



## MEMORANDUM

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

**DATE:** October 30, 2017

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

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

**SUBJECT:** 2017 Kodiak Management Area Season Summary

cc:

Cotten	Witteveen	United Salmon Association
Kelley	Polum	Kodiak Island Borough
Schaberg	Fuerst	Ocean Beauty Seafoods
Bowers	Elison	Alaska Pacific Seafoods
Murphy	Salomone	Alaska Fresh Seafoods
Wilburn	Dupuis	Icicle Seafoods
Spalinger	Fall	True World Seafoods
Wilson	Russell	Trident Seafoods
Lipka	Poetter	Island Seafoods
Anderson	KRAA, T. Fairbanks	United Chignik Salmon Fishermen
Wattum	KRAA, Kitoi Hatchery	USFWS – OSM
Foster	Fair	USFWS – Kodiak
Schrof	Shields	City of Kodiak
Fox	Sands	Sand Point Advisory Committee
Stumpf	Fisher	Chignik Advisory Committee
Finkle	Dorner	Kodiak Advisory Committee
Linderman	Stratton	UFMA - Stephens
Miller		



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

The commercial fishing effort in 2017 was average compared to recent years. Of the 592 eligible commercial salmon permits, 309 (52%) made commercial landings. By gear type, a total of 163 purse seine, 3 beach seine, and 143 set gillnet permit holders made deliveries in 2017. Participation by purse seine permit holders was slightly above average while set gillnet permit holder participation was below the previous 10-year average (Table 1).

Table 1. Commercial salmon fishery 2017 limited entry permit activity and 10-yr. averages, by gear type, in the Kodiak Management Area, 2017.

Gear Type	2017 Permits			2007-2016 Average Permits		
	Available	Fished	% of permits fished	Available	Fished	% of permits fished
Purse Seine	374	163	44%	375	162	43%
Beach Seine	30	3	10%	31	3	10%
Set Gillnet	188	143	76%	188	151	80%
Total	592	309	52%	594	316	53%

The 2017 commercial harvest (not including personal use or ADF&G Test Fishery) in the Kodiak Management Area (KMA) was 7,094 Chinook salmon, 2,467,246 sockeye salmon, 359,823 coho salmon, 27,103,276 pink salmon, and 1,891,226 chum salmon. The total Kodiak areawide harvest (including KRAA cost recovery) of 32,178,764 salmon was above the 2017 forecast and above the previous 10-year average of approximately 21,171,000 salmon (Table 2).

Table 2.—2017 commercial salmon harvest for KMA compared to the previous 10-year average and the 2017 harvest forecast.

	Chinook	Sockeye	Coho	Pink	Chum	Total
2017 Harvest	7,094	2,467,246	359,823	27,103,276	1,891,226	32,178,764
2007-2016 Avg.	14,738	2,248,808	295,254	17,880,012	732,219	21,171,031
2017 Forecast	9,000	2,516,000	364,000	28,100,000	637,000	31,626,000

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 2017 fishery was approximately \$53.8 million. This was one of the highest values since 1975 and well above 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 \$272,508 per fished permit. Set gillnet earnings averaged \$65,532 per permit fished. Beach seine earnings averaged \$19,352 per permit fished.

Table 3.—Estimated commercial salmon harvest and value, by gear type, in the Kodiak Management Area, 2007 - 2017.

Year	Total Catch <sup>a</sup>	Total Value <sup>b</sup>	Average Exvessel Value		
			Purse Seine	Gillnet	Beach Seine
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	<sup>c</sup>
2010	10,291,590	\$24,269,085	\$130,009	\$25,728	<sup>c</sup>
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	<sup>c</sup>
2016	5,031,781	\$14,509,665	\$66,243	\$25,972	\$7,111
2017	29,978,228	\$53,847,957	\$272,508	\$65,532	\$19,352
<b>Recent 10-year average</b>					
2007–2016	20,523,956	\$35,227,411	\$175,948	\$41,159	\$12,714

<sup>a</sup> Number of fish: Does not include hatchery cost recovery, test fisheries, or personal use harvests.

<sup>b</sup> Exvessel values based on inseason price estimates and do not include postseason adjustments.

<sup>c</sup> Confidential data.

## 2017 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 Ayakulik and Karluk river

systems both support small populations of Chinook salmon. By regulation, non-retention of Chinook salmon was implemented for the seine fleet area wide from June 1 through July 5. Due to both Karluk and Ayakulik not meeting their respective escapement goals, 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 2017 commercial harvest of Chinook salmon in the KMA totaled approximately 7,100 fish which was below the previous 10-year average (14,738 fish) and below the 2017 forecast (9,000 fish; Table 2).

### **Sockeye Salmon**

The 2017 commercial harvest of sockeye salmon totaled 2,467,246 fish. The harvest was above the recent 10-year average (2,248,808 fish) but slightly below forecast (2,516,000 fish; Table 2).

Early season management for much of the Westside of Kodiak Island is driven by Karluk early-run sockeye salmon. Extended fishing time was allowed along much of the Westside of Kodiak until the management focus turned to pink salmon. Approximately 592,000 sockeye salmon were harvested in early-season Westside areas opened based on Karluk early-run sockeye salmon. Westside sockeye salmon numbers include an estimated contribution of approximately 111,000 sockeye salmon from the enhanced Spiridon Lake sockeye salmon run.

Late-season management for much of the Westside of Kodiak is driven by the Kodiak Island pink salmon fishery and Karluk late-run sockeye salmon. Approximately 1,071,000 sockeye salmon were commercially harvested in late-season Westside areas opened based on local pink and chum salmon as well as Karluk late-run sockeye salmon. Westside sockeye salmon numbers include an estimated contribution of approximately 123,000 sockeye salmon from the enhanced Spiridon Lake sockeye salmon run.

The Ayakulik sockeye salmon run was weak and there were only two fishing periods during early-run sockeye salmon management. Approximately 30,000 sockeye salmon were harvested in areas managed based on Ayakulik early-run sockeye salmon. The strength of the Ayakulik late-run sockeye salmon was adequate to allow for three openings in July and liberal fishing time in August. Approximately 25,000 sockeye salmon were harvested in areas managed based on Ayakulik late-run sockeye salmon. Approximately 55,000 sockeye salmon were harvested from Westside sections opened based on Ayakulik returns, which was well below the 2017 forecast of 151,000 fish.

Frazer Lake and Upper Station sockeye salmon runs came in weaker than forecasted, although both runs were strong enough to allow for commercial salmon openings in the traditional fishing areas (i.e. seine and gillnet sections of the Alitak District). The Alitak District early-run sockeye salmon harvest was approximately 39,000 fish, below the projected harvest of 130,000 fish.

Upper Station late-run sockeye salmon run came in stronger than expected and several fishing periods were permitted. The total harvest of the Alitak District late-run sockeye salmon was approximately 176,000 fish, which was above the forecasted harvest of 59,000.

***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 weaker than forecast but the allocative and biological criteria were met throughout the year. Fishing time was allowed in the Cape Igvak Section in June but not in July with approximately 131,000 sockeye salmon harvested during the allocation period, or 14% of the Chignik-bound sockeye. This was below the preseason forecast of 186,000 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 managed based on local pink 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 14 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 approximately 68,000 sockeye salmon, which included both the Shoreward and Seaward Zone harvests. A Seaward Zone closure did not take place in the Southwest Afognak Section and the harvest cap of 50,000 was never exceeded. Approximately 19,239 sockeye salmon were harvested in the Southwest Afognak Section between July 6 and July 25.

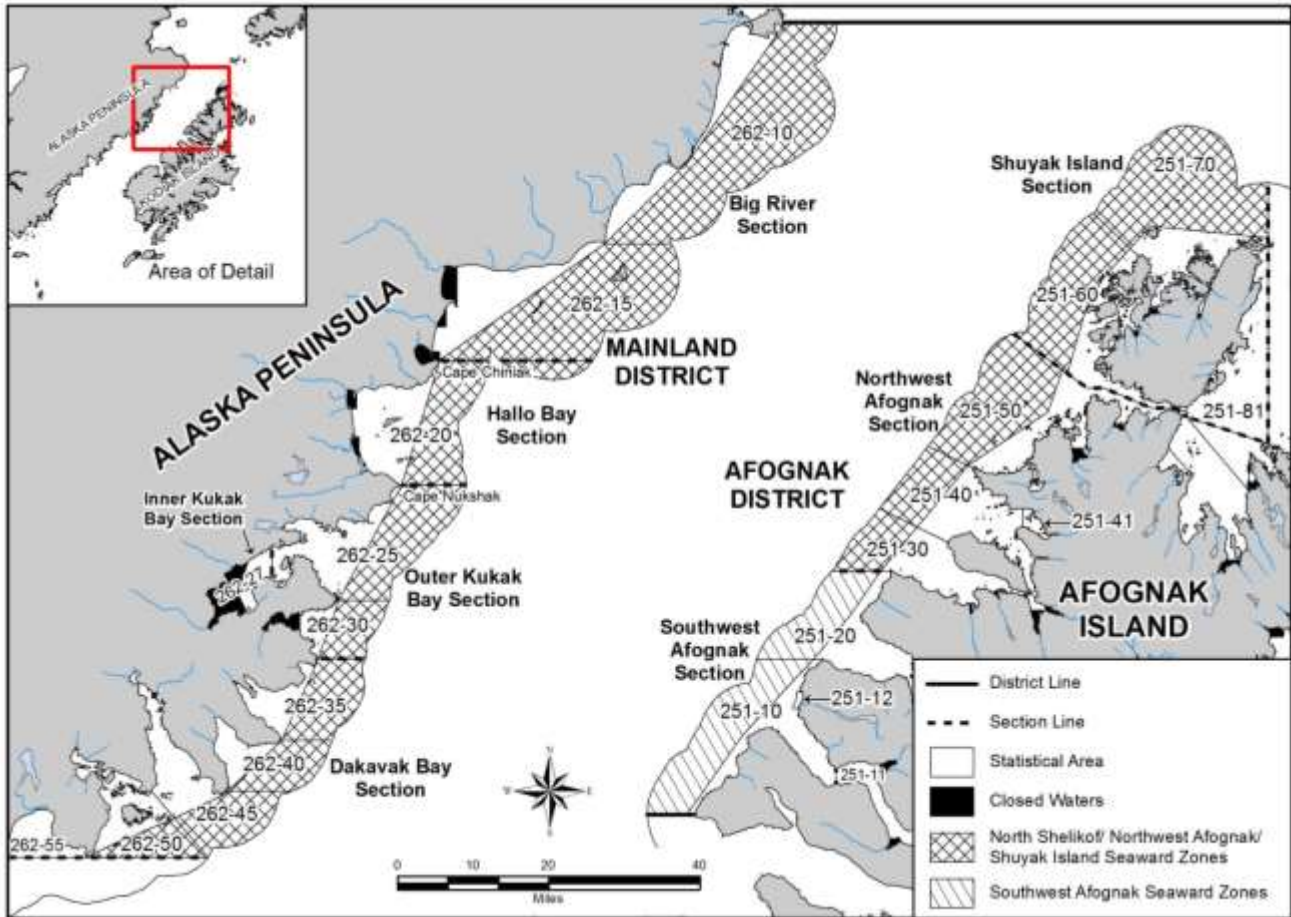


Figure 2.—Map of the North Shelikof Management Area.

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

There was average effort and harvest in the Foul Bay Special Harvest Area (SHA) with approximately of 21,000 sockeye salmon harvested.

In the Spiridon Bay SHA (Telrod Cove), and the Spiridon Bay Section, approximately 109,000 sockeye salmon were harvested. This includes 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 fisheries along the Westside of Kodiak. It is estimated that approximately 234,000 Spiridon enhancement fish were harvested outside of Telrod Cove and the Spiridon Bay Section, bringing the total Spiridon enhancement sockeye salmon harvest to approximately 343,000 fish.

The Kitoi Bay Hatchery harvest was approximately 15,000 sockeye salmon, which was below the forecast of 65,000 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. 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 approximately 360,000 fish was similar to the forecast (364,000 fish) and above the previous 10-year average (295,254 fish; Table 2). The majority of the coho salmon were caught in the Westside Kodiak fishery.

**Pink Salmon**

The 2017 pink salmon harvest of approximately 27,100,000 fish was similar to the forecast (28,100,000 fish) and well above the previous 10-year average harvest of 17,880,012 fish (Table 2).

The wild stock pink salmon harvest was approximately 25,100,000 pink salmon harvested in the KMA (18,400,000 forecast). The majority of the pink salmon were harvested on the Westside but the Eastside/Northend and Alitak District of Kodiak had significant harvests as well. Westside pink salmon fisheries (Raspberry Cape to Ayakulik) accounted for approximately 15,000,000 pink salmon, the Eastside/Northend Kodiak fisheries had a combined harvest of approximately 4,400,000 pink salmon, the Alitak District had a harvest of approximately 3,400,000 pink salmon.

The Kitoi Bay Hatchery pink salmon run was much weaker than expected with approximately 2,000,000 pink salmon harvested in sections near the hatchery (9,700,000 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 approximately 1,890,000 fish was well above the forecast (637,000 fish) and the largest chum salmon harvest since at least 1970 in the KMA. Additionally, the Kitoi Bay Hatchery chum salmon harvest of approximately 157,000 chum salmon was well above the forecast of 45,000 fish.

**2017 Escapement Summary**

Fish counting weirs were operated on 8 systems in 2017, including the Karluk, Ayakulik, Upper Station, Dog Salmon, Litnik, Buskin, Saltery, and Pasagshak systems. Four observers also flew several 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 KMA.

**Chinook Salmon**

The total Chinook salmon escapement (6,387) was above 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 River weir (2,600 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 (3,712 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. All of the major systems met their established escapement goals. The entire KMA estimated sockeye salmon escapement of (1,522,210 fish; Table 4) was above the previous 10-year average of 1,249,000 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 (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.

Coho salmon enter systems in the fall after most of the weirs have been removed. Due to the limitations of funding and fall weather, the area wide coho salmon escapement numbers do not reflect the actual KMA coho salmon escapement. From limited foot surveys on streams conducted near the city of Kodiak and the Islands of Afognak and Shuyak, coho salmon escapement looked average. However, similar to pink salmon many of the runs were later than usual.

**Pink Salmon**

The KMA pink salmon escapement of 6,089,116 fish was well above the previous 10-year average of (3,900,000 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 (5,079,016 fish) was slightly above the escapement goal range of 2.0 to 5.0 million fish (Table 5). The Mainland District pink salmon escapement of 1,010,100 fish was slightly above the established escapement goal range (250,000 to 1,000,000 fish; Table 5).

**Chum Salmon**

The overall chum salmon escapement of 764,500 fish was well above the previous 10-year average (316,262 fish; Table 4). A peak indexed escapement goal based on 17 streams in on the Kodiak Archipelago has been established. The 2017 peak indexed escapement of 175,000 fish was above the goal of 101,000 fish.



Table 4. Total salmon escapements in the KMA for all species in 2017, compared to average escapement from 2007 to 2016.

Species	2017 KMA Escapement <sup>a</sup>	2007-2016 Average KMA Escapement
Chinook	6,387	6,072
Sockeye	1,522,210	1,249,342
Coho	84,174	80,331
Pink	6,089,116	3,900,523
Chum	764,500	316,262

<sup>a</sup> 2017 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 funding 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, 2017.

Species	District/System (stock)	Stream Number	Escapement Goal		2017 Peak Escapement <sup>a</sup>
			Lower	Upper	
<b>Chinook</b>					
	Karluk	255-101	3,000	6,000	2,600
	Ayakulik	256-201	4,800	8,400	3,712
		<b>Total</b>	<b>7,800</b>	<b>14,400</b>	<b>6,312</b>
<b>Sockeye</b>					
	Malina	251-105	1,000	10,000	1,000
	Afognak	252-342	20,000	50,000	21,441
	Karluk	255-101			
	Early run		150,000	250,000	235,225
	Late run		200,000	450,000	393,270
	Ayakulik	256-201			
	Early run		140,000	280,000	204,497
	Late run		60,000	120,000	120,361
	Upper Station	257-304			
	Early run		43,000	93,000	83,6147
	Late run		120,000	265,000	209,298
	Frazer Lake	257-403	75,000	170,000	122,585
	Buskin/Lake Louise	259-211	5,000	8,000	7,222
	Pasagshak	259-411	3,000		11,021
	Saltery	259-415	15,000	35,000	39,315
		<b>Total</b>	<b>856,000</b>		<b>1,208,340</b>
<b>Pink</b>					
	Mainland District		250,000	1,000,000	1,010,100
	Kodiak Archipelago		2,000,000	5,000,000	5,079,016
		<b>Total</b>	<b>2,250,000</b>	<b>6,000,000</b>	<b>6,089,116</b>
<b>Chum</b>					
		Kodiak <sup>b</sup> Archipelago	101,000		175,500 <sup>b</sup>
		<b>Total</b>	<b>101,000</b>		<b>175,000 <sup>b</sup></b>

<sup>a</sup> 2017 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.

<sup>b</sup> The Kodiak Archipelago peak index escapement goal is based on 17 Kodiak Archipelago streams and does not represent actual the Kodiak Area chum salmon escapement.