



THE STATE
of **ALASKA**
GOVERNOR MIKE DUNLEAVY

Department of Fish and Game

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September 23, 2026

Diana Evans, Executive Director
North Pacific Fishery Management Council
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Anchorage, AK 99501

Dear Ms. Evans:

This letter provides an estimate of the mature biomass of Pacific herring (*Clupea pallasii*) in the eastern Bering Sea for the purposes of establishing the 2027 prohibited species catch (PSC) limit per Amendment 16A of the Bering Sea/Aleutians Islands Groundfish FMP. The biomass estimate for Pacific herring in the eastern Bering Sea is 201,451 metric tons (Table 1), which is the same as the estimate provided for 2026. The estimate is the long-term median of sufficiently rated aerial survey biomass estimates for each of the nine spawning areas (the median since 1985 for Port Heiden/Port Moller and the median since 1981 for all other areas). While surveys were funded in Togiak in 2026, lingering sea ice and poor weather conditions unfortunately prohibited an aerial survey biomass estimate with sufficient confidence rating. Consequently, the Togiak population size was estimated using the same method (median of sufficiently rated annual aerial survey biomass estimates since 1981) used for all stocks to provide the long-term average biomass of herring in the eastern Bering Sea for setting the 2027 PSC limit (Table 2). The median of sufficiently-rated aerial survey estimates since 1981 is used to provide an average population size for each of the eastern Bering Sea herring stocks because: (1) it is the only survey data available that provides an absolute estimate of mature eastern Bering Sea herring biomass, (2) aerial surveys have been flown to estimate population biomass for eastern Bering Sea herring stocks for nearly 50 years, (3) aerial surveys are the most recent biomass data collected (ranging from four to 35 years since the last sufficiently-rated survey, depending on the stock), and (4) aerial surveys are the most likely data to be collected on the biomass of spawning stocks in the future.

Historically, statistical catch-at-age models or single-year age-structured projections were often used for forecasting biomass for eastern Bering Sea stocks. Starting in 2015, as aerial survey and age composition data became unavailable for most stocks, estimation for individual spawning areas changed to a short-term (5-year) rolling average of aerial survey biomass estimates. As lack of data continued, estimation for individual spawning areas changed to long-term medians of

Ms. Evans

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aerial survey biomass estimates. For the Togiak stock, a statistical catch-at-age model was used to forecast biomass through 2023, then a 10-year rolling median of sufficiently rated aerial survey biomass estimates was used to give a recent indication of population size for 2024 and 2025, and a long-term median of sufficiently rated aerial survey biomass estimates has been used to provide a long-term indication of population size for 2026 and 2027 (Table 2). This transition in methodology is similar to moving a groundfish stock from Tier 3 (using a statistical catch-at-age model) to Tier 5 (rolling average of survey estimates) to Tier 6 (using a historical statistic). The change in Togiak biomass estimation from a short-term to a long-term median for 2026 was made because there were only four sufficiently rated aerial surveys in the most recent 10 years and no sufficiently rated surveys in the last two years. With the trajectory of the population becoming increasingly uncertain, developing a three-year projection based on only a few data points was not recommended and a historical statistic based on sufficiently rated aerial survey estimates since 1981 was used instead. The move to both the short-term and long-term median methodologies has resulted in more stable and lower estimates of eastern Bering Sea herring biomass than seen in 2022 and 2023, but estimates remain within the range of historical estimates. The change in methodology for all eastern Bering Sea herring stocks reflects the lack of recent surveys and the growing uncertainty in stock sizes.

The Department considered other statistical methodologies and projections, as well as other datasets for developing estimates of mature Pacific herring biomass. While there are more complicated projections, fishery-dependent datasets, fishery-independent datasets collected with gears which do not target herring, and fishery-independent datasets for juvenile herring, none of these were considered more informative and transparent for estimating the mature biomass of Pacific herring in the eastern Bering Sea at this time than the historical aerial survey biomass time-series of spawning populations used in this letter.

It is our hope next year that we will not see the lingering sea ice and poor weather conditions we experienced this year, and we will be able to conduct an aerial survey biomass estimate with sufficient confidence rating to improve the estimate of mature biomass of Pacific herring in the eastern Bering Sea for the purposes of establishing the 2028 PSC limit.

Sincerely,



Doug Vincent-Lang,
Commissioner

CC: Rachel Baker, Deputy Commissioner, Alaska Department of Fish and Game
Forrest Bowers, Acting Director, Alaska Department of Fish and Game
Chris Siddon, Fisheries Scientist, Alaska Department of Fish and Game
Karla Bush, Program Manager, Alaska Department of Fish and Game
Heather Scannell, Fish and Game Coordinator, Alaska Department of Fish and Game
John Linderman, Fish and Game Coordinator, Alaska Department of Fish and Game
Steve Whitney, Fisheries Program Specialist, NOAA Fisheries
Andrew Olson, Fisheries Management Specialist, NOAA Fisheries

Table 1. Pacific herring mature median biomass estimates for spawning aggregations in the eastern Bering Sea, Alaska (1985–2026 for Port Moller/Port Heiden and 1981–2026 for all other), for purpose of establishing the 2027 prohibited species catch limit.

Spawning area	short tons	metric tons
Norton Sound	34,180	31,007
Cape Romanzof	3,638	3,300
Nunivak Island	4,921	4,464
Nelson Island	5,420	4,917
Cape Avinof	2,083	1,890
Goodnews Bay	5,207	4,724
Security Cove	5,249	4,762
Togiak	158,650	143,924
Port Moller/Port Heiden	2,715	2,463
Total	222,063	201,451

Table 2. Estimates of Pacific herring mature biomass (mt) for spawning aggregations in the eastern Bering Sea, Alaska, provided to the North Pacific Fishery Management Council for the purpose of establishing the 2017–2027 prohibited species catch limits per Amendment 16A of the Bering Sea/Aleutians Islands Groundfish FMP. Estimates in bold are statistical catch-at-age model single-year forecasts; estimates underlined are 10-year running medians of sufficiently rated aerial survey estimates; and regular font are long-term medians. Starting in 2020, time periods for median estimates were standardized to be 1985 and later for Port Moller/Port Heiden and 1981 and later for all other stocks. The year of the most recent sufficiently rated aerial survey estimate for individual stocks are: Norton Sound 2011, Cape Romanzof 2006, Nelson Island 2014, Nunivak Island 2002, Cape Avinof 1992, Goodnews Bay 2014, Security Cove 2014, Togiak 2023, and Port Moller/Port Heiden 2021.

Spawning area	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Norton Sound	31,007	31,007	31,007	31,007	31,007	31,007	31,007	31,007	31,007	31,007	31,007
Cape Romanzof	4,678	4,678	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300
Nunivak Island	3,540	3,540	4,464	4,464	4,464	4,464	4,464	4,464	4,464	4,464	4,464
Nelson Island	4,785	4,785	4,916	4,916	4,916	4,916	4,916	4,917	4,917	4,917	4,917
Cape Avinof	3,126	3,126	1,890	1,890	1,890	1,890	1,890	1,890	1,890	1,890	1,890
Goodnews Bay	4,724	4,724	4,724	4,724	4,724	4,724	4,724	4,724	4,724	4,724	4,724
Security Cove	4,781	4,781	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762
Togiak	142,453	124,062	197,355	195,793	214,768	324,350	286,853	<u>195,984</u>	<u>207,569</u>	143,924	143,924
Port Moller/ Port Heiden	2,184	2,268	2,291	2,350	2,449	2,463	2,463	2,463	2,463	2,463	2,463
Total	201,278	182,971	254,709	253,207	272,281	381,876	344,379	253,511	265,096	201,451	201,451