

Figure 1.-Map of the commercial salmon fishing districts in the KMA.

The 2018 commercial harvest (not including personal use or ADF&G Test Fishery) in the KMA was 3,893 Chinook salmon, 1,820,319 sockeye salmon, 438,046 coho salmon, 5,946,840 pink salmon, and 463,814 chum salmon. The total KMA harvest (including KRAA cost recovery) of 8,668,580 salmon was well below the 2018 forecast as well as the previous 10-year average of approximately 21,563,216 salmon (Table 2).

Table 2.–2018 commercial salmon harvest for KMA compared to the previous 10-year average and the 2018 harvest forecast.

	Chinook	Sockeye	Coho	Pink	Chum	Total
2018 Harvest	3,893	1,820,319	438,046	5,946,840	463,814	8,668,580
2008-2017 Avg.	13,726	2,295,184	296,287	18,109,553	848,458	21,563,216
2018 Forecast	8,000	2,609,500	400,200	8,700,000	1,017,000	12,734,700

Note: harvest numbers do not include harvest from the ADF&G test fisheries or personal use but includes cost recovery.

The estimated exvessel value of the 2018 fishery was approximately \$27.2 million. This was well below the 10-year average exvessel value of \$37.8 million (Table 3).

### **2018 Escapement Summary**

Fish counting weirs were operated on 8 systems in 2018, including the Karluk, Ayakulik, Upper Station, Dog Salmon, Litnik, Buskin, Saltery, and Pasagshak systems. Four observers also flew 28 aerial surveys, and several observers conducted foot and skiff survey escapement estimates.

#### **Chinook Salmon**

The total Chinook salmon escapement (5,378) was below the previous 10-year average (Table 4). Escapement goals for Chinook salmon have been developed for the Karluk and Ayakulik rivers, and escapements are estimated using fish counting weirs (Table 5).

The Chinook salmon escapement through the Karluk River weir (3,155 fish; Table 5) was within the biological escapement goal (BEG) range of 3,000 to 6,000 fish. Chinook salmon escapement through the Ayakulik River weir (2,149 fish; Table 5) was below the BEG range of 4,800 to 8,400 fish; however, the Ayakulik River weir was out due to high water during much of the Chinook salmon run.

## **Sockeye Salmon**

Sockeye salmon runs in many systems in the KMA were average. The major sockeye salmon systems of the KMA met their established escapement goals although several smaller systems (Buskin, Malina, Pasagshak, and Afognak) did not achieve their escapement goals. The entire KMA estimated sockeye salmon escapement of (1,501,385 fish: Table 4) was above the previous 10-year average of 1,275,371 fish (Table 4).

## Coho Salmon

The only established coho salmon escapement goals occur in the Northeast Kodiak and Eastside Kodiak districts for the following systems: American (400 fish), Olds (1,000 fish), Buskin (4,700 to 9,600 fish) and the Pasagshak rivers (1,200 fish). At the time of this report the final estimated escapement numbers have not been calculated.

Coho salmon enter systems in the fall after most of the weirs have been removed. From limited foot surveys on streams conducted near the city of Kodiak and the Islands of Afognak and Shuyak, coho salmon escapement was well above average. However, due to warm and dry weather conditions in September many of the runs were later than usual.

#### **Pink Salmon**

The KMA pink salmon escapement of 5,154,242 fish was above the previous 10-year average of 4,207,128 fish (Table 4). Pink salmon escapement goals have been established as aggregate goals for the entire Kodiak Archipelago and the Mainland District. The escapement for the Kodiak Archipelago (4,873,842 fish) was near the upper end of the escapement goal range of 2.0 to 5.0 million fish (Table 5); however, 47% of the total archipelago's pink salmon escapement (2,275,207 fish) returned to just the Karluk River. The Mainland District pink salmon escapement of 280,400 fish was below average but within the established escapement goal range (250,000 to 1,000,000 fish; Table 5).

## **Chum Salmon**

The overall KMA chum salmon escapement of 342,745 fish was below the previous 10-year average (363,734 fish; Table 4). A peak indexed escapement goal based on 17 streams in on the Kodiak

Table 1. Lower Cook Inlet commercial salmon harvest based on preliminary fish ticket data, 2018.

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District (or hatchery)	Permits	Chinook	Sockeye	Coho	Pink	Chum	Total
Southern District	20	131	55,246	1,747	472,204	1,166	530,494
Outer District	11	2	1,409	5	32,326	34,857	68,599
Eastern District	5	0	22,310	0	0	66	22,376
Kamishak Bay District	7	0	33,699	9,077	5,226	8,298	56,300
Purse seine preliminary total	20	133	112,664	10,829	509,756	44,387	677,769
Southern District	24	185	15,157	3,067	56,638	4,232	79,279
Set gillnet preliminary total	24	185	15,157	3,067	56,638	4,232	79,279
Commercial homepacks	61	773	135	72	28	1,069	
Commercial common property preliminary total			128,594	14,031	566,466	48,647	758,117
Hatchery cost recovery preliminary harves							
Tutka Lagoon SHA		2	62,389	79	939,967	70	1,002,507
Port Graham SHA					57,549	4	57,553
China Poot SHA			6,590		2		6,592
Resurrection Bay SHA			129,444			2	129,446
Bear Lake SHA			28,983				28,983
Kirschner Lake SHA		11,536		95	6	11,637	
donated - Bear Lake SHA			2,924	1,277			4,201
Hatchery preliminary total			241,866	1,356	997,613	82	1,240,919
LCI preliminary total harvest			370,460	) 15,387	1,564,079	48,729	1,999,036
		,				_	

Sockeye Salmon (8 w English Bay Delight Lake Desire Lake	ith goals) 18,304 13,428 9,840	SEG SEG SEG	6,000 5,100 4,800	9,750 7,850 8,350	13,500 10,600 11,900	X X used weir count X X used weir count X
Bear Lake	10,568	SEG	700	4,500	8,300	
Aialik Lake	2,620	SEG	3,200	4,300	5,400	
Mikfik Lake	4,966	SEG	3,400	7,200	11,000	
Chenik Lake	6,651	SEG	2,900	8,300	13,700	
Amakdedori Creek	1,916	SEG	1,200	1,900	2,600	X

#### SOCKEYE SALMON

## 2018 Run and Fishery Summary

The 2018 total run of sockeye salmon to UCI, which includes estimates of commercial, sport, personal use, educational, subsistence harvests, and escapement of approximately 3.1 million fish was 32% less than the preseason forecast (Table 2). The Kenai River run fell short of the forecast by approximately 1.1 million sockeye salmon and Fish Creek fell short of the forecast by 120,000 sockeye salmon. The Kasilof River sockeye salmon total run estimate was 167,000 fish short of the forecast, while the number of sockeye salmon returning to the Susitna River and all other systems (minor systems) were also considerably less than forecast in 2018.

A similar pattern of sockeye salmon passage in the Kenai River was observed in 2018 as was seen in 2015 through 2017. For the fourth year in a row, the peak day of sockeye salmon passage in the Kenai River was 54% less than peak count days of recent years. In 2018, the peak day of passage occurred on July 21, with 62,623 sockeye salmon compared to a 2005–2014 average of 135,000 fish. The 2018 figure represented the second lowest peak day of passage in the past 10 years. This is further exemplified by the fact that commercial fishing on this stock had been closed (see below) for the previous six days to increase daily passage into the Kenai River. In the previous 10 years, the average date where 50% of sockeye salmon passage has occurred in the Kenai River is July 23. In 2018, 50% of the final passage estimate did not occur until August 3, or 11 days later than average. The late run timing and smaller peak complicated management in 2018 as management plans with specific dates and triggers were developed to account for average run entry timing and magnitude.

The 2018 UCI commercial harvest of 815,000 sockeye salmon was approximately 70% less than the 2008–2017 average annual harvest of 2.8 million fish. The 2018 sockeye salmon harvest was the 7<sup>th</sup> smallest on record and the smallest harvest since 1975. Sockeye salmon prices varied during the season but based on an estimated average price of \$2.04 per pound, the total exvessel value of the 2018 UCI sockeye salmon harvest was approximately \$8.7 million, representing 79% of the total exvessel value of salmon in UCI.

Table 3Upper	Cook Inlet socker	ye salmon goal	ls and passage (	(or counts), 2018.
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System	2018 Estimate	Goal type <sup>a</sup>	Lower goal	Upper goal 1,300,000	
Kenai River	1,034,771 <sup>b</sup>	Inriver	1,000,000		
		SEG	700,000	1,200,000	
Kasilof River	394,288 <sup>b,c</sup>	BEG	160,000	340,000°	
	·	OEG	160,000	390,000	
Larson Lake	23,444	SEG	15,000	35,000	
Chelatna Lake	20,437	SEG	20,000	45,000	
Judd Lake	30,844	SEG	15,000	40,000	
Fish Creek	71,566	SEG	15,000	45,000	
Packers Creek	16,247 <sup>d</sup>	SEG	15,000	30,000	

<sup>&</sup>lt;sup>a</sup> BEG=Biological Escapement Goal, SEG=Sustainable Escapement Goal, OEG=Optimum Escapement Goal, and Inriver=Inriver Goal.

b Sonar estimate at river mile 19 on Kenai River and river mile 8 on Kasilof River; not escapement. Harvest upstream of sonar must be subtracted to estimate escapement. Sport harvest estimated from Statewide Harvest Survey; results for 2018 available spring of 2019 at the earliest.

<sup>&</sup>lt;sup>c</sup> The Kasilof River goal in 2018 was a biological escapement goal (BEG) of 160,000 to 340,000.

Incomplete count. Video data collected from June 15 through August 20.



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# Inseason Commercial Harvest Estimates

Prince William Sound Commercial Fisheries 2018

#### Prince William Sound Inseason Harvest Estimates

District Name	Gear	Chinook	Sockeye	Coho	Pink	Chum
200 - Bering River	Drift Gillnet	5	32	120,407	3	0
212 - Copper River	Drift Gillnet	7,165	44,318	302,071	10,479	3,164
221 - PWS Eastern	Purse Seine	45	4,930	23,565	10,303,769	195,479
222 - PWS Northern	Purse Seine	4	2,641	3,366	2,613,756	8,276
223 - Coghill	Drift Gillnet	476	186,999	4,360	290,742	1,803,312
223 - Coghill	Purse Seine	0	2,436	6,323	690,831	4,074
224 - PWS Northwestern	Purse Seine	5	4,171	1,022	180,428	7,433
225 - Eshamy Main Bay	Drift Gillnet	136	969,980	3,952	320,309	138,045
225 - Eshamy Main Bay	Drift/Set	4	30,627	48	13,357	1,199
226 - PWS Southwestern	Purse Seine	88	47,039	41,709	4,878,879	351,347
227 - Montague	Purse Seine	155	4,984	1,527	353,244	440,312
228 - PWS Southeastern	Purse Seine	7	207	678	443,469	28,941
229 - Unakwik	Drift Gillnet	0	3,371	3	34	14
Grand Total		8,090	1,301,735	509,031	20,099,300	2,981,596
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