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Advisory Announcement

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Released: 1:00 p.m. November 9, 2020

2020 KODIAK COMMERCIAL SALMON SEASON SUMMARY

The following is a brief overview of the 2020 Kodiak Management Area (KMA; Figure 1) commercial salmon season.

Commercial fishing effort in 2020 was below average compared to recent years. Of the 587 eligible commercial salmon permits, only 277 (47%) made commercial landings. By gear type, a total of 149 purse seine and 126 set gillnet permit holders made deliveries in 2020. Less than 3 beach seine permits were fished in 2020. Participation rates for all gear types were below the previous 10-year average (Table 1).

Table 1.— Commercial salmon fishery 2020 limited entry permit activity and 10-yr. averages, by gear type, in the KMA, 2020.

Gear Type	2020 Permits			2010-2019 Average Permits		
	Available	Fished	% of permits fished	Available	Fished	% of permits fished
Purse Seine	370	149	40%	374	169	45%
Beach Seine	29	^a	^a	31	3	10%
Set Gillnet	188	126	67%	188	150	80%
Total	587	277	47%	593	322	54%

^a Confidential data.



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

The 2020 commercial harvest (not including personal use or ADF&G Test Fishery) in the KMA was 8,324 Chinook salmon, 1,524,845 sockeye salmon, 441,353 coho salmon, 21,823,300 pink salmon, and 368,901 chum salmon. The total KMA harvest of 24,166,723 salmon was above the 2020 forecast as well as the previous 10-year average of approximately 21,794,054 salmon (Table 2).

Table 2.–2020 commercial salmon harvest for KMA compared to the previous 10-year average and the 2020 harvest forecast.

	Chinook	Sockeye	Coho	Pink	Chum	Total
2020 Harvest	8,324	1,524,845	441,353	21,823,300	368,901	24,166,723
2010-2019 Avg.	12,413	2,340,283	320,521	18,357,663	763,175	21,794,054
2020 Forecast	6,700	1,812,000	437,900	12,249,000	809,600	15,315,200

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

The estimated exvessel value of the 2020 fishery (not including hatchery cost recovery) was approximately \$26.5 million. This was well below the 10-year average exvessel value of \$39.2 million (Table 3).

Purse seine fishermen accounted for most of the total harvest (in number of fish), and their earnings averaged \$157,217 per fished permit. Set gillnet earnings averaged \$23,187 per permit fished while beach seine earnings were confidential.

Table 3.—Estimated commercial salmon harvest and value, by gear type, in the KMA, 2010 - 2020.

Year	Total Catch ^a	Total Value ^b	Average Exvessel Value		
			Purse Seine	Gillnet	Beach Seine
2010	10,291,590	\$24,269,085	\$130,009	\$25,728	^c
2011	18,228,922	\$44,247,720	\$225,633	\$31,155	\$13,750
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
Recent 10-year Average					
2010–2019	20,403,788	\$39,243,185	\$194,557	\$42,187	^c

^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.

2020 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 seine fleet areawide from June 1 through July 5. Due to a poor Chinook salmon run to Ayakulik, non-retention of Chinook salmon was extended for the 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 2020 commercial harvest of Chinook salmon in the KMA totaled 8,324 fish, which was below the previous 10-year average (12,413 fish) but above the 2020 forecast (6,700 fish; Table 2).

Sockeye Salmon

The 2020 commercial harvest of sockeye salmon totaled 1,524,845 fish. The harvest was below the recent 10-year average (2,340,283 fish) and the preseason forecast (1,812,000 fish; Table 2).

Early-season management for much of the Westside of Kodiak Island is driven by Karluk early-run sockeye salmon. The 2020 Karluk early-run was weak, and minimal fishing time was allowed along much of the Westside of Kodiak until the management focus turned to pink salmon (July 6). The lower value of the Karluk early-run sockeye salmon escapement goal (150,000 fish) was not achieved until July 7. A total of 149,554 sockeye salmon were harvested in early-season Westside areas based on Karluk early-run sockeye salmon. Westside sockeye salmon numbers include an estimated contribution of 35,544 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 salmon fishery and the Karluk late-run sockeye salmon run. Most of the pink salmon runs to the Westside of Kodiak Island were very strong (particularly in the Southwest Kodiak District), and liberal fishing time was allowed in July and August. The Karluk late-run sockeye salmon run was average and a large buildup of sockeye salmon in Karluk Lagoon in late August allowed for liberal fishing time. A total of 614,394 sockeye salmon were commercially harvested in late-season Westside areas opened based on Karluk late-run sockeye and Westside Kodiak pink and chum salmon. Westside sockeye salmon numbers include an estimated contribution of 27,214 sockeye salmon from the enhanced Spiridon Lake sockeye salmon run, harvested outside of the Spiridon Bay Special Harvest Area.

The Ayakulik early-run sockeye salmon run was below average, allowing only three fishing period in the Outer Ayakulik and Halibut Bay sections of the Southwest Kodiak District during early-run sockeye salmon management. A total of 72,623 sockeye salmon were harvested in areas managed based on Ayakulik early-run sockeye salmon. The strength of the Ayakulik late-run sockeye salmon was average, but the Ayakulik pink salmon run was one of the largest on record and there was liberal fishing time in the Outer Ayakulik and Halibut Bay sections of the Southwest Kodiak District. A total of 174,606 sockeye salmon were harvested in areas managed based on Ayakulik late-run sockeye and Ayakulik pink salmon. A total of 247,229 sockeye salmon were harvested from Westside sections opened based on the Ayakulik sockeye salmon and pink salmon runs, which was above the 2020 forecast of 108,000 fish.

Upper Station early-run sockeye salmon escapement was weak, and the traditional fishing areas of the Alitak District (i.e. seine and set gillnet sections) were closed for much of June. Eventually, the minimum Upper Station early-run sockeye salmon escapement goal of 43,000 fish was achieved, and the Frazer Lake sockeye salmon escapement was adequate, allowing for Alitak District early-run sockeye salmon commercial salmon openings. The Alitak District early-run sockeye salmon harvest was approximately 67,490 fish, well below the projected harvest of 132,000 fish. The Upper Station late-run sockeye salmon run was average, and despite liberal fishing time, set gillnet effort was at near record low levels. The Alitak District late-run sockeye salmon harvest was 188,188 fish, below the projected harvest of 231,000 fish. The total harvest of the Alitak District late-run sockeye salmon was 255,678 fish, which was below the forecasted harvest of 363,000 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 interception 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 13 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 96,593 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 only 4,000 sockeye salmon, which included both the Shoreward and Seaward Zone harvests. A 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 only 11,807 sockeye salmon, which included both the Shoreward and Seaward Zone harvests.

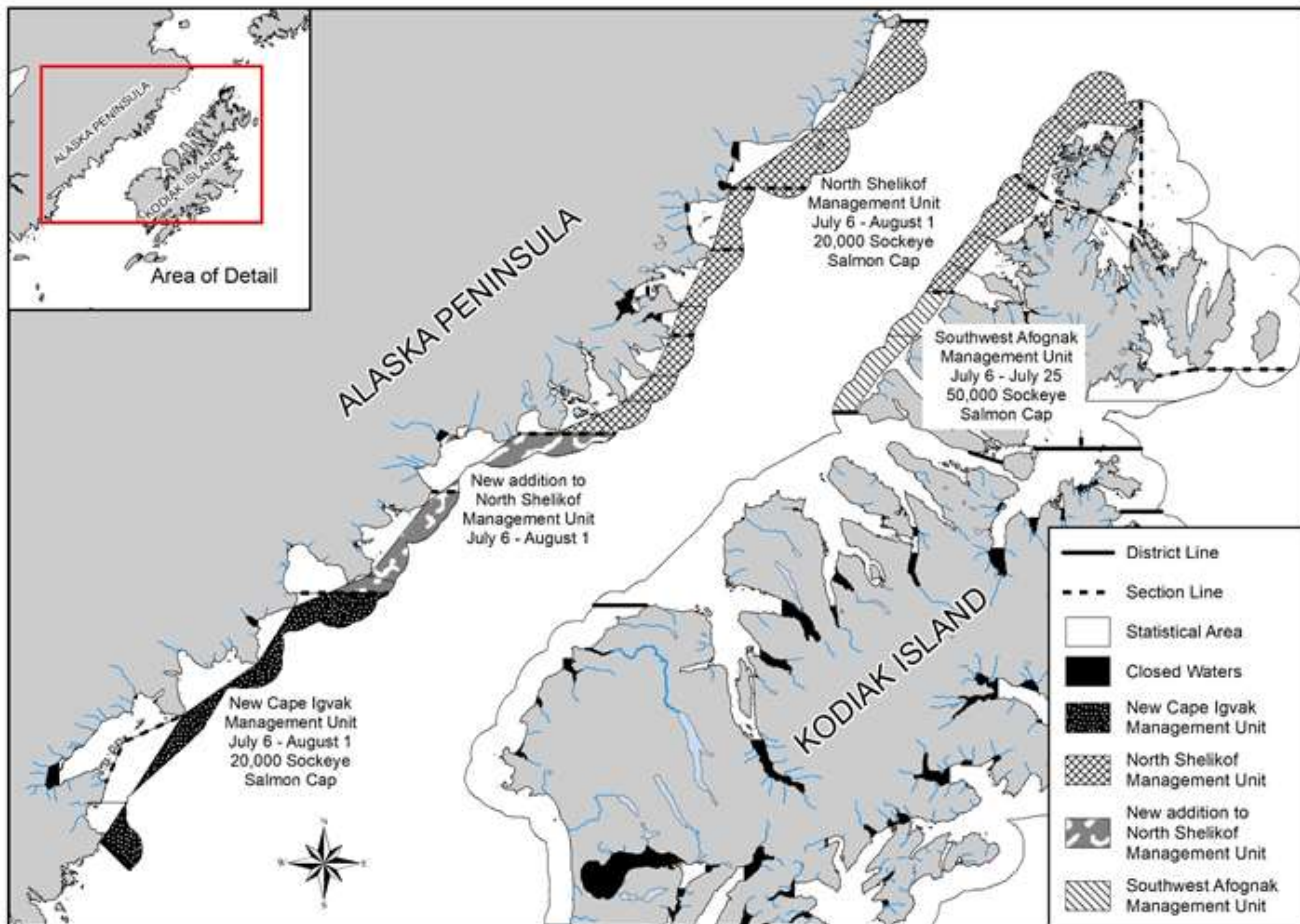


Figure 2.—Map of the North Shelikof Management Area.

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

There was below-average effort and harvest in the Foul Bay Special Harvest Area (SHA), with only 1,307 sockeye salmon harvested.

In the Spiridon Bay SHA (Telrod Cove) and the Spiridon Bay Section, only 70,822 sockeye salmon were harvested. There was no cost-recovery fish harvested by Kodiak Regional Aquaculture Association. 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 62,758 Spiridon enhancement fish were harvested outside of Telrod Cove and the Spiridon Bay Section, bringing the total Spiridon enhancement sockeye salmon harvest to 133,580 fish, which was above the forecast of 115,000 fish.

The Kitoi Bay Hatchery harvest was 18,008 sockeye salmon, which matched the forecast of 18,000 fish. 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 441,353 fish was slightly above the forecast (437,900 fish) and above the previous 10-year average (320,521 fish; Table 2). The majority of the coho salmon were harvested in the Westside Kodiak fishery in August and September and at Kitoi Bay Hatchery in August.

Pink Salmon

The 2020 KMA pink salmon harvest of 21,823,300 fish was above the forecast (12,249,000 fish) and above the previous 10-year average harvest of 18,357,663 fish (Table 2). Pink salmon harvested in the areas managed on KMA wild stocks were approximately 17,007,888 fish (9,924,000 forecast). Most of the pink salmon were harvested on the Westside of Kodiak Island (12,314,115), particularly the Southwest Kodiak District. The three major systems of Karluk, Sturgeon, and Ayakulik all had extremely large pink salmon runs and record or near-record pink salmon escapement. The 2020 season was the largest pink salmon harvest ever in the Southwest Kodiak District with 7,923,000 pink salmon harvested.

The Kitoi Bay Hatchery pink salmon run was stronger than expected with 4,815,412 pink salmon harvested in sections near the hatchery (2,325,000 forecast). 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. However, the department does not have a stock separation program for pink salmon and is unable to differentiate the stocks. No cost recovery was conducted by the Kodiak Regional Aquaculture Association for the 2020 commercial salmon season.

Chum Salmon

Most of the KMA wild chum salmon are harvested during the directed pink and chum salmon fisheries in July. The 2020 chum salmon runs were very weak and closures were necessary to achieve escapement. The 2020 KMA chum salmon harvest of 368,901 fish was well below the 2020 forecast (809,600 fish). Additionally, the Kitoi Bay Hatchery chum salmon harvest of only 20,852 chum salmon was well below the forecast of 86,600 fish.

2020 Escapement Summary

Fish counting weirs were operated on 8 systems in 2020, including the Karluk, Ayakulik, Upper Station, Dog Salmon, Litnik, Buskin, Saltery, and Pasagshak systems. Two observers also flew 26 aerial surveys, and several observers conducted foot and skiff survey escapement estimates.

Chinook Salmon

The total Chinook salmon escapement (5,794) was below the previous 10-year average of 6,193 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 (3,344 fish; Table 5) was within the biological escapement goal (BEG) range of 3,000 to 6,000 fish. Chinook salmon escapement through the Ayakulik River weir (2,402 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. The major sockeye salmon systems of the KMA all met their established escapement goals although, one small system (Malina Lake) did not achieve its escapement goal. The entire KMA estimated sockeye salmon escapement of (1,283,256 fish; Table 4) was slightly below the previous 10-year average of 1,349,317 fish (Table 4).

Coho Salmon

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

Pink Salmon

The KMA pink salmon escapement of 10,913,396 fish was above the previous 10-year average of 4,497,851 fish (Table 4) and the second largest pink salmon escapement on record. 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 (9,429,396 fish) exceeded the upper end of the escapement goal range of 3.0 to 7.0 million fish (Table 5). It should be noted that the more than 58% (or 5,469,305) of the total Kodiak Archipelago pink salmon escapement occurred in the three major systems of Karluk, Sturgeon, and Ayakulik rivers. Karluk River alone escaped 3.1 million pink salmon. For a second straight year, low water conditions caused a large amount of pre-spawn mortality and commercial salmon closures were necessary for escapement, particularly on the Eastside of Kodiak Island and Afognak.

The Mainland District pink salmon escapement of 1,484,000 fish was above average and above the established escapement goal range (250,000 to 1,000,000 fish; Table 5) and the second highest on record. The Mainland District north of Puale Bay had well above average pink salmon escapement.

Chum Salmon

The overall KMA chum salmon escapement of 212,320 fish was well below the previous 10-year average (387,477 fish; Table 4). Chum salmon runs were weak in every KMA district. A peak indexed escapement goal based on 17 streams on Kodiak Island has been established; the 2020 peak indexed escapement of 72,100 fish was below the goal of 101,000 fish.

Table 4. Total salmon escapements in the KMA for all species in 2020 compared to average escapement from 2010 to 2019.

Species	2020 KMA Escapement ^a	2010–2019 Average KMA Escapement
Chinook	5,794	6,193
Sockeye	1,283,256	1,349,317
Coho	64,793	91,731
Pink	10,913,396	4,497,851
Chum	212,320	387,477

^a 2020 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, 2020.

Species	Stream District/System (stock)	Stream Number	Escapement Goal		2020 Peak Escapement ^a
			Lower	Upper	
Chinook					
	Karluk	255-101	3,000	6,000	3,344
	Ayakulik	256-201	4,800	8,400	2,402
	Total		7,800	14,400	5,746
Sockeye					
	Malina	251-105	1,000	10,000	0
	Afognak	252-342	20,000	50,000	25,383
	Karluk	255-101			
	Early run		150,000	250,000	157,411
	Late run		200,000	450,000	294,552
	Ayakulik	256-201			
	Early run		140,000	280,000	220,935
	Late run		60,000	120,000	81,660
	Upper Station	257-304			
	Early run		43,000	93,000	56,190
	Late run		120,000	265,000	195,147
	Frazer Lake	257-403	75,000	170,000	181,384
	Buskin/Lake Louise	259-211	5,000	8,000	7,741
	Pasagshak	259-411	3,000		3,522
	Saltery	259-415	15,000	35,000	24,987
	Total		832,000	1,731,000	1,248,912
Pink					
	Mainland District		250,000	1,000,000	1,484,000
	Kodiak Archipelago		3,000,000	7,000,000	9,429,396
	Total		3,250,000	8,000,000	10,913,396
Chum^b					
	Kodiak Archipelago		101,000		72,100
	Total		101,000		96,700

^a 2020 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.