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Advisory Announcement

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2024 CHIGNIK COMMERCIAL SALMON SEASON SUMMARY

The following is a brief overview of the 2024 Chignik Management Area (CMA; Figure 1) commercial salmon season. The numbers provided in this season summary are preliminary.

The Chignik River watershed supports two primary sockeye salmon runs which traditionally provide a majority of directed harvest opportunities within the CMA. With a total run size of approximately 980,000 sockeye salmon, commercial harvest opportunity targeting sockeye salmon was not provided until early-July, past historical sockeye salmon opening dates in June, due to the weak and late timing of the early-run. The overall escapement was 727,580 sockeye salmon, composed of approximately 372,831 early-run sockeye salmon and 354,749 late-run sockeye salmon (Table 1).

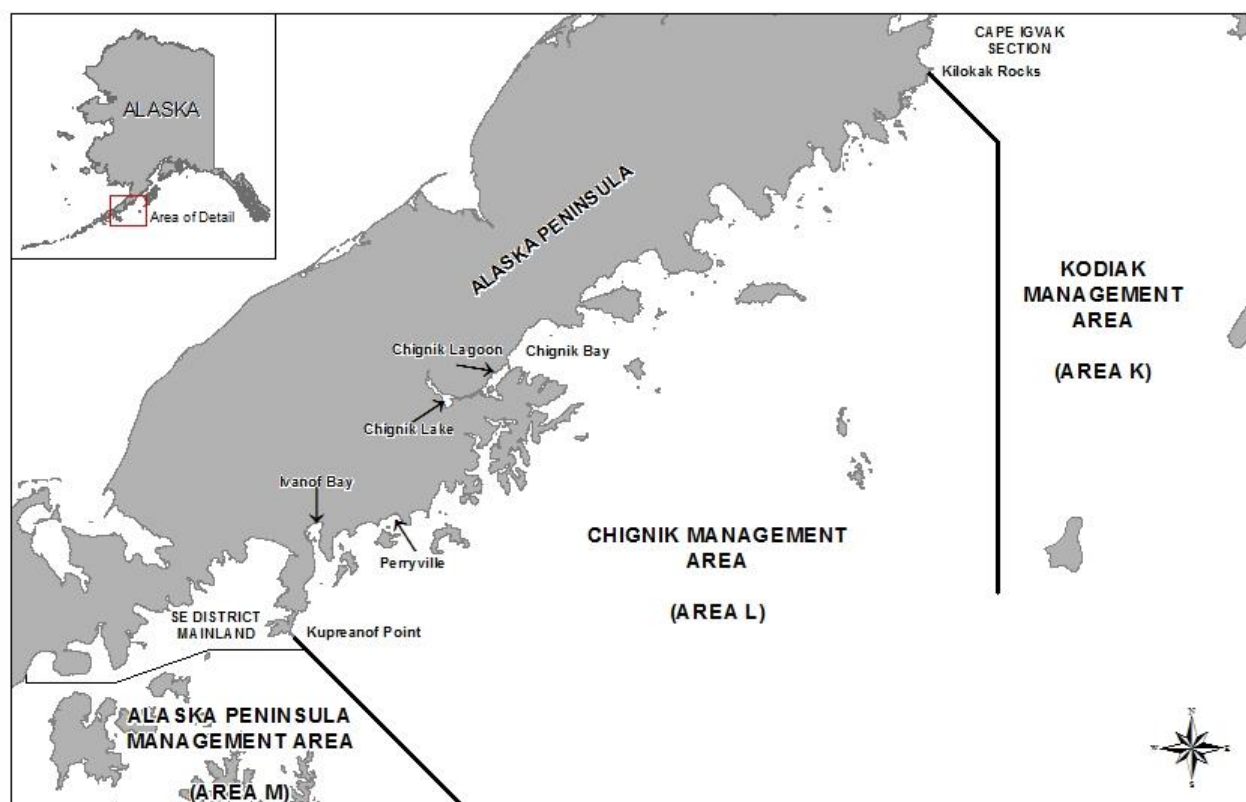


Figure 1.– Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and Alaska Peninsula Management areas.

2024 Escapement Summary

Escapement through the Chignik River weir was monitored using underwater digital video equipment from June 1 through August 24. Two underwater camera gates in the weir were open to provide uninterrupted passage. Fish passing through 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 estimate daily fish passage. A digital video archive was kept of each 10-minute counting period throughout the entire monitoring time. Additionally, 24/7 footage was archived from June 1 through August 24.

Aerial surveys were flown throughout the season to monitor pink and chum salmon escapement into CMA streams. Peak survey counts, by index stream and species, were summed and compared to areawide sustainable escapement goals (SEG) established by Schaberg et al. (2019).

Chinook salmon

The Chignik River is the only major Chinook salmon-producing stream within the CMA and supports the largest Chinook salmon stock on the South Alaska Peninsula. The biological escapement goal range (BEG) for Chinook salmon into the Chignik River watershed is 1,300–2,700 fish (Schaberg et al. 2019). The 2024 Chignik River Chinook salmon escapement of 1,166 fish (Table 1) was below the escapement goal and was between recent 5- and 10-year escapement averages.

Sockeye salmon

Sockeye salmon escapement to the Chignik River in 2024 was managed based on separate optimal escapement goal (OEG) objectives for both early-run and late-run sockeye salmon. During 2024, the commercial salmon fishery targeting sockeye salmon in the CMA was managed based upon in-season escapement information gathered at the Chignik River weir. In addition to daily escapement observations, a total of approximately 240 adult sockeye salmon were sampled each week for age, sex, and length (ASL) information. Apportionment between early- and late-run sockeye salmon was achieved in season using a historic run timing curve built using a combination of an Expectation-Maximization algorithm and historical genetic information. ASL information was also used in season to help inform management decisions.

Postseason, all sockeye salmon caught in the CMA and, as outlined in regulation, harvest from Southeastern District Mainland (SEDM) of Registration Area M and the Cape Igvak Section of Registration Area K, are apportioned as Chignik-bound sockeye salmon based on genetic stock information (Dann et al. 2012, Shedd et al. 2016). Chignik-bound harvest data are temporally aligned with Chignik River weir escapement counts to the day the harvest would have arrived at the weir had they not been caught based on Conrad (1983). The mixDist package in R is used to identify daily early- and late-run stock proportions for building the run reconstruction by modeling probability density functions with an Expectation-Maximization algorithm. This method employs the best available data, is reproducible, and yields stock proportions not significantly different than those derived using genetic information. A post-weir estimate of escapement is also calculated.

Early-run sockeye salmon have a OEG range of 300,00–400,000 fish. The early-run was late and weak, trending below minimum management objectives before an increase in escapement late June. The early-run escapement objective was ultimately met with an estimated escapement of 372,831 fish (Table 1). The early-run sockeye salmon escapement was above all recent escapement averages.

The late-run OEG range of 240,000–360,000 sockeye salmon was also met, with an estimate of 354,749 sockeye salmon escaping into the Chignik River system (Table 1). Interim escapement objectives for the late run were met or exceeded throughout the entire season with escapement staying near the upper objectives throughout the season.

A total of 31,021 sockeye salmon were estimated to have escaped into the river system after August 24, when the weir was removed.

Coho salmon

Coho salmon begin to enter CMA drainages in mid-August and continue through November. In 2024, 1,082 coho salmon were observed passing the weir (Table 1). It should be noted that the weir was removed on August 25, which is early in the coho salmon run.

Pink salmon

Indexed pink salmon escapements to CMA streams were estimated via aerial surveys. The even-year pink salmon SEG range of 170,000–280,000 fish is based on pink salmon escapement for four of the five districts and eight total index streams within those districts (Schaberg et al. 2019). In 2024, pink salmon peak estimated escapement for the eight representative index streams was 262,000 fish, above recent even-year averages and within the bound of the SEG range (Table 2).

Chum salmon

Indexed chum salmon escapements to CMA streams were estimated via aerial surveys. The chum salmon SEG range of 45,000–110,000 fish is based on escapement of six total index streams within four of the five districts (Schaberg et al. 2019). The 2024 estimated total peak chum escapement for the six index was 83,100 fish, below recent averages but within the bound of the SEG range (Table 2).

Table 1.– Estimated Chinook, sockeye, coho, pink, and chum salmon, and Dolly Varden escapement to the Chignik River, 2010 to 2024.

Year	Escapement						Dolly Varden
	Chinook ^a	Sockeye		Coho	Pink	Chum	
		Early-run	Late-run ^b				
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	15,572	3,171	58	44,899
2015	2,054	534,088	589,810	60,209	4,269	54	16,346
2016	1,843	418,290	337,698	14,187	486	114	24,625
2017	1,137	453,257	339,303	33,270	123,531	615	7,664
2018	825	263,979	275,718	64,214	3,222	54	4,550
2019	1,517	345,918	336,077	282	18,073	67	6,242
2020	1,278	137,213	193,765	6,964	10,614	124	4,919
2021	1,172	244,382	396,756	0	6,057	25	4,363
2022	761	412,228	395,858	10,903	12,558	90	1,238
2023	267	431,294	457,060	1,366	19,696	26	605
2024	1,166	372,831	354,749	1,082	2,836	58	1,428
Averages							
2014–2023	1,375	360,103	361,327	20,697	6,010	123	11,545
2019–2023	999	314,207	355,903	3,903	11,586	66	3,473

^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.

^b Late-run sockeye salmon totals include a weir estimate and post-weir escapement estimate using a time series analysis.

^c Pink salmon averages include even years only.

Table 2.– Estimated indexed, peak pink and chum salmon escapement in the Chignik Management Area, 2010 to 2024.

Year	Indexed Peak Escapement	
	Pink	Chum
2010	98,400	102,625
2011	272,000	119,000
2012	111,000	93,800
2013	231,800	109,900
2014	87,240	46,720
2015	404,000	123,400
2016	68,100	69,900
2017	586,000	96,900
2018	41,900	33,400
2019	432,373	98,000
2020	118,585	39,675
2021	462,000	122,000
2022	303,600	73,200
2023	629,000	183,000
2024	262,000	83,100
Averages ^a		
2014-2023	123,885	88,620
2019-2023	211,093	103,175

Note: Peak escapements are calculated using aerial surveys from the eight pink salmon and six chum salmon index streams established in Schaberg et al. 2019.

^a Pink salmon averages include even years only.

2024 Commercial Fishery Summary

In early June, commercial salmon fishing is based on the strength of Chignik River early-run sockeye salmon. Fishing periods are determined by daily escapements as well as harvest information. From mid-June thru July, the CMA is managed to achieve adequate escapement of the Chignik River early- and late-run sockeye salmon, as well as local pink and chum salmon stocks. Beginning in early July, opportunity to target pink and chum salmon may occur in select bays of the Central, Western, Eastern, and Perryville Districts. In August, and for the remainder of the season, management of the CMA is based on achieving the Chignik River late-run sockeye salmon goal or on the department's evaluation of local stocks of pink, chum, and coho salmon. If the Chignik River sockeye salmon late run is not meeting interim escapement objectives and a harvestable surplus of pink, chum, or coho salmon is available, the department may restrict fishing to certain areas in the CMA to allow fishing, while minimizing the harvest of sockeye salmon.

Sockeye salmon

In 2024, the department managed the commercial salmon fishery based upon daily escapement levels, ASL data, and an applied average stock apportionment curve developed from using a combination of an Expectation-Maximization algorithm and historical genetic information to apportion stocks of sockeye salmon to early or late runs.

Early-run sockeye salmon escapement was weak and late and fell behind interim escapement objectives early in June before increasing late June. As a result of the poor early-run escapement throughout June, there were no

fishing periods until July 4 after interim objectives were being met. Fishing periods started throughout the entire CMA once early-run escapement neared its midpoint interim escapement objectives.

Typically, in early- to mid-July, late-run sockeye salmon begin to enter the Chignik watershed. Commercial fishing is frequently curtailed during this time for the department to evaluate the strength of the late run. The late run of sockeye salmon met all interim escapement goals throughout the 2024 season, with escapement trending between the upper and middle interim escapement objectives through July and August.

Commercial salmon fishing in areas with sockeye salmon opened July 4 in all districts. Through July commercial salmon fishing in the Chignik Bay District was restricted to two days a week when meeting sockeye salmon escapement objectives, or four days a week when exceeding sockeye escapement in order to conserve the weak Chinook run. Harvest effort ceased after August 26 when processors ended fish purchasing operations.

Pink and chum salmon

Aerial surveys to monitor pink and chum salmon escapement began on July 10. Aerial surveys for each district were flown approximately once a week, beginning in early July and through late August. Starting July 4, commercial salmon fishing was allowed in all districts. This decision was based upon both increasing numbers of sockeye salmon observed escaping into the Chignik River. Commercial salmon fishing in the Eastern, Central, Western, and Perryville Districts began to be restricted in late July due to low pink and chum escapement at the time. During the month of August, the Western and Perryville Districts were closed intermittently, the Central District was closed the majority of the month, and the Eastern District was closed for the entirety of the month due to poor pink and chum escapement.

2024 Commercial Harvest Summary

Chinook salmon

A total of 12,166 Chinook salmon were harvested during the 2024 season, above recent historical averages (Table 3). The majority of harvest occurred in the Western District (Table 4). Chinook salmon harvest was incidental to fisheries targeting other species. In addition to the stock of concern action plan, retention of Chinook salmon over 28 inches in the was disallowed throughout the entire CMA the entire season and fishing time in the Chignik Bay District was restricted during July.

Sockeye salmon

A total of 271,199 sockeye salmon were harvested during 2024, below recent historical averages (Table 3). The majority of the harvest occurred in the Chignik Bay District (Table 4).

SEDM was not opened during the June 1 – July 25 allocation period. The Cape Igvak fishery was not opened during the June 1 – July 5 allocation period. Both the SEDM and Cape Igvak fisheries depend upon sockeye salmon harvest in the CMA reaching certain thresholds. Generally, no commercial salmon fishing will occur in Cape Igvak or SEDM unless the department believes at least 300,000 sockeye salmon will be harvested by July 5 within the CMA, and 600,000 sockeye salmon will be harvested by July 25 for SEDM.

Coho salmon

Coho salmon harvest in the CMA totaled 68,020 fish, below recent historical averages (Table 3). The majority of the coho salmon harvest occurred in the Western District (Table 4).

Pink salmon

A total of 892,096 pink salmon were harvested in the CMA during 2024, above the even 10-year pink salmon harvest (Table 3). Most of the pink salmon harvest occurred in the Western District (Table 4).

Chum salmon

A total of 61,310 chum salmon were harvested in the CMA during 2024, below recent 5- and 10-year historical averages (Table 3). Most of the chum salmon harvest occurred in the Western District (Table 4).

Table 3.– Total commercial salmon harvests, including home pack and department test fishery, from the Chignik Management Area by species and year, 2014 through 2024.

Year	Permits ^a	Landings	Chignik Management Area Harvest					Total
			Chinook	Sockeye	Coho	Pink	Chum	
2014	70	1,521	8,809	616,879	132,459	352,099	55,149	1,165,395
2015	71	2,270	9,105	1,540,310	82,049	1,978,134	101,001	3,710,599
2016	69	2,551	20,684	1,385,673	94,373	140,895	118,418	1,760,043
2017	67	2,405	3,908	894,933	226,542	7,077,418	609,105	8,811,906
2018	6	6		128	1	6	924	1,059
2019	51	1,503	4,286	638,772	248,281	2,452,838	157,517	3,501,694
2020	0	0	0	0	0	0	0	0
2021	31	439	1,420	118,785	84,452	1,321,454	43,187	1,569,298
2022	35	582	3,623	334,644	40,099	1,043,282	70,886	1,492,534
2023	35	951	2,300	1,068,666	52,119	2,158,377	108,098	3,389,560
2024	54	688	12,166	271,199	68,020	892,096	61,310	1,304,791
Averages ^{b,c}								
2014–2023	48	1,359	6,767	733,199	106,708	307,256	140,476	2,822,454
2019–2023	38	869	2,907	540,217	106,238	1,043,282	94,922	2,488,272

^a Includes the department's test fishery permit.

^b Pink salmon averages include even years only.

^c Averages do not include 2020 due to no fishing opportunity.

Table 4.– Chignik Management Area commercial salmon harvest, excluding home pack and department test fishery, by district, 2024.

District	Chinook		Sockeye		Coho		Pink		Chum	
	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Chignik Bay	34	337	173,071	1,067,383	3,083	19,593	77,841	289,963	4,837	35,006
Central	32	166	24,766	145,001	7,274	42,279	111,527	391,414	8,779	61,460
Eastern ^a										
Western	12,083	36,485	58,076	328,801	50,651	290,568	515,705	1,847,899	40,455	265,601
Perryville	17	107	14,793	83,377	6,969	40,069	186,856	719,134	7,100	48,310
Total	12,166	37,095	271,199	1,627,850	68,020	392,908	892,096	3,249,071	61,310	411,640

^a Confidential harvest

Exvessel value

The total 2024 exvessel value in the CMA was approximately \$3.0 million, or about \$55,000 per active participant in the fishery (Table 5). The majority of the exvessel value (\$1.76 million) was made up of sockeye salmon, followed by pink salmon (\$725,000, Table 5).

Table 5.— Total value, by species, and average value per active permit, in dollars, in the Chignik Management Area, 2014 to 2024.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Permits ^b	Value per permit
2014	\$66,875	\$6,040,512	\$434,394	\$286,942	\$185,016	\$7,013,739	70	\$100,196
2015	\$74,403	\$6,600,110	\$101,967	\$940,236	\$164,225	\$7,880,941	71	\$110,999
2016	\$176,800	\$8,044,321	\$158,010	\$95,776	\$161,028	\$8,635,935	69	\$125,158
2017	\$51,611	\$7,182,853	\$546,586	\$6,579,390	\$1,439,418	\$15,799,858	67	\$235,819
2018	\$0	\$860	\$1	\$3	\$1,235	\$2,099	6	\$350
2019	\$31,628	\$5,062,351	\$506,047	\$2,047,651	\$363,019	\$8,010,696	51	\$157,072
2020	\$0	\$0	\$0	\$0	\$0	\$0	0	\$0
2021	\$2,807	\$867,612	\$143,434	\$1,332,609	\$120,000	\$2,466,462	31	\$79,563
2022	\$4,193	\$2,259,129	\$51,567	\$1,193,624	\$176,974	\$3,685,488	35	\$105,300
2023	\$3,816	\$3,849,293	\$26,009	\$1,086,898	\$161,174	\$5,127,190	35	\$146,491
2024	\$1,598	\$1,758,954	\$309,423	\$724,904	\$123,492	\$2,918,370	53	\$55,064
Averages^c								
2014-2023	\$45,793	\$4,434,116	\$218,668	\$1,507,014	\$308,010	\$6,513,601	48	\$117,883
2019-20223	\$10,611	\$3,009,596	\$181,764	\$1,415,195	\$205,292	\$4,822,459	38	\$122,107

Note: Values do not include home pack or department test fishery.

^a Values represent the initial price paid, and do not include any postseason adjustments by any processor. The average 2024 prices per pound were: Chinook - \$0.04, sockeye - \$1.10, coho - \$0.79, pink - \$0.23, chum - \$0.30.

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

^c Average values do not include 2020 due to no fishing opportunity.

Test Fishery and Cost Recovery

The department conducted test and cost recovery fisheries in June within the Chignik Bay District in order to generate revenue and get an estimate of fish population within the Chignik Lagoon. An estimated 9,881 sockeye salmon were harvested, which provided approximately \$58,500 that was used to offset the cost of operations at the Chignik River weir.

Subsistence

State and Federal subsistence fishing was open for sockeye salmon the entire season in the CMA.

Due to poor Chinook salmon escapement through the Chignik weir, both state and federal subsistence fishing for Chinook salmon was restricted on June 14. The department closed the Chignik Lagoon and Chignik River watershed to the harvest of Chinook salmon greater than 28 inches in length to all users through December 31, 2024. Subsistence fishing for Chinook salmon on all Federal public waters was closed through August 31, 2024.

State subsistence harvest totals for 2024 will not be known until the spring of 2025 when all permits have been returned.

Literature Cited

- Conrad, R. H. 1983, Management applications of scale pattern analysis methods for the sockeye salmon runs to Chignik, Alaska. M. Sc. University of Washington, Seattle.
- Dann, T. H., C. Habicht, J. R. Jasper, E. K. C. Fox, H. A. Hoyt, H. L. Liller, E. S. Lardizabal, P. A. Kuriscak, Z. D. Grauvogel and W. D. Templin. 2012a. Sockeye salmon baseline for the Western Alaska Salmon Stock Identification Project. Alaska Department of Fish and Game, Special Publication No. 12-12, Anchorage.
- Schaberg, K. L., M. B. Foster, A. St. Savior. 2019. Review of salmon escapement goals in the Chignik Management Area, 2018. Alaska Department of Fish and Game, Fishery Manuscript Series No. 19-02, Anchorage.
- Shedd, K. R., T. H. Dann, H. A. Hoyt, M. B. Foster, and C. Habicht. 2016. Genetic baseline of North American sockeye salmon for mixed stock analyses of Kodiak Management Area commercial fisheries, 2014-2016. Alaska Department of Fish and Game, Fishery Manuscript Series No. 16-03, Anchorage.