Division of Commercial Fisheries Sam Rabung, Director

Headquarters Office PO Box 115526 Juneau, AK 99811-5526



Alaska Department of Fish and Game Doug Vincent-Lang, Commissioner

> PO Box 115526 Juneau, AK 99811-5526 www.adfg.alaska.gov

Advisory Announcement

CONTACT: James Jackson, Area Biologist Geoff Spalinger, Asst. Area Biologist Todd Anderson, Asst. Area Biologist Brad Fuerst, Fishery Biologist (907) 486-1830

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2022 KODIAK COMMERCIAL SALMON SEASON SUMMARY

The following is a brief overview of the 2022 Kodiak Management Area (KMA; Figure 1) commercial salmon season.

Commercial fishing effort in 2022 was below average compared to recent years. Of the 586 eligible commercial salmon permits, only 307 (52%) made commercial landings. By gear type, a total of 168 purse seine and 137 set gillnet permit holders made deliveries in 2022. Less than three beach seine permits were fished in 2022. Participation rates for purse seine was average (45%), but participation of set gillnet was below average (73%; (Table 1).

Table 1.– Commercial salmon fishery 2022 limited entry permit activity and 10-yr. averages, by gear type, in the KMA, 2022.

	2022 Permits			2012-2021 Average Permits		
Gear Type	Available	Fished	% of permits fished	Available	Fished	% of permits fished
Purse Seine	370	168	45%	373	167	45%
Beach Seine	29	а	а	30	3	10%
Set Gillnet	187	137	73%	188	144	77%
Total	586	307	52%	591	314	53%

^a Confidential data.



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

The 2022 commercial harvest (not including personal use or ADF&G test fishery) in the KMA was 11,409 Chinook salmon, 2,365,236 sockeye salmon, 88,293 coho salmon, 15,221,647 pink salmon, and 550,409 chum salmon. The total KMA salmon harvest of 18,481,628 was below the 2022 forecast as well as the previous 10-year average of approximately 24,069,418 fish (Table 2).

Table 2.-2022 commercial salmon harvest for KMA compared to the previous 10-year average and the 2022 harvest forecast.

	Chinook	Sockeye	Coho	Pink	Chum	Total
2022 Harvest	11,409	2,365,236	88,293	15,221,647	550,409	18,481,628
2012-2021 Avg.	10,852	2,451,521	349,799	20,571,515	685,731	24,069,418
2022 Forecast	7,150	3,290,981	453,900	19,180,600	751,300	23,904,150

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 2022 fishery (not including hatchery cost recovery) was approximately \$34.8 million. This was below the 10-year average exvessel value of \$40.0 million (Table 3).

Purse seine fishermen accounted for most of the total harvest (in number of fish), and their earnings averaged \$184,714 per fished permit. Set gillnet earnings averaged \$39,919 per permit fished while beach seine earnings were confidential.

	Total	Total	Average Exvessel Value			
Year	Catch ^a	Value ^b	Purse Seine	Gillnet	Beach Seine	
2012	19,032,409	\$44,988,487	\$219,164	\$52,084	\$16,367	
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	\$34,785,074	\$184,714	\$39,919	c	
Recent 10-year average						
2012–2021	22,669,199	\$40,003,012	201,709	\$42,718	\$14,212	

^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.

2022 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 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 from the latitude of Cape Kuliuk to the latitude of Low Cape. The 2022 commercial harvest of Chinook salmon in the KMA totaled 11,409 fish, which was above the previous 10-year average (10,852 fish) and the 2022 forecast (7,150 fish; Table 2).

Sockeye Salmon

The 2022 commercial harvest of sockeye salmon totaled 2,365,2361fish. The harvest was below the recent 10-year average (2,451,512 fish) and the preseason forecast (3,290,981 fish; Table 2).

Early-season management for much of the Westside of Kodiak Island is driven by Karluk River early-run sockeye salmon. The 2022 Karluk River early run was weak, but escapement was adequate to allow for several weekly fishing periods along much of the westside of Kodiak until the management focus turned to pink salmon (July 6). A total of 320,760 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

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salmon numbers include an estimated contribution of 64,714 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 average but a large buildup of sockeye salmon in Karluk Lagoon in mid-August allowed for liberal fishing time in August. However, a very weak coho salmon run to most of the Kodiak Area made for only short weekly fishing periods from mid-September through the end of the season. A total of 752,320 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 83,771 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 moderately strong and weekly fishing time was allowed in the Outer Ayakulik Section and Halibut Bay Sections of the Southwest Kodiak District during early-run sockeye salmon management. A total of 293,542 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 as well as the Ayakulik pink salmon run were also strong and liberal fishing time was allowed in the Outer Ayakulik Section of the Southwest Kodiak District. A total of 254,909 sockeye salmon were harvested in areas managed based on Ayakulik River late-run sockeye. A total of 548,451 sockeye salmon were harvested from Westside sections opened based on abundance of Ayakulik River sockeye salmon.

Upper Station early-run sockeye salmon escapement was again strong and the traditional fishing areas of the Alitak District (i.e. purse seine and set gillnet sections) were open for weekly fishing periods for most of 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 170,888 fish.

The Upper Station late-run sockeye salmon run was below average. The Alitak District late-run sockeye salmon harvest was 153,392 fish. The total harvest of the Alitak District late-run sockeye salmon was 324,280 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 weak, 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 1:00 p.m. July 22 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 17,720 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 19,799 sockeye salmon, which included both the Shoreward and Seaward Zone closure did not take place in the Southwest Afognak Section. The total July 6 to July 25 harvest in the Southwest Afognak Section Unit was 20,766 sockeye salmon.



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 below-average effort and harvest in the Foul Bay Special Harvest Area (SHA), with only 1,672 sockeye salmon harvested.

In the Spiridon Bay SHA (Telrod Cove) and the Spiridon Bay Section, about 118,521 sockeye salmon were harvested. Cost-recovery fish harvested by Kodiak Regional Aquaculture Association accounted for 56% of the

harvest within the SHA or 66,723 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 148,485 Spiridon enhancement fish were harvested outside of Telrod Cove and the Spiridon Bay Section, bringing the total Spiridon enhancement sockeye salmon harvest to 267,358 fish, which was above the forecast.

The Kitoi Bay Hatchery harvest was 24,686 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 88,293 fish was well below the forecast and below the previous 10-year average (349,799 fish; Table 2), and the lowest in 43 years. The majority of the coho salmon were harvested in the Westside Kodiak fishery in August and September. The coho salmon fishery was largely restricted for most of the Kodiak Area from September through the end of the season.

Pink Salmon

The 2022 KMA pink salmon harvest (including cost recovery and carcass sales) of 15,221,647 fish was below the forecast and below the previous 10-year average harvest of 20,571,515 fish (Table 2). Pink salmon harvested in the areas managed on KMA wild stocks totaled 11,519,235 fish which was below forecast.

The Kitoi Bay Hatchery pink salmon run was below average but above forecast with 3,702,412 pink salmon harvested in sections near the hatchery. A further 244,634 pink salmon carcasses were also sold but not included in in the total number. 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 30% of the harvest or 1,197,110 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 2022 KMA chum salmon runs were weak, and closures were necessary to achieve escapement. The 2022 KMA chum salmon harvest of 550,409 fish was well below the 2022 forecast (777,500 fish). Additionally, the Kitoi Bay Hatchery chum salmon harvest of only 40,493 chum salmon was well below the forecast of 128,100 fish.

2022 Escapement Summary

Fish counting weirs were operated on eight systems in 2022, including the Karluk, Ayakulik, Upper Station, Dog Salmon, Litnik, Buskin, Saltery, and Pasagshak systems. Two observers also flew a near record low 22 aerial surveys, and several observers conducted foot and skiff survey escapement estimates.

Chinook Salmon

The total Chinook salmon escapement (5,532) was slightly below the previous 10-year average of 5,715 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).

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The Chinook salmon escapement through the Karluk River weir (2,629 fish; Table 5) was below the biological escapement goal (BEG) range of 3,000 to 6,000 fish. Chinook salmon escapement through the Ayakulik River weir (2,845 fish; Table 5) was 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 below average. All sockeye salmon systems in the Kodiak Area met their established escapement goals (Table 5). The entire KMA estimated sockeye salmon escapement of 1,356,959 fish (Table 4) was below the previous 10-year average of 1,441,007 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 5,733,724 fish was slightly above the previous 10-year average of 5,450,880 fish (Table 4). Forty-eight percent of the 2022 pink salmon escapement were in the three major systems of Karluk, Sturgeon, and Ayakulik. 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 (5,153,824 fish) was within escapement goal range of 3.0 to 7.0 million fish (Table 5). The Mainland District pink salmon escapement of 579,900 fish was 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 307,775 fish was again weak and below the previous 10-year average (368,388 fish; Table 4). A peak indexed escapement goal based on 17 streams on Kodiak Island has been established; the 2022 peak indexed escapement of 102,300 fish was above the goal of 101,000 fish (Table 5).

Species	2022 KMA Escapement ^a	2012–2021 Average KMA Escapement
Chinook	5,532	5,715
Sockeye	1,356,959	1,441,007
Coho	38,879	85,105
Pink	5,733,724	5,450,880
Chum	307,775	368,388

Table 4. Total salmon escapements in the KMA for all species in 2022 compared to average escapement from 2012 to 2021.

^a 2022 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.

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Table 5. Salmon peak escapements and escapement goals by species in the KMA, 2022.

Species	Stream	Escapement	Goal	2022 Peal
District/System (stock)	Number	Lower	Upper	Escapemen
Chinook				
Karluk	255-101	3,000	6,000	2,629
Ayakulik	256-201	4,800	8,400	2,84
	Total	7,800	14,400	5,474
Sockeye				
Malina	251-105	1,000	10,000	1,50
Afognak	252-342	20,000	50,000	29,50
Karluk	255-101			
Early run		150,000	250,000	175,33
Late run		200,000	450,000	328,47
Ayakulik	256-201			
Early run		140,000	280,000	251,69
Late run		60,000	120,000	100,72
Upper Station	257-304			
Early run		43,000	93,000	82,82
Late run		120,000	265,000	168,88
Frazer Lake	257-403	75,000	170,000	137,56
Buskin	259-211	5,000	8,000	8,12
Pasagshak	259-411	3,000		4,37
Saltery	259-415	15,000	35,000	25,61
		832,000	1,731,000	1,328,992
Pink ^a Mainland District		250,000	1,000,000	579,90
Kodiak Archipelago		3,000,000	7,000,000	5,153,824
	Total	3,250,000	8,000,000	5,733,724
Chum ^b	Kodiak Archipelago	101,000		102,30
	Total	101,000		102,30

^a 2022 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.