



MEMORANDUM

TO: Nick Sagalkin
Regional Supervisor
Division of Commercial Fisheries
Westward Region

DATE: November 6, 2015

THRU: Jeff Wadle
Regional Finfish Management Supervisor
Division of Commercial Fisheries
Kodiak

FROM: James Jackson
Area Management Biologist
Division of Commercial Fisheries
Kodiak

SUBJECT: 2015 Kodiak Management Area Season Summary

cc:	Tracy	Fuerst
Cotten	Polum	United Salmon Association
Kelley	Bergstrom	Kodiak Island Borough
Schaberg	Lingnau	Ocean Beauty Seafoods
Bowers	Elison	Alaska Pacific Seafoods
Murphy	Salomone	Western Alaska Seafoods
Wilburn	Fleener	Icicle Seafoods
Spalinger	Fall	True World Seafoods
Wilson	Russel	Trident Seafoods
Keyse	Lechner	Island Seafoods
Anderson	KRAA, Fairbanks	Alaska Fresh Seafoods
Wattum	KRAA, Kitoi Hatchery	USFWS – OSM, Fried
Foster	Volk	USFWS – Kodiak, Wheeler
Schrof	Fair	City of Kodiak
Fox	Shields	Sand Point Advisory Committee
Stumpf	Sands	Chignik Advisory Committee
Finkle	Fisher	Kodiak Advisory Committee
Linderman	Dorner	UFMA - Stephens
Miller	Greer	United Chignik Salmon Fishermen

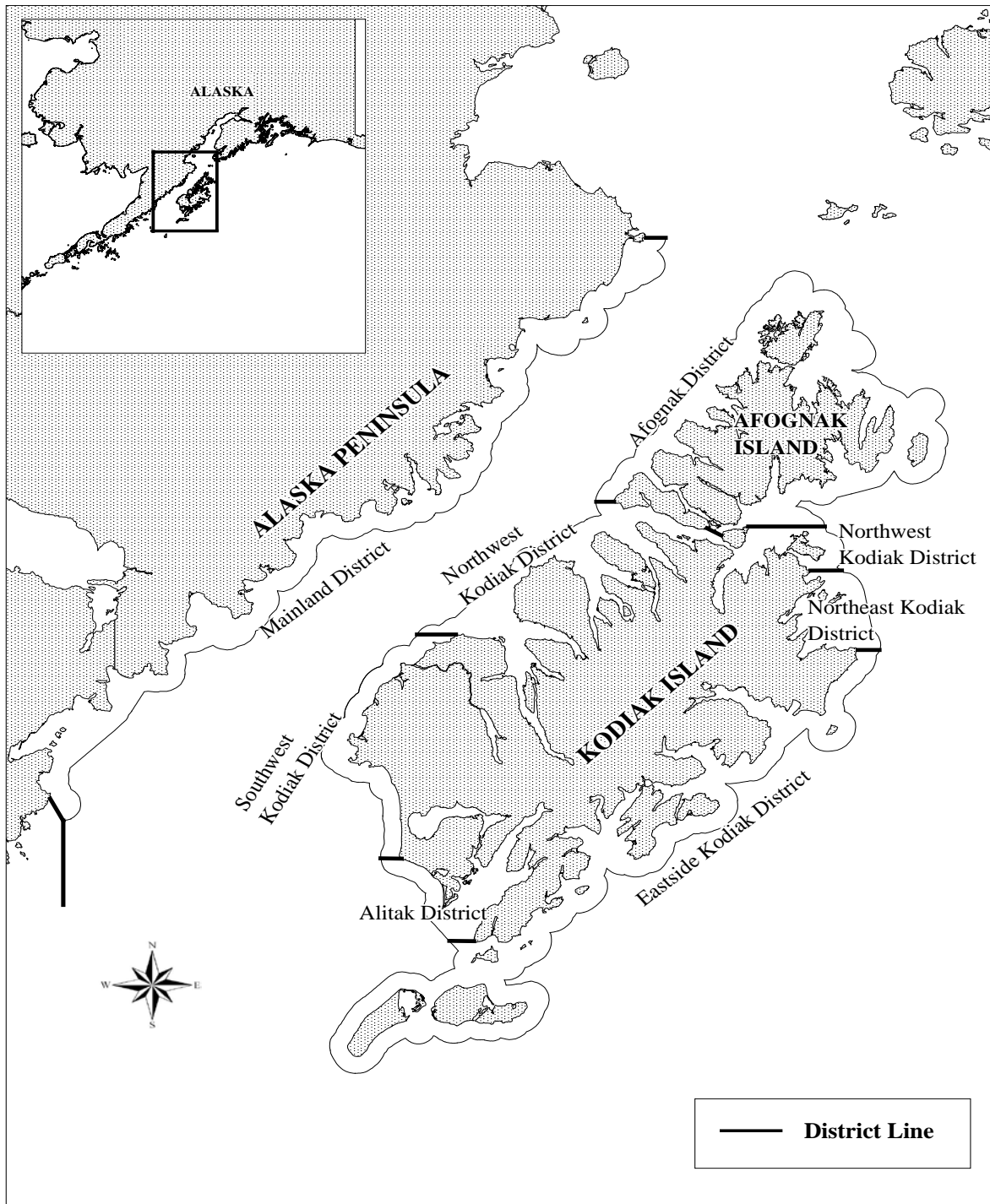


Figure 1.—Map of the commercial salmon fishing districts in the Kodiak Management Area.

Commercial fishing effort increased slightly during 2015. Of the 591 eligible commercial salmon permits, 335 (57%) made commercial landings. By gear type, a total of 180 purse seine, 1 beach seine, and 154 set gillnet permit holders made deliveries in 2015. Participation by purse seine and set gillnet permit holders was above the previous 10-year average (Table 1).

Table 1. Commercial salmon fishery 2015 limited entry permit activity and 10-yr. averages, by gear type, in the Kodiak Management Area, 2015.

Gear Type	2015 Permits			2005-2014 Average Permits		
	Available	Fished	% of permits fished	Available	Fished	% of permits fished
Purse Seine	372	180	48%	375	154	41%
Beach Seine	31	1	3%	31	2	6%
Set Gillnet	188	154	82%	188	153	81%
Total	591	335	57%	594	309	52%

The 2015 commercial harvest (not including personal use or ADF&G Test Fishery) in the KMA was 8,087 Chinook salmon, 3,097,344 sockeye salmon, 410,502 coho salmon, 33,010,891 pink salmon, and 770,283 chum salmon. The total Kodiak areawide harvest (including KRAA Cost Recovery) of 37,297,107 salmon was well about the 2015 forecast and the previous 10-year average of approximately 23,745,906 salmon (Table 2).

Table 2.—2015 commercial salmon harvest for KMA compared to the previous 10-year average and the 2015 harvest forecast.

	Chinook	Sockeye	Coho	Pink	Chum	Total
2015 Harvest	8,087	3,097,344	410,502	33,010,891	770,283	37,297,107
2005-2014 Avg.	16,651	2,195,831	329,946	20,432,760	770,718	23,745,906
2015 Forecast	15,000	3,494,116	330,889	14,298,094	707,416	18,960,515

Note: harvest numbers do not include harvest from the ADF&G test fisheries or personal use but includes cost recovery.

The estimated exvessel value of the 2015 fishery was approximately \$33.2 million. This was below the previous 10-year average exvessel value of \$35.2 million (Table 3).

Purse seine fishermen accounted for the majority of the total harvest (in number of fish) and their earnings averaged \$158,714 per fished permit. Set gillnet earnings averaged \$30,228 per permit fished. Beach seine fishermen harvested a negligible amount of fish.

Table 3.—Estimated commercial salmon harvest and value, by gear type, in the Kodiak Management Area, 2005 - 2015.

Year	Total Catch ^a	Total Value	Average Exvessel Value		
			Purse Seine	Set Gillnet	Beach Seine
2005	31,434,179	\$24,067,755	\$129,181	\$40,172	\$0
2006	32,595,862	\$24,820,388	\$150,038	\$33,926	Confidential
2007	26,239,484	\$28,174,695	\$148,504	\$41,404	\$3,484
2008	10,127,638	\$25,806,691	\$143,819	\$43,202	\$0
2009	28,338,446	\$33,698,297	\$174,566	\$44,918	Confidential
2010	10,291,590	\$24,269,085	\$130,009	\$25,728	Confidential
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	34,353,657	\$33,213,751	\$158,714	\$30,228	Confidential
2005-2014 Avg.	22,042,989	\$35,227,082	\$180,889	\$42,977	\$15,069

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

2015 Commercial Harvest Summary

Chinook Salmon

There are no directed Chinook salmon commercial fisheries in the KMA but incidental commercial harvest occurs during targeted sockeye salmon fisheries. The Ayakulik and Karluk river systems support the largest Chinook salmon populations in the KMA. Non-retention of Chinook salmon was implemented for the seine fleet area wide from June 3 through July 5. Non-retention of Chinook salmon was implemented 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. Neither Karluk nor Ayakulik Chinook salmon achieved their escapement goals. The 2015 commercial harvest of Chinook salmon in the KMA totaled 8,087 fish which was below the previous 10-year average (16,651 fish) and below the 2015 forecast (15,000 fish; Table 2).

Sockeye Salmon

The 2015 commercial harvest of sockeye salmon totaled 3,097,344 fish. The harvest was well above the recent 10-year average (2,195,831 fish) but slightly below the forecast (3,494,116 fish; Table 2).

Early season management for much of the Westside and north end of Kodiak Island is driven by Karluk early-run sockeye salmon (through July 5). Extended fishing was allowed along the Westside of Kodiak in the Central, North Cape, Southwest Afognak, and Outer Karluk sections until the management focus turned to pink salmon beginning July 6. A total of 304,821 sockeye salmon were harvested in early-season (through July 15) Westside areas opened based on Karluk early-run sockeye salmon, which was above the forecasted Karluk early-run harvest of 176,867 fish.

Late-season management for much of the Westside and north end of Kodiak Island is driven by the Kodiak Island pink salmon fishery (beginning July 6) and Karluk late-run sockeye salmon (after August 16). A total of 1,205,542 sockeye salmon were commercially harvested in late-season (after July 15) Westside areas opened based on Karluk late-run sockeye salmon and during the Kodiak Island pink salmon fishery. This was above the forecasted Karluk late-run harvest of 824,440 fish.

Westside sockeye salmon numbers include an estimated contribution of approximately 237,994 sockeye salmon from the enhanced Spiridon Lake sockeye salmon run of which 92,222 were harvested in Spiridon Bay Special Harvest Area.

The Ayakulik sockeye salmon run was strong and there were several openings throughout the season. The first commercial opening occurred in both the Inner and Outer Ayakulik sections on June 15. A total 568,932 of sockeye salmon were harvested from Westside sections attributed to Ayakulik, which was well above the 2015 forecast of 101,273 fish.

The Frazer Lake sockeye salmon run came in as forecasted and Upper Station early run was strong enough to allow for openings in the traditional fishing areas. The Alitak District early-run (through July 15) sockeye salmon harvest was 151,632 fish, below the projected harvest of 257,657 fish. However, a large amount of the Frazer sockeye salmon run showed up late and extended fishing time was allowed until early August. The Upper Station late-run sockeye salmon run came in as weak as expected and no fishing periods were permitted after August 9 in areas in which Upper Station-bound sockeye salmon would be harvested in high numbers. The total harvest of the Alitak District late-run sockeye salmon was 213,652 fish, which was above the forecasted harvest of 106,673.

Cape Igvak Salmon Management Plan: This regulatory management plan (5 AAC 18.360) allocates up to 15% 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 25 in the Cape Igvak Section are considered to be Chignik-bound.

Both Chignik sockeye salmon runs were extremely late and the allocative and biological criteria were not met until mid July. Although extended fishing time was allowed after July 16 only 6,595 sockeye salmon were harvested in the Cape Igvak Section through July 25 which was below the preseason forecast of approximately 235,353 fish.

North Shelikof Strait Sockeye Salmon Management Plan: From July 6 to July 25, this regulatory management plan (5 AAC 18.363) places harvest limits on areas along the 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 targeting local pink salmon runs and fishing periods are based on projected pink salmon run strength. 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 3:00 p.m. July 15 when it was estimated that the cumulative sockeye salmon harvest had approached the 15,000 fish limit. The total July 6 to July 25 harvest in the North Shelikof Unit was 82,225 sockeye salmon, which included both the Shoreward and Seaward Zone harvests. A Seaward Zone closure did not take place in the Southwest Afognak Section and the harvest cap of 50,000 was never exceeded. Approximately 38,294 sockeye salmon were harvested in the Southwest Afognak Section between July 6 and July 25.

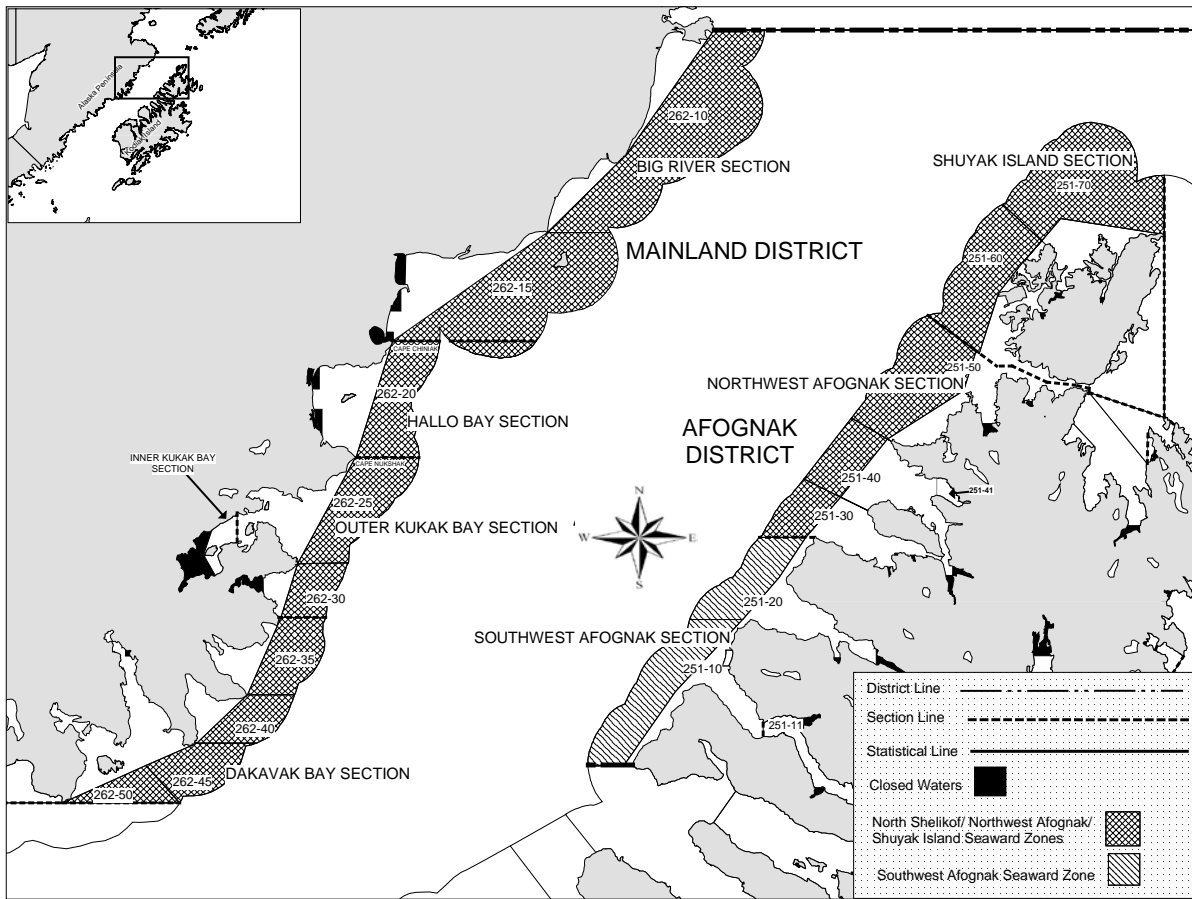


Figure 2.—Map of the North Shelikof Management Area.

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

There was no effort or harvest in the Waterfall Bay Special Harvest Area (SHA). There was below average effort and harvest in the Foul Bay Special Harvest Area (SHA) with a total of 8,327 sockeye salmon harvested.

In the Spiridon Bay SHA (Telrod Cove), 92,222 sockeye salmon were harvested. This includes a cost recovery fish harvested by Kodiak Regional Aquaculture Association. The harvest in the Spiridon Bay SHA represents only a portion of the total harvest of Spiridon enhancement fish, the remainder is harvested in traditional fisheries along the Westside of Kodiak. It is estimated that 145,772 Spiridon enhancement fish were harvested outside of Telrod Cove, bringing the total Spiridon enhancement sockeye salmon harvest to 237,994 fish.

The Kitoi Bay Hatchery harvest was an estimated 62,627 sockeye salmon, which was below the forecast of 87,516 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 and including fish retained for

personal use (294 fish). Additional enhanced sockeye salmon may have been harvested in adjacent sections, but stock separation data are not available.

Coho Salmon

The commercial coho salmon harvest of 410,502 fish was above the forecast (330,889 fish) and above the previous 10 year average (329,946 fish; Table 2). The majority of the coho salmon were caught in the Westside Kodiak, Eastside/Northend and the Afognak fisheries.

Pink Salmon

The 2015 pink salmon harvest of 33,010,891 fish was above forecast (14,298,094 million fish) above the previous 10-year average harvest of 20,432,760 fish, and the third largest ever in the Kodiak Area (Table 2).

Wild stock pink salmon harvest was the second largest ever with 28,057,301 pink salmon harvested in the KMA. The majority of the pink salmon were harvested on the Westside but both Alitak and the Eastside/Northend of Kodiak had significant harvests. Westside pink salmon fisheries (Raspberry Cape to Ayakulik) accounted for 10,449,128 pink salmon, the Alitak District had a harvest of 5,813,080 pink salmon, and the Eastside/Northend Kodiak fisheries had a combined harvest of 8,057,474 pink salmon.

The Kitoi Bay Hatchery pink salmon run was weaker than expected with 4,957,598 pink salmon harvested in sections near the hatchery (7,365,000 forecast). Kitoi-bound pink salmon were likely harvested along the west and east sides of Kodiak and Afognak islands. Likewise, additional wild stock salmon were 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 stocks. There was a cost recovery fishery near the hatchery with sockeye, pink, and chum salmon harvested and sold by the Kodiak Regional Aquaculture Association.

Chum Salmon

The chum salmon harvest of 770,718 fish was above the forecast (707,416). However, the Kitoi Bay Hatchery chum salmon production was again very weak with only 55,256 chum salmon harvested, which is below the preseason forecast of 171,000 fish.

2015 Escapement Summary

Fish counting weirs were operated on 9 systems in 2015, including the Karluk, Ayakulik, Upper Station, Dog Salmon, Litnik, Buskin, Saltery, Pauls Bay and Pasagshak systems. Three observers also flew a record low 18 aerial surveys, and several observers conducted foot and skiff survey escapement estimates. Due to the lack of sufficient funding peak aerial surveys were not conducted in much of the Kodiak Area.

Chinook Salmon

The total Chinook salmon escapement (5,250) was below the previous 10-year average (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 weir (2,777 fish; Table 5) was below the escapement goal range of 3,000 to 6,000 fish. Chinook salmon escapement through the Ayakulik weir (2,392 fish; Table 5) was below the escapement goal range of 4,000 to 8,000 fish.

Sockeye Salmon

Sockeye salmon runs in many systems in the KMA were strong (particularly Karluk and Ayakulik). Most of the major systems either met or exceeded their established escapement goals. However, the sockeye salmon runs to Uganik River and Pasagshak River did not achieve the minimum escapement goal values. The entire KMA estimated sockeye salmon escapement of (1,498,756 fish; Table 4) was well above the previous 10-year average of 1,219,116 fish (Table 4).

Coho Salmon

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 (3,200 to 7,200 fish) and the Pasagshak rivers (1,200 fish; Table 5). At the time of this report the final estimated escapement numbers have not been calculated.

It is expected that coho salmon enter systems in the fall after weirs have been removed and aerial and foot surveys have concluded. However, due to limited funding the department no longer flies peak or late season salmon surveys, and the area wide coho salmon escapement numbers do not reflect the actual the KMA coho salmon escapement.

Pink Salmon

The KMA pink salmon escapement of 5,906,331 fish was above the previous 10-year average of (4,075,413 Fish; Table 4). 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 (5,151,731 fish) was within the escapement goal range of 3.0 to 6.0 million fish (Table 5). The Mainland District pink salmon escapement of 754,600 fish was above the established escapement goal range (250,000 to 750,000 fish; Table 5). However, due to limited funding the department no longer conducts peak aerial surveys and both the Kodiak Archipelago and Mainland numbers should be considered minimum estimates.

Chum Salmon

The overall chum salmon escapement of 437,544 fish was above the previous 10-year average (355,031 fish; Table 4). Escapement goals have been established for the Kodiak Archipelago and the Mainland District. The escapement in the Kodiak Archipelago was above the escapement goal of 151,000 fish with an estimated 304,344 fish, and the Mainland District escapement of 133,200 fish was above the escapement goal of 104,000 fish (Table 5). However, due to limited funding the department no longer conducts peak aerial surveys and both the Kodiak Archipelago and Mainland numbers should be considered minimum estimates.

Table 4. Total salmon escapements in the KMA for all species in 2015, compared to average escapement from 2005 to 2014.

Species	2015 KMA Escapement ^a	2005-2014 Average KMA Escapement
Chinook	5,250	6,817
Sockeye	1,498,756	1,219,116
Coho	30,151	86,229
Pink	5,906,331	4,075,413
Chum	437,544	355,031

^a2015 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, limited money for aerial surveys 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 Kodiak Management Area, 2015.

Species District/System (stock)	Stream Number	Escapement Goal		2015 Peak Escapement ^a
		Lower	Upper	
Chinook				
Karluk	255-101	3,000	6,000	2,777
Ayakulik	256-201	4,000	7,000	2,392
	Total	7,000	13,000	5,169
Sockeye				
Malina	251-105	1,000	10,000	1,000
Afognak	252-342	20,000	50,000	38,151
Little River	253-115	3,000		5,500
Uganik	253-122	24,000		9,000
Karluk	255-101			
Early run		110,000	250,000	233,036
Late run		170,000	380,000	396,618
Ayakulik	256-201			
Early run		140,000	280,000	218,178
Late run		60,000	120,000	108,257
Upper Station	257-304			
Early run		43,000	93,000	54,473
Late run		120,000	265,000	132,864
Frazer Lake	257-403	70,000	150,000	219,093
Buskin/Lake Louise	259-211	5,000	8,000	8,719
Pasagshak	259-411	3,000		2,077
Saltery	259-415	15,000	35,000	42,468
	Total	784,000		1,469,434
Pink				
Mainland District		250,000	1,000,000	754,600
Kodiak Archipelago		3,000,000	6,000,000	5,151,731
	Total	3,250,000	7,000,000	5,906,331
Chum				
Mainland District		104,000		133,200
Kodiak Archipelago		151,000		304,344
	Total	255,000		437,544

^a 2015 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.