



## MEMORANDUM

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**DATE:** October 27, 2015

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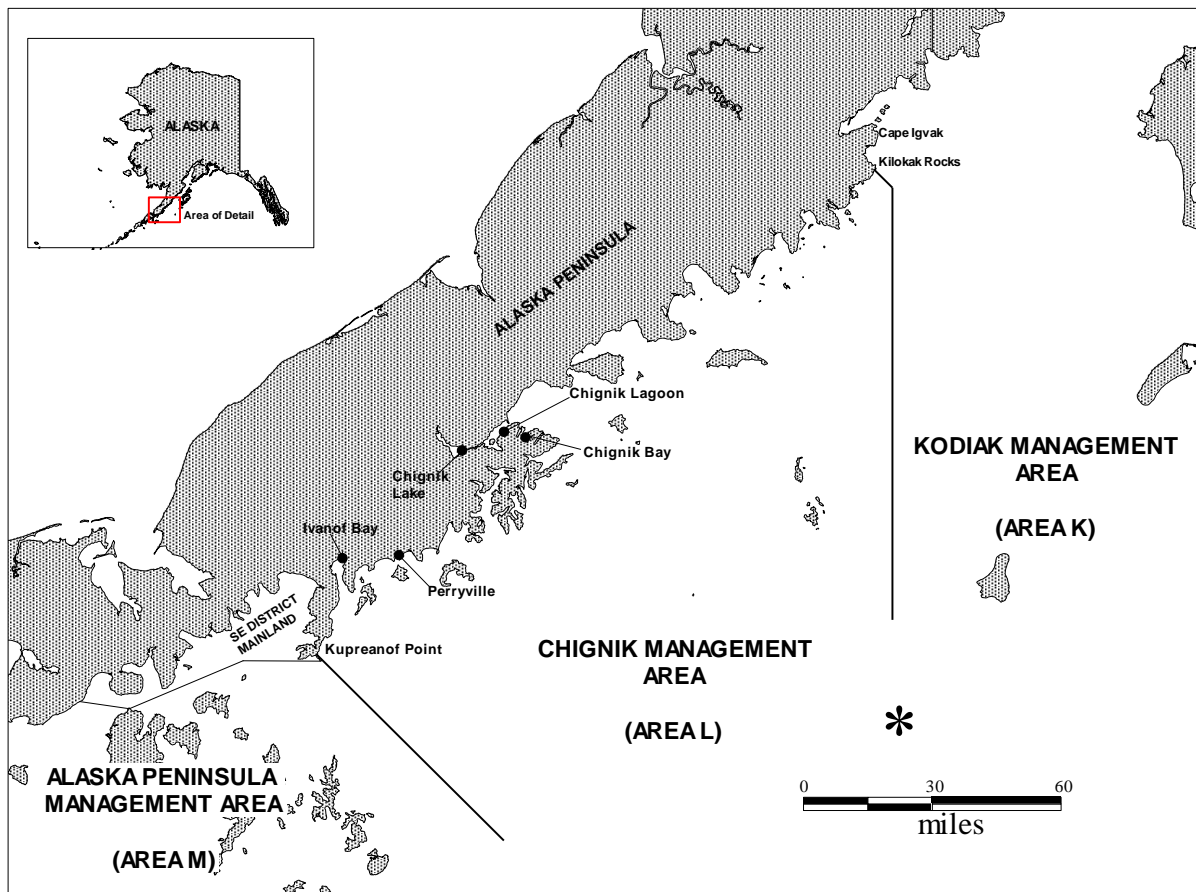
**SUBJECT:** 2015 Chignik Salmon  
Season Summary

**cc:**

Cotten	Linderman	City of Chignik Lake
Kelley	Miller	City of Chignik Lagoon
Loewen	Sagalkin	City of Chignik Bay
Dorner, A.	Tracy	Native Village of Perryville
Keyse	Bowers	Lake and Peninsula Borough
Spalinger, G.	Bergstrom	Chignik Advisory Committee
Shriver	Wattum	Sand Point Advisory Committee
Hutter	Greer	Kodiak Advisory Committee
Murphy	Stumpf	USFWS-ANC-Gerken
Habicht	Shed	Chignik Regional Aquaculture Association
Johnson, R.	Fair	USFWS-OSM-Pappas
Foster	Dann	Trident Seafoods
Volk	Schrof	International Seafoods of Alaska
Polum	Fox	United Chignik Salmon Fishermen
Schaberg	Marchioni	Alaska Peninsula Fisherman Cooperative
Jackson	Fall	Fisheries Research Institute-UW
Fuerst	Baechler	Concerned Area M Fisherman
Russell	Sands	United Fisherman of Alaska
Hutchinson-Scarborough	Lechner	
Anderson		

The following is a brief overview of the 2015 Chignik Management Area (CMA; Figure 1) commercial salmon season.

The Chignik River watershed supports two genetically distinct sockeye salmon runs which traditionally provide the majority of directed harvest opportunities within the CMA. In 2015, the combined early- and late-run Chignik River sockeye salmon escapement was above recent averages while Chignik-bound harvest was similar to recent averages. The CMA was open to commercial salmon fishing for 68 days (June 24–September 14) and a total of 72 permits were fished (including the department’s test fishery permit).



**Figure 1.-** Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and Alaska Peninsula and Aleutian Islands Management Areas.

## **ESCAPEMENT**

Escapement through the Chignik River weir was monitored using underwater digital video equipment from May 19 through August 20. Two underwater gates in the weir were open to provide uninterrupted escapement. Fish passing the weir were counted, by species, for the first 10 minutes of each hour. The

counts were expanded to obtain hourly escapement estimates, and then summed to provide an estimate of daily fish passage. A digital video archive was kept of each 10-minute counting period in the 2015 season.

Beginning August 21, escapement was estimated using two DIDSON acoustic units. The numbers of fish passing by the DIDSONs were counted for the first 10 minutes of each hour and the then counts were expanded to obtain hourly escapement estimates. Species apportionment was determined by fishing with a seine net at least every other day. The results of the fishing samples were then applied to the escapement numbers. The last day of DIDSON escapement estimates was September 23.

Aerial surveys were flown throughout the season to monitor escapement into CMA streams. Peak aerial survey counts, by index stream and species, were summed and compared to available escapement goals established by Sagalkin et al. (2013). Pink and chum salmon escapements were measured against established area-wide sustainable escapement goals (SEG).

### **Chinook Salmon**

The Chignik River is the only Chinook salmon-producing stream within the CMA and one of the largest Chinook salmon streams on the South Alaska Peninsula. The biological escapement goal (BEG) for Chinook salmon in the Chignik River watershed is 1,300 to 2,700 fish (Sagalkin et al. 2013). The 2015 Chignik River Chinook salmon escapement, above the weir, of 2,054 fish (Table 1) was below the most recent 5-year and 10-year averages. Subsistence and sport fishery harvest of Chinook salmon above the weir will not be known until permits and questionnaires are returned and tabulated by the spring of 2016.

### **Sockeye Salmon**

Sockeye salmon escapement to the Chignik River is managed based on separate escapement objectives for both early- and late-run sockeye salmon. The early-run SEG of 350,000 to 450,000 sockeye salmon was exceeded with an estimated escapement of 534,088 fish (Table 1).

The late-run objectives include an additional 50,000 sockeye salmon which are incorporated into the late-run SEG to provide for additional freshwater subsistence fishing opportunity. The late-run SEG of 250,000 to 400,000 sockeye salmon was exceeded with an estimated escapement of 589,810 sockeye salmon (Table 1). Of these fish, an estimated 286,553 late-run sockeye passed through the weir and 303,257 sockeye salmon were estimated by post-weir DIDSON counts. Approximately 131,985 sockeye salmon escaped from September 1–15 and were included in the total late-run escapement estimate.

Both the early- and late-run escapements were above the most recent 5- and 10-year average escapements (Table 1). Sockeye salmon escapements into other CMA streams were relatively minor. The 2015 sockeye salmon run timing for both Chignik River runs was at least a week later than the previous 10-year average. Fish weight and lengths were also smaller than average in the CMA. The 2015 average sockeye salmon weight of 5.5 pounds is the smallest average weight in the last 20 years.

## Coho Salmon

Coho salmon begin to enter CMA drainages in mid-August and continue through November. The coho salmon run is generally building when the weir is removed. The 2015 Chignik River coho salmon weir escapement estimate through September 23 was 60,209 fish which was well above the most recent 5- and 10-year average escapement estimates (Table 1).

## Pink Salmon

An estimated 4,269 pink salmon passed the Chignik River weir in 2015, which was below the previous 5- and 10-year average pink salmon escapements (Table 1). Pink salmon escapements into other CMA streams were estimated via aerial survey and summarized by district. The odd-year pink salmon SEG for all districts combined (500,000–800,000; Sagalkin et. al. 2013) was exceeded with an estimated total peak escapement of 1,132,529 pink salmon.

## Chum Salmon

The 2015 Chignik River chum salmon escapement was 54 fish, which was below average for the Chignik River (Table 1). Chum salmon escapements to other CMA streams were estimated via aerial survey and summarized by district. The SEG lower bound for all districts combined (57,400; Sagalkin et al. 2013) was exceeded with an estimated total peak escapement of 238,214 chum salmon.

Table 1.- Estimated Chinook, sockeye, coho, pink, and chum salmon, and Dolly Varden escapement to the Chignik River, 2005 to 2015.

Year	Escapement						
	Chinook <sup>a</sup>	Sockeye		Coho <sup>b</sup>	Pink	Chum	Dolly Varden
		Early-Run	Late-Run <sup>b</sup>				
2005	6,486	355,091	225,366	18,206	13,637	408	13,940
2006	3,535	366,497	368,996	37,113	18,401	99	2,031
2007	2,000	361,091	293,883	10,299	20,464	118	6,993
2008	1,730	377,579	328,479	13,958	22,341	124	14,776
2009	1,680	391,476	328,586	7,670	12,873	109	8,618
2010	3,679	432,535	310,634	5,152	3,670	95	17,578
2011	2,728	488,930	264,887	5,293	16,298	145	19,225
2012	1,449	353,441	358,948	2,663	2,849	73	18,032
2013	1,253	386,782	369,319	16,783	7,231	72	17,230
2014	2,895	360,381	291,228	108,955	3,171	58	44,899
2015	2,054	534,088	589,810	60,209	4,269	54	16,346
Averages							
2005-14	2,744	387,380	339,103	26,027	11,382	123	16,332
2010-14	2,401	404,414	319,003	27,769	6,644	89	23,393

<sup>a</sup> No escapement adjustments were made for Chinook salmon that spawn below the weir, or those removed by the sport and subsistence fisheries above the weir.

<sup>b</sup> Late-run sockeye salmon and coho salmon totals include a post-weir escapement estimate.

## COMMERCIAL FISHERY

The CMA was open to commercial salmon fishing for 68 days during the 2015 commercial salmon season. The first fishing period occurred on June 24 and the CMA closed to commercial salmon fishing on September 14. Salmon processors ceased operations in the CMA on August 20, the last day the area was actively fished in the 2015 season. In 2015, 72 permit holders (including the department's test fishery permit) made a total of 2,276 landings (Table 2).

Table 2.- Total commercial salmon harvests, including home pack, and department test fishery from the Chignik Management Area by species and year, 2005 through 2015.

Year	Permits Making		Chignik Management Area Harvest					
	Deliveries <sup>a</sup>	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
2005	97	1,669	3,408	1,152,133	6,956	194,045	8,821	1,365,363
2006	49	2,066	2,256	902,709	39,221	383,547	61,630	1,389,363
2007	56	2,101	1,773	834,547	73,277	2,019,748	78,553	3,007,898
2008	55	2,217	970	687,270	161,536	2,389,958	209,325	3,449,059
2009	56	2,172	3,319	1,198,105	110,373	1,408,339	256,425	2,976,561
2010	66	2,532	10,380	1,379,785	159,198	489,781	581,329	2,620,473
2011	65	2,617	6,586	2,497,004	76,792	905,166	269,503	3,755,051
2012	70	2,915	3,687	1,800,121	33,316	137,706	171,112	2,145,942
2013	77	3,142	2,959	2,396,645	32,258	871,503	154,425	3,457,790
2014	71	1,521	8,846	620,339	132,459	352,115	55,152	1,168,911
2015	72	2,276	9,204	1,552,495	82,054	1,978,211	101,017	2,325,700
Averages								
2005-14	66	2,293	4,418	1,346,866	82,539	915,191	184,628	2,533,641
2010-14	70	2,545	6,492	1,738,779	86,805	551,254	246,304	2,629,633

<sup>a</sup> Includes ADF&G's test fishery permit.

### Harvest

#### Chinook Salmon

A total of 9,105 Chinook salmon were commercially harvested (excluding home pack and the department's test fishery) in 2015 (Table 3), which was well above recent average harvests (Table 2). The majority of the 2015 CMA Chinook salmon harvest occurred in the Central and Western districts (Table 3).

#### Sockeye Salmon

A total of 1,540,310 sockeye salmon were commercially harvested (excluding home pack and the department's test fishery) in the CMA during 2015 (Table 3), which was below the prior 5-year average harvest and above the most recent 10-year average harvest (Table 2). The majority of the 2015 CMA sockeye salmon harvest came from the Chignik Bay and Western districts (Table 3).

In 2015, Cape Igvak and Southeastern District Mainland (SEDM) opened to commercial salmon fishing on July 16. Cape Igvak fisherman harvested 6,595 sockeye salmon (5,936 considered Chignik-bound)

during the allocation period through July 25. A total of 123,091 sockeye salmon (98,473 considered Chignik-bound) were harvested in SEDM through July 18 when the fishery closed.

### **Coho Salmon**

A total of 82,049 coho salmon were commercially harvested in 2015 (Table 3), which was similar to the 5- and 10-year average harvests (Table 2). The majority of the coho salmon harvest in 2015 took place during July and August in the Western District (Table 3).

### **Pink Salmon**

A total of 1,978,134 pink salmon were commercially harvested (excluding the department's test fishery and home pack) in the CMA in 2015 (Table 3), which was well above the 5-year and 10-year average harvests (Table 2). The majority of the pink salmon harvest occurred in the Western and Central districts during late-July and August (Table 3).

### **Chum Salmon**

A total of 101,001 chum salmon were commercially harvested in 2015 (Table 3), which was well below the 5-year and 10-year average chum salmon harvests (Table 2). The majority of the chum salmon harvest in 2015 took place in the Central and Western districts in late-July (Table 3).

Table 3.- Chignik Management Area commercial salmon harvest, excluding home pack, and department test fishery, by district, 2015.

District	Chinook		Sockeye		Coho		Pink		Chum	
	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Chignik Bay	1,572	20,021	690,550	3,716,702	709	3,899	81,464	245,800	5,667	35,563
Central	3,150	26,614	364,934	1,991,639	27,257	168,681	686,374	2,054,425	39,373	255,751
Eastern	115	1,353	5,542	28,561	454	2,606	13,783	43,533	2,768	18,992
Western	4,248	23,552	433,193	2,466,115	48,948	319,266	993,349	2,861,503	48,080	311,903
Perryville	20	182	46,091	266,700	4,681	29,066	203,164	638,310	5,113	33,839
<b>Total</b>	<b>9,105</b>	<b>71,722</b>	<b>1,540,310</b>	<b>8,469,717</b>	<b>82,049</b>	<b>523,519</b>	<b>1,978,134</b>	<b>5,843,570</b>	<b>101,001</b>	<b>656,047</b>

### **Economic Value**

The exvessel value of the 2015 CMA commercial salmon fishery was about \$7.9 million, or approximately \$111,000 per active permit holder. A majority of the value was from the sale of sockeye salmon (84%), with a total of approximately \$92,960 per active permit holder. The harvest of Chinook, coho, pink, and chum salmon provided approximately \$1,050, \$1,440, \$13,240 and \$2,310 respectively, per active permit holder (Table 4)

Table 4.- Value, by species, and average value per active permit, in dollars, in the Chignik Management Area, 2004 to 2015.

Year	Chinook		Sockeye		Coho		Pink		Chum		(\$ Total Value	Number of Permits <sup>c</sup>	(\$ Value Per Permit
	Total <sup>a</sup>	Average <sup>b</sup>	Total <sup>a</sup>	Average <sup>b</sup>	Total <sup>a</sup>	Average <sup>b</sup>	Total <sup>a</sup>	Average <sup>b</sup>	Total <sup>a</sup>	Average <sup>b</sup>			
2005	36,060	377	6,314,036	64,429	11,280	115	55,070	562	10,917	111	6,427,363	98	65,585
2006	26,895	560	4,703,317	97,986	105,132	2,190	126,309	2,631	81,123	1,690	5,042,776	48	105,058
2007	26,176	476	4,154,210	75,531	195,754	3,559	1,034,322	18,806	162,089	2,947	5,572,550	55	101,319
2008	15,249	282	4,121,611	76,326	778,282	14,412	1,810,965	33,536	533,358	9,877	7,259,465	54	134,435
2009	30,714	558	7,058,058	128,328	220,823	4,015	800,523	14,555	520,791	9,469	8,630,909	55	156,926
2010	160,076	2,463	9,549,370	146,913	566,191	8,711	565,941	8,707	1,774,763	27,304	12,616,341	65	194,098
2011	57,524	899	21,469,153	335,456	278,391	4,350	1,040,264	16,254	919,586	14,369	23,764,918	64	371,327
2012	47,612	690	12,803,505	185,558	97,430	1,412	146,011	2,116	634,705	9,199	13,729,263	69	198,975
2013	37,620	495	21,946,587	288,771	86,892	1,143	867,978	11,421	384,458	5,059	23,323,535	76	306,889
2014	66,875	955	6,040,512	86,293	434,394	6,206	286,942	4,099	185,016	2,643	7,013,739	70	100,196
2015 <sup>d</sup>	74,403	1,048	6,597,432	92,959	101,967	1,436	940,236	13,243	164,225	2,313	7,878,263	71	110,961
Averages													
2005-14	50,480	776	9,816,036	148,559	277,457	4,611	673,432	11,269	520,681	8,267	11,338,086	65	173,481
2010-14	73,941	1,100	14,361,825	208,598	292,660	4,364	581,427	8,519	779,706	11,715	16,089,559	69	234,297

<sup>a</sup> Total value of commercial catch in dollars, by species. Value does not include home pack or department test fishery.

<sup>b</sup> Average value of commercial catch per permit in dollars, by species. Average value does not include home pack or department test fishery.

<sup>c</sup> Includes the number of commercial permits that received income from the harvest. These figures do not include department test fishery harvests.

<sup>d</sup> Values represent the initial price paid, and do not include any postseason adjustments by any processor. The average 2015 exvessel prices per pound were: Chinook - \$1.01, sockeye - \$0.78, coho - \$0.19, pink - \$0.16, chum - \$0.25.

## Department Test Fishery

The department conducted six test fisheries in Chignik Lagoon for run assessment and cost recovery purposes in 2015. An estimated 12,107 sockeye salmon were harvested, which provided approximately \$49,000 that was used to offset the cost of vessel charters and operations at the Chignik River weir.

## SUBSISTENCE

As of this writing subsistence harvest numbers for 2015 have not been finalized.

## LITERATURE CITED

Sagalkin, N. H., A. St. Saviour, J. W. Erickson, and H. Finkle. 2013. Review of salmon escapement goals in the Chignik Management Area, 2013. Alaska Department of Fish and Game, Fishery Manuscript Series No. 13-06, Anchorage.