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Advisory Announcement

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2023 KODIAK COMMERCIAL SALMON SEASON SUMMARY

The following is a brief overview of the 2023 Kodiak Management Area (KMA; Figure 1) commercial salmon season.

Commercial fishing effort in 2023 was below average compared to recent years. Of the 585 eligible commercial salmon permits, a confidential amount of made commercial landings. By gear type, a total of 163 purse seine and 122 set gillnet permit holders made deliveries in 2023. Less than three beach seine permits were fished in 2023. Participation rates for purse seine was below average (44%), and participation of set gillnet was below average (65%; (Table 1).

Table 1.– Commercial salmon fishery 2023 limited entry permit activity and 10-yr. averages, by gear type, in the KMA, 2023.

Gear Type	2023 Permits			2013-2022 Average permits		
	Available	Fished	% of permits fished	Available	Fished	% of permits fished
Purse seine	371	163	44%	373	167	45%
Beach seine	27	^a	^a	30	3	^a
Set gillnet	187	122	65%	188	141	75%
Total	585	^a	^a %	591	311	^a %

^a Confidential data.



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

The 2023 commercial harvest (not including personal use or ADF&G test fishery) in the KMA was 11,360 Chinook salmon, 2,558,398 sockeye salmon, 265,918 coho salmon, 24,744,333 pink salmon, and 827,907 chum salmon. The total KMA salmon harvest of 28,407,916 was slightly below the 2023 forecast but above the previous 10-year average of approximately 23,874,624 fish (Table 2).

Table 2.–2023 commercial salmon harvest for KMA compared to the previous 10-year average and the 2023 harvest forecast.

	Chinook	Sockeye	Coho	Pink	Chum	Total
2023 Harvest	11,360	2,558,398	265,918	24,744,333	827,907	28,407,916
2013–2022 Avg.	10,514	2,465,593	337,794	20,406,587	654,138	23,874,624
2023 Forecast	8,000	1,790,000	379,700	26,200,000	456,800	28,834,500

Note: harvest numbers do not include harvest from the ADF&G test fisheries, personal use, or aquaculture carcass sales.

The estimated exvessel value of the 2023 fishery (not including hatchery cost recovery) was approximately \$24.3 million. This was below the 10-year average exvessel value of \$39 million (Table 3).

Purse seine fishermen accounted for most of the total harvest (in number of fish), and their earnings averaged \$131,586 per fished permit. Set gillnet earnings averaged \$23,156 per permit fished while beach seine earnings were confidential.

Table 3.—Estimated commercial salmon harvest and value, by gear type, in the KMA, 2013 - 2023.

Year	Total catch ^a	Total value ^b	Average exvessel value		
			Purse seine	Gillnet	Beach seine
2013	30,145,552	\$59,391,598	\$304,526	\$55,673	\$24,487
2014	13,995,803	\$42,806,102	\$183,451	\$61,504	\$23,796
2015	34,353,663	\$34,381,769	\$163,566	\$29,953	^c
2016	5,031,781	\$14,509,665	\$66,243	\$25,972	\$7,111
2017	29,978,602	\$54,750,472	\$277,675	\$65,957	\$19,216
2018	8,618,297	\$27,263,475	\$147,748	\$35,118	^c
2019	34,361,257	\$45,823,478	\$227,552	\$38,725	\$1,461
2020	23,898,965	\$26,461,042	\$157,217	\$23,187	^c
2021	27,275,959	\$47,099,145	\$250,550	\$38,407	^c
2022	17,202,482	\$34,785,070	\$182,515	\$31,404	^c
2023	26,402,522	\$24,302,285	\$131,586	\$23,156	^c
<u>Recent 10-year average</u>					
2013–2022	22,486,206	\$38,982,670	\$198,044	\$40,650	\$15,406

^a Number of fish: Does not include hatchery cost recovery, test fisheries, or personal use harvests.

^b Exvessel values based on inseason price estimates and do not include postseason adjustments.

^c Confidential data.

2023 Commercial Harvest Summary

Chinook Salmon

There are no directed Chinook salmon commercial fisheries in the KMA, but incidental commercial harvest occurs during targeted sockeye and pink salmon fisheries. The Karluk and Ayakulik Rivers both support small populations of Chinook salmon. By regulation, non-retention of Chinook salmon over 28 inches was implemented for the purse seine fleet areawide from June 1 through July 5. Due to a poor Chinook salmon run to both Karluk and Ayakulik, non-retention of Chinook salmon was extended for the purse seine fleet from July 6 until the end of the season along the westside of Kodiak Island from the latitude of Cape Kuliuk to the latitude of Low Cape. The 2023 commercial harvest of Chinook salmon in the KMA totaled 11,360 fish, which was above the previous 10-year average (10,514 fish) and the 2023 forecast (8,000 fish; Table 2).

Sockeye Salmon

The 2023 commercial harvest of sockeye salmon totaled 2,558,398 fish. The harvest was above the recent 10-year average (2,465,593 fish) and the preseason forecast (1,790,000 fish; Table 2).

Early-season management for much of the westside of Kodiak Island is driven by Karluk River early-run sockeye salmon. The 2023 Karluk River early run was weak, but escapement was adequate to allow for several weekly fishing periods along much of the westside of Kodiak Island until the management focus turned to pink salmon (July 6). A total of 246,309 sockeye salmon were harvested in early-season westside areas based on Karluk River early-run sockeye salmon and the beginning of the pink salmon fishery (June 1 – July 15). Westside sockeye

salmon numbers include an estimated contribution of 60,054 sockeye salmon from the enhanced Spiridon Lake sockeye salmon run harvested outside of the Spiridon Bay Special Harvest Area.

Late-season management for much of the westside of Kodiak is driven by the Kodiak Island pink and chum salmon fishery and the Karluk River late-run sockeye salmon run. Most of the wild pink salmon runs to the westside of Kodiak Island were average, and weekly fishing time was allowed in July and early August. The Karluk River late-run sockeye salmon run was very strong, and liberal fishing time was allowed in August and September. A near record total of 1,285,569 sockeye salmon were commercially harvested in late-season westside areas opened based on Karluk River late-run sockeye and westside Kodiak pink and chum salmon abundance. Westside sockeye salmon numbers include an estimated contribution of 93,277 sockeye salmon from the enhanced Spiridon Lake sockeye salmon run harvested outside of the Spiridon Bay Special Harvest Area.

The Ayakulik River early-run sockeye salmon run was weak, and very few fishing days were allowed in the Outer Ayakulik and Halibut Bay Sections of the Southwest Kodiak District during early-run sockeye salmon management. A total of 90,614 sockeye salmon were harvested in areas managed based on abundance of Ayakulik River early-run sockeye salmon.

The Ayakulik River late-run sockeye salmon run was weak and despite liberal fishing time, effort was extremely low in the Outer Ayakulik Section of the Southwest Kodiak District. A total of 89,073 sockeye salmon were harvested in areas managed based on Ayakulik River late-run sockeye. A total of 179,687 sockeye salmon were harvested from Westside sections managed based on abundance of Ayakulik River sockeye salmon.

Upper Station early-run sockeye salmon escapement was above average, and the traditional fishing areas of the Alitak District (i.e. purse seine and set gillnet sections) were open for several weekly fishing periods in June. The Frazer Lake sockeye salmon escapement was below average, but escapement was adequate to allow for Alitak District early-run sockeye salmon commercial salmon openings through July 15. The Alitak District early-run sockeye salmon harvest was approximately 103,428 fish.

The Upper Station late-run sockeye salmon run was below average. The Alitak District late-run sockeye salmon harvest was 180,906 fish. The total harvest of the Alitak District sockeye salmon was 284,334 fish.

Cape Igvak Salmon Management Plan: This regulatory management plan (5 AAC 18.360) allocates up to 7.5% of the total Chignik-bound sockeye salmon harvest to KMA fishermen in the Cape Igvak Section. Based on regulations, ninety percent (90%) of all sockeye salmon caught prior to July 5 in the Cape Igvak Section are considered to be Chignik-bound.

The Chignik early-run sockeye salmon run was stronger than the past few seasons but the majority of the harvest was after the management plan timeframe, and the allocative and biological criteria were never met to allow fishing in the Cape Igvak Section. No sockeye salmon were harvested in the Cape Igvak Section through July 5.

North Shelikof Strait Sockeye Salmon Management Plan: From July 6 to August 1, this regulatory management plan (5 AAC 18.363) places harvest limits on areas along the Mainland District and northern Shelikof Strait to limit harvest of sockeye salmon that are considered Cook Inlet-bound. During the period that this management plan is in effect, KMA fisheries are managed based on local pink and chum salmon runs. If it appears that the sockeye salmon harvest will meet or exceed limits set by the management plan, then fisheries are to be restricted to inshore “Shoreward Zones” only, and offshore “Seaward Zones” are closed (Figure 2).

A department biologist was present on the grounds to determine the sockeye salmon catch and to facilitate orderly and short-notice closures if the harvest limits are met. A Seaward Zone closure was implemented in the North Shelikof Unit at 11:30 p.m. July 15 when it was estimated that the cumulative sockeye salmon harvest had approached the 20,000 fish limit. The total July 6 to August 1 harvest in the North Shelikof Unit was 31,710 sockeye salmon, which included both the Shoreward and Seaward Zone harvests. A Seaward Zone closure did not take place in the Cape Igvak Management Unit. The total July 6 to August 1 harvest in the Cape Igvak Management Unit was 12,502 sockeye salmon, which included both the Shoreward and Seaward Zone harvests. A Seaward Zone closure was implemented in the Southwest Afognak Section at 5:00 p.m. July 17 when it was estimated the cumulative sockeye salmon harvest had approached the 50,000 fish limit. The total July 6 to July 25 harvest in the Southwest Afognak Section Unit was 59,724 sockeye salmon, which included both the Shoreward and Seaward Zone harvests.

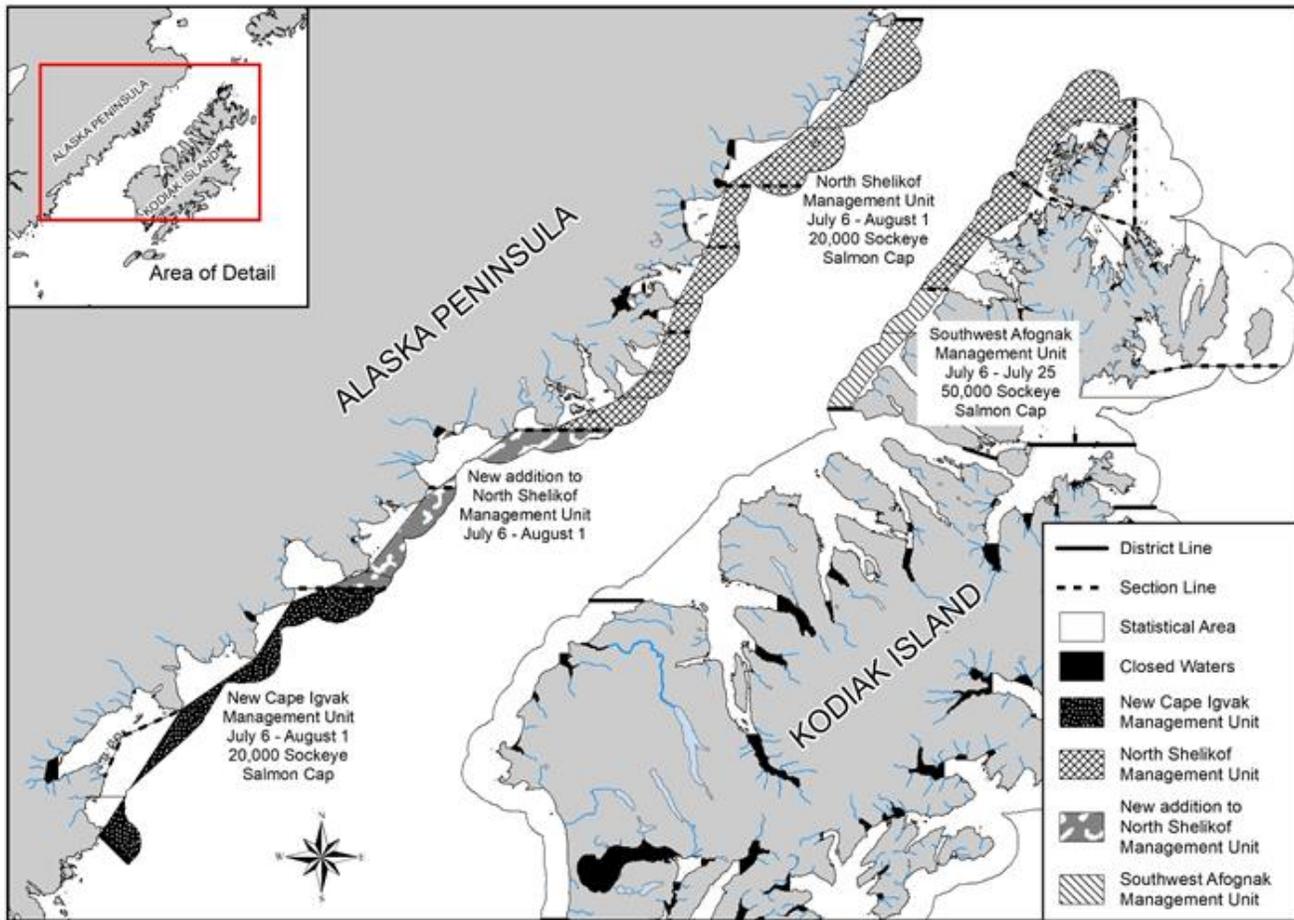


Figure 2.—Map of the North Shelikof Management Area.

Terminal and Special Harvest Areas: Some fisheries occur in areas where salmon enhancement projects create surplus production.

There was no effort in the Foul Bay Special Harvest Area (SHA) with no sockeye salmon harvested.

In the Spiridon Bay SHA (Telrod Cove) and the Spiridon Bay Section, about 140,912 sockeye salmon were harvested. Cost-recovery fish harvested by Kodiak Regional Aquaculture Association accounted for 18% of the harvest within the SHA or 25,615 fish. The harvest in the Spiridon Bay SHA and the Spiridon Bay Section represents only a portion of the total harvest of Spiridon enhancement fish; the remainder is harvested in

traditional pink and chum fisheries along the westside of Kodiak. It is estimated that approximately 153,331 Spiridon enhancement fish were harvested outside of Telrod Cove and the Spiridon Bay Section, bringing the total Spiridon enhancement sockeye salmon harvest to 294,213 fish, which was above the forecast.

The Kitoi Bay Hatchery harvest was 43,359 sockeye salmon, which was above the forecast. This includes the commercial harvest of both enhanced and wild salmon from the Inner Kitoi Bay, Outer Kitoi Bay, Duck Bay, and Izhut Bay Sections.

Coho Salmon

The commercial coho salmon harvest of 265,918 fish was below the forecast and below the previous 10-year average (337,794 fish; Table 2). The majority of the coho salmon were harvested around Kitoi Bay hatchery and the Westside Kodiak fishery in August and September.

Pink Salmon

The 2023 KMA pink salmon harvest (including cost recovery and carcass sales) of 24,744,333 fish was below the forecast but above the previous 10-year average harvest of 20,406,587 fish (Table 2). However, the 2023 KMA pink salmon run was late this year, and processors stopped buying pink salmon at the end of August. Had processors kept buying into September, the forecast would have likely been harvested. Pink salmon harvested in the areas managed on KMA wild stocks totaled 13,835,951 fish, which was below forecast.

The Kitoi Bay Hatchery pink salmon run was above average and above forecast with 10,908,382 pink salmon harvested in sections near the hatchery and well above the 2023 forecast (5,300,000 fish). Kitoi-bound pink salmon are likely harvested along the west and east sides of Kodiak and Afognak Islands. Likewise, additional wild stock salmon are likely harvested in areas associated with Kitoi Bay Hatchery. The department does not have a stock separation program for pink salmon and is unable to differentiate the KMA wild and hatchery stocks. Cost-recovery fish and carcasses sales harvested by Kodiak Regional Aquaculture Association accounted for 18% of the harvest or 1,943,701 fish.

Chum Salmon

Most of the KMA wild chum salmon are harvested during the directed pink and chum salmon fisheries in July. Most of the 2023 KMA chum salmon runs were above average. The 2023 KMA chum salmon harvest of 827,907 fish was well above the 2023 forecast (456,800 fish). Additionally, the Kitoi Bay Hatchery chum salmon harvest of 239,348 chum salmon was well above the forecast (60,000 fish).

2023 Escapement Summary

Fish counting weirs were operated on eight systems in 2023, including the Karluk, Ayakulik, Upper Station, Dog Salmon, Litnik, Buskin, Saltery, and Pasagshak systems. One observer also flew a record low 16 aerial surveys, and several observers conducted foot and skiff survey escapement estimates.

Chinook Salmon

The total Chinook salmon escapement (987 fish) was a record low, and below the previous 10-year average of 5,458 fish (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 was a record low (379 fish; Table 5) and below the biological escapement goal (BEG) range of 3,000 to 6,000 fish. Chinook salmon escapement through the Ayakulik River weir was a record low (590 fish; Table 5) and below the BEG range of 4,800 to 8,400 fish.

Sockeye Salmon

Sockeye salmon runs in many systems in the KMA were average to above average. All sockeye salmon systems in the Kodiak Area met their established escapement goals except Buskin Lake (Table 5). The entire KMA estimated sockeye salmon escapement of 1,616,545 fish (Table 4) was above the previous 10-year average of 1,447,123 fish (Table 4).

Coho Salmon

Although the KMA has substantial coho salmon runs, the department no longer has the funds to monitor most stocks. 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 finalized.

Pink Salmon

The KMA pink salmon escapement of 5,170,013 fish was slightly below the previous 10-year average of 5,471,815 fish (Table 4). However, this should be seen as a minimal estimate given the lack of aerial surveys conducted due to an insufficient budget and increased costs. Pink salmon escapement goals have been established as aggregate goals for the entire Kodiak Archipelago and the Mainland District. The 2023 escapement for the Kodiak Archipelago (4,440,413 fish) was within escapement goal range of 2.0 to 5.0 million fish (Table 5). However, given how late the pink salmon run was this season, and the lack of aerial survey coverage, there is a strong likelihood that the Kodiak Archipelago exceeded its escapement goal of 5,000,000 pink salmon. The Mainland District pink salmon escapement of 729,600 fish was above average and within the established escapement goal range (250,000 to 1,000,000 fish; Table 5).

Chum Salmon

The overall KMA chum salmon escapement of 481,999 fish was stronger than the past several seasons and above the previous 10-year average (365,032 fish; Table 4). Chum salmon escapement was particularly strong in the Mainland District due to newly restrictive management plans and lack of effort. A peak indexed escapement goal based on 17 streams on Kodiak Island has been established; the 2023 peak indexed escapement of 127,800 fish was above the goal of 101,000 fish (Table 5).

Table 4. Total salmon escapements in the KMA for all species in 2023 compared to average escapements from 2013 to 2022.

Species	2023 KMA escapement ^a	2013–2022 average KMA escapement
Chinook	987	5,458
Sockeye	1,616,545	1,447,123
Coho	31,574	77,305
Pink	5,170,013	5,471,815
Chum	481,999	365,032

^a 2023 escapement estimates are the sum of all weir, aerial survey, and foot survey estimates. These are minimum estimates and are incomplete due to limited dates of weir operation and poor survey conditions. This includes escapement from all streams surveyed including many non-index streams that are not measured against established escapement goals.

Table 5. Salmon peak escapements and escapement goals by species in the KMA, 2023.

Species	District/System (stock)	Stream Number	Escapement Goal		2023 Peak Escapement
			Lower	Upper	
Chinook					
	Karluk	255-101	3,000	6,000	379
	Ayakulik	256-201	4,800	8,400	590
		Total	7,800	14,400	969
Sockeye					
	Malina	251-105	1,000	10,000	2,500
	Afognak	252-342	20,000	50,000	35,559
	Karluk	255-101			
	Early run		150,000	250,000	182,172
	Late run		200,000	450,000	605,468
	Ayakulik	256-201			
	Early run		140,000	280,000	200,143
	Late run		60,000	120,000	117,956
	Upper Station	257-304			
	Early run		43,000	93,000	63,129
	Late run		120,000	265,000	181,290
	Frazer Lake	257-403	75,000	170,000	100,447
	Buskin	259-211	5,000	8,000	1,761
	Pasagshak	259-411	3,000		4,345
	Saltery	259-415	15,000	35,000	47,936
			832,000	1,731,000	1,542,706
Pink^a					
	Mainland District		250,000	1,000,000	729,600
	Kodiak Archipelago		2,000,000	5,000,000	4,444,0413
		Total	2,250,000	6,000,000	5,170,013
Chum^b					
		Kodiak Archipelago	101,000		127,800
		Total	101,000		127,800

^a 2023 escapement estimates are the sum of all weir, aerial survey, and foot survey estimates. These may be minimum estimates only, and are incomplete due to limited dates of weir operation, and poor survey conditions.

^b The Kodiak Archipelago peak index escapement goal is based on 17 Kodiak Archipelago streams and does not represent actual the KMA chum salmon escapement.