



## Advisory Announcement

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## 2024 Chignik and Alaska Peninsula Management Areas Salmon Forecasts

### Chignik Management Area

The 2024 Chignik Management Area predicted sockeye salmon harvest is expected to be in the *Strong* category with a point estimate of 1,582 thousand (Table 1).

Table 1.—Point estimate and ranges (80% prediction intervals) of the 2024 Chignik sockeye salmon forecasts.

Stock	Escapement goal (thousands)	2024 run	Point estimate (thousands)	Range (thousands)
Total Chignik	BEG: 450–800 OEG: 540–760	Total Run Estimate	2,080	873–4,869
		Escapement goal <sup>a</sup>	650	
	Harvest	1,430		
	CMA harvest <sup>b</sup>	1,582		
	SEDM Area <sup>c</sup>	65		
	Cape Igvak <sup>d</sup>	0		
	Harvest Category	<i>Strong</i>		

<sup>a</sup>The escapement estimate is the midpoint of the combined optimal escapement goals (OEGs) for the early run (300,000 to 400,000) and the late run (240,000 to 360,000).

<sup>b</sup>To approximate for the mixed-stock nature of the CMA fishery, the total Chignik River sockeye salmon harvest is expanded to project the total CMA harvest (20-year average estimate of Chignik-bound sockeye harvest in Chignik area is approximately 90.4%) less the Chignik sockeye harvested at SEDM and Cape Igvak. Of the CMA harvest, 1,365,000 sockeye salmon are estimated to be Chignik bound and 217,000 fish are estimated to be fish harvested while transiting through the CMA.

<sup>c</sup>Based on projected harvest, a commercial fishery is anticipated in the Southeastern District Mainland (SEDM) during the regulatory timeframe thru July 25, as outlined in regulation (5 AAC 09.360).

<sup>d</sup>Based on projected harvest, no commercial fishery is anticipated in the Cape Igvak Section during the regulatory timeframe through July 5, as outlined in regulation (5 AAC 18.360).

Harvest categories were delimited from the 20th, 40th, 60th, and 80th percentiles of historical Chignik Management Area commercial harvest 1990 to 2023 (Table 2).

Table 2.—Categorical ranges of total Chignik sockeye salmon harvest and this year’s forecast in bold.

Harvest Category	Range (thousands)	Percentile
<i>Poor</i>	Less than 722	Less than 20 <sup>th</sup>
<i>Weak</i>	722 to 1,064	21 <sup>st</sup> to 40 <sup>th</sup>
<i>Average</i>	1,064 to 1,408	41 <sup>st</sup> to 60 <sup>th</sup>
<i>Strong</i>	1,408 to 1,784	61 <sup>st</sup> to 80 <sup>th</sup>
<i>Excellent</i>	Greater than 1,784	81 <sup>st</sup> to 100 <sup>th</sup>

The Chignik sockeye salmon harvest forecast is derived from a combination of the formal forecasts for the Chignik early and late runs. Harvest estimates are calculated from the total run forecast minus the estimated escapement. The run forecasts are primarily made by investigating simple linear regression models utilizing recent outmigration year age-class relationships and median returns. The mean absolute percent error since 2001 is 43.8% for the total sockeye salmon forecast compared to actual.

### Alaska Peninsula Management Area

The 2024 South Alaska Peninsula predicted pink salmon harvest (post June) is expected to be in the *Average* category with a point estimate of 5.3 million (Table 3).

Table 3.—Point estimate and ranges (80% prediction intervals) of the 2024 South Alaska Peninsula pink salmon forecast.

Stock	Escapement goal (millions)	2024 run	Point estimate (millions)	Range (millions)
South Alaska Peninsula	SEG: 1.75–4.0	Total run forecast <sup>a</sup>	7.6	1.5–13.6
		Escapement <sup>b</sup>	2.3	1.8–4.0
		Post-June harvest estimate	5.3	0–9.6
		Harvest category	<i>Average</i>	

<sup>a</sup> Post-June harvest and escapement. The 5-year (even-year) average harvest of pink salmon in June is 1.2 million fish.

<sup>b</sup> The escapement estimate is the mid point of the aggregate goal range (1.75–4.0 million) in 2024.

Harvest categories were delimited from the 20<sup>th</sup>, 40<sup>th</sup>, 60<sup>th</sup>, and 80<sup>th</sup> percentiles of historical post-June commercial harvest on the South Alaska Peninsula from 1984 to 2023 (Table 4).

Table 4.—Categorical ranges of South Alaska Peninsula pink salmon harvest and this year’s forecast in bold.

Harvest Category	Range (millions)	Percentile
<i>Poor</i>	Less than 2.0	Less than 20 <sup>th</sup>
<i>Weak</i>	2.0 to 4.2	21 <sup>st</sup> to 40 <sup>th</sup>
<b><i>Average</i></b>	<b>4.2 to 7.1</b>	<b>41<sup>st</sup> to 60<sup>th</sup></b>
<i>Strong</i>	7.1 to 10.1	61 <sup>st</sup> to 80 <sup>th</sup>
<i>Excellent</i>	Greater than 10.1	81 <sup>st</sup> to 100 <sup>th</sup>

The 2024 South Alaska Peninsula pink salmon harvest forecast is derived from a total run forecast minus the mid point (2.25 million fish) of the annual South Alaska Peninsula escapement goal range. Based on best model fit, the total run was forecasted fitting a Holt model using the South Peninsula even-year run size from 1962 to 2022. The mean absolute percent error since 2011 is 79% for the pink salmon forecast.

Table 5.—Point estimate and ranges of 2024 North Alaska Peninsula sockeye salmon forecasts.

Stock	Escapement goal (thousands)	2024 run	Point estimate (thousands)	Range (thousands)
Nelson River	BEG: 97–219	Forecast	444	237–638
		Escapement	158	97–219
		Harvest estimate	286	
Late-run Bear Lake	BEG: 117–195	Late-run forecast	332	88–638
		Late-run escapement	156	117–195
		Late-run harvest estimate	176	

On the North Peninsula, the Nelson River and Bear Late-run sockeye salmon harvest forecasts are calculated from the total run forecast minus the estimated escapement (Table 5). The run forecasts are primarily made by investigating simple linear regression models utilizing recent outmigration year age-class relationships, parent escapement, and median returns. Forecasting sockeye salmon harvest for the North Alaska Peninsula outside Nelson Lagoon and Bear Late run (post July 31) is not done as stock specific harvest estimates outside of these areas and timeframes is unknown.