

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



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2013 Preliminary Kuskokwim Area Salmon Season Summary

Kuskokwim Area Management

The Kuskokwim River salmon fisheries were managed according to the Kuskokwim River Salmon Management Plan (5 AAC 07.365). The Kuskokwim Bay salmon fisheries were managed according to the District 4 Salmon Management Plan (5 AAC 07.367).

Kuskokwim Area Commercial Harvest

A total of 333,973 salmon were commercially harvested from the Kuskokwim Area (Table 1). A total of 469 individual permit holders (each making at least one recorded landing) participated in area commercial fisheries, which had an estimated exvessel value of \$2,399,035; this was approximately 49% above the most recent 10-year average value (Table 2).

Kuskokwim River

Preseason Forecast and Management Strategies

The preliminary estimated 2012 total run of Chinook salmon in the Kuskokwim River was the lowest on record, which goes back to 1976. The preliminary 2012 subsistence Chinook salmon harvest estimate was the smallest Chinook salmon subsistence harvest estimate in our dataset, which goes back to 1990.

The 2013 Kuskokwim River Chinook salmon forecast was for 160,000–240,000 fish. The drainagewide Chinook salmon sustainable escapement goal (SEG) is 65,000–120,000. Average subsistence Chinook salmon harvest is 84,000. If the run came back as forecasted then there would have been enough Chinook salmon to provide for escapement and subsistence needs. However, escapements at Kwethluk, Kisaralik, Tuluksak, and Aniak Rivers have been poor in

recent years. Also, given consecutive years of low Chinook salmon runs to the Kuskokwim River, conservation measures were warranted in tributaries with specific conservation concerns.

The following preseason management actions were jointly recommended by the Alaska Department of Fish and Game (ADF&G), and the United States Fish and Wildlife Service (USFWS) and became effective from June 1 through July 25 in an effort to achieve escapement goals. The Kuskokwim River Salmon Management Working Group (Working Group) voted unanimously to support the joint recommendation.

Subsistence Chinook salmon fishing with hook and line gear was closed and subsistence fishing was restricted to the use of gillnets with 4-inch or less mesh size not to exceed 60-feet in length in the following waters of the Kuskokwim River Drainage:

- The Kwethluk River drainage including its confluence with Kuskokuak Slough and downstream to ADF&G regulatory markers located at the downstream mouth of Kuskokuak Slough.
- The Kasigluk and Kisaralik River drainages including Old Kuskokuak Slough to ADF&G markers at the confluence of Old Kuskokuak Slough with Kuskokuak Slough.
- The Tuluksak River drainage including its confluence with the Kuskokwim River and downstream approximately 1-mile to ADF&G regulatory markers.
- The Aniak River drainage to ADF&G regulatory markers at its confluence with the Kuskokwim River.

2013 Commercial Harvest Outlook and Harvest

	<u>Chinook</u>	<u>Sockeye</u>	<u>Chum</u>	<u>Coho</u>
2013 Outlook	0–3,000	5,000–20,000	100,000–200,000	60,000–120,000
2013 Harvest	1	768	52,235	114,069

Inseason Subsistence Management

In January of 2013, the Alaska Board of Fisheries adopted a new *Kuskokwim River Salmon Management Plan* (5 AAC 07.365), and a new drainagewide SEG of 65,000–120,000 Chinook salmon was established. Within the management plan it states that the department shall use inseason run projections and test fishing indices to assess run abundance. This information would be evaluated inseason using the Bethel Test Fishery (BTF) catch per unit effort (CPUE) and subsistence harvest reports.

The Chinook salmon run started about one week later than average based on BTF (Figure 1) and subsistence harvest reports. The Working Group met on June 11 to hear subsistence salmon fishing reports and discuss Chinook salmon run assessment. The first Chinook salmon was caught at BTF on June 8 and catches continued each day through June 10. Subsistence fishermen in the lower Kuskokwim River were reporting good catches. ADF&G and USFWS recommended to maintain the existing subsistence salmon fishing restrictions on the tributaries and to keep subsistence salmon fishing open in the mainstem to all gear types and unrestricted gillnet mesh size. The Working Group voted unanimously to support the recommendation.

The Working Group met on June 19 to hear subsistence salmon fishing reports and discuss salmon run assessment. Many subsistence fishermen from the lower Kuskokwim River reported that people were slowing down on targeting Chinook salmon and shifting to targeting chum

salmon as they were close to meeting their Chinook salmon harvest goals. A few lower river subsistence fishermen reported that they were waiting to start fishing until the densities of salmon increased to achieve their harvest goals more efficiently. Reports from middle river subsistence fishermen indicated that the Chinook salmon run was beginning to show up in that section of river, however catch rates were still fairly low. Data from BTF indicated that Chinook salmon escapement goals would likely be met. The cumulative index to date was in excess of the threshold, which equates to exceeding the lower bound of the escapement goal (Figure 2). ADF&G and USFWS recommended to maintain the existing subsistence salmon fishing restrictions on the tributaries and to keep subsistence salmon fishing open in the mainstem to all gear types and unrestricted gillnet mesh size. The Working Group voted unanimously to support the recommendation.

The Working Group met on June 26 to hear subsistence salmon fishing reports and discuss salmon run assessment. Many subsistence fishermen from the lower Kuskokwim River reported that people were slowing down on targeting Chinook salmon and shifting to targeting chum salmon as they had met or were close to meeting their Chinook salmon harvest goals. Reports from middle river subsistence fishermen indicated that the Chinook salmon run was beginning to build in that section of river, however catch rates were still fairly low. Data from BTF indicated that Chinook salmon escapement goals would likely be met; however projections were near the lower end of the drainage-wide SEG (Figure 2). BTF indicated increasing abundance of sockeye and chum salmon at that time (Figures 3 and 4). Given the uncertainty of inseason run assessment, it was warranted to restrict gillnet mesh size to 6-inch or less to conserve Chinook salmon and provide harvest opportunity on more abundant sockeye and chum salmon. ADF&G and USFWS recommended to restrict gillnet mesh size and close hook and line Chinook salmon fishing from the mouth of the Kuskokwim River to Tuluksak for a six-day period (June 28 through July 3) and from Tuluksak to Chuathbaluk for a four-day period (July 3 through July 6). ADF&G and USFWS also recommended maintaining subsistence salmon fishing restrictions on Kuskokwim River tributaries. The Working Group voted unanimously to support the recommendation.

The Working Group met on July 2 to hear subsistence salmon fishing reports and discuss salmon run assessment. Many subsistence fishermen from the lower and middle Kuskokwim River reported that people were mostly finished with subsistence fishing until coho salmon fishing begins. Data from BTF indicated that Chinook salmon escapement goals would likely be met; however projections were near the lower end of the drainagewide SEG (Figure 2). BTF indicated high abundances of sockeye and chum salmon (Figures 3 and 4). Given the uncertainty of inseason run assessment, it was warranted to extend restrictions to gillnet mesh size to 6-inch or less to conserve Chinook salmon and provide harvest opportunity on more abundant sockeye and chum salmon. ADF&G, USFWS, and the Working Group discussed several different options for extending the restrictions. At the end of the meeting agreement was reached to extend gillnet mesh size restrictions and Chinook salmon hook and line closures for six additional days (July 3 through July 9) from the mouth of the Kuskokwim River to Tuluksak and eight additional days (July 6 through July 14) from Tuluksak to Chuathbaluk. Subsistence salmon fishing restrictions on the tributaries were maintained.

Except for closures around commercial fishing periods, subsistence salmon fishing was open with unrestricted gillnet mesh size and all other legal gear types from July 15 through the remainder of the salmon fishing season. Subsistence salmon fishing was closed by emergency order 6 hours before, during, and 3 hours after commercial fishing periods. In 2013 all commercial fishing periods occurred in Subdistrict 1-B (below Bethel), therefore subsistence salmon fishing closures were in effect from the upper end of Straight Slough downstream to the mouth of the Kuskokwim River.

Postseason subsistence harvest surveys are presently being conducted. An accounting of subsistence salmon harvest in 2013 will not be available until after postseason harvest surveys have been completed, data have been analyzed, and preliminary harvest estimates are produced.

District 1 Commercial Fishery

The District 1 commercial fishing season began on July 16 and ended on August 23 with a total of 11 commercial fishing periods (Table 3). The initiation of the commercial fishery was delayed until the majority of the Chinook salmon run had passed through the district to ensure ongoing Chinook salmon conservation. As a result, commercial fishing occurred after the peak of the sockeye and chum salmon runs had passed through the district. A total of 1 Chinook; 768 sockeye; 52,235 chum; and 114,069 coho salmon were commercially harvested (Table 4). An additional 173 Chinook salmon were reported as harvested during the commercial fishery, but they were retained for personal use as the buyers agreed not to purchase Chinook salmon because of the poor run. Chinook, sockeye, and chum salmon catch rates were below average. Coho salmon catch rates ranged from above average to below average. Chum salmon harvest was similar to the most recent 10-year average. Chinook, sockeye, and coho salmon harvests were below the most recent 10-year average (99%, 94%, and 31% respectively; Table 4). A total of 378 individual permit holders (making at least one recorded landing) participated in the fishery. The price per pound for sockeye, chum, and coho salmon was \$1.00. Total exvessel value of the fishery was \$1,184,847; approximately 101% above the most recent 10-year average value (Table 2).

Run Timing and Escapement

Chinook Salmon

Based on BTF the Chinook salmon run started about one week later than average, however the run was compressed and ended almost two weeks earlier than average. The majority of the run passed Bethel from June 16 through June 27 and resulted in overall average run timing (Figure 1). Run timing at escapement projects was three days earlier than average at Tuluksak River weir and approximately three to six days later than average at all other tributary weirs.

Chinook salmon escapements at tributary weirs were the lowest on record at all projects. Escapements at George and Kogruklu Rivers were below the respective SEGs (Table 5). Operational uncertainties at Kwethluk River weir resulted in incomplete passage counts. Seven tributaries have aerial survey SEGs and escapements at two of the tributaries were within the respective SEGs and escapements at five of the tributaries were below the respective SEGs (Table 6). The Kuskokwim River drainagewide SEG was likely not achieved, but it will not be fully assessed until after estimates are made this winter.

Sockeye Salmon

Based on BTF and escapements at tributary weirs sockeye salmon run timing was average. Overall, sockeye salmon escapement was below average. The Kogrukluk River weir has the only established sockeye salmon escapement goal and the escapement was within the SEG (Table 7).

Chum Salmon

Chum salmon run timing was three days late at BTF and two to four days late at tributary weir projects. Overall, chum salmon escapement was average. Escapement at the Kogrukluk River weir was above the SEG (Table 8). Although Aniak River has an established SEG for chum salmon based on sonar indices, the sonar project has discontinued operation in favor of weir based escapement assessment on the Salmon River of the Aniak.

Coho Salmon

Coho salmon run timing was one day late at BTF and approximately two days early at tributary weir projects. Overall coho salmon escapements were slightly below average. Kwethluk and Kogrukluk rivers, have established SEGs. Escapement at the Kogrukluk River weir was within the SEG (Table 9). Escapement at the Kwethluk River weir was not assessed because operations ceased prior to the majority of historical coho salmon passage.

Kuskokwim Bay

2013 Commercial Harvest Outlook and Harvest, Districts 4 and 5

	<u>Chinook</u>	<u>Sockeye</u>	<u>Chum</u>	<u>Coho</u>
2013 Outlook	1,500 – 6,000	60,000 – 110,000	60,000 – 130,000	40,000 – 80,000
2013 Harvest	2,549	50,914	70,730	42,707

District 4 (Quinhagak) Commercial Fishery

The District 4 commercial fishing season began on July 2 and ended on August 23. There were 18 commercial fishing periods. Subsistence fishing was closed 8 hours before, during, and 4 hours after commercial fishing periods. The commercial fishing season was delayed from the normal start of June 15 due to concerns for Chinook salmon abundance and subsistence fishing reports of late run timing. Additionally, fishing periods were reduced from three periods per week to two periods per week during the first two weeks of July for Chinook salmon conservation (Table 10). A total of 2,054 Chinook; 26,393 sockeye; 21,126 chum; and 58,079 coho salmon were commercially harvested (Table 11). Catch rates for chum salmon were average. Chinook, sockeye, and coho salmon catch rates were below average. Fishing periods were reduced to two periods per week during the first two weeks of August because of below average catches and catch rates of coho salmon in the commercial fishery. Chum salmon harvest was approximately 2% below the most recent 10-year average. Chinook, sockeye, and coho salmon harvests were below the most recent 10-year averages (86%, 64%, and 54% respectively) (Table 1). The Chinook salmon harvest was the lowest since 1967. A total of 197 individual permit holders (making at least one recorded landing) participated in the commercial fishery. Chinook, sockeye, chum, and coho salmon were all purchased for \$1.00 per pound. Total exvessel value of the fishery was \$761,537; approximately 1% below the most recent 10-year average value (Table 2).

Run Timing and Escapement

Based on escapement timing at the Kanektok River weir; the Chinook, sockeye, and chum salmon runs were one to two days earlier than average. Chinook, sockeye, and chum salmon escapements at the Kanektok River weir were below average (Table 12). An aerial survey was flown on the Kanektok River on July 30, 2013. The Kanektok River aerial Chinook salmon survey SEG (range 3,500–8,000) was not achieved with 2,346 fish observed, while the sockeye salmon SEG (range 14,000–34,000) was exceeded with 64,802 fish observed (Table 12). Coho salmon were not completely enumerated at the Kanektok River weir.

District 5 (Goodnews Bay) Commercial Fishery

The District 5 commercial fishing season began on June 29 and ended on August 23. There were 21 commercial fishing periods. Subsistence fishing was closed 8 hours before, during, and 4 hours after commercial fishing periods. The District 5 open waters were reduced during the early part of the 2013 commercial fishing season to aid in the conservation of Chinook salmon. Analysis of harvest patterns the previous two years indicated a higher harvest of Chinook salmon in the eastern portion of the district, closer to the mouth of Goodnews River, compared to the western portion of the district near the entrance to the bay. A temporary boundary line was put in place from approximately Big Beluga on the north side of the bay to Little Beluga on the south side, with that portion of the district east of this line closed to commercial fishing (Figure 5). During the first four commercial fishing periods, when the reduced waters were in effect, the Chinook harvest and catch rates were very low. For the next two commercial periods, the department reopened the full district and the Chinook harvest and catch rates were substantially higher than the first four periods. With this information and a low Chinook escapement at the Middle Fork Goodnews River weir, the department reduced the open waters again for the next two commercial fishing periods (Table 13). This management action was effective for the conservation of Chinook salmon while still allowing for harvest of sockeye and chum salmon.

A total of 495 Chinook; 24,521 sockeye; 12,651 chum; and 21,581 coho salmon were commercially harvested (Table 14). Chinook and sockeye salmon catch rates were below average. Catch rates for chum salmon were average and coho salmon catch rates were above average. Coho salmon harvest was approximately 42% above the most recent 10-year average. Chinook and sockeye salmon harvests were below the most recent 10-year averages (75% and 24% respectively). The Chinook salmon harvest was the lowest since 1972. Chum salmon harvest was similar to the most recent 10-year average. A total of 71 individual permit holders (making at least one recorded landing) participated in the fishery. Chinook, sockeye, chum, and coho salmon were all purchased for \$1.00 per pound. Total exvessel value of the fishery was \$452,651; which is approximately 68% above the most recent 10-year average value (Table 2).

Run Timing and Escapement

Based on commercial harvests and escapements at the Goodnews River weir; Chinook and chum salmon run timing was later than average. Sockeye salmon run timing was earlier than average while coho salmon run timing was about average.

The Chinook salmon biological escapement goal (BEG) of 1,500–2,900 fish was not met with an estimated escapement of 1,168 fish. The sockeye salmon BEG (range 18,000–40,000) was achieved with a minimum estimated escapement of 23,029 fish. The chum salmon lower bound

SEG of 12,000 was achieved with a minimum estimated escapement of 27,673 fish (Table 15). The Middle Fork Goodnews River weir was plagued by high water in the later part of the 2013 season and a large portion of the coho salmon escapement was missed. An aerial survey was not flown at the Goodnews River this season due to adverse weather conditions.

Kuskokwim Area Preliminary 2014 Management Strategy

The Kuskokwim Area has experienced low Chinook salmon runs during the past four years and run sizes the past two years were among the lowest on record. In 2012 and 2013, the majority of escapement goals were not consistently achieved. As a result the department will be working with the public to implement a more conservative management strategy for Chinook salmon in 2014. In general, management will be restrictive at the onset of the season with the potential to relax restrictions based on inseason information if warranted. Management options and specific actions to be taken will be discussed with federal managers, the Working Group, and public stakeholders through the winter with the expectation for finalized management strategies prior to the season. Management options under consideration in the Kuskokwim River include significant reductions in subsistence fishing time, gillnet mesh size and fish wheel restrictions, and delaying the onset of commercial fishing in District 1 to avoid incidental harvest of Chinook salmon. In District 4, Quinhagak, management options under consideration include gillnet mesh size restrictions in the subsistence fishery and delaying opening of the commercial fishery until the majority of Chinook salmon have passed through the district. In District 5, Goodnews Bay, management options under consideration include delaying opening of the commercial fishery until sockeye salmon become abundant in the district and reducing the District 5 commercial fishing area similar to 2013 until the majority of Chinook salmon have passed through the district.

Table 1.—Commercial salmon harvest and exvessel value by District, Kuskokwim Area, 2013.

	Chinook	Sockeye	Coho	Pink	Chum	Total
Lower Kuskokwim River, District 1						
Fish	1	768	114,069	0	52,235	167,073
Pounds	6	5,226	833,327	0	346,288	1,184,847
Price	\$1.00	\$1.00	\$1.00	\$0.00	\$1.00	
Value	\$6	\$5,226	\$833,327	\$0	\$346,288	\$1,184,847
Recent 10-yr Average 2003-2012						
Fish	2,853	12,982	165,437	2	53,077	234,351
Value	\$24,371	\$59,804	\$409,836	\$0	\$90,704	\$584,715
Quinhagak, District 4						
Fish	2,054	26,393	21,126	0	58,079	107,652
Pounds	35,126	154,135	172,739	0	399,537	761,537
Price	\$1.00	\$1.00	\$1.00	\$0.00	\$1.00	
Value	\$35,126	\$154,135	\$172,739	\$0	\$399,537	\$761,537
Recent 10-yr Average 2003-2012						
Fish	16,679	74,932	46,353	2	58,853	196,817
Value	\$152,765	\$324,878	\$151,380	\$0	\$135,693	\$764,716
Goodnews Bay, District 5						
Fish	495	24,521	21,581	0	12,651	59,248
Pounds	8,546	169,318	185,332	0	89,455	452,651
Price	\$1.00	\$1.00	\$1.00	\$0.00	\$1.00	
Value	\$8,546	\$169,318	\$185,332	\$0	\$89,455	\$452,651
Recent 10-yr Average 2003-2012						
Fish	2,018	32,351	15,133	0	12,513	62,016
Value	\$19,043	\$149,508	\$59,572	\$0	\$31,570	\$259,693
Kuskokwim Area Total						
Fish	2,550	51,682	156,776	0	122,965	333,973
Pounds	43,678	328,679	1,191,398	0	835,280	2,399,035
Price	\$1.00	\$1.00	\$1.00	\$0.00	\$1.00	
Value	\$43,678	\$328,679	\$1,191,398	\$0	\$835,280	\$2,399,035
Recent 10-yr Average 2003-2012						
Fish	21,549	120,265	226,923	4	124,442	493,184
Value	\$196,179	\$534,190	\$620,787	\$1	\$257,967	\$1,609,125

Table 2.—Commercial salmon fishing estimated exvessel value and permits fished by district, Kuskokwim Area, 2003–2013.

Year	District 1		District 4		District 5		Total	
	Value	Permits ^a	Value	Permits ^a	Value	Permits ^a	Value	Permits ^a
2003	\$453,187	359	\$304,553	114	\$135,287	34	\$893,027	438
2004	\$943,767	390	\$405,344	116	\$227,680	29	\$1,484,358	467
2005	\$448,853	403	\$571,965	145	\$134,295	29	\$1,155,113	484
2006	\$451,390	373	\$551,182	132	\$141,235	24	\$1,143,806	453
2007	\$380,842	366	\$660,865	125	\$223,329	28	\$1,265,034	456
2008	\$538,310	374	\$750,731	146	\$198,070	25	\$1,487,234	462
2009	\$502,848	342	\$747,326	179	\$192,031	39	\$1,442,202	434
2010	\$765,607	433	\$1,655,326	241	\$473,674	48	\$2,894,766	530
2011	\$764,358	413	\$1,176,435	219	\$346,022	48	\$2,287,202	510
2012	\$597,998	379	\$824,435	179	\$617,766	58	\$2,040,296	477
2013	\$1,184,847	378	\$761,537	197	\$452,651	71	\$2,399,035	469
Average								
2003–2012	\$584,716	383	\$764,816	160	\$268,939	36	\$1,609,304	471

^a Number of permits that made at least one delivery.

Table 3.–Commercial harvest by period in the District 1, Kuskokwim River 2013.

Date	Permits	Hours	Subdistrict	Permit Hours	Chinook		Sockeye		Chum		Coho	
	Fished	Fished			Catch	CPUE	Catch	CPUE	Catch	CPUE	Catch	CPUE
Jul 16	189	6	1-B	1,134	133	0.1	373	0.3	24,823	21.9	1,894	1.7
Jul 19	221	4	1-B	884	6	0.0	78	0.1	15,413	17.4	2,097	2.4
Jul 23	218	4	1-B	872	20	0.0	47	0.1	5,771	6.6	2,960	3.4
Jul 26	171	4	1-B	684	1	0.0	45	0.1	3,121	4.6	5,785	8.5
Jul 30	227	4	1-B	908	5	0.0	35	0.0	1,712	1.9	8,968	9.9
Aug 6	274	4	1-B	1,096	2	0.0	20	0.0	709	0.6	23,461	21.4
Aug 10	289	6	1-B	1,734	4	0.0	168	0.1	474	0.3	30,972	17.9
Aug 13	247	4	1-B	988	1	0.0	2	0.0	79	0.1	8,077	8.2
Aug 17	226	4	1-B	904	0	0.0	0	0.0	50	0.1	12,778	14.1
Aug 20	236	6	1-B	1,416	1	0.0	0	0.0	68	0.0	11,630	8.2
Aug 23	187	6	1-B	1,122	1	0.0	0	0.0	16	0.0	5,447	4.9
Total		52		11,742	174		768		52,236		114,069	

Table 4.–Commercial salmon harvest, excluding personal use, District W-1, Kuskokwim River, Kuskokwim Management Area, 2003-2013.

Year	Chinook	Sockeye	Chum	Coho	Total
2003	158	282	2,764	284,064	287,268
2004	2,305	8,532	20,150	435,407	466,394
2005	4,784	27,645	69,139	142,319	243,887
2006	2,777	12,618	44,070	185,598	245,063
2007	179	703	10,763	141,049	152,694
2008	8,865	15,601	30,516	142,862	197,844
2009	6,664	25,673	76,790	104,546	213,673
2010	2,731	22,428	93,148	58,031	176,338
2011	49	13,482	118,256	74,108	205,895
2012	14	2,857	65,171	86,389	154,431
2013	1	768	52,235	114,069	167,073
Average 2003–2012	2,853	12,982	53,077	165,437	234,349

Table 5.—Chinook salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area 2003–2013.

Year	Chinook Salmon Escapement						Takotna Salmon
	Kwethluk	Tuluksak	George	Kogrukuk	Tatlawiksuk	Takotna	
2003	14,474	1,064	4,693	11,771	1,683	378	a
2004	28,605	1,475	5,207	19,651	2,833	461	a
2005	a	2,653	3,845	22,000	2,918	499	a
2006	17,619	1,043	4,357	19,414	1,700	539	a
2007	13,267	374	4,883	13,029	2,061	418	6,220
2008	5,312	701	2,698	9,730	1,071	413	2,376
2009	5,710	362	3,663	9,702	1,071	311	a
2010	1,693	201	1,500	5,690	567	178	a
2011	4,079	288	1,571	6,891	1,012	134	a
2012	a	560	2,302	a	1,116	228	a
2013 ^b	a	193	1,121	1,702	485	93	599
SEG	4,100-7,500		1,800-3,300	4,800-8,800			
Average							
2003–2012	11,345	872	3,472	13,098	1,603	356	4,298

^a Weir did not operate or counts were incomplete.

^b Preliminary numbers subject to change.

Table 6.–Chinook salmon spawning aerial survey index estimates, Kuskokwim River Drainage, Kuskokwim Management Area, 2003–2013.

Year	Lower Kuskokwim River ^a				Middle Kuskokwim River ^a						Upper Kuskokwim River ^a		Salmon (Pitka)
	Eek	Kwethluk Canyon C.	Kisaralik	Tuluksak	Aniak	Kipchuk	Salmon	Holokuk	Oskawalik	Holitna	Gagarayah	Cheeneetnuk	
2003	1,236	2,628	654	94	3,514	1,493	1,242	528	844	^b	1,095	810	1,241
2004	4,653	6,801	5,157	1,196	5,362	1,868	2,177	306	293	4,051	670	918	1,138
2005	^b	5,059	2,206	672	^b	1,679	4,097	268	582	1,760	788	1,155	1,801
2006	^b	^b	4,734	^b	5,639	1,618	^b	365	386	1,866	531	1,015	862
2007	^b	^b	692	173	3,984	2,147	1,458	146	^b	^b	1,035	^b	943
2008	^b	487	1,074	^b	3,222	1,061	589	190	213	^b	177	290	1,305
2009	^b	^b	^b	^b	^b	^b	^b	390	379	^b	303	323	632
2010	^b	^b	235	^b	^b	^b	^b	108	^b	587	62	^b	135
2011	263	^b	534	^b	^b	116	79	20	26	^b	96	249	767
2012	^b	^b	610	^b	^b	193	49	9	51	^b	178	229	670
2013	240	1,165	597	83	754	261	154	29	38	670	74	138	475
Escapement			400–		1,200–		330–			970–	300–	340–	470–
Goal Range:			1,200		2,300		1,200			2,100	830	1,300	1,600
Average													
2003–2012	2,051	3,744	1,766	534	4,344	1,272	1,384	233	347	2,066	494	624	949

^a Estimates are from aerial surveys conducted during peak spawning periods under 'good' or 'fair' survey conditions.

^b Survey was either not flown or did not meet acceptable survey criteria.

Table 7.–Sockeye salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area 2003–2013.

Year	Sockeye Salmon Escapement							
	Kwethluk	Tuluksak	George	Kogrukluk	Tatlawiksuk	Takotna	Telaquana	Salmon
2003	2,928	288	16	9,164	a	3	a	a
2004	3,490	136	177	6,775	10	17	a	a
2005	a	642	276	37,939	77	34	a	a
2006	6,732	985	164	60,807	41	59	a	a
2007	5,262	352	74	16,525	27	13	a	2,130
2008	2,451	188	94	19,675	39	12	a	1,181
2009	4,385	686	54	23,785	39	3	a	a
2010	4,242	437	115	13,995	33	8	72,021	a
2011	2,031	126	43	8,132	23	1	35,105	a
2012	a	187	79	a	9	0	22,994	a
2013 ^b	a	392	148	7,558	34	0	28,166	968
SEG	4,400-17,000							
Average								
2003–2012	3,940	403	109	21,866	33	15	43,373	1,656

^a Weir did not operate or counts were incomplete.

^b Preliminary numbers subject to change.

Table 8.—Chum salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area 2003–2013

Year	Chum Salmon Escapement							
	Kwethluk	Tuluksak	George	Kogruklu	Tatlawiksuk	Takotna	Aniak	Salmon
2003	41,812	11,724	33,666	23,413	a	3,393	477,544	a
2004	38,646	11,796	14,409	24,201	21,245	1,630	672,931	a
2005	a	35,696	14,828	197,723	55,720	6,467	1,151,505	a
2006	47,490	25,650	41,467	180,594	32,301	12,598	1,108,626	a
2007	54,913	17,286	55,842	49,505	83,246	8,900	696,801	25,379
2008	20,030	12,550	29,978	44,978	30,896	5,691	427,911	9,459
2009	32,191	13,671	7,941	84,940	19,975	2,487	479,531	a
2010	19,242	13,042	26,154	63,583	36,701	4,057	429,643	a
2011	18,329	9,828	44,640	76,384	84,202	8,414	345,630	a
2012	a	16,981	34,336	a	44,572	6,050	a	a
2013 ^b	a	12,894	35,514	64,826	31,537	6,381	a	7,317
SEG	15,000-49,000				222,000-480,000			
Average								
2003–2012	34,082	16,822	30,326	82,813	45,429	5,969	643,347	17,419

^a Weir did not operate or counts were incomplete.

^b Preliminary numbers subject to change.

Table 9.—Coho salmon spawning weir escapement, Kuskokwim River drainage, Kuskokwim Management Area, 2003–2013.

Year	Coho Salmon Escapement						Salmon	
	Kwethluk	Tuluksak	George	Kogrukuk	Tatlawiksuk	Takotna		
2003	107,789	41,071	33,280	74,604	a	7,171	a	
2004	64,216	20,336	12,499	27,041	16,410	3,207	a	
2005	a	11,324	8,200	24,116	7,495	2,216	a	
2006	25,664	6,111	11,296	17,011	9,453	5,548	a	
2007	20,257	2,807	29,317	27,033	8,685	2,853	a	
2008	49,971	7,457	21,931	29,661	11,065	2,817	11,022	
2009	21,911	8,137	12,573	22,981	10,148	2,708	6,391	
2010	a	1,216	12,961	13,971	3,520	3,217	a	
2011	a	a	30,028	24,174	12,928	4,063	a	
2012	19,960	4,407	15,272	13,697	8,070	1,838	a	
2013 ^b	a	6,117	10,500	19,707	9,432	3,031	2,666	
SEG	>19,000		13,000–28,000					
Average								
2003–2012	44,253	11,430	18,736	27,429	9,753	3,564	8,707	

^a Weir did not operate or counts were incomplete.

^b Preliminary numbers subject to change.

Table 10.–Commercial harvest by period in the District 4, Kuskokwim Bay, 2013.

Date	Permits Fished	Hours Fished	Permit Hours	Chinook		Sockeye		Chum		Coho	
				Catch	CPUE	Catch	CPUE	Catch	CPUE	Catch	CPUE
Jul 2	68	12	816	325	0.4	3,161	3.9	2,698	3.3	0	0.0
Jul 6	122	12	1,464	670	0.5	8,736	6.0	16,281	11.1	0	0.0
Jul 10	138	12	1,656	367	0.2	3,595	2.2	10,103	6.1	0	0.0
Jul 12	138	12	1,656	190	0.1	3,557	2.1	7,886	4.8	1	0.0
Jul 15	77	12	924	101	0.1	1,293	1.4	3,442	3.7	8	0.0
Jul 17	90	12	1,080	177	0.2	2,012	1.9	8,167	7.6	34	0.0
Jul 19	71	12	852	119	0.1	1,506	1.8	4,025	4.7	121	0.1
Jul 22	78	12	936	30	0.0	1,170	1.3	1,993	2.1	104	0.1
Jul 24	46	12	552	28	0.1	589	1.1	1,106	2.0	147	0.3
Jul 26	29	12	348	12	0.0	303	0.9	705	2.0	64	0.2
Jul 29	37	12	444	12	0.0	205	0.5	608	1.4	513	1.2
Aug 5	50	12	600	8	0.0	109	0.2	421	0.7	1,993	3.3
Aug 7	51	12	612	3	0.0	64	0.1	204	0.3	1,996	3.3
Aug 12	65	12	780	4	0.0	30	0.0	305	0.4	3,362	4.3
Aug 16	69	12	828	4	0.0	26	0.0	36	0.0	3,430	4.1
Aug 19	57	12	684	3	0.0	17	0.0	34	0.0	4,611	6.7
Aug 21	60	12	720	0	0.0	12	0.0	45	0.1	3,370	4.7
Aug 23	53	12	636	1	0.0	8	0.0	20	0.0	1,372	2.2
Total		216	15,588	2,054		26,393		58,079		21,126	

Table 11.–Commercial salmon harvest District 4, Quinhagak, Kuskokwim Bay, 2003-2013.

Year	Chinook	Sockeye	Chum	Coho	Total
2003	14,444	33,941	27,868	49,833	126,086
2004	25,462	34,627	25,820	82,398	168,307
2005	24,195	68,801	13,529	51,780	158,305
2006	19,184	106,308	39,151	26,831	191,474
2007	19,573	109,343	61,228	34,710	224,854
2008	13,812	69,743	57,033	94,257	234,845
2009	13,920	112,153	91,158	48,115	265,346
2010	14,230	138,362	106,610	13,690	272,892
2011	15,387	38,543	104,959	30,457	189,346
2012	6,675	37,688	61,140	31,214	136,717
2013	2,054	26,393	21,126	58,079	107,652
Average					
2003–2012	16,688	74,951	58,850	46,329	196,817

Table 12.—Kanektok River salmon spawning escapement estimates, 2003–2013.

Year	Weir Escapement				Aerial Survey Escapement	
	Chinook	Sockeye	Chum	Coho	Chinook ^a	Sockeye ^b
2003	8,231	127,471	40,066	72,448	6,206	21,335
2004	19,528	102,867	46,444	87,828	28,375	78,380
2005	14,331	242,208	53,580	26,343	14,202	110,730
2006	^c	^c	^c	^c	8,433	382,800
2007	14,120	307,750	133,215	30,471	^d	^d
2008	6,578	141,388	54,024	24,490	3,659	38,900
2009	6,841	272,483	51,652	^c	^d	^d
2010	5,800	202,634	62,567	^c	1,228	16,950
2011	5,032	84,805	50,908	^c	^d	^d
2012	1,568	88,800	24,173	^c	^d	^d
2013 ^e	3,569	128,761	43,040	^c	2,346	64,802
Average						
2003–2012	9,114	174,490	57,403	48,316	10,351	108,183

^a Chinook salmon SEG is 3,500–8,000 fish.

^b Sockeye salmon SEG is 14,000–34,000 fish.

^c Weir did not operate or counts were incomplete.

^d Survey was either not flown or did not meet acceptable survey criteria.

^e Preliminary numbers subject to change.

Table 13.—Commercial harvest by period in the District 5, Kuskokwim Bay, 2013.

Date	Permits Fished	Hours Fished	Permit Hours	Chinook		Sockeye		Chum		Coho	
				Catch	CPUE	Catch	CPUE	Catch	CPUE	Catch	CPUE
Jun 29 ^a	20	12	240	19	0.1	1,868	7.8	960	4.0	0	0.0
Jul 2 ^a	25	12	300	43	0.1	3,047	10.2	1,475	4.9	0	0.0
Jul 6 ^a	53	12	636	60	0.1	3,740	5.9	2,336	3.7	0	0.0
Jul 10 ^a	52	12	624	30	0.0	3,921	6.3	1,691	2.7	0	0.0
Jul 12	52	12	624	120	0.2	3,697	5.9	1,838	2.9	4	0.0
Jul 15	46	12	552	133	0.2	1,904	3.4	1,860	3.4	3	0.0
Jul 17 ^a	37	12	444	21	0.0	1,231	2.8	807	1.8	2	0.0
Jul 19 ^a	31	12	372	8	0.0	1,114	3.0	455	1.2	10	0.0
Jul 22	27	12	324	11	0.0	1,261	3.9	514	1.6	36	0.1
Jul 24	25	12	300	18	0.1	739	2.5	314	1.0	23	0.1
Jul 26	15	12	180	7	0.0	545	3.0	122	0.7	70	0.4
Jul 29	17	12	204	3	0.0	281	1.4	84	0.4	122	0.6
Aug 5	22	12	264	3	0.0	209	0.8	94	0.4	794	3.0
Aug 7	17	12	204	3	0.0	127	0.6	27	0.1	732	3.6
Aug 9	21	12	252	1	0.0	152	0.6	18	0.1	1,204	4.8
Aug 12	23	12	276	5	0.0	149	0.5	16	0.1	3,138	11.4
Aug 14	26	12	312	5	0.0	138	0.4	12	0.0	2,816	9.0
Aug 16	31	12	372	3	0.0	144	0.4	12	0.0	3,709	10.0
Aug 19	28	12	336	1	0.0	97	0.3	9	0.0	3,149	9.4
Aug 21	23	12	276	1	0.0	77	0.3	4	0.0	2,611	9.5
Aug 23	27	12	324	0	0.0	80	0.2	3	0.0	3,159	9.8
Total		252	7,416	495		24,521		12,651		21,582	

^a District 5 open waters were reduced to aid in the conservation of Chinook salmon.

Table 14.—Commercial salmon harvests, District W-5 Goodnews Bay, Kuskokwim Bay, 2003–2013.

Year	Chinook	Sockeye	Chum	Coho	Total
2003	1,412	29,423	5,593	12,658	49,086
2004	2,565	20,523	5,965	24,089	53,142
2005	2,035	23,933	2,568	11,735	40,271
2006	2,892	29,857	11,568	12,436	56,753
2007	3,126	43,766	7,853	13,697	68,442
2008	1,281	27,237	10,408	22,547	61,473
2009	1,509	32,544	16,985	8,406	59,444
2010	1,752	41,074	26,914	4,900	74,640
2011	2,092	24,573	13,191	15,358	55,214
2012	1,531	50,635	24,487	25,515	102,168
2013	495	24,521	12,651	21,581	59,248
Average 2003–2012	2,020	32,357	12,553	15,134	62,063

Table 15.—Salmon spawning escapement estimates, Middle Fork Goodnews River, Kuskokwim Bay, 2003–2013.

Year	Middle Fork Goodnews River Weir Escapement			
	Chinook	Sockeye	Chum	Coho
2003	2,389	44,387	21,637	52,810
2004	4,388	55,926	31,616	47,916
2005	4,633	113,809	26,690	15,683
2006	4,559	126,772	54,699	15,969
2007	3,852	72,282	49,285	20,975
2008	2,161	51,763	44,699	36,630
2009	1,630	25,465	19,715	20,000
2010	2,244	35,762	26,687	23,839
2011	1,861	17,946	19,974	23,826
2012	513	30,472	10,723	13,679
2013 ^b	1,168	23,029	27,673	^a
Esc Goal	1,500–2,900	18,000–40,000	>12,000	>12,000
Average				
2003–2012	2,823	57,458	30,573	27,133

^a Weir did not operate or counts were incomplete.

^b Preliminary numbers subject to change.

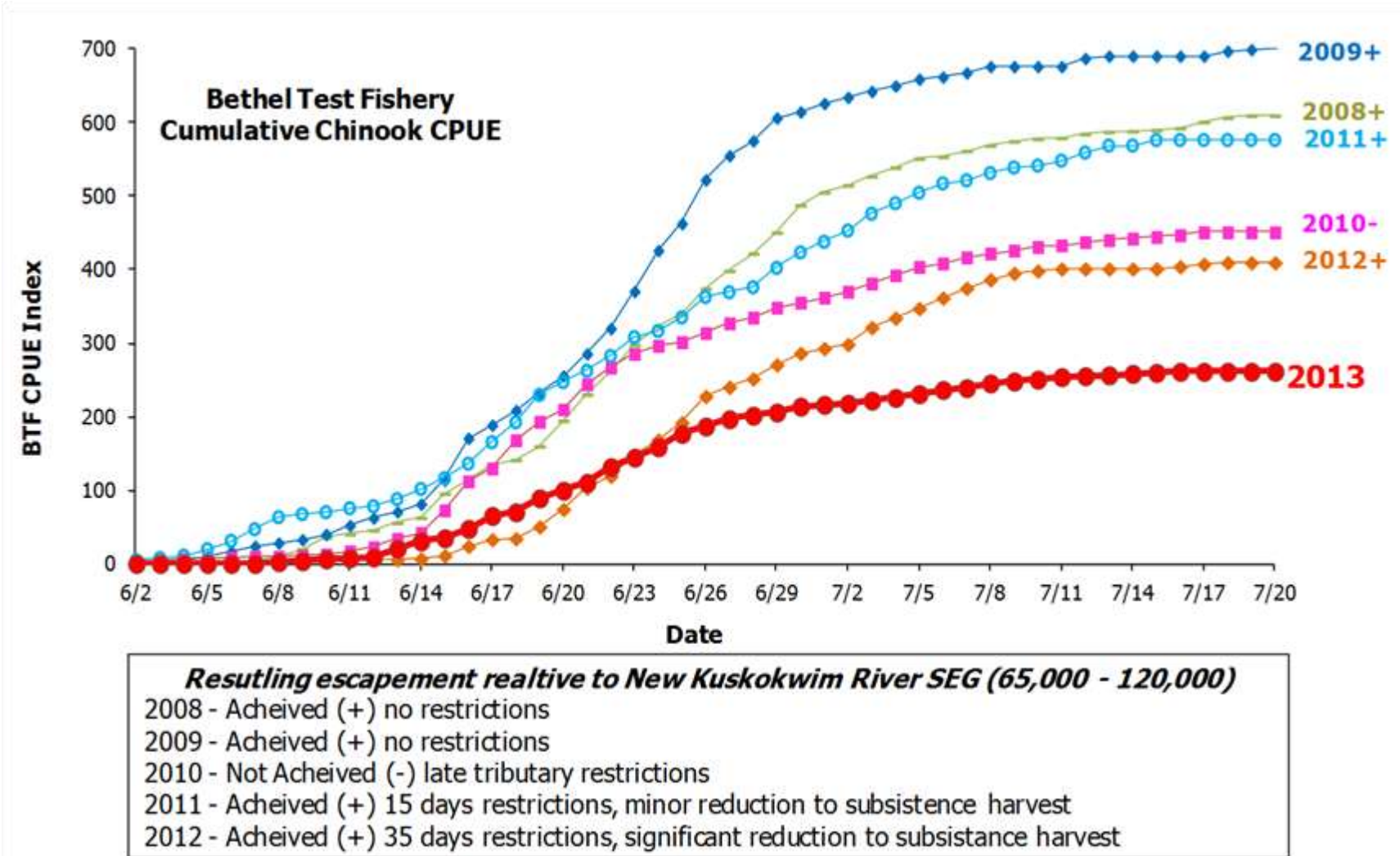


Figure 1.—Cumulative Chinook CPUE in the Bethel Test Fishery, Kuskokwim River, 2008–2013.

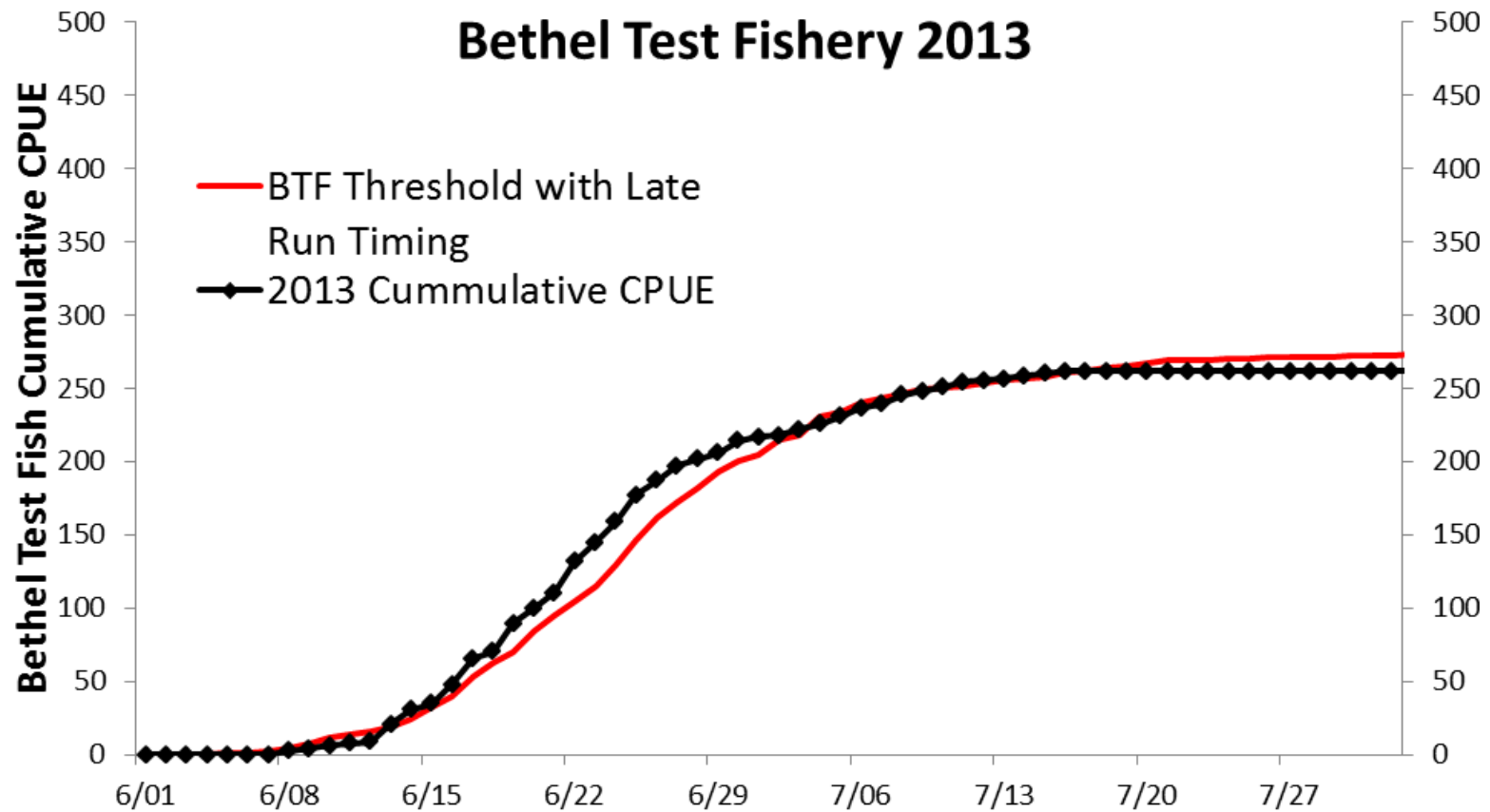


Figure 2.—Daily inseason projection of the end of season Bethel Test Fish Chinook salmon cumulative value using late run timing, Kuskokwim River, 2013

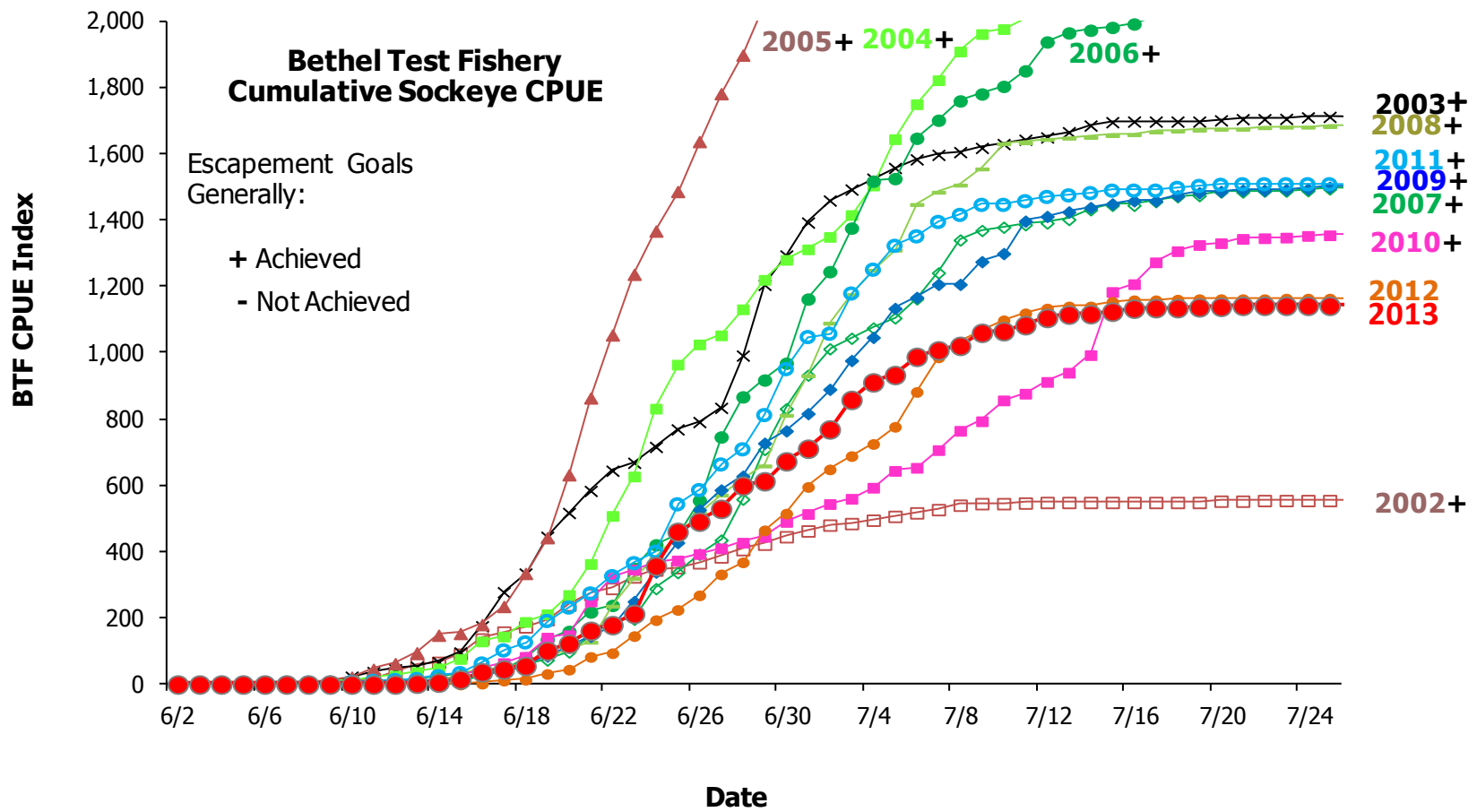


Figure 3.—Cumulative sockeye CPUE in the Bethel Test Fishery, Kuskokwim River, 2002–2013.

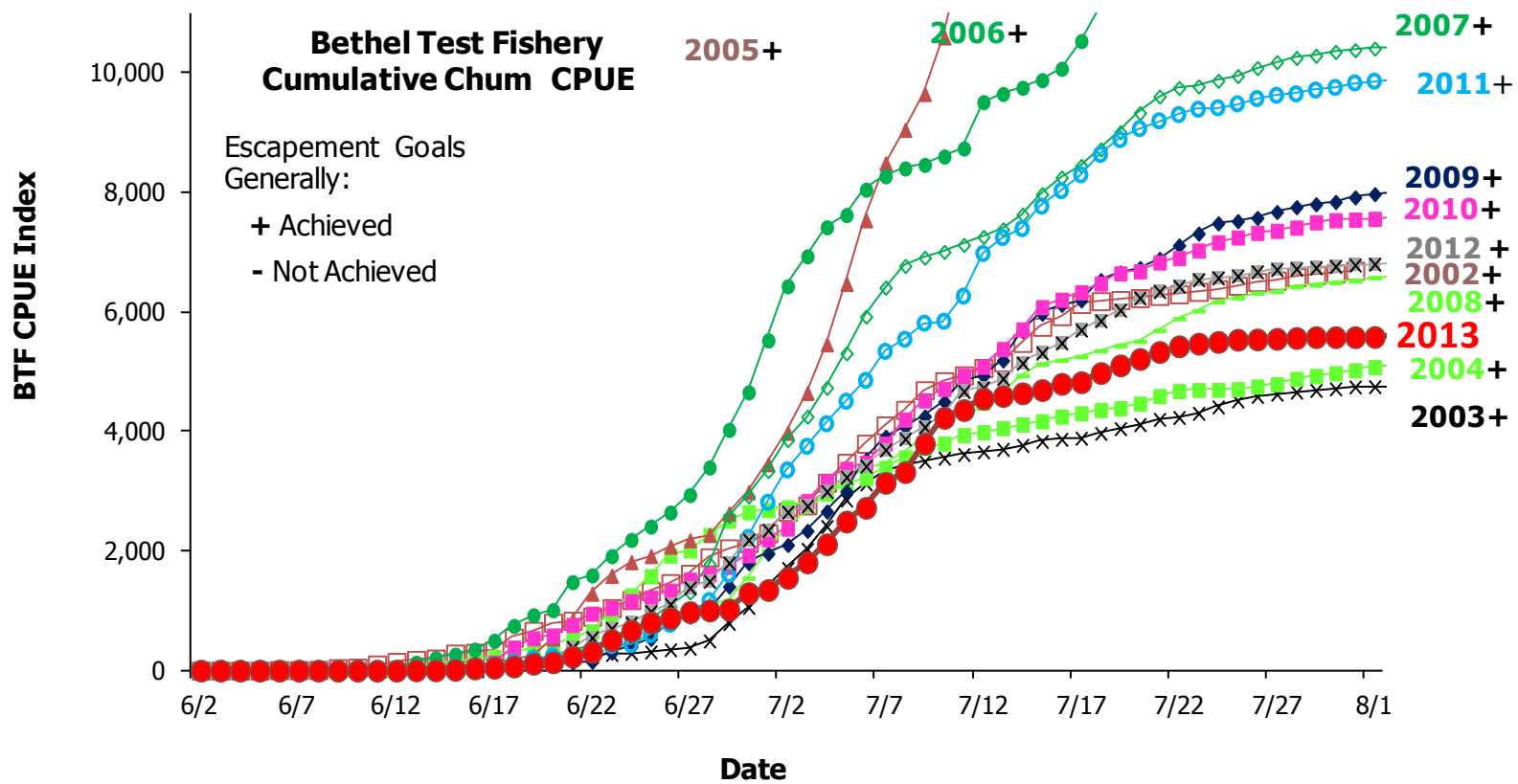


Figure 4.—Cumulative chum CPUE in the Bethel Test Fishery, Kuskokwim River, 2002–2013.

Kuskokwim Management Area District W-5

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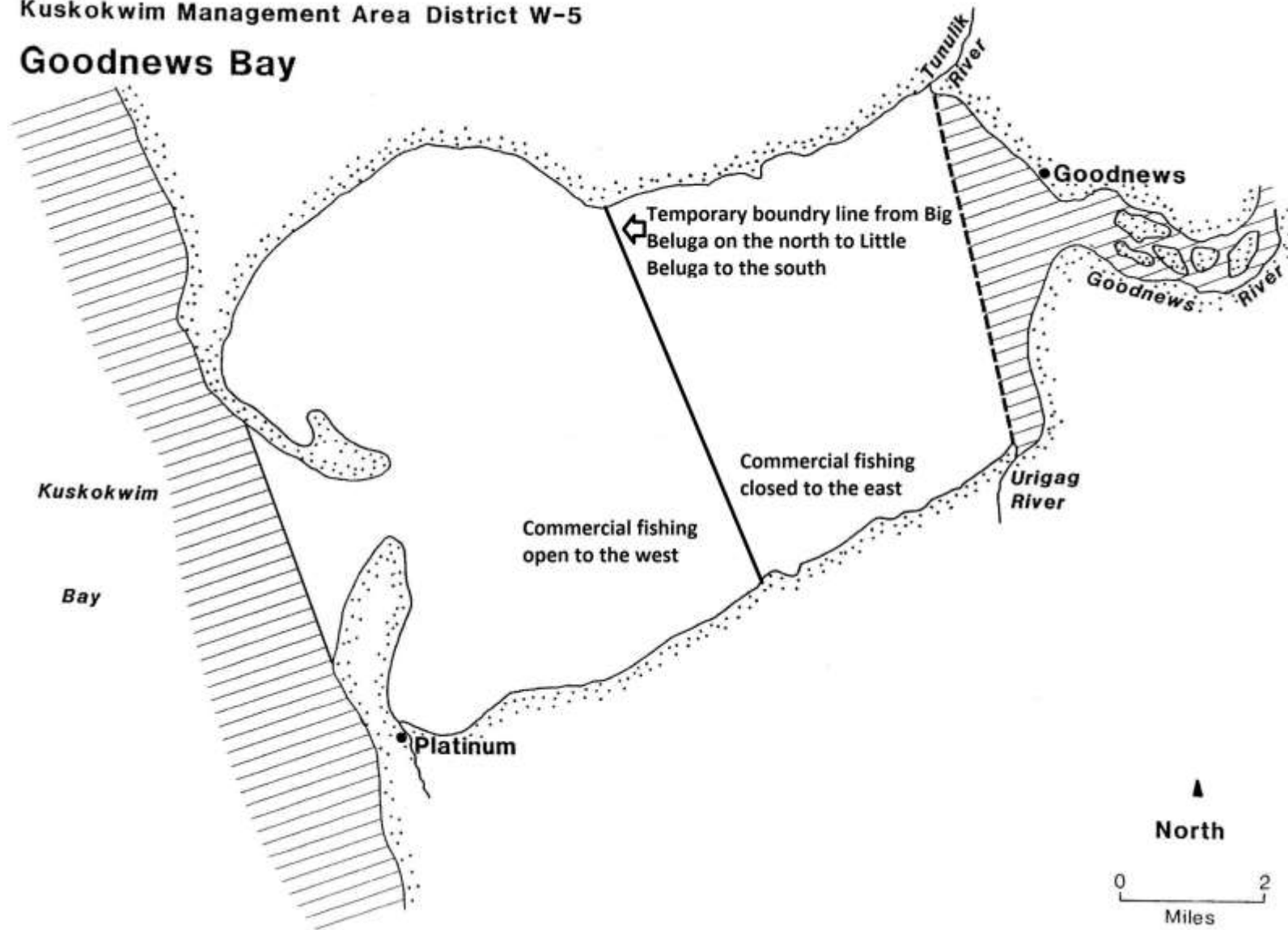


Figure 5.—District 5 reduced water, Kuskokwim Bay, 2013.