



ALASKA DEPARTMENT OF FISH AND GAME

DIVISION OF COMMERCIAL FISHERIES

MEMORANDUM

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SUBJECT: 2010 Chignik Salmon
Season Summary

cc:	Regnart	City of Chignik Lake
Lloyd	Linderman	City of Chignik Lagoon
Hilsinger	Miller	City of Chignik Bay
Bruce	Schmidt	Native Village of Perryville
Aspelund	Tracy	Lake and Peninsula Borough
Dinnocenzo	Kelley	Chignik Advisory Committee
Spalinger, G.	Bergstrom	Sand Point Advisory Committee
Tiernan	Woodby	Kodiak Advisory Committee
Murphy	Gann	USFWS- King Salmon
Hartill	Fisher	USFWS-OSM-Campbell
Poetter	Moreland	Trident Seafoods
Volk	Hart	International Seafoods of Alaska
Jackson	Fall	Alaska Peninsula Fisherman
Loewen	Fleener	Cooperative
Hendrickson	Salamone	Chignik Seiner's Association
Honnold	Gardner	Concerned Area M Fisherman
Witteveen	Sands	United Fisherman of Alaska
Foster	Fair	Peninsula Marketing Association
Tide	Shaker	United Salmon Association
Nichols		Chignik Regional Aquaculture Association

The following is a brief overview of the 2010 Chignik Management Area (CMA; Figure 1) commercial salmon season.

The Chignik River watershed supports two distinct sockeye salmon runs which traditionally provide the majority of directed harvest opportunities within the CMA. In 2010, the combined early- and late-run sockeye salmon harvest was above recent averages. Additionally, there are several streams within the CMA that support large runs of pink, chum, and coho salmon. In 2010, the CMA was open to commercial salmon fishing for 75 days (June 16- September 7) and a total of 65 permits were fished.

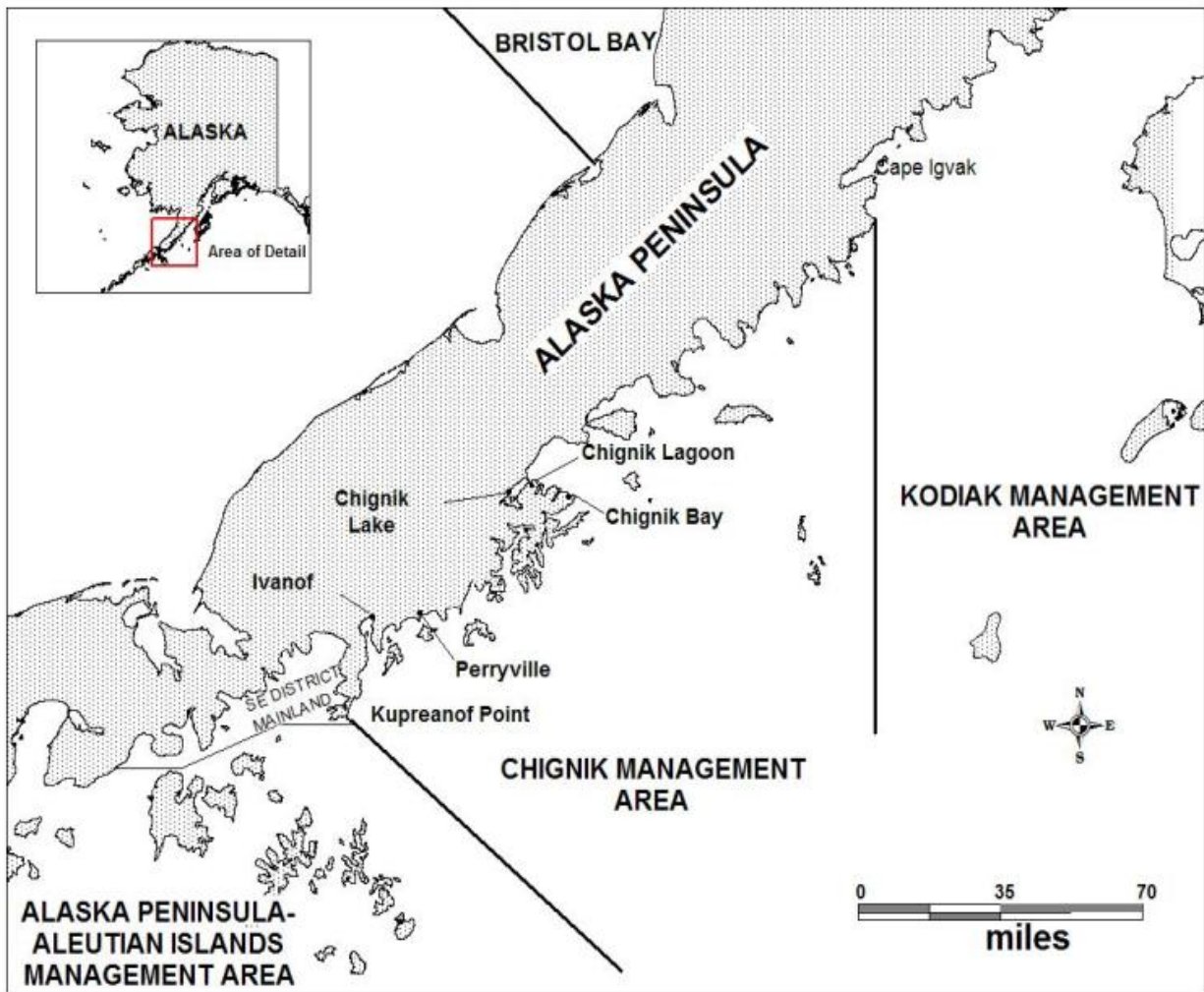


Figure 1.- Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and Alaska Peninsula and Aleutian Islands Management Areas.

ESCAPEMENT

Escapement through the Chignik River weir was monitored using underwater digital video equipment. Two underwater gates in the weir were open to provide uninterrupted escapement. The numbers of 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. The first count of the 2010 season occurred on May 27 when weir installation was complete, and the last weir count of the season took place on September 2, after which the weir was removed.

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 Witteveen et al. (2007). Pink and chum salmon escapements were measured against established area wide sustainable escapement goals (SEG), which were apportioned into district-wide management objectives (MO).

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 (Witteveen et al. 2005). The 2010 Chignik River Chinook salmon escapement, through the weir, of 3,679 fish (Table 1) was above the 5-year average but below the 10-year average. Subsistence and sport fishery harvest of Chinook salmon above the weir will not be known until after permits and questionnaires are returned and tabulated by the spring of 2011.

Sockeye Salmon

Sockeye salmon escapement to the Chignik River is managed based on separate interim escapement objectives for both early- and late-run sockeye salmon. The early-run SEG of 350,000 to 400,000 sockeye salmon through July 4 was exceeded with an estimated escapement of 432,535 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 (post-July 4) SEG of 250,000 to 400,000 sockeye salmon was met with an estimated escapement of 310,634 sockeye salmon (Table 1). Post-weir sockeye salmon escapement estimates were produced for the September 3-15 (20,184) and the September 16-30 (6,189) periods, which were included in the total late-run escapement estimate.

Early run escapement was above the prior 5- and 10-year average escapement (Table 1). The late run sockeye salmon escapement was similar to prior 5- and 10-year averages (Table 1). Sockeye salmon escapements into other CMA streams were relatively minor.

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; therefore, coho salmon escapement estimates are considered incomplete. The 2010 Chignik River coho salmon

escapement estimate through Sept 2 was 5,152 fish (Table 1). This was below prior 5- and 10-year average escapements (Table 1). Although no coho salmon escapement goals have been established for the CMA (Witteveen et al. 2005), coho salmon escapement throughout the CMA appears to be consistent with past years and sustainable at this level.

Pink Salmon

An estimated 3,670 pink salmon passed the Chignik River weir in 2010, which was below previous 5- and 10-year pink salmon average escapements (Table 1). Pink salmon escapements into CMA streams were estimated via aerial survey and summarized by district. The even-year lower end of the SEG for all districts combined (200,000; Witteveen et al. 2007) was met with an estimated total peak escapement of 330,570 pink salmon.

Chum Salmon

The 2010 Chignik River chum salmon escapement was 95 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 of all districts combined (57,400; Witteveen et al. 2007) was exceeded with an estimated total peak escapement of 199,625 chum salmon.

Table 1.- Estimated Chinook, sockeye, coho, pink, and chum salmon, and Dolly Varden escapement to the Chignik River, 2000 to 2010.

Year	Escapement						
	Chinook ^a	Sockeye		Coho	Pink	Chum	Dolly Varden
		Early-Run	Late-Run				
2000	4,285	536,141	269,084	7,062	4,284	48	ND
2001	3,028	744,013	392,905	103	1,464	66	6,416
2002	3,541	380,701	343,616	9,262	3,417	67	8,179
2003	6,412	350,004	334,119	7,635	1,897	68	36,397
2004	7,840	363,800	214,459	18,810	2,243	276	20,086
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
Averages							
2000-09	4,054	422,639	309,949	13,012	10,102	138	13,048
2005-09	3,086	370,347	309,062	17,449	17,543	172	9,272

^a 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.

COMMERCIAL FISHERY

The CMA was open to commercial salmon fishing for 75 days during the 2010 commercial salmon season. The first fishing period occurred on June 16 and the CMA closed to commercial salmon fishing shortly after local processors ceased operations on September 5. In 2010, 66

permit holders (including the department's test fishery permit) made a total of 2,532 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, 2000 through 2010.

Year	Permits Making		Chignik Management Area Harvest					Total
	Deliveries	Landings	Chinook	Sockeye	Coho	Pink	Chum	
2000	100	3,268	2,612	1,775,225	123,222	428,064	120,957	2,450,080
2001	93	2,906	2,939	1,511,587	131,448	1,281,767	199,003	3,126,744
2002	42	2,432	1,521	1,050,553	49,372	66,050	54,559	1,222,055
2003	44	2,073	3,068	1,100,297	103,896	502,638	64,044	1,773,943
2004	33	1,346	2,520	704,652	37	2,380	505	711,473
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
Averages								
2000-09	63	2,225	2,439	1,091,708	79,934	867,654	105,382	2,147,254
2005-09	63	2,045	2,345	954,953	78,273	1,279,127	122,951	2,437,649

Harvest

Chinook Salmon

A total of 10,262 Chinook salmon were commercially harvested (excluding home pack and the department's test fishery) in 2010, which was well above recent average harvests (Table 3). The majority of the 2010 CMA Chinook salmon harvest occurred in the Western District, with much of the remainder harvested in the Chignik Bay and Central districts (Table 3). Most of the Chinook salmon harvest occurred from late June until the end of July.

Sockeye Salmon

A total of 1,372,267 sockeye salmon were commercially harvested (excluding home pack and the department's test fishery) in the CMA during 2010, which was above the prior 10-year average harvest and approximately 425,000 (44%) more than the prior 5-year average harvest (Table 3). The majority of the 2010 CMA sockeye salmon harvest came from the Chignik Bay District, although substantial harvests also occurred in Central and Western districts (Table 3).

In 2010, Southeast District Mainland (SEDM) and Cape Igvak opened to commercial salmon fishing for the first time on June 18. A total of 106,584 (85,267 considered Chignik-bound) sockeye salmon were harvested in the Southeast District Mainland through the end of the allocation period, on July 25. Cape Igvak fisherman harvested 205,770 (185,193 considered Chignik-bound) during the allocation period.

Coho Salmon

A total of 159,198 coho salmon were commercially harvested in 2010, which was greater than the prior 5- and 10-year average harvests. The majority of the coho salmon harvest in 2010 took place during July and August in the Western District (Table 3).

Pink Salmon

A total of 489,774 pink salmon were commercially harvested in 2010, which was well below the prior 5- and 10-year average harvests. The largest portion of the CMA pink salmon harvest came from the Western District, although the Central district also yielded a substantial portion of the catch (Table 3). Most pink salmon were harvested between late June and mid-August.

Chum Salmon

A total of 581,329 chum salmon were commercially harvested in 2010, which was the highest catch since accurate harvest records began in 1954. The majority of the chum salmon harvest in 2010 took place in the Central District, although the Western and Eastern districts also yielded substantial catches (Table 3). Most chum salmon were harvested between late June and mid-August.

Table 3.- Chignik Management Area commercial salmon harvest, excluding home pack, and department test fishery, by district, 2010.

District	Chinook		Sockeye		Coho		Pink		Chum	
	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Chignik Bay	1,480	24,020	839,516	5,583,826	17,469	145,227	30,676	111,700	27,388	209,083
Central	2,403	25,441	371,085	2,356,537	27,982	197,446	183,008	633,206	226,501	1,749,294
Eastern	823	7,762	102,587	642,697	3,109	20,936	43,264	148,029	116,336	917,843
Western	5,470	44,333	56,532	341,335	104,886	734,996	225,716	747,428	204,911	1,517,865
Perryville	86	1,128	2,547	15,812	5,752	39,273	7,110	23,598	6,193	42,957
Total	10,262	102,684	1,372,267	8,940,207	159,198	1,137,878	489,774	1,663,961	581,329	4,437,042

Economic Value

The exvessel value of the 2010 CMA commercial salmon fishery was about \$14.3 million (approximately \$220,599 per active permit holder). A majority of the value was from the sale of sockeye salmon (79%), while chum salmon harvest contributed a much larger proportion (12%) of the fishery value than in previous years, contributing roughly \$27,500 per active permit holder. The harvest of coho, pink, and Chinook salmon provided approximately \$8,711, \$8,707, and \$2,463, 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, 2000 to 2010.

Year	Chinook		Sockeye		Coho		Pink		Chum		(\$ Total Value	Number of Permits ^c	(\$ Value Per Permit
	Total ^a	Average ^b	Total ^a	Average ^b	Total ^a	Average ^b	Total ^a	Average ^b	Total ^a	Average ^b			
2000	16,336	165	11,812,368	119,317	283,061	2,859	106,470	1,075	93,030	940	12,311,264	99	124,356
2001	12,205	133	7,419,339	80,645	263,160	2,860	366,714	3,986	209,239	2,274	8,270,657	92	89,898
2002	3,516	36	4,564,214	46,103	36,078	364	10,333	104	40,671	411	4,654,812	99	47,018
2003	20,212	202	5,283,962	52,840	173,625	1,736	182,100	1,821	71,140	711	5,731,039	100	57,310
2004	26,191	262	3,568,350	35,684		59		835		647	3,596,082	100	35,961
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 ^d	160,076	2,463	11,271,976	173,415	566,191	8,711	565,941	8,707	1,774,763	27,304	14,338,947	65	220,599
Averages													
2000-09	21,355	305	5,899,946	77,719	206,725	3,211	449,364	7,709	172,300	2,844	6,749,692	80	91,787
2005-09	27,019	451	5,270,246	88,520	262,254	4,858	765,438	14,018	261,656	4,819	6,586,613	62	112,664

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

^b Average value of commercial catch in dollars, by species. Average value does not include home pack or department test fishery.

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

^d Values represent the initial price paid, and do not include any post-season adjustments by any processor. The average 2010 exvessel prices per pound were: Chinook- \$1.56, sockeye- \$1.26, coho- \$0.50, pink- \$0.34, chum- \$0.40.

Department Test Fishery

The department conducted test fisheries on three occasions in 2010. Data from these test fisheries were used to assess the early season buildup of sockeye salmon in Chignik Lagoon. An estimated 6,545 sockeye salmon were harvested, which provided approximately \$31,000 that was used to offset the cost of vessel charters and operating the Chignik weir.

SUBSISTENCE

At this writing subsistence harvest numbers for 2010 have not been finalized.

LITERATURE CITED

Witteveen, M. J., H. Finkle, P. A. Nelson, J. J. Hasbrouck, and I. Vining. 2005. Review of salmon escapement goals in the Chignik Management Area. Alaska Department of Fish and Game, Fishery Manuscript No. 05-06, Anchorage.

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