemak Bay are as follows:

Port Graham -- middle of May  
Tutka Bay, McDonald Spit, Seldovia Bay --  
    first half of May  
Homer Spit -- last of April, first of May  
Halibut Cove, Mallard Bay, Aurora Lagoon,  
    Bear Cove -- first of May

The purpose of aerial survey of herring spawning grounds is to obtain an annual estimate of the nautical miles of beach used for spawning each year. The size of the spawn deposit is indicative of the number of spawners or that portion of the population which has escaped the fishery.

The present fishery in the Cook Inlet Area is limited pretty much to a few personal use gill nets and an occasional haul by a hand purse seine or beach seine for fish to be used for bait in crab pots.

Herring spawning activity can be easily seen from the air, a fact which permits reliable estimates of the amount of beach area used. Active spawning is distinguished by the milkiness of the water resulting from the discharge of milt. Beaches previously spawned but which no longer retain the milky appearance are readily distinguished by the heavy concentrations of feeding birds. Under most

circumstances the spawn itself cannot be seen from the air. Since the density of the spawn deposit cannot be determined from the air, these surveys are limited to obtaining the mileage of beach spawned.

Adequate coverage should be obtained if flights can be made at 7- to 10-day intervals, although more frequent observation may be required as spawning approaches its peak. The surveys should cover the full extent of the spawning period which varies with year and with locality, but is usually between March 15 and May 25 in Southeastern Alaska. Cook Inlet timing appears to be slightly later, with the earliest spawning starting in late April in early years.

In order to make observations uniform, the following procedures are used: (these were the guide lines used by the Fish and Wildlife Service)

1. Report each flight on prepared form. Complete form even though no spawnings are sighted.
2. In estimating length of beach area utilized, use tenths of miles (nautical).
3. Under "active" spawning list only those spawnings in progress as indicated by milkiness of water. Mark in red pencil on chart.
4. Under "old" spawning list areas which apparently support a spawn deposit as evidenced by concentrations of birds on the beach. Mark in limits in blue or green pencil on chart.
5. When flights are repeated over localities where spawning has been previously observed, report only that portion of the spawn not already accounted for.

6. Attach map to each report. On map show date of flight, route of flight, and localities of spawnings sighted. Number each spawning in accordance with the report sheet and mark in limits of beach area used. Mileage estimates are made from limits on charts.

REPORT FORM FOR AERIAL SURVEY OF HERRING  
SPAWNING GROUNDS (sample form)

Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

Observer \_\_\_\_\_

Plane \_\_\_\_\_ Pilot \_\_\_\_\_

Take Off: Hour \_\_\_\_\_ Place \_\_\_\_\_

Land: Hour \_\_\_\_\_ Place \_\_\_\_\_

Average Ground Speed \_\_\_\_\_

SPAWNINGS SIGHTED

Location	Nautical Miles of Beach		
	Active Spawn 1/	Old Spawn 2/	Total
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

1/ Indicated by milt in water

2/ Indicated by concentrations of birds on beach

SUBMIT MAP SHOWING ROUTE OF FLIGHT AND LOCALITIES OF SPAWNING WITH THIS REPORT.

Herring spawn check flight, May 17, 1960  
biologist Jim Rearden - in Super cub, Klingbeil flying.  
Small schools of Herring seen only  
where marked red ●

No herring spawn activities seen  
clear, calm weather flight from  
10:05 AM until 1:30.

Line of flight marked in —

to Delight  
EROCK  
→

Two Sea otter

STREAM CLEARANCE PROGRAM - COOK INLET

Each summer for the nearly thirty years for which we have records, salmon migrating into streams of the Cook Inlet drainage have encountered beaver dam barriers. At times these dams entirely block runs of fish. It is a serious problem, and it is not lessening.

The following is a resume' of activities by Federal agencies during their years of management in their attempts to cope with the problem:

1935 & 1936 Clearance work initiated. No record of cost or time.

1937 Beaver dam clearance program financed jointly by Territory and Cook Inlet packers. Confined to Cottonwood Creek and Fish Creek, and their tributaries. "Beaver have established themselves in these particular areas within the past three years..." A Mr. Mosier was paid \$336.00 for clearing streams, June 21 to August 15.

1938 Work was confined to Cottonwood and Fish Creek systems of lakes and streams. Total of \$494.00 for clearing streams, June 30 to August 29.

1939 Fish Creek and Cottonwood Creek -- and Hidden Creek. Total of \$483.00 was spent for clearance.

1940 Fish Creek primarily -- Total of \$263.00.

1941 Fish Creek and Cottonwood Creek. Known that many rivers of the Kenai drainage need beaver dam clearance work.

1942 Survey made of Moose River by Andy Simons and a FWS biologist. Worked Hidden Creek, Jean Lake drainage, Swanson River. Plane used, and two men for 10 days.

1943 No money or time spent -- could not get men for crews.

1944 Cottonwood and Fish Creek -- one man worked entire season patrolling for fishery violations and keeping dams open -- salary of \$557.61.

1945 Cap Cole was furnished with money from the packers of Cook Inlet to perform beaver dam clearance work in Cook Inlet. Andy Simons helped with the work, and Cole was in charge. Plane was used. Landed on lakes with folding boat, and floated down streams blowing dams. Streams covered included: Moose Creek (1 dam), Russian River (has been kept open by Luke Elwell, who had a permit to take beaver if he would keep dams open for salmon), Hidden Creek (4 dams), East Fork Moose River (24 dams), Kalgin Island stream (3 dams), Fish Creek and Meadow Creek (5 dams), West Fork Moose River (4 dams), Swanson Creek (16 dams), and Seepage Creek, (Tustumena Lake).

Cost this year was for \$1,767.05. Included 57 days' labor for Andy Simons and Ed Lovdahl (total) and did not include salary of Cap Cole, which was paid by FWS. Plane charter alone came to \$453.00.

Estimate minimum of \$2,200.00 total cost, salary and all, this season. Present day cost would run close to \$5,000.00 for this type operation.

1946 Worked East and West forks of Moose River, Hidden Creek, and Jean Creek, Seepage Creek, Swanson River, Meadow Creek, Fish Creek, Cottonwood Creek, and Kalgin Island Stream. Total cost -- \$2,463.40.

1947 Same streams as 1946, with added Bishop Creek, Rabbit Creek and Nancy Creek. Cost approximately \$2,500.00.

1948 Stream clearance work carried out during June and July. Alaska Salmon Industry paid for June, FWS paid for July. FWS provided airplane and boat transportation. Used two 2-men crews. Red-Shirt Lake covered for first time during the last two weeks of July, when 52 dams were blown in area; for first time in three years red salmon reached spawning grounds there.

Streams covered also included: Swanson and Bishop Creeks near Boulder Point on the Kenai; Moose River area included the East Fork and part of West Fork; the Kenai Lake drainage, which took most of the summer's operational time.

1949 Work done strictly by FWS, with two 2-men crews. Streams covered included: Davis, Quartz, Bear, Trail, Crescent, Jean and Hidden Creeks of the Kenai Drainage. Seepage Creek in the Tustumena area, Red-Shirt and Flathorn Lakes with connecting streams, head of the Little Susitna, Talkeetna area, Big Lake and Fish Creek, Horse Shoe Lake in the Susitna Drainage, and Blodgett Lake and Meadow Creek of the Fish Creek system.

1950 Two 2-men crews, June - July. Seepage Creek, Tustumena Lake, Moose Lake Drainage, Johnson, Trail, and Moose Creek, Daves, Crescent, and Quartz Creeks, Jean and Hidden Lake Creeks, Swan

Lake, Sharon Lake, and Fish Creek on the Yentna River, Shell Lake Stream, Rabbit Creek, Cottonwood and Wasilla Creek, Kalgin Island stream, Swanson River, Meadow Creek of Fish Creek drainage, Rolejo Stream (Fish Creek at Red Shirt Lake), 10 miles north of Big Lake, Croto Lake, Fish Lake tributary, Question Lake and Answer Creek. Used L-1 airplane to fly to lakes, drifted down them with folding boat.

1951 Seven men did stream clearance this year. Fish Creek, Kalgin Island Creek, Quartz Creek, Cottonwood Creek, Moose River, Question and Answer Lake area southeast of Talkeetna. Report incomplete.

1952 Used ditching powder for first time -- (50%) Had one two-man crew in the field starting July 24. Red Shirt Lake, Rolejo Creek, Wasilla Lake, Cottonwood Creek, and Fish Creek, Kalgin Island.

1953 One 3-man crew. Special permit for second year for work by trappers on beaver of Kalgin Island. A permit issued March 30, and 52 beaver taken on Kalgin. Red Shirt Lake, Cottonwood Creek, Indian Creek near Tyonek, Three Mile Creek, S. W. of the Beluga River, Sucker Lake Creek (part of Alexander Lake system), Hewitt Lake outlet stream, Shell Lake outlet stream, Nancy Lake outlet, Elling Lake.

1954 Have Enforcement report only -- no management report for Cook Inlet.

1955 Two crews of 2 men each. Fish Creek, Packers

Creek, Cottonwood Creek, Seepage Creek, Red Shirt and Rolejo Lakes, Hidden Creek, Nancy Creek, Lower Russian River, Moose Creek, Three Mile Creek, Elling Lake, Shell Lake, Hewitt Creek, Talachulitna River, Spring Creek, Sucker Lake outlet.

1956 Two crews of two men each in field from July 6 to August 5. Same streams systems.

1957 Fifteen creeks and rivers covered, and 73 dams removed. One crew of two men in field from July 6 to July 31.

1958 One 2-man crew removed 20 dams in season.

1959 Ten streams and lakes covered, and 54 dams removed.

1960 In January of 1960 when the state assumed control of fish and game resources much thought was given to the problem of beaver dams vs. salmon runs. Beaver fur is not in strong demand, and beaver are only casually trapped by a few individuals in this area nowadays; beaver dams have become extremely common in many areas of Cook Inlet. The expense of having a crew of two men remove dams for six weeks each year is considerable.

Experiments to find a convenient and permanent means of passing salmon through any given beaver dam have not been very successful. The Fish and Wildlife Service in Cook Inlet tried using two parallel fences through the center of a beaver dam, and they also tried a wooden flume that was imbedded within a dam. Neither was successful.

The possibility of issuing special permits to individuals to take beaver in trouble areas was discussed during Spring of 1960

with Jim Brooks, Chief of the Game Division. However, a limit of 40 beaver per trapper had been established for 1960, and a three months season set (Feb. 1 to April 30). Few trappers took 40 beaver. Most serious trappers work in pairs, hence two men legally were allowed 80 beaver.

From this it is apparent that issuance of permits for taking beaver by trapping in winter and early spring would not likely succeed in reducing beaver populations.

Policy of the Game Division prevents issuing of permits to individuals to shoot beaver in spring, after ice is gone. Trapping is the only legal and, nowadays, socially acceptable, method of taking beaver.

Department employees in especially severe problem areas could shoot beaver after removing dams and houses with dynamite. This, however, in such a populous area as Cook Inlet could lead to public condemnation unless the beaver were skinned and properly cared for. Since the skins are near worthless during July and early August when stream clearance work is done, this is not economically practical.

Too, beaver are so plentiful in the Susitna-Matanuska basins where the greatest fish-passage problem exists that killing of one colony would at best be but a temporary move. Within a year other beaver would take their place.

The situation is not all entirely dark. Beaver can be of value in salmon production. Their dams help maintain stream flows

at critical times when fish are running and need it. And in some instances beaver ponds undoubtedly provide desirable rearing areas for smolts.

No simple solution is in sight for the beaver dam problem in Cook Inlet. It appears that the only way to handle it is to continue putting a crew into problem areas each season to remove dams so fish can get through, with no special attempt to destroy the beaver.

Estimated annual cost of this operation is \$4,000.00:

Flying time to search out beaver dams -- mostly in June	\$ 900.00
Replacement of equipment each year	300.00
Transportation, auto & plane, of crew to dams	1,000.00
Dynamite & misc. costs	200.00
Salaries, two temporaries, 6-weeks work	1,650.00
	<u>\$4,050.00</u>

Cost does not include that of administering this program -- office paper work, permanent personnel to oversee the work, etc.

A complete file is maintained in the Homer office on locations of beaver dams throughout the Area. In addition, a report on this work was filed in the office by the dam clearance crew at the end of the 1960 season.

This procedure will continue to be followed.

#### OTHER STREAM CLEARANCE

Gore Point Lake in the Outer District formerly had runs of red salmon, according to local fishermen. Fish and Wildlife records turned over to the State make no mention of this lake. Too heavy fishing undoubtedly was a factor in the decline of this run, since

no protection was ever given to it.

This lake faces the open sea, and the long semi-circular beach is a natural trap for drift. Heavy logs have been thrown up in a jackstraw pile in the lake outlet. It was questionable if fish could get into the lake from the sea.

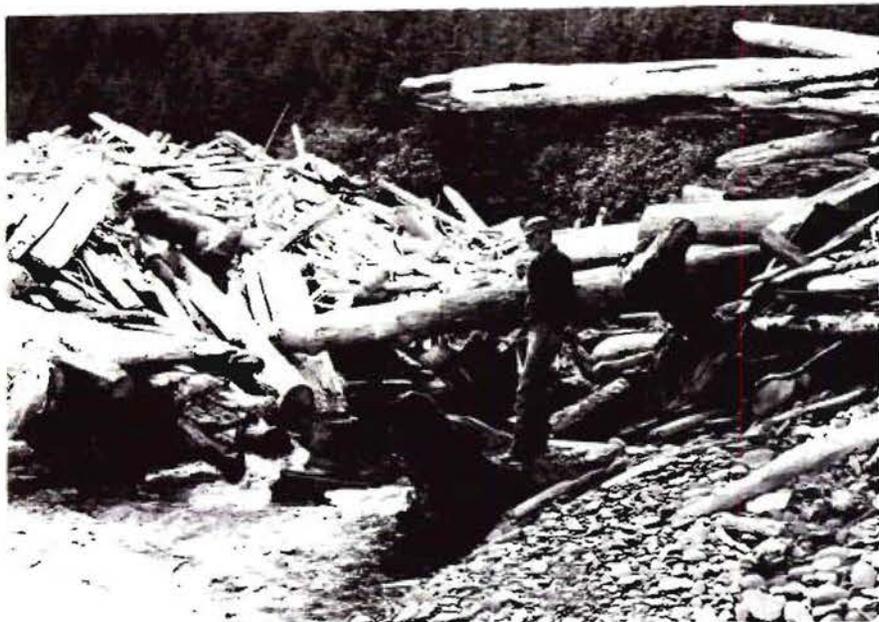
A crew of two men with dynamite, a chainsaw, peavy, axes, and handsaws were flown to the lake where they spent several days cleaning out drift in the stream.

It is uncertain whether reds still exist in this lake. No mature fish were seen there during the season. A few smolts were seen by the clearance crew, but species were not determined. Rainbow and Dolly Varden are found in the lake.

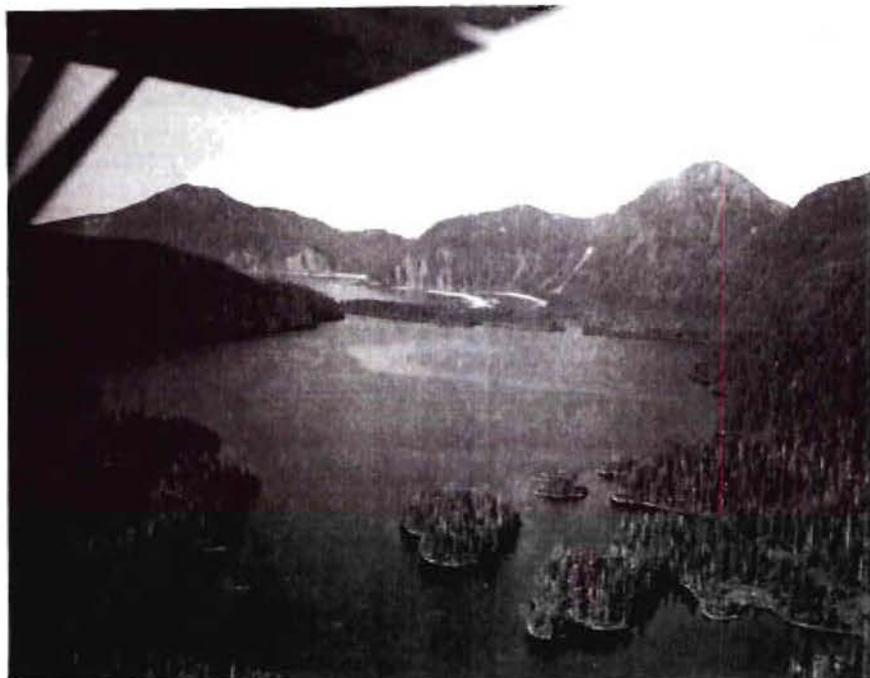
Port Dick Streams are heavily utilized by chum and pink salmon, especially in the lower portions. For some reason apparently good spawning area upstream a mile or so is frequently not utilized.

Downed logs and debris overhang some of these sections, which may or may not explain the lack of utilization of these upstream sections by salmon. A crew went into the area to remove as much of this as possible. Approximately a week was spent by two men clearing Island Creek, Middle Creek, Port Dick Creek, Windy River and Taylor Bay Creeks.

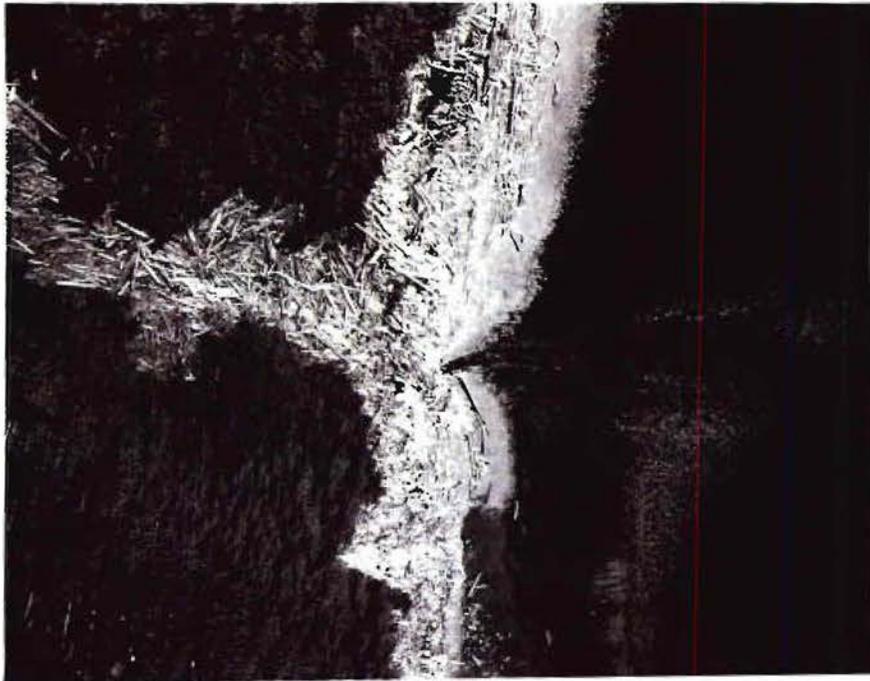
Anderson Beach, also in the Outer District, requires clearing. A small red salmon run known to occur there could be wholly or partially blocked by drift that has piled in the lake outlet. Weather prohibited the crew from reaching this beach during the



A close-up of the jam before work started.



Point Gore Lake, facing toward the sea. Gore Point is the mountain directly beneath the wing. The Gulf of Alaska is found beyond Gore Point.



The logs jammed at the outlet of Point Gore  
Lake before --



and after being cleaned out.

1960 season. Attempts will be made to get there during 1961 to clear it out.

#### COOK INLET SALMON COUNTING STATIONS

Evaluation of salmon escapement into spawning areas has been accomplished by aerial and ground stream surveys. However, total counts of escapement are not always possible by this method. Silt-laden glacier streams used by salmon are a major problem to counting efforts in Cook Inlet; salmon simply cannot be seen in them. The Susitna River, Kenai River, and the Kasilof River, which are probably Cook Inlet's three most important red salmon streams, are of this type.

In 1960 no evaluation of salmon escapement into the Susitna Basin was made during the time fish were running. The usual aerial and ground surveys were made following the runs. The same can be said of the Kasilof and Tustumena system. However, during this season, a counting tower was placed on the Russian Lake and River system at the outlet of Lower Russian Lake. The count at this clear water station is regarded as an index to escapement of red salmon into the Kenai River drainage.

In addition, a counting station was established at Fish Creek, which drains into Knik Arm, where counts (weir and tower type) have been made of an important red salmon run into the Big Lake system most years since 1937.

In 1960 the stream guard assigned to English Bay was

requested to make a regular count of reds ascending to the English Bay Lake system. From 1937 through 1941 a weir was built by the Bureau of Fisheries at this site.

Other weir sites used by the Fish and Wildlife Service in Cook Inlet in the past include Chenik (1937 - 1939), Kalgin Island (1937 - 1941), Swanson River and Bishop Creek. None of these runs is presently extensive enough to warrant a counting station.

Salmon Counting Stations (Continued)

FISH CREEK RED SALMON ESCAPEMENTS

1938 through 1960

YEAR	RED SALMON COUNT
36	201,000
37	50,000
1938	182,463
1939	116,558
1940	305,982
1941	55,077
1942	-
1943	-
1944	-
1945	-
1946 *	57,000
1947 *	150,000
1948 *	150,000
1949	68,240
1950	29,659
1951	34,704
1952	92,724
1953	54,345
1954	23,287
1955	37,445
1956 **	42,663
1957	15,630
1958 ***	26,000
1959 ****	77,416
1960	90,720

1961 — 34,500  
 1962 — 68,000  
 1963 — 119,000  
 1964 — 63,000  
 1965 — ?

Ave count  
 23 years = 81,000

- \* Estimated escapement - no weir installed
- \*\* Estimated escapement - weir washed out
- \*\*\* Estimated escapement - high water condition.
- \*\*\*\* Estimated escapement - initial year of screen-count sampling method

Ave count 1938-1960 = 81,000

Salmon Counting Stations (Continued)

ENGLISH BAY COUNTS

<u>YEAR</u>	<u>RED SALMON</u>	<u>PINK SALMON</u>
1937	14,857	174
1938	16,572	
1939	48,777	958
1940	30,235	390
1941	26,905	
1960	<del>35,000</del> (Estimated) 2595	

LOWER RUSSIAN LAKE

<u>YEAR</u>	<u>RED SALMON</u>
1960	37,680

### TEMPORARY SUMMER EMPLOYEES

Six summer temporaries were employed in 1960. Each was given the title of "Biological Aide."

Eric Francke was a repeater from summer work with the Fish and Wildlife Service. In 1959 he was a stream guard. During this season he worked on removing beaver dams (Francke handled explosives while in the service), stream surveyed, and performed a variety of duties in a very satisfactory manner. Recommendation for Francke -- excellent. Francke is a Forestry student at New York State College at Syracuse.

Allen Davis was another repeater. During 1959 he worked as a biological aide with the Fish and Wildlife Service Bureau of Commercial Fisheries, Cook Inlet. He is a fisheries student at Oregon State College. His work during 1960 was outstanding. He is capable of making decisions, and has a good awareness of the importance of the varying duties assigned him.

Jerry O'Gorman had worked for the Fish and Wildlife Service in the past, both in Cook Inlet and in Bristol Bay. He has had no education beyond high school. His attitude on the job was somewhat at variance with those in charge of the field work, hence recommend that he not be re-hired for Cook Inlet work.

Bob Stokes, of Homer, had worked for the Fish and Wildlife Service in fisheries work previously. He is also an experienced pilot. During 1960 his primary responsibility was to pilot the dry-charter Cessna 180 and PA 18 aircraft out of

Temporary Summer Employees (Continued)

Homer for both the Commercial Fisheries and Protection Divisions. Performance of duties by Stokes was excellent.

David Warren of Red Cliff, Colorado -- Warren was employed for about three weeks. His decision to leave the position because of his ineptitude for the work was a relief to himself and his employers.

Floyd Fortuin of Ridgewood, New Jersey, was a medical student (not pre-med) who wandered into the office when Warren (above) left. Fortuin showed excellent aptitude for fisheries work (and, of course, had an excellent biological background for it) and performed his duties in a highly satisfactory manner.

STREAM AND LAKE SURVEYS

During the commercial fishing season, stream and lake surveys were made primarily from aircraft, although some ground surveys were made. Aerial surveys were made throughout the entire Cook Inlet Area.

Toward the end of the commercial season, foot and small boat survey crews covered the Tustumena - Kasilof spawning system, the Kenai River system, established count areas elsewhere on the Kenai Peninsula, in the Matanuska Valley, and in the Susitna River. In general, established count areas were followed (such areas, established by Fisheries Research Institute and Fish and Wildlife Service, purportedly covering the key spawning areas

## Stream and Lake Surveys (Continued)

of the Area, were established and marked about 1956).

Some check flights were made in late August and into September on important spawning areas.

A number of weaknesses were found to exist in the stream and lake survey data that had been compiled by the Fish and Wildlife Service. Timing of runs are at variance in many instances with the recommended time of survey. In some systems, aerial surveys were apparently made (from a Grumman Goose) sporadically; some years two or three flights would cover a drainage, while other years one or none were made. Apparently no account was taken of the fact that in many of Cook Inlet's spawning areas (especially drainages utilized by chum and pink salmon) the total run of the stream is made up of a number of "waves" of salmon that arrive at the stream, spawn, and die, only to be replaced by a subsequent "wave" of salmon spawning in essentially the same area. The "run" in drainages where this occurs must, then, be composed of a complex of "runs", no one of which can be separated from the others in evaluating escapement.

In order to follow such a complex frequent aerial (or ground) surveys of streams are essential. Spot flights made infrequently do not give the complete picture.

When it became obvious that the stream and lake survey records submitted to the state by the Fish and Wildlife Service were of dubious value, a secretary was assigned the task of combing field notebooks and records for all possible data on streams

### Stream and Lake Surveys (continued)

and lakes of the Area. This project has not been completed.

The 1960 salmon escapement, in general, was good to excellent throughout nearly all major spawning grounds. Pink streams in the Outer District had excellent showings, as in Port Dick, and the south end of Nuka Island. Escapement into Rocky River was estimated at 130,000, which is far the greatest number of spawners for that system of which there is a record. Port Graham stream had an escapement of 10,000 which, according to old-timers in the area, is the best escapement there since 1916.

The Talachulitna River, in the Susitna Basin, had an estimated escapement of one million pinks.

Red salmon escapement was good to excellent in the Kenai, Kasilof, Fish Creek, and Susitna systems (see Fish Creek and Russian River counts).

### METHODS OF AERIAL SURVEY

Both a Super Cub (PA 18) and a Cessna 180 were used for aerial surveys of streams and lakes. After a few tries, however, the Cessna was abandoned for this work, and the Cub used exclusively.

The Homer office was fortunate to have as contractor for flying Johnnie Klingbeil, who for seven or eight years was a professional fish spotter, making his livelihood flying for canneries each summer, searching for salmon.

## Methods of Aerial Survey (continued)

Techniques used by Klingbeil have become standards for aerial surveys in the Cook Inlet area. The method used is to fly at from 300 to 600 feet altitude over and beside a stream, following the convolutions of the stream, and with the pilot skidding the airplane on turns that, if banked, would place the floats between the observer and the stream. A pilot who has a complete familiarity with his plane is an absolute necessity, and an aircraft in perfect operating condition, obviously, is a second requirement.

One ground check was made of a count made from the air -- in this instance the count from the ground was 1500 fish, and the estimate made by the aerial observer was also 1500 fish (Tutka Bay Lagoon and stream).

On other occasions different observers, flying over the same streams on consecutive days, compared estimates. In every instance there was a remarkable correspondence in figures obtained, and never was there a disparity of more than 10 per cent.

Fish are estimated in blocks. If there are few fish, they may be estimated in blocks of 10 or 20 or 25. The denser the concentration of fish, the larger the "block" used -- until at times fish may be estimated 1,000 at a time. Poloroid glasses are a big help, although not an absolute must as at first believed.

A convenient form for tabulating fish, carried on a clipboard, was used on all aerial surveys.

#### Methods of Aerial Survey (continued)

In addition to the stream and lake surveys, which gave counts of salmon that had reached spawning areas, certain areas of Cook Inlet are such that fresh incoming sea-run fish can be observed from the air as they approach spawning streams. Concentrations of fish off the mouths and in the bays and estuaries of the Southern District, Outer, Western, and at times, the Eastern District are usually readily observed from the air. This, of course, makes management of the fishery, based on escapement and numbers of observed fish available to the fishermen, simpler and more efficient.



The Department Vessel M/V Auklet, with the two aircraft used by Commercial Fisheries and Protection Divisions during the 1960 Summer season.

PROCEDURES FOR CHANGES IN FISHING  
REGULATIONS

Authority for Area Biologists to open or close fishing season, to change location of stream markers, and other important management procedures went into effect in 1960 with State control of the resource.

A fairly standard procedure was followed in the Cook Inlet Area for making field announcements. When possible, at least 24 hours advance notice was given for a change in fishing regulations. When a decision was made to announce a change, the first announcement was made to stream guards and other Department personnel. Next, the announcement was made over standard fishing boat radio frequencies -- 2512, 2450, and 2538 are the most commonly used ones in this area.

After that, telephone calls were made (if the regulation affected the processors concerned) to canneries in the area involved, requesting that they announce the change to their fishermen.

During the peak of the summer salmon season, a 6-day a week radio program "Fishermen's Corner" was presented by the Homer office on an Anchorage commercial station. Important field announcements were made by direct recording -- that is, a telephone call to the control room of the radio station was made, and the message recorded on tape, which was later played for the "Fishermen's Corner" for the evening.

Procedures for Changes in  
Fishing Regulations (continued)

On several occasions stream markers were to be moved within a few hours: sufficient fish were in the stream for spawning, and large numbers had piled up inside the markers off the stream mouth (as at Island Creek at Port Dick). In such cases when a decision was made to move markers, it was announced on standard fishing boat radio frequencies, and then a few hours prior to moving the markers, a small boat was used to cover all of Port Dick (in this instance) to notify each boat present of the fact. This worked very efficiently.

Flares were used for some openings in the seining areas of the Southern and Outer Districts for the first time. Under former management practices, a time was set for opening for fishing, but all fishermen's time was not the same. Frequent early sets were the result, with great difficulty in getting court convictions of those involved. In 1960 a time was set for the opening, but also the announcement was made that a flare would be fired and that no fishing was to be allowed before the flare.

This worked very well, and met with strong approval of all fishermen involved. Flare openings in these Districts will be continued.

March 30, 1960

Regulation closing the season for the taking of king crab in certain areas of Kachemak Bay.

Whereas, I find the adoption of an emergency regulation is necessary for the immediate preservation of the general welfare of the public and for the proper utilization of king crab, and

Whereas, my finding is based on the following facts:

1. Substantial damage is occurring to gravid female king crab and their spawn by the fishery.
2. Substantial damage is occurring to both male and female king crab in the soft shell stage by the fishery.
3. Data indicates that a portion of Kachemak Bay is at this time being utilized by a large population of spawning king crab.
4. Present utilization of king crab stocks in the area is not compatible with proper conservation and management practices.

Now therefore, I, Walter Kirkness, Acting Commissioner of the Alaska Department of Fish and Game, pursuant to authority vested in me in Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedures Act of 1959, do hereby adopt the following regulation:

Section 109.73 shall be amended to read as follows:

King crab may be taken from January 1 to December 31 provided that no king crab may be taken in Kachemak Bay east of a line between Anchor Point and Nubble Point.

The said regulation is therefore adopted as an emergency regulation to take effect at 12:01 A.M. on the 31st day of March, 1960.

cc: Meacham  
Hilliker  
Chuck Hendrix  
Ed Martin

Cook Inlet District #2

REGULATION FOR OPENING THE SEASON  
FOR THE TAKING OF KING CRAB IN  
CERTAIN AREAS OF KACHEMAK BAY

WHEREAS, I find the adoption of an emergency regulation is necessary for the immediate preservation of the general welfare of the public and for proper utilization of king crab, and

WHEREAS, my finding is based on the following facts:

1. Substantial damage will not occur to gravid female king crab and their spawn by the fishery.
2. Substantial damage will not occur to both male and female king crab in the soft shell stage by the fishery.
3. Data indicate that Kachemak Bay is not at this time being utilized by a large population of spawning king crab.
4. Present utilization of king crab stocks in the area is compatible with proper conservation and management practices.

NOW, THEREFORE, I, Walter Kirkness, Acting Commissioner of the Alaska Department of Fish and Game, pursuant to authority vested in me in Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, do hereby adopt the following emergency regulation:

Section 109.73. Open fishing season, king crab, shall be amended to read as follows:

King crab may be taken from January 1 to December 31.

End of regulation.

Cook Inlet District #3

June 2, 1960

REGULATION RESTRICTING SALMON FISHING IN THE WESTERN DISTRICT OF THE RESURRECTION BAY AREA TO THE USE OF HAND PURSE SEINES AND BEACH SEINES

WHEREAS, I find the adoption of an emergency regulation is necessary for the immediate preservation of the general welfare to the public and for proper utilization of salmon, and

WHEREAS, my finding is based on the following facts:

1. Historically salmon have been taken by hand purse seines and beach seines in the Western District of Resurrection Bay.
2. Utilization of the salmon stocks will be compatible with proper management practices.

NOW, THEREFORE, I, C. L. Anderson, Commissioner of the Alaska Department of Fish and Game, pursuant to authority vested in me in Sections 6 and 12 of Chapter 94, Session Laws of Alaska, 1959, and the provisions of the Administrative Procedure Act of 1959, do hereby adopt the following emergency regulation:

Section 110.10 legal gear salmon, shall be amended to read:

(a) Eastern District

Gill nets, hand purse seines, and beach seines may be used.

(b) Western District

Hand purse seines and beach seines may be used.

End of regulation.

July 3, 1960

FISH AND GAME

FINDING OF AN EMERGENCY

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an emergency is:

ROCKY BAY AND ITS TRIBUTARY STREAMS HAS INADEQUATE ESCAPEMENT.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following emergency regulation.

Section: 109.05 Open fishing seasons, salmon.

(d) Outer district.

- (1) From July 1 to July 16, provided that Rocky Bay, North of the latitude of,  $59^{\circ} 14' 2''$  is closed to all commercial salmon fishing.

The said regulation is therefore adopted as an emergency regulation to take effect at 6:00 AM, July 4, 1960.

/s/ C. A. Weberg  
C. A. Weberg, District Biologist

cc: Anderson  
Kirkness  
Meacham  
Seward  
Seldovia  
Anchorage Times

Cook Inlet District #5

EMERGENCY OPENING FOR THE TAKING COMMERCIALY  
OF DUNGENESS CRAB IN COOK INLET, AND RESURRECTION BAY

EMERGENCY BY FIELD ANNOUNCEMENT

REASONS:

1. To gain biological information on the population, and molting condition of Dungeness crab in this region.
2. To determine if possible the feasibility of using ring nets to harvest Dungeness crab in this region.
3. Damage to the existing Dungeness crab population in this region will not occur under this provision.

Regulation to take effect at 8:00 A.M., Thursday, June 23, 1960, to be terminated at 8:00 A.M., Monday, July 4, 1960.

Section 109.77 shall be amended to read as follows:

109.77 Open fishing season, Dungeness crab.

Dungeness crab may be taken from August 14 to May 31, and from 8:00 A.M., Thursday, June 23, 1960, until 8:00 A. M., Monday, July 4, 1960.

/s/ C. A. Weberg  
C. A. Weberg, District Management Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #6

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. The gear fishing in the Northern, North Central and South Central districts of Cook Inlet during the period July 4 and 5 is close to 1050 units.
2. A very good showing of fish is present, especially in the South Central District.
3. Escapement is proceeding satisfactorily.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.06 Weekly fishing period.

- (3) A six hour extension is granted in the Northern, North Central and South Central districts of Cook Inlet. The fishing period in these districts will be from 6:00 A.M. Thursday, July 7th until 12:00 noon, July 8th, 1960.

/s/ C. A. Weberg

C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #7

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. A good showing of fish is present in the Northern, North Central, and South Central Districts of Cook Inlet.
2. Escapement is proceeding satisfactorily.
3. The units of gear fishing in the Northern, North Central, and South Central Districts of Cook Inlet is less than 1050 units.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.06 Weekly fishing period.

- (3) A twenty-four hour extension is granted in the Northern, North Central, and South Central districts of Cook Inlet. The fishing period in these districts will be from 6:00 AM Saturday, July 16, until 6:00 AM Sunday, July 17, 1960.

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #8

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. McNeil River, in Kamishak Bay, is receiving adequate escapement.
2. Streams entering Bruin Bay, in Kamishak Bay, are receiving adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.21 Closed waters.

- (c) Kamishak Bay: Within one statute mile of any salmon stream provided however, that this does not apply to McNeil River, or Bruin Bay.

DATED July 19, 1960

cc: Kirkness  
Meacham  
Seldovia - Port Graham  
Seward Post Office  
Seldovia Post Office  
Kenai Packers  
Columbia-Wards  
Kenai Post Office  
Anchorage Protection

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #9

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Surveys indicate between 6,000 and 7,000 pink salmon in the Port Dick area.
2. Only small numbers of pink salmon are present in Rocky, Windy and Chugach bays.
3. No appreciable amount of escapement of pink salmon has occurred in the Outer District of Cook Inlet.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

(d) Outer district

(2) To be opened by field announcement.

DATED July 20, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #10

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Two Bays, McNeil and Ursus Cove, have received adequate escapement.
2. A good showing of chum salmon is present in Kamishak Bay.
3. The Kamishak Bay area has received little fishing pressure during 1960.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.06 Weekly fishing period.

(a) (1) A twenty-four hour extension is granted from Cape Douglas to Chinitna Point in Kamishak Bay. The fishing period will be from 6:00 AM July 21 to 6:00 AM July 23.

DATED July 20, 1960

cc: Anderson  
Kirkness  
Meacham  
Seldovia-Port Graham  
Seward Post Office  
Seldovia Post Office  
Kenai Packers  
Columbia-Wards  
Kenai Post Office  
Anchorage Protection

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #11

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Two bays, McNeil and Ursus Cove, have received adequate escapement.
2. A good showing of salmon is present in Kamishak Bay.
3. The Kamishak Bay area has received little fishing pressure during 1960.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.06 Weekly fishing period.

(a) (1) A twenty-four hour extension is granted from Cape Douglas to Chinitna Point in Kamishak Bay. The fishing period will be from 6:00 AM July 25 to 6:00 AM July 27.

DATED July 22, 1960

cc: Anderson  
Kirkness  
Maacham  
Seldovia-Port Graham  
Seward Post Office  
Seldovia Post Office  
Kenai Packers  
Columbia Wards  
Kenai Post Office  
Anchorage Protection  
Homer Post Office

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #12

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

A good showing of pink and chum salmon are present in the Northern, North Central, and South Central Districts of Cook Inlet.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.06 Weekly fishing period.

(3) A twelve-hour additional period is granted in the Northern, North Central, and South Central districts of Cook Inlet, provided however, that this extension shall not apply to the area from the East Foreland light to the Coast Guard bouy approximately 3 miles west, and east of a line from the Coast Guard bouy to the southern Department marker at the Kasilof River. The closed area extends approximately 3 miles from the shoreline from the East Foreland light to the southern Department marker at the Kasilof River and includes the Salamatof and Kalifonsky beaches.

The fishing period in these districts will be from 6:00 AM Sunday, July 24, until 6:00 PM Sunday, July 24, 1960.

DATED July 23, 1960.

cc: Anderson  
Kirkness  
Meacham  
Seldovia-Port Graham  
Seward Post Office  
Seldovia Post Office  
Kenai Packers  
Columbia Wards  
Kenai Post Office  
Anchorage Protection  
Homer Post Office

/s/ C. A. Weberg

C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #13

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Inadequate escapement has and is occurring in Port Graham streams.
2. Only small amounts of salmon are present in Port Graham.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

(c) Southern district

Shall be amended to read.

- (1) From May 23 to August 16, provided however that, Port Graham, east of a line extending from Dangerous Cape to the Western edge of Passage Island thence to the waterfall on the southern shore of Port Graham is closed to all salmon fishing until further notice.

DATED July 23, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #14

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Surveys indicate that between 20 and 25,000 pink salmon are present in the Port Dick area.
2. A portion of these fish are behind the stream markers and some fish have moved into the streams.
3. Rocky Bay has a poor showing of fish, both in the bay and stream.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

(d) Outer district

- (2) From July 28th until closed by field announcement, provided that Rocky Bay, north of the latitude of  $59^{\circ} 14' 2''$  will remain closed until open by field announcement.

DATED July 27, 1960

cc: C. L. Anderson  
Walt Kirkness  
C. H. Meacham  
Anchorage Protection  
Seldovia-Port Graham  
Consolidation  
Seward Post Office  
Saldovia Post Office  
Kenai Packers  
Columbia-Wards  
Kenai Post Office  
Homer Post Office

/s/ C. A. Weberg  
E. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #15

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Tutka Bay Creek has received adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.21 Closed waters.

Shall be amended to read as follows:

(d) Kachemak Bay

Above a line from Chugachik Island to a point on the opposite shore one half mile below the terminus of Swift Creek, provided, however, that fishing will be allowed up to the markers at Tutka Bay Creek.

DATED July 29, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #16

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Mallard Bay Creek has received adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.21 Closed waters.

Shall be amended to read as follows:

(d) Kachemak Bay

Above a line from Chugachik Island to a point on the opposite shore one-half mile below the terminus of Swift Creek, provided, however, that fishing will be allowed up to the markers at Mallard Bay Creek.

DATED July 29, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #17

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

The stream at the south end of Nuka Bay has received adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

110.21 Closed waters.

Shall be amended to read as follows:

- (a) Fishing is prohibited north of a line from the southeast corner of the Alaska Railroad dock to the southwest corner of the Alaska Freight Line dock.
- (b) Fishing will be allowed up to the stream terminus at the south end of Nuka Island.

DATED July 29, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #18

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Tutka Bay Creek has received adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.21 Closed waters.

Shall be amended to read as follows:

(d) Kachemak Bay

Above a line from Chugachik Island to a point on the opposite shore one half mile below the terminus of Swift Creek, provided, however, that fishing will be allowed in the Tutka Bay Lagoon during the period 6:00 A.M. August 5 through 6:00 A.M. August 6, 1960.

DATED August 4, 1960

-  
cc: C. L. Anderson  
Walt Kirkness  
C. H. Meacham  
Anchorage Protection  
Seldovia-Port Graham Consolidation  
Kenai Packers  
Columbia-Wards  
Seward Post Office  
Seldovia Post Office  
Kenai Post Office  
Homer Post Office  
Alaska Packers  
PAF  
Seward Protection

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #19

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Port Dick Creek is receiving adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to include:

(d) Outer District

(2) Stream markers at Port Dick Creek will be moved near the terminus of the creek mouth effective at 12:00 noon, Tuesday, August 9, 1960.

DATED August 8, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #20

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

The streams in the Western District of Resurrection Bay are receiving adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

110.05 Open fishing seasons.

Shall be amended to read as follows:

(b) Western District

Salmon may be taken from 6:00 A.M., Wednesday, August 10, until 6:00 A.M., Saturday, August 13, 1960.

DATED August 8, 1960

/s/ C. A. Weberg

C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #21

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Rocky Bay Creek is receiving adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to include:

(d) Outer District

- (2) Rocky Bay, in the Outer District of Cook Inlet, will be open to fishing from 12:00 noon Tuesday, August 9, until 6:00 A.M., Saturday, August 13, 1960.

DATED August 8, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #22

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

The majority of streams in the Outer District of Cook Inlet are receiving adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to read as follows:

(d) Outer District

(2) From 6:00 A.M. Wednesday, August 10, until 6:00 A.M., Saturday, August 13, 1960.

DATED August 8, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #23

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Middle Creek, in the Port Dick area, has not received adequate escapement.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to read as follows:

(d) Outer District

- (2) From 6:00 A.M., Wednesday, August 10, until 6:00 A.M., Saturday, August 13, 1960, provided, however, that the markers at the Southeast shore of Middle Creek will be moved outward from the stream terminus to provide additional protection for escapement purposes. The markers will be moved effective at 12:00 noon August 9, 1960.

DATED August 8, 1960

c/o S. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #24

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Fresh salmon are continuing to run into the Western District of the Resurrection Bay Area and the Outer District of the Cook Inlet Area. Adequate escapement of brood stock into spawning areas of both Areas has been received. Proper utilization of the resource can be achieved only through further fishing.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to read as follows:

(d) Outer District

(2) From 6:00 A. M. Monday, August 15, until 6:00 A. M. Wednesday, August 17, 1960.

110.05 Open fishing seasons.

Shall be amended to read as follows:

(b) Western District: From 6:00 A.M. Monday, August 15, until 6:00 A.M. Wednesday, August 17, 1960.

DATED August 12, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

A good showing of pink salmon and some chum salmon are present in the Northern, North Central, South Central, and Southern Districts of Cook Inlet. Adequate escapement of both pink and chum salmon has been received by Cook Inlet streams, with the exception of Port Graham stream. Proper utilization of the resource can be had only through further fishing effort.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon

(a) Northern and North Central Districts.

- (2) From June 30 to August 20, and
- (3) From August 22 to September 23

(b) South Central District

- (1) From May 23 to August 20, and
- (2) From August 22 to September 23

(c) Southern District. Provided that Port Graham, east of a line extending from Dangerous Cape to the Western edge of Passage Island thence to the waterfall on the southern shore of Port Graham is closed to all salmon fishing until further notice.

- (1) From May 23 to August 20, and
- (2) From August 22 to September 23.

DATED August 12, 1960

/s/ C. A. Weberg  
C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

Cook Inlet District #26

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

Sadie Cove has received a poor escapement of pink salmon.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to read as follows:

- (c) Southern District. Provided that Sadie Cove shall be closed to all commercial salmon fishing.

DATED August 15, 1960

/s/ C. A. Weberg

C. A. Weberg, District Mgmt., Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

cc: C. L. Anderson  
Walt Kirkness  
C. H. Meacham  
Anchorage Protection  
Seldovia-Port Graham Consolidation  
Alaska Packers  
Pacific American Fisheries  
Seward Protection  
Seward Post Office  
Seldovia Post Office  
Homer Post Office  
Berman Packing

Cook Inlet District #27

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Inadequate escapement has occurred in Portlock streams.
2. Small numbers of salmon are present in Portlock Bay.

NOW THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.05 Open fishing seasons, salmon.

Shall be amended to read as follows:

- (c) Southern District. Provided that Portlock, inside a line from Chrome Point to Chatham Island then to a point on the mainland due east of the northeast end of Elizabeth Island, shall be closed to salmon fishing until further notice. This closure is effective at 3:00 A.M. Tuesday, August 16, 1960.

DATED August 16, 1960

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C. A. Weberg, District Mgmt. Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

cc: C. L. Anderson  
Walt Kirkness  
C. H. Meacham  
Ben L. Hilliker  
Anchorage Protection  
Seward Protection  
Berman Packing Co.  
Saldovia-Port Graham Consolidation  
Alaska Packers  
Pacific American Fisheries  
Seward Post Office  
Saldovia Post Office  
Homer, Post Office

FIELD ANNOUNCEMENT

The Alaska Department of Fish and Game finds that the attached regulation is necessary for the immediate preservation of the general welfare of the public. A statement of the facts constituting such an announcement is:

1. Herring exist in relative abundance in the Cook Inlet District.
2. An economic need exists for herring in this area.
3. There are no known biological reasons for not harvesting quantities of herring in all waters of the Cook Inlet District by means other than those presently provided for.
4. Good conservation and proper management of the herring resource of the Cook Inlet District will be achieved by allowing herring fishing in all waters of the District by the means provided for in this field announcement.

NOW, THEREFORE, pursuant to the authority vested by Sections 6 and 12 of Chapter 94, Session Laws of Alaska 1959, and the provisions of the Administrative Procedure Act of 1959, the Alaska Department of Fish and Game does hereby adopt the following regulation by field announcement.

109.50 Legal gear, herring

Shall be amended to read as follows:

Gillnets, purse, hand purse, and beach seines may be used to take herring.

This regulation shall become effective at 8:00 A. M. December 6, 1960, and it will remain in effect until midnight December 31, 1960.

Dated: December 2, 1960

C. A. Weberg, District Management Biologist  
Commercial Fisheries Division  
Cook Inlet District Office

cc: C. L. Anderson, Commissioner  
Walter Kirkness, Director  
C. H. Meacham, Regional Supervisor  
Ben L. Hilliker, Mgmt. Biologist  
Seward Protection  
Urain Seafoods, Seldovia  
Wakefield Fisheries, Seldovia  
Lae Shelford, Homer  
Browning Seafoods, Homer  
Halibut Producers Coop., Seward  
U. S. Post Office, Homer  
U. S. Post Office, Saldovia

## OIL DEVELOPMENT AND CONSTRUCTION

The discovery of oil in the Swanson River area of the Kenai Peninsula in 1957 started a flurry of seismic exploration and oil drilling that continues to increase. Section 31 of Chapter 94 SLA, which relates to the protection of fish and game gives the Department of Fish and Game authority over use of any river, lake or stream by individuals or agencies, insofar as use of the stream bed or of the waters is concerned. Thus every stream that is crossed by any equipment, that is bridged for a road, or any oil or gas line that is to be buried beneath a stream bed, or any seismic exploration work that is carried on in such a manner that it affects a stream, falls within this category. Permits must be issued for such uses by the Department, and the operation involved must be inspected to see that the terms of the permits are followed. (See copy of typical seismic exploration permit following.

Highway expansion, oil activity, mining, and logging are the major categories that the Cook Inlet Commercial Fisheries Division office are involved with in protecting salmon spawning areas under Section 31. During 1960 a 65-mile natural gas line was layed from near Kenai across land to Turnagain Arm. It crossed several major salmon streams. A 20-mile pipe line for carrying oil was layed from the Swanson River Unit to Nikishka Beach, and it crossed several salmon streams. At least a dozen seismic operations were carried on that required issuance of permits and field inspections. Of course, many roads were built or re-built, requiring checking of stream crossings via bridge or culvert.

This type of activity is extremely time-consuming, and detracts considerably from the amount of time that staff members can spend on more direct management

Oil Development and Construction (continued)

and biological studies of the fishery. Not that this work is not extremely important. It is important, but it is unfortunate that specialists in this particular field cannot be assigned this work, relieving Area Biologists of the time-consuming and costly (money-wise) efforts in this direction.

TYPICAL SEISMIC EXPLORATION PERMIT

(addressee)

The Alaska Department of Fish and Game hereby grants permission to (company) and the contractor (name of company), to conduct seismographic work in the (area), subject to the following provisions:

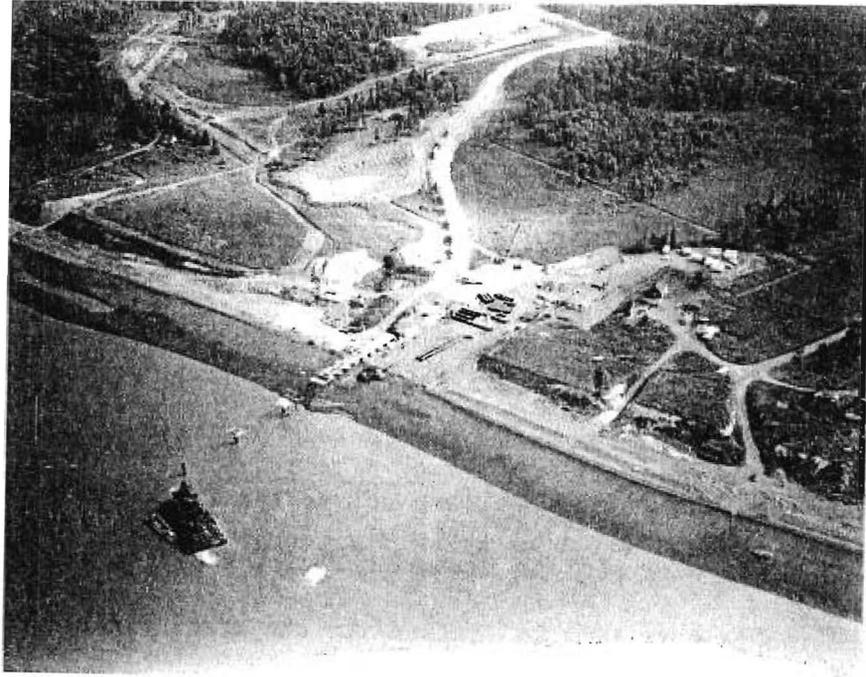
1. Seismographic work will be conducted during the period (dates).
2. Seismographic work will be confined to the areas described in your letter of (date) and marked on the accompanying map.
3. Explosives will not be detonated within one-quarter (1/4) mile of any salmon stream or river.
4. In the event that excessive erosion is caused by the movement of vehicular traffic, the permittee or contractor will be required to take whatever corrective action the Department of Fish and Game deems necessary.
5. Any necessary "clean-up work" will be conducted by the permittee or contractor.

We sincerely thank you for your cooperation in this matter.

Yours very truly,

ALASKA DEPARTMENT OF FISH AND GAME

C. L. ANDERSON, Commissioner



The Standard Oil Company oil loading dock under construction at Nikiska Beach. The oil line from this dock crosses several salmon streams. Department personnel checked and approved the crossings.

## FISHERMEN'S CORNER

Several types of salmon fisheries exist in the Cook Inlet Area.

Seven Districts are defined. Fishing methods, seasons, and daily fishing periods vary from District to District.

Communication with fishermen in so varied and widespread a fishery is a problem. Set netters, who live in beach shacks mostly in the upper Inlet, do not have two-way radio communications, for they do not use vessel radios.

Rapid contact with fishermen in each District is necessary if field announcements are to be effective. Radio contact appeared the only solution. Accordingly, a commercial radio station in Anchorage (KENI) was asked if they would carry a 6-day a week program, to be broadcast about 9:30 P.M. Each program was not over a full double-spaced typewritten page. KENI provided the time free on a public service basis.

The program, called "Fishermen's Corner" was effective, and the fishermen of Cook Inlet requested that it be continued each year. Information on progress of the fishery -- pack reports, where the fish appeared to be moving, field work of the Department, and other informative material, was used on the program in addition to the occasional field announcement.

Copies of "Fishermen's Corner," sent to the Area office in Anchorage, and to the Juneau office, further helped to keep supervisory personnel abreast of developments in the Summer season Cook Inlet fishery.

Fishermen's Corner will probably be continued each Summer season.

## NEEDS FOR FUTURE

### I:

Better and more up-to-the-minute figures on escapement of red salmon (primarily) into Cook Inlet drainages is probably the greatest single need for management of the Area's salmon fishery.

Three of Cook Inlet's primary red salmon spawning streams are so turbid from glacier silt that aerial or other observation of salmon in them is impossible. These streams (the Susitna River, Kenai River, and Kasilof River) all produce the reds that yield probably 80 per cent of the red salmon produced in the Area, yet at no time have any counts that can be considered complete been made of spawners using these systems.

The only present means of determining, in any manner, amount of escapement into these systems is to make counts of fish when they reach clearwater tributaries -- which occurs long after the commercial fishing season has passed. Since management of the fishery is dependent upon escapement, which should be tabulated during the commercial fishing season, it is obvious that management of this fishery is largely guess work, based on size of the catch, observed jumpers in the turbid waters of these drainages, and an after the season stream survey to see if the guess work yielded the desired results.

A large weir might be possible in the Kenai River. In 1960, for the first time, a counting tower was established on the Russian River and Lake system which is the most important clearwater tributary to the Kenai River. The red salmon count obtained on the Russian River gives an index of questionable value to the total escapement realized into the entire Kenai drainage.

## Needs for Future (continued)

It is hoped that an electronic sonar device that can give some indication of escapement into these systems can be developed so that counts will be available while the fishery is going on. An attempt will be made to contact various manufacturers of such equipment to see if this is possible.

### II.

Evaluation of spawning results is probably the second most urgent need for management at present. Smolt counts of downstream migrant red salmon, as well as counts of viable egg and smolt counts of pink and chum salmon, using egg pumps and working in gravel just prior to emergence from the gravel of the smolts, are the techniques that appear best suited to this work.

The eventual goal of this, of course, is to make reasonable accurate predictions of returns of adult salmon.

### III.

The Cook Inlet Commercial Fisheries Management Area encompasses approximately 51,638 square miles (more than the 49,576 square miles of the State of New York). The human population of nearly 100,000 in this Area is greater than in any other Commercial Fisheries Management Area in Alaska. Public pressure and contacts are at a high level. Meetings with advisory groups, with fishermen's groups, constant issuance of permits for mining, for seismic work on land and water, for oil lines, for natural gas lines, for culverts and bridges on new road construction, a gradually developing winter fishery for whitefish, dolly varden and lake trout, in addition to the usual duties of managing the salmon fishery during the Summer season, constitute too great a work load for the three permanent biologists assigned to the area. Add to this a year-round king crab and shrimp fishery, as well as a razor clam fishery which must be managed (a

Needs for Future (continued)

full-time job for one man) and the work load for the District is apparent.

In short, at least one other permanently assigned management biologist is a dire need for the Cook Inlet Commercial Fisheries Area. After an initial break-in period at the main office in Homer, such a biologist should be stationed in Anchorage, with the Susitna Valley, the Matanuska Valley, and the Inlet above the Forelands as his primary responsibility.

IV.

A fourth need is proper warehouse space. The Fish and Wildlife Service, Bureau of Commercial Fisheries, when it managed the Cook Inlet Area, had a warehouse of at least 3200 square feet. When property was transferred to the State, the bulk of items from this warehouse was stored in a 20 x 20 storeroom. Subsequently, a 24 x 30 building was found and is presently being utilized. This is a combination Commercial Fisheries - Protection Division use.

Equipment is not easily found, it is not possible to properly maintain it, and some of it simply cannot be stored under cover with present warehousing.

Temporary personnel literally camp in this warehouse. There is no water, and no heat. Many of these stream guards and biological aides do not have sufficient funds to stay in a hotel room (many are college students fresh from the costs of attending a year at school -- trying to earn sufficient money to return).

A warehouse, with bunk-room space, and if possible, attached office space, is a necessity in this Area for the immediate future.