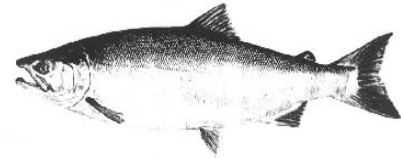


ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE



Cora Campbell, Commissioner
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2011 UPPER COOK INLET COMMERCIAL SALMON FISHERY SEASON SUMMARY

The 2011 Upper Cook Inlet (UCI) commercial harvest of 5.3 million salmon ranks as the fourth largest overall harvest in the past 20 years (Table 3). The 2011 UCI commercial exvessel value of approximately \$51.6 million was the fifth highest value in the UCI fishery since 1960, and represents the highest exvessel value since 1992. While all five species of Pacific salmon are present in UCI, sockeye salmon are the most valuable, accounting for approximately 77% of the exvessel value in the commercial fishery since 1960, and nearly 93% of the total value during the past 20 years. Sockeye salmon escapement goals have historically been monitored in 6 systems in UCI. In 2009, the Yentna River sonar goal was replaced with sustainable escapement goals (SEGs) monitored by weirs on 3 lake systems within the Susitna River, those being Judd and Chelatna Lakes in the Yentna River drainage and Larson Lake in the mainstem Susitna River drainage. Packers Lake escapement was monitored via remote video in 2011; however, these data have not yet been processed. For the 2011 season, three of seven sockeye salmon goals were met, falling within the established goal range, while three exceeded and one fell below the goal objective (Tables 1 & 4).

Table 1.–Upper Cook Inlet sockeye salmon goals and escapement, 2011.

System	2011 Inriver Estimate	Lower Goal	Upper Goal
Crescent River	81,952	30,000	70,000
Fish Creek	66,678	20,000	70,000
Kasilof River	245,721	160,000	340,000 ^a
Kenai River	1,599,217	1,100,000	1,350,000
Packers Creek	To be determined	15,000	25,000
Larson Lake	12,393	15,000	50,000
Chelatna Lake	70,353 ^b	20,000	65,000
Judd Lake	39,997	25,000	55,000

^a The Kasilof River BEG is 160,000 to 340,000; an OEG was established in 2011 of 160,000 to 390,000 to aid in achieving the lower end of the Kenai River goal.

^b The weir was flooded for 8 days, therefore counts represent minimum escapement.

SOCKEYE SALMON

The preseason forecast for the 2011 season projected a total run of 6.4 million sockeye salmon, with a harvest estimate (sport, personal use and commercial) of 4.4–4.8 million fish. The total run to the Kenai River, generally the largest producer in UCI, was forecast to be 3.9 million sockeye salmon. This resulted in managing for an inriver sonar goal range in the Kenai River of 1.0–1.2 million sockeye salmon. In the Upper Subdistrict set gillnet fishery, two regularly scheduled 12-hour fishing periods per week, plus up to 51 hours of additional fishing time, were allowed for this run size under the abundance based escapement goals for the Kenai River.

While the fishing season opens in most of UCI in mid to late June, participation and harvests remain fairly low until early July. In 2011, sockeye salmon harvests in the Central District up to July 14 were well below average, especially in the Upper Subdistrict set gillnet fishery. The July 14 cumulative harvest of 269,000 fish was more than 43% lower than the average harvest of 475,000 fish from 2000–2010. However, beginning on Thursday, July 14, sockeye salmon run strength changed quickly. First, the July 14 drift gillnet harvest of approximately 685,000 sockeye salmon, or more than 1,600 fish per boat, was a record CPUE for one day in UCI history. There had been an indication from the Offshore Test Fishery (OTF) project that a significant number of fish had moved into the district. For example, the OTF cumulative index (CPUE) went from 227 on July 9, which was just above the historic low of 119, to a cumulative index of 1,369 through July 14, which was just below the historic record high of 1,433. The OTF daily index on July 15 was 378, which was the largest single day CPUE in the history of the project. Moreover, the number of consecutive days the OTF daily index exceeded 100 reached nine (July 10–18), which also was a record for this program. A mandatory 36-hour no fishing window was implemented in the Upper Subdistrict set gillnet fishery from 7:00 p.m. on Thursday, July 14, until 7:00 a.m. on Saturday, July 16. A survey of east side beaches throughout the day on Friday, July 15, revealed that the body of fish the drifters had encountered on July 14 were now pushing hard toward the Kenai and Kasilof Rivers. Therefore, even though the cumulative sonar passage in the Kenai River through July 15 had reached only 64,000 fish (in a system with a minimum inriver goal at the time of 1.0 million fish), an emergency order was issued opening the Upper Subdistrict set gillnet fishery, as well as drift gillnetting in the Expanded Kenai and Expanded Kasilof Sections, on Saturday, July 16, from 7:00 a.m. until 10:00 p.m. The sockeye salmon harvest from the Upper Subdistrict set gillnet fishery on July 16 was more than 450,000 fish, which turned out to be a single day harvest record for this fishery. In addition, drifters captured more than 200,000 fish in the expanded corridor. It soon became apparent that the number of sockeye salmon that had entered the Kenai River during the closed fishing window, and days afterwards, was significant. From July 17–24 (eight days), more than 950,000 fish were estimated to have passed the sonar. On July 17, a single day sonar passage record of more than 230,000 sockeye salmon occurred, followed by more than 177,000 fish on July 18.

On July 22, department staff made an inseason assessment of the sockeye salmon run, with the determination being that the final Kenai River run would be more than 4.6 million fish. This triggered changes in management of the commercial fishery. First, the new inriver escapement goal range increased to 1.10–1.35 million fish. In addition, the maximum number of additional hours the Upper Subdistrict set gillnet fishery could be fished each week increased from 51 to 84 hours. Finally, the mandatory Tuesday 24 hour no-fishing window was eliminated, but the 36-hour “Friday” window remained in effect.

For the remainder of the fishing season, the primary management challenge was how to slow down the escapement of sockeye salmon into the Kenai River while at the same time attempting to minimize Chinook salmon harvests. The Kenai River late-run Chinook salmon run was categorized as below average, resulting in bait being removed from the inriver sport fishery on July 25. Because of the below average Chinook salmon run, the Upper Subdistrict set gillnet fishery never fished the additional hours that were available per the management plans. Moreover, Chinook salmon conservation was also addressed by implementing all of the no-fishing window periods. Meanwhile, in order to attempt to harvest the large sockeye salmon run, the drift gillnet fleet was fished on four different days in the expanded corridor when the Upper Subdistrict set gillnet fishery was closed. The final sockeye salmon sonar estimate of passage in the Kenai River was approximately 1.6 million fish, exceeding the upper range of the inriver goal by approximately 250,000 fish. Post season analysis indicated the Kenai River Chinook salmon escapement estimate for 2011 was approximately 29,800 fish (the escapement goal range is 17,800–35,700).

The total sockeye salmon run to UCI in 2011 was estimated to be 8.4 million fish, which was 31% more than forecast (Table 2). Based on OTF data, the run was two days late, which is consistent with large Kenai River runs. Runs to Fish Creek, and the Kenai and Susitna Rivers were better than forecast, while sockeye salmon runs to the Crescent and Kasilof River and minor systems were all slightly below forecast. The UCI commercial harvest of 5.1 million sockeye salmon was approximately 21% above the preseason forecast harvest estimate of 4.2 million and nearly 2.2 million fish more than the average annual harvest since 1966. In only one year since 1999 (13 total years), when the abundance based escapement goal to the Kenai River was developed, has commercial fisheries management ended up in the same tier as the preseason forecast.

Table 2.–UCI sockeye salmon forecast versus actual run by river system in 2011.

System	Forecast	Actual	Difference
Crescent River	131,000	126,000	-4%
Fish Creek	105,000	203,000	94%
Kasilof River	929,000	860,000	-7%
Kenai River	3,941,000	5,895,000	50%
Susitna River	463,000	564,000	22%
Minor Systems	835,000	772,000	-8%
Overall Total	6,404,000	8,420,000	31%

Sockeye salmon prices varied considerably during the season, ranging from early season pricing in the \$1.75 per pound range, but fell to approximately \$1.35 per pound late in the season. Using an average price of \$1.50 per pound, the total exvessel value in UCI for sockeye salmon was approximately \$50.0 million, which was 96.8% of the total UCI exvessel value.

COHO SALMON

The 2011 coho salmon harvest estimate of 87,000 fish (Table 3) was the second smallest harvest in UCI history and approximately 54% lower than the recent 10-year average annual harvest of 188,000 fish. In the drift gillnet fishery, only 37,000 coho salmon were harvested in 2011, which was 65% less than the previous 10-year average annual harvest of 105,000 fish. Reduced

commercial harvests of coho salmon in 2011 were likely due to restrictions in fishing area put in regulation by the Alaska Board of Fisheries (board) to reduce the drift fleet coho salmon harvest, but also were the result of a very poor coho salmon run to many parts of UCI. Monitored coho salmon escapements in UCI are the Little Susitna River, Fish Creek and Jim Creek (McRoberts Creek). In 2011, the escapement in the Little Susitna River of 4,825 was less than half of the lower end of the SEG range of 10,100–17,700 fish. At the 2011 board meeting, the Fish Creek coho salmon SEG of 1,200–4,400 was reinstated. The weir was pulled on August 15, before the entire coho salmon run was complete. The count at that time (1,428 coho salmon) was within the SEG. This is a minimum estimate, accounting for 35%-40% of the escapement. The final Fish Creek coho salmon escapement projection was approximately 3,700 fish. The escapement for Jim Creek (McRoberts Creek) was 261 coho salmon with a goal of 450–700 fish.

Beginning Saturday, August 27, the Division of Sport Fish prohibited fishing for coho salmon in all waters of the Knik Arm Management Area, excluding Fish Creek and the Eklutna Tailrace. The estimated total commercial coho salmon harvest in the General Subdistrict (west side) of the Northern District after the sport fish closure was nine fish.

The exvessel value of coho salmon to the commercial fishery was approximately \$385,000, or 0.7 % of the total exvessel value in Upper Cook Inlet.

PINK SALMON

Pink salmon runs in UCI are even-year dominant, with odd-year average annual harvests typically less than one-seventh of even-year harvests. The commercial harvest of pink salmon in 2011 was estimated to be approximately 32,000 fish (Table 3), which is 63% less than the average annual harvest during the previous 10 odd-years (1991–2009). Pink salmon escapements are not monitored in Upper Cook Inlet to an appreciable degree, but it appears the 2011 pink salmon run, even by odd-year standards, was a weak return. Prices paid for pink salmon were approximately \$0.25 per pound, resulting in an exvessel value for this species of \$25,000, or approximately 0.05% of the total exvessel value.

CHUM SALMON

The 2011 harvest of 126,000 chum salmon (Table 3) was about 8% above the previous 10-year average annual harvest of 116,000 fish. There is only one chum salmon escapement goal in UCI, which is an SEG in Chinitna Bay on Clearwater Creek. The upper range of that goal was exceeded in 2011. The exvessel value of chum salmon to the commercial fishery was approximately \$ 692,000, or 1.3 % of the total exvessel value.

CHINOOK SALMON

Approximately 10,260 Chinook salmon were harvested in 2011 (Table 3), which was about 34% less than the long-term average harvest of 15,600 fish. The two fisheries where Chinook salmon are harvested in appreciable numbers in UCI are the Northern District and Upper Subdistrict set gillnet fisheries.

At the 2011 board meeting, many Chinook salmon stocks in the Northern District of UCI were found to be stocks of management concern. Based on this finding, an action plan was developed to reduce Chinook salmon harvests by both sport and commercial fisheries. In the commercial fishery, that portion of the General Subdistrict of the Northern District from a point at the wood chip dock located approximately three miles south of Tyonek north to the Susitna River was closed to

fishing for the entire directed king salmon fishery. The estimated harvest in the Northern District during the directed king salmon season was approximately 2,130 fish, or about 200 fish less than the previous 10-year average annual harvest of 2,330.

The Deshka River is the only system in northern Cook Inlet where Chinook salmon escapement is monitored inseason with a weir. The 2011 Chinook salmon escapement at the Deshka River of 19,026 was very similar to the 2010 escapement of 18,600 fish, with both years' counts falling within the escapement range of 13,000 to 28,000 fish.

Recent late-run Kenai River Chinook salmon runs have been characterized as below average. At the 2011 board meeting, the Division of Sport Fish notified the board and all user groups that the standard target-strength sonar estimate of passage would not be used during the 2011 season to monitor daily Kenai River Chinook salmon passage. Instead, the department would rely on a number of "indices" of Chinook salmon abundance. During the 2011 season, this suite of indices indicated the Chinook salmon run was below average and on July 25 bait was removed from the inriver recreational fishery. As stated in the sockeye salmon section of this summary, the concern about low Chinook salmon abundance in the Kenai River resulted in conservative use of the Upper Subdistrict set gillnet fishery in order to reduce Chinook salmon harvests. All of the no-fishing windows required in the management plans were implemented and only about 64% of the additional hours that could have been fished were utilized in the full Upper Subdistrict fishery. The estimated Chinook salmon harvest in the Upper Subdistrict set gillnet fishery of 6,900 fish represented the smallest harvest in this fishery since 1975 and was approximately 58% less than the previous 10-year average annual harvest of more than 16,000 fish. As previously stated, a postseason analysis of Kenai River late-run Chinook salmon escapement indicated the SEG was met (estimate of 29,800 for the SEG of 17,800–35,700).

In 2011, the estimated exvessel value of \$518,000 for Chinook salmon was approximately 1.0% of the total UCI commercial fishery.

Table 3.—Upper Cook Inlet commercial salmon harvest^a by species, 1966–2011.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1966	8,544	1,852,114	289,837	2,005,745	532,756	4,688,996
1967	7,859	1,380,062	177,729	32,229	296,837	1,894,716
1968	4,536	1,104,896	468,160	2,276,993	1,107,903	4,962,488
1969	12,386	691,815	100,684	32,499	267,686	1,105,070
1970	8,336	732,572	275,205	814,760	750,774	2,581,647
1971	19,765	636,289	100,362	35,590	323,945	1,115,951
1972	16,086	879,811	80,896	628,566	626,414	2,231,773
1973	5,194	670,098	104,420	326,184	667,573	1,773,469
1974	6,596	497,185	200,125	483,730	396,840	1,584,476
1975	4,787	684,751	227,376	336,330	951,588	2,204,832
1976	10,865	1,664,149	208,663	1,256,728	469,180	3,609,585
1977	14,790	2,052,291	192,593	553,855	1,233,436	4,046,965
1978	17,299	2,621,421	219,193	1,688,442	571,779	5,118,134
1979	13,738	924,406	265,164	72,980	649,758	1,926,046
1980	13,798	1,573,588	271,416	1,786,421	387,815	4,033,038
1981	12,240	1,439,262	484,405	127,143	831,977	2,895,027
1982	20,870	3,259,864	792,224	790,644	1,432,940	6,296,542
1983	20,634	5,049,733	516,322	70,327	1,114,858	6,771,874
1984	10,062	2,106,714	449,993	617,452	680,726	3,864,947
1985	24,088	4,060,429	667,213	87,828	772,849	5,612,407
1986	39,254	4,791,562	757,319	1,300,939	1,134,817	8,023,891
1987	39,440	9,469,248	449,479	109,389	348,937	10,416,493
1988	29,080	6,843,833	560,948	471,076	710,615	8,615,552
1989	26,737	5,011,124	339,818	67,441	122,051	5,567,171
1990	16,105	3,604,259	501,643	603,434	351,123	5,076,564
1991	13,542	2,178,331	426,487	14,663	280,223	2,913,246
1992	17,171	9,108,353	468,930	695,861	274,303	10,564,618
1993	18,871	4,755,329	306,882	100,934	122,770	5,304,786
1994	19,962	3,565,586	583,793	523,434	303,177	4,995,952

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Table 3.–Page 2 of 2.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1995	17,893	2,951,827	446,954	133,575	529,422	4,079,671
1996	14,306	3,888,922	321,668	242,911	156,501	4,624,308
1997	13,292	4,176,738	152,404	70,933	103,036	4,516,403
1998	8,124	1,219,242	160,660	551,260	95,654	2,034,940
1999	14,383	2,680,510	125,908	16,174	174,541	3,011,516
2000	7,350	1,322,482	236,871	146,482	127,069	1,840,254
2001	9,295	1,826,833	113,311	72,559	84,494	2,106,492
2002	12,714	2,773,118	246,281	446,960	237,949	3,717,022
2003	18,490	3,476,159	101,756	48,789	120,767	3,765,961
2004	26,922	4,926,774	311,056	357,939	146,164	5,768,855
2005	28,171	5,238,168	224,657	48,419	69,740	5,609,155
2006	18,029	2,192,730	177,853	404,111	64,033	2,856,756
2007	17,625	3,316,779	177,339	147,020	77,240	3,736,003
2008	13,333	2,380,135	171,869	169,368	50,315	2,785,020
2009	8,750	2,045,794	153,210	214,321	82,811	2,504,886
2010	9,901	2,828,367	207,256	292,672	228,670	3,566,866
2011	10,261	5,093,313	86,599	32,127	125,899	5,348,199
1966-2010 Avg	15,805	2,898,970	307,030	472,780	445,868	4,140,453
2001-2010 Avg	16,323	3,100,486	188,459	220,216	116,218	3,641,702

^a 2011 data preliminary

Table 4.-Upper Cook Inlet sockeye salmon enumeration by watershed and date, 2011.

Date	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake ^a		Judd Lake		Larson Lake	
	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
15-Jun			5,521	5,521										
16-Jun			3,192	8,713										
17-Jun			1,927	10,640										
18-Jun			2,700	13,340										
19-Jun			5,808	19,148										
20-Jun			5,268	24,416										
21-Jun			5,340	29,756										
22-Jun			5,508	35,264										
23-Jun			11,352	46,616										
24-Jun			11,032	57,648			1,786	1,786						
25-Jun			9,162	66,810			1,855	3,641						
26-Jun			768	67,578			356	3,997						
27-Jun			2,442	70,020			169	4,166						
28-Jun			1,344	71,364			114	4,280						
29-Jun			6,012	77,376			801	5,081						
30-Jun			786	78,162			2,948	8,029						
1-Jul	2,256	2,256	2,994	81,156			1,943	9,972						
2-Jul	4,260	6,516	6,606	87,762			1,361	11,333						
3-Jul	3,084	9,600	1,362	89,124			3,227	14,560						
4-Jul	2,244	11,844	2,628	91,752			3,595	18,155						
5-Jul	4,272	16,116	1,392	93,144			2,531	20,686						
6-Jul	4,647	20,763	3,068	96,212			1,950	22,636						
7-Jul	5,302	26,065	534	96,746			2,202	24,838						
8-Jul	4,737	30,802	1,938	98,684			2,024	26,862						
9-Jul	6,522	37,324	2,268	100,952			1,184	28,046						
10-Jul	6,846	44,170	846	101,798			889	28,935						

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Table 4.–Page 2 of 4.

Date	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake ^a		Judd Lake		Larson Lake	
	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
11-Jul	3,510	47,680	1,398	103,196			1,314	30,249						
12-Jul	3,102	50,782	786	103,982			2,624	32,873						
13-Jul	3,822	54,604	1,578	105,560			2,771	35,644						
14-Jul	6,400	61,004	1,146	106,706			4,112	39,756	0	0				
15-Jul	2,916	63,920	1,278	107,984			8,723	48,479	35	35				
16-Jul	27,826	91,746	10,302	118,286	52	52	5,906	54,385	366	401				
17-Jul	230,643	322,389	13,542	131,828	88	140	5,034	59,419	23	424				
18-Jul	177,053	499,442	15,042	146,870	578	718	3,427	62,846	329	753				
19-Jul	87,978	587,420	5,506	152,376	384	1,102	3,432	66,278	94	847			40	49
20-Jul	113,178	700,598	11,838	164,214	991	2,093	1,981	68,259	146	993			32	81
21-Jul	90,426	791,024	3,924	168,138	1,059	3,152	1,621	69,880	169	1,162			0	81
22-Jul	37,974	828,998	5,856	173,994	1,135	4,287	962	70,842	1,749	2,911			76	157
23-Jul	106,313	935,311	11,214	185,208	1,713	6,000	1,464	72,306	11,583	14,494			582	739
24-Jul	110,772	1,046,083	8,178	193,386	2,539	8,539	1,321	73,627	8,338	22,832	45	45	1,436	2,175
25-Jul	79,518	1,125,601	7,914	201,300	14,099	22,638	3,678	77,305	8,911	31,743	802	847	1,631	3,806
26-Jul	77,982	1,203,583	7,351	208,651	10,142	32,780	853	78,158	7,407	39,150	2,977	3,824	435	4,241
27-Jul	73,092	1,276,675	5,826	214,477	8,827	41,607	593	78,751	4,336	43,486	3,015	6,839	971	5,212
28-Jul	55,470	1,332,145	3,191	217,668	6,149	47,756	901	79,652	3,931	47,417	2,736	9,575	1,412	6,624
29-Jul	36,540	1,368,685	2,908	220,576	1,431	49,187	950	80,602	2,738	50,155	2,468	12,043	543	7,167
30-Jul	30,384	1,399,069	3,102	223,678	163	49,350	497	81,099	1,897	52,052	2,806	14,849	176	7,343
31-Jul	18,240	1,417,309	2,232	225,910	680	50,030	285	81,384	2,228	54,280	2,716	17,565	403	7,746
1-Aug	21,714	1,439,023	2,214	228,124	32	50,062	568	81,952	2,724	57,004	4,015	21,580	429	8,175
2-Aug	20,707	1,459,730	1,907	230,031	44	50,106			1,204	58,208	4,598	26,178	357	8,532

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Table 4.–Page 3 of 4.

Date	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake ^a		Judd Lake		Larson Lake	
	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
3-Aug	10,074	1,480,200	1,926	233,687	5,234	58,501			1,800	60,008	1,406	27,584	501	9,033
4-Aug	11,220	1,491,420	2,173	235,860	3,041	61,542			720	60,728	456	28,040	284	9,317
5-Aug	22,086	1,513,506	2,466	238,326	1,517	63,059			648	61,376	512	28,552	484	9,801
6-Aug	17,316	1,530,822	960	239,286	1,223	64,282			576	61,952	116	28,668	237	10,038
7-Aug	6,114	1,536,936	1,215	240,501	875	65,157			504	62,456	1,059	29,727	377	10,415
8-Aug	12,198	1,549,134	1,710	242,211	595	65,752			432	62,888	1,185	30,912	241	10,656
9-Aug	16,524	1,565,658	1,908	244,119	434	66,186			360	63,248	1,061	31,973	135	10,791
10-Aug	11,326	1,576,984	1,602	245,721	89	66,275			288	63,536	1,075	33,048	87	10,878
11-Aug	12,204	1,589,188			72	66,347			762	64,298	803	33,851	63	10,941
12-Aug	10,029	1,599,217			157	66,504			737	65,035	841	34,692	318	11,259
13-Aug					97	66,601			783	65,818	742	35,434	243	11,502
14-Aug					77	66,678			1,123	66,941	764	36,198	302	11,804
15-Aug									1,040	67,981	665	36,863	93	11,897
16-Aug									728	68,709	529	37,392	108	12,005
17-Aug									553	69,262	552	37,944	100	12,105
18-Aug									421	69,683	398	38,342	44	12,149
19-Aug									237	69,920	522	38,864	3	12,152
20-Aug									160	70,080	378	39,242	2	12,154
21-Aug									119	70,199	98	39,340	0	12,154
22-Aug									102	70,301	110	39,450	24	12,178
23-Aug									52	70,353	81	39,531	69	12,247
24-Aug											75	39,606	32	12,279
25-Aug											50	39,656	21	12,300
26-Aug											48	39,704	0	12,300
27-Aug											32	39,736	21	12,321
28-Aug											32	39,768	19	12,340

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Date	Kenai River		Kasilof River		Fish Creek		Crescent River		Chelatna Lake ^a		Judd Lake		Larson Lake	
	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum	daily	cum
29-Aug											22	39,790	17	12,357
30-Aug											23	39,813	8	12,365
31-Aug											86	39,899	28	12,393
1-Sep											37	39,936	0	12,393
2-Sep											17	39,953		
3-Sep											31	39,984		
4-Sep											13	39,997		
5-Sep														
6-Sep														
7-Sep														
8-Sep														
9-Sep														
10-Sep														
11-Sep														
12-Sep														
13-Sep														

^a Weir flooded from August 3-10; escapement for these days represent minimum estimates.