

Division of Commercial Fisheries
Forrest Bowers, Acting Director

Anchorage Office
333 Raspberry Road
Anchorage, AK 99518



Alaska Department of Fish and Game
Doug Vincent-Lang, Commissioner

Headquarters Office
P.O. Box 115526
Juneau, AK 99811-5526
www.adfg.alaska.gov

Advisory Announcement

Date Issued: November 13, 2025

Time Issued: 12:00 p.m.

Contact Information

Cole Weaver, Area Research Biologist
Jasmine Terry-Shindelman, Assistant Area
Research Biologist
Phone: (907) 267-2407

2026 Bristol Bay Sockeye Salmon Forecast

FORECAST OF THE 2026 RUN:

	Forecast	Forecast range
TOTAL PRODUCTION:	(millions)	(millions)
Total run	45.32	31.12–59.52
Escapement	11.79	
Total harvestable surplus	33.53	
Bristol Bay harvestable surplus	32.26	
South Peninsula	1.27	
Inshore Run	44.05	

The sockeye salmon total run forecast for Bristol Bay in 2026 is predicted to be **strong**, with a point estimate of **45.32 million fish** and a range of **31.12–59.52 million fish (80% prediction interval)**. Categorical ranges of sockeye salmon total run strength were formulated from percentiles of total runs from 1961 to 2025 (Table 1). Since 2006, our preseason forecasts have under-forecasted the actual run by 14% on average, ranging from 36% below in 2014 to 21% above in 2011 (Figure 1).

Table 1. Categorical ranges of sockeye salmon total run and this year's forecast in bold.

Category	Range (millions)	Percentile
Poor	Less than 20	Less than 20 th
Weak	20 to 29	20 th to 40 th
Average	29 to 43	40 th to 60 th
Strong	43 to 55	60th to 80th
Excellent	Greater than 55	Greater than 80 th

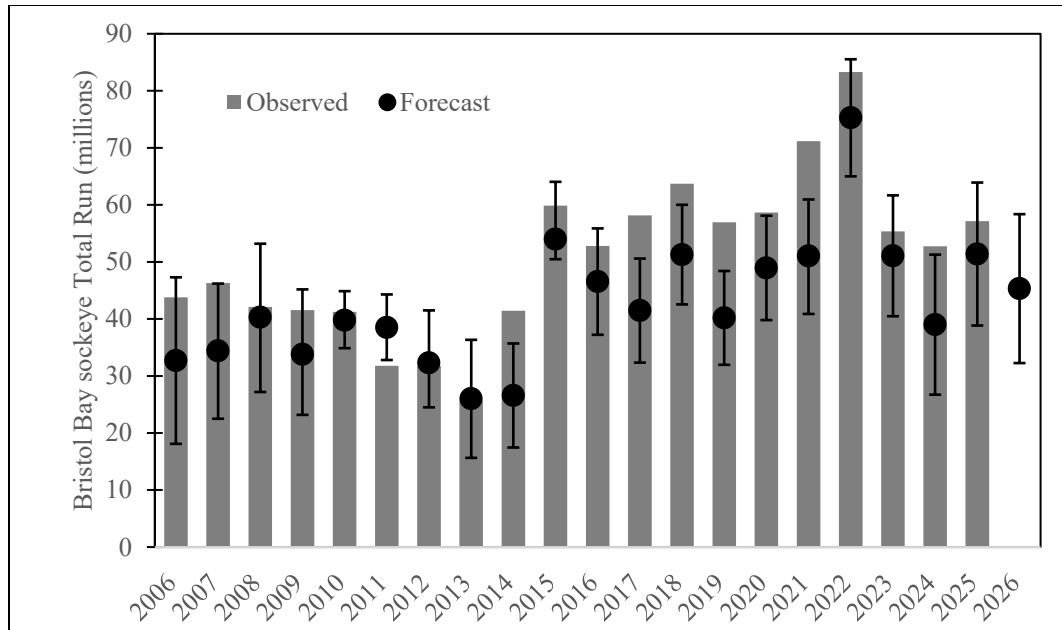


Figure 1. Annual observed total run of sockeye salmon in Bristol Bay compared to preseason total run forecasts, 2006–2026. Error bars represent 80% prediction intervals of forecasts.

METHODS

The 2026 Bristol Bay sockeye salmon forecast is the sum of individual predictions from nine river systems (Kvichak, Alagnak, Naknek, Egegik, Ugashik, Wood, Igushik, Nushagak, and Togiak Rivers) and four age classes (ages 1.2, 1.3, 2.2, and 2.3). Adult escapement and return data from brood years 1972–2021 were used in the analyses for most rivers.

Forecasts for each age class returning to a river system were derived from models based on the relationship between adult returns of that age class and either total returns or sibling returns from the same brood years. The average return over the last five years was also considered as a forecast model, and in certain cases, competing models were averaged in a weighted hybrid model approach. In general, models with statistically significant parameters and/or the best past performance metrics were chosen. Performance was evaluated using mean absolute deviation, mean absolute percent error, mean arctangent absolute percent error, and mean percent error between forecasted and observed returns measured across the most recent 3- and 5-year time frames.

In the Nushagak District, escapement goals for the Wood and Nushagak Rivers will be modified in accordance with the *Nushagak District King Salmon Stock of Concern Management Plan* (5AAC 06.391). Based on this regulation, the upper ends of the Optimal Escapement Goal (OEG) ranges in 2026 will be 2.79 and 2.61 million sockeye salmon for the Wood and Nushagak Rivers, respectively, and escapements are projected as the 75th percentile of the OEGs. There is a possibility for changes to management plans with the upcoming Alaska Board of Fisheries meeting that could modify or eliminate these OEGs or adjust management actions taken to address Nushagak River king salmon. Where practical, the Alaska Department of Fish and Game will manage escapements proportional to the run size (5 AAC 06.355(d)(1)). Forecasted escapements are the midpoints of the escapement goal ranges for Egegik and Ugashik Rivers as the total run is forecast to be average (Table 2).

Escapements are projected as the 25th percentile of the escapement goal range when the forecast is in the lower range of historical run sizes, as seen in Naknek, Igushik, and Togiak Rivers. Kvichak River is forecasted at 2.02 million based on 50% exploitation rate. Since the Alagnak River is passively managed, the exploitation rate is assumed to be the same as that of the Kvichak.

Over the past five years, an average of 2.8% of the Bristol Bay return is thought to have been harvested in the South Alaska Peninsula fisheries in June. Preseason harvestable surplus projections are provided to aid industry in planning for the upcoming season.

RESULTS

A total of 45.32 million sockeye salmon (with a range of 31.12–59.52 million) are expected to return to Bristol Bay in 2026 (Table 2). This is 26% smaller than the most recent 10-year average of 61.0 million fish and 21% greater than the long-term average of 37.40 million fish (1963–2025). All systems are expected to meet their spawning escapement goals in 2026. The forecast range represents the upper and lower values of the 80% prediction interval for the total run forecast. The confidence bounds were calculated from the difference between actual runs and run forecasts from 2006 through 2025.

A run of 45.32 million sockeye salmon would allow for a potential harvestable surplus of 33.53 million fish: 32.26 million fish in Bristol Bay and 1.27 million fish in the South Peninsula June fishery. A Bristol Bay inshore harvest of this size is 21% less than the most recent 10-year average harvest of 41.09 million (ranging from 31.69 to 60.52 million), and 38% greater than the long-term average harvest of 23.40 million fish (1963–2025).

Age-specific forecasts for the 2026 run consist of 16.00 million age-1.2 fish (35% of the total run), 5.38 million age-2.2 fish (12% of the total run), 19.98 million age-1.3 fish (44% of the total run), and 3.85 million age-2.3 fish (8% of the total run; Table 2).

DISCUSSION

Forecasting future salmon returns is inherently difficult and uncertain. The department has used similar methods since 2001 to produce Bristol Bay sockeye salmon forecasts, which have performed well when applied to Bristol Bay as a whole. In the last 20 years, our forecasts have on average under forecasted the run by 14%, ranging from 36% below the actual run in 2014 to 21% above the actual run in 2011. Forecasted harvestable surplus has had a mean absolute percentage error of 16% since 2006.

Forecasts at the individual river scale exhibit greater uncertainty than the total Bristol Bay forecast. Since 2006, return estimates have been biased low for the Alagnak (-16%), Togiak (-3%), Kvichak (-36%), Wood (-22%), Nushagak (-19%), Igushik (-7%), and Ugashik (-10%) Rivers, and biased high for Egegik (5%) and Naknek (1%). These offsetting errors contribute to higher accuracy in the bay-wide forecast compared to forecasts for individual rivers.

The department would like to acknowledge the Bristol Bay Fisheries Collaborative (BBFC) for its support of Bristol Bay fisheries. The collaborative is an agreement between the department, Bristol Bay Science and Research Institute (BBSRI), and other contributors to work together and with stakeholders to maintain the management system for this world-class fishery. A list of organizations that committed financial support to the BBFC, as well as additional information about this agreement can be found at <https://www.bbsri.org/bbfc>.

Table 2.—Forecast of total run, escapement, and harvest of major age classes of sockeye salmon returning to Bristol Bay river systems in 2026.

DISTRICT	River	Millions of Sockeye Salmon								
		Forecasted Production by Age Class				Total	Forecasted		South Peninsula ^a	BB Inshore
		1.2	2.2	1.3	2.3		Escapement	Surplus		
NAKNEK-KVICHAK										
	Kvichak	1.48	0.92	1.29	0.35	4.04	2.02	1.91	0.11	3.93
	Alagnak	1.58	0.24	1.35	0.10	3.26	1.63	1.54	0.09	3.17
	Naknek	1.11	0.45	2.09	0.35	4.00	1.10	2.79	0.11	3.89
	Total	4.17	1.61	4.73	0.80	11.30	4.75	6.23	0.32	10.98
EGEGIK										
		2.70	2.84	1.07	2.58	9.19	1.40	7.53	0.26	8.93
UGASHIK										
		2.43	0.49	2.19	0.25	5.36	0.95	4.26	0.15	5.21
NUSHAGAK										
	Wood	3.60	0.25	2.71	0.07	6.61	2.27	4.16	0.19	6.43
	Igushik	0.41	0.02	0.48	0.01	0.91	0.21	0.68	0.03	0.89
	Nushagak	2.56	0.17	8.42	0.14	11.39 ^b	2.05	9.02	0.32	11.07
	Total	6.56	0.43	11.60	0.22	18.92	4.53	13.86	0.53	18.39
TOGIAK										
		0.14	0.01	0.39	0.01	0.54 ^c	0.16	0.37	0.02	0.53
BRISTOL BAY										
		16.00	5.38	19.98	3.85	45.32	11.79	32.26	1.27	44.05
		35%	12%	44%	8%	100%				

Note: This table is a summary. Slight difference may appear due to rounding.

^a Projected harvest based on a current 5-year running average exploitation rate of 2.8%.

^b Nushagak River forecast includes approximately 108,000 age-1.4 fish.

^c Forecasts for Kulukak, Kanik, Osviak, and Matogak river systems are not included. These systems contribute approximately 50,000 sockeye salmon to Togiak District harvest each year.