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Advisory Announcement

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2025 Kodiak Management Area Salmon Forecasts

The 2025 Kodiak Management Area (KMA) predicted pink salmon harvest is expected to be in the *Excellent* category with a point estimate of 31.8 million fish combining the wild stock and Kitoi Bay Hatchery harvest estimates (Table 1).

Table 1.–Point estimate and ranges (80% prediction intervals) of the 2025 Kodiak pink salmon forecast.

Stock	Escapement goal (millions)	2025 run	Point estimate (millions)	Range (millions)
Kodiak Management Area	SEG: 3.25–6.0	Wild stock total run	26.0	15.9–36.1
	Odd-year, Mainland and Kodiak Archipelago combined	Wild stock escapement	5.0	
		Wild stock harvest	21.0	10.9–31.1
		Kitoi Bay hatchery harvest	10.8	8.0–13.6
		Total KMA harvest	31.8	18.9–44.7
		Harvest category	***Excellent***	

Harvest categories were delimited from the 20th, 40th, 60th, and 80th percentiles of historical commercial harvest in the KMA from 1988 to 2024 (Table 2).

Table 2.–Categorical ranges of total KMA pink salmon harvest and this year's forecast in bold.

Harvest Category	Range (millions)	Percentile
Poor	Less than 8.2	Less than 20th
Weak	8.2 to 14.1	21st to 40th
Average	14.1 to 20.7	41st to 60th
Strong	20.7 to 27.6	61st to 80th
Excellent	**Greater than 27.6**	**81st to 100th**

The KMA wild stock pink salmon harvest forecast is derived from a total run forecast minus the estimated KMA escapement (5.0 million). The total run estimates were derived from a combination of weir counts, aerial survey index, and harvest estimates. The 2025 KMA wild stock pink salmon forecast was based on a generalized Ricker model using environmental, escapement, and sea surface temperature indices as well as previous year (lag-1) return fit to the odd-year

KMA returns from 1987 to 2023. The hatchery pink salmon forecast is developed examining the average survival rates of hatchery releases and for this forecast was calculated using the last four 4-year cyclical returns (parent class 2007, 2011, 2015 and 2019). The mean absolute percent error since 2018 is 31% for the wild stock and 27% for the hatchery pink salmon forecast to actual. The projection of

The 2025 Kodiak Management Area (KMA) predicted sockeye salmon harvest is expected to be in the ***Poor*** category with a point estimate of 1,584 thousand fish combining the formal and non-formal harvest estimates (Table 3).

Table 3.–Point estimate and ranges (80% prediction intervals) of the 2025 Kodiak sockeye salmon forecasts.

Stock	Escapement goal (thousands)	2025 run	Point estimate (thousands)	Range (thousands)
Spiridon Lake/ Telrod Cove	NA	Spiridon Run	109	4–213
		Telrod Run	60	0–140
		Harvest	169	0–353
Ayakulik	SEG (early and late runs combined): 200–400	Total run	711	353–1,109
		Escapement	300	200–400
		Harvest	411	
Early-run Karluk	BEG: 150–250	Early run	95	0–311
		Early-run escapement	95	150–250
		Early-run harvest	0	
Late-run Karluk	BEG: 200–450	Late run	674	195–1,189
		Late-run escapement	325	200–450
		Late-run harvest	349	
Total Karluk		Total run	769	195–1,189
		Total escapement	420	350–700
		Total Karluk harvest	349	
Early-run Upper Station	BEG: 43–93	Early run	55	14–117
		Early-run escapement	55	43–93
		Early-run harvest	0	
Late-run Upper Station	BEG: 120–265	Late run	326	173–626
		Late-run escapement	186	120–265
		Late-run harvest	140	
Frazer Lake	BEG: 75–170	Total run	203	25–404
		Escapement (Dog Salmon Crk)	143	95–190
		Harvest	60	
Total Alitak District		Alitak run	584	212–1,147
		Alitak escapement	384	258–548
		Alitak harvest estimate	200	
Total Kodiak Harvest Forecast		Formal forecast[a]	1,129	
		Non-formal forecast[b]	447	
		Total Kodiak	1,576	
		Harvest category	***Poor***	

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Table 3.–(continued)

[a] The formal forecast includes summed forecasts for Karluk, Ayakulik, Upper Station, Frazer, and Spiridon runs anticipated to be harvested in the Northwest, Southwest, and Alitak Districts of the Kodiak Management Area. In addition, anticipated harvest of Chignik-bound sockeye salmon in the Cape Igvak section based on the Chignik forecast is included but is projected to be 0 during the regulatory timeframe in 2025.

[b] Non-formal forecasts include KRAA hatchery enhancement (Little Kitoi, Ruth/Jennifer, Crescent, Ouzinkie, and Hidden), harvest of formally forecasted runs outside the traditional run reconstruction areas, minor Kodiak local stocks (e.g., Uganik, Little River, Ocean Beach, Portage, Malina, Thorsheim, Pasagshak, Saltery, Pauls Bay, Kaflia, and Discoverer), and non-local stocks transiting Kodiak Management Area borders.

Harvest categories were delimited from the 20th, 40th, 60th, and 80th percentiles of historical commercial harvest in the KMA from 1988 to 2024 (Table 4).

Table 4.–Categorical ranges of total KMA sockeye salmon harvest and this year's forecast in bold.

Harvest Category	Range (thousands)	Percentile
Poor	**Less than 1,862**	**Less than 20th**
Weak	1,862 to 2,482	21st to 40th
Average	2,482 to 2,894	41st to 60th
Strong	2,894 to 4,141	61st to 80th
Excellent	Greater than 4,166	81st to 100th

The KMA sockeye salmon harvest forecast is derived from a combination of the formal forecasts for the major sockeye salmon systems and the non -formal forecasts. The formal forecast harvest estimates are calculated from the total run forecast minus the estimated escapement. The formal forecasts are primarily made by investigating simple linear regression models utilizing recent outmigration year age-class relationships and median returns. The non-formal forecast is calculated by applying the average proportion (2020–2024) of sockeye salmon harvested falling outside the traditional formal forecasted method and areas (0.28). The mean absolute percent error since 2007 is 28% for the KMA sockeye salmon forecast. The projection of a poor sockeye salmon harvest is likely influenced in part by abnormally warm and dry conditions persisting during July and August of the 2019 and 2020 brood years.

The Kodiak Management Area salmon forecasts are authored by Alaska Department of Fish and Game Finfish Research Biologists: Heather Finkle and M. Birch Foster; and Kodiak Regional Aquaculture Association.