



## Advisory Announcement

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### 2023 TOGIAK HERRING OUTLOOK

The 2023 mature herring biomass forecast is 316,203 tons and is based on an age-structured assessment model that was first used for the 1993 forecast (Figure 1). Under a 20% exploitation rate, the 2023 potential harvest is 63,241 tons for all combined fisheries and 57,419 tons for the Togiak sac roe fisheries (purse seine and gillnet). The large forecast is due primarily to the highest estimated recruitment of age-4 fish on record in 2021 (about 1.5 times the large recruitments seen in the early 1980s) and one of the largest recruitments on record in 2020. These cohorts are projected to make up an even higher portion of the population in 2023 due to increasing maturity (Figure 2). The majority of the mature population in 2023 is anticipated to be age-6 and age-7 fish, both by number (39% and 22% respectively) and by biomass (36% and 24% respectively; Figure 2). The forecast average weight of a fish in the 2023 mature population is 321 g (Figure 2), whereas the forecast average weight of a fish that is vulnerable to the commercial purse seine fishery is 332 g.

The commercial fishery and spawn timing of Togiak herring are related to several factors, including water temperatures at the spawning grounds in the Togiak District and sea surface temperatures in the southeastern Bering Sea. The department uses a sea surface temperature (SST) model based on temperatures near Unalaska to predict the timing of the Togiak herring run. Additionally, the department tracks ice coverage of the Bering Sea throughout February and March to help inform predictions in run timing, as we consider this a useful index for predicting the maturity of herring bound for the Togiak District to spawn. Our Sea Surface Temperature (SST) model predicts the first herring spawn on April 29.

*The Bristol Bay Herring Management Plan (5 AAC 27.865)* sets a maximum exploitation rate of 20% for the Togiak District stock. For the 2023 Togiak herring fishery, the guideline harvest level (GHL) will be based on a 20% exploitation rate. Harvest allocation, in accordance with the management plan will be:

<b>Fishery</b>	<b>Harvest allocation</b>
Spawn-on-kelp	1,500 tons
Dutch Harbor food and bait	4,322 tons
Togiak fishery	57,419 tons
Purse seine (80%)	45,935 tons
Gillnet (20%)	11,484 tons

Processors have indicated that they do not intend to harvest herring in Togiak in 2023 and there will be no commercial fishery. The department does not expect this will change. The department will continue to conduct aerial surveys to assess the herring biomass in 2023. The lack of interest for the Togiak fishery does not impact the Dutch Harbor Food and Bait fishery or GHL.

Visit <http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.main> to subscribe to herring updates and announcements. Harvest and fishery opening information will also be available at the Division of Commercial Fisheries website at:

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyfisheryherring.herringannouncements#central>

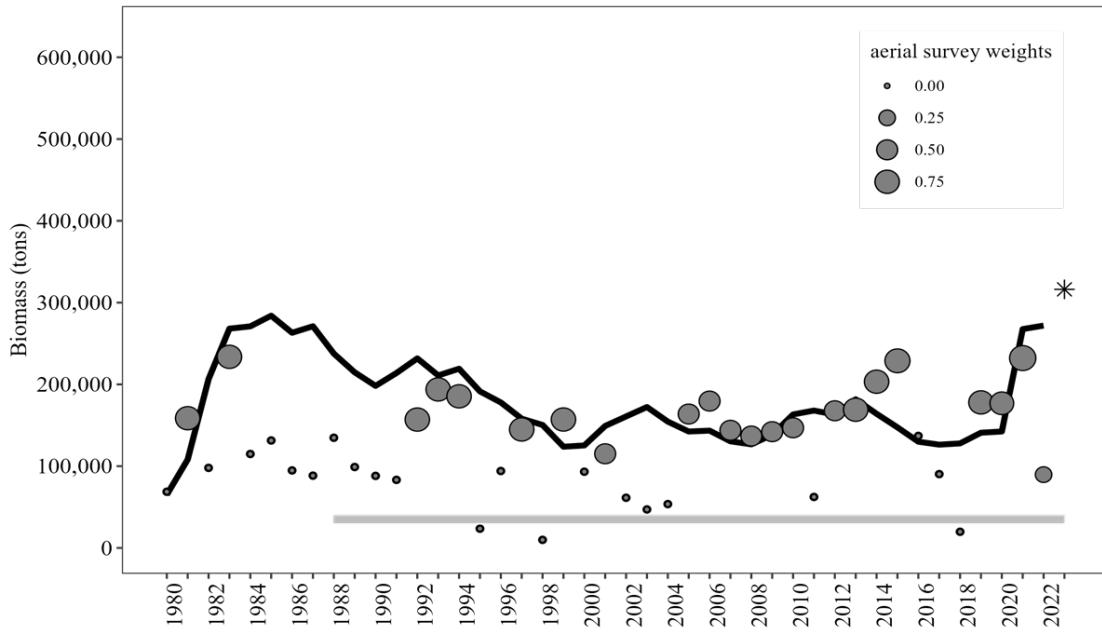


Figure 1.– Aerial survey-estimated biomass plus pre-peak catch that were included in the model (grey points), model-estimated mature biomass (black solid line), and model-estimated mature biomass forecast (black star). The size of the grey points reflects the confidence weighting of each aerial survey estimate in the model based on weather, number of surveys, quality of surveys, and timing of surveys relative to the spawn (ranging from 0 = no confidence to 1 = perfect confidence). The confidence ranking in 2022 was 0.25. The grey line denotes the threshold biomass of 35,000 tons.

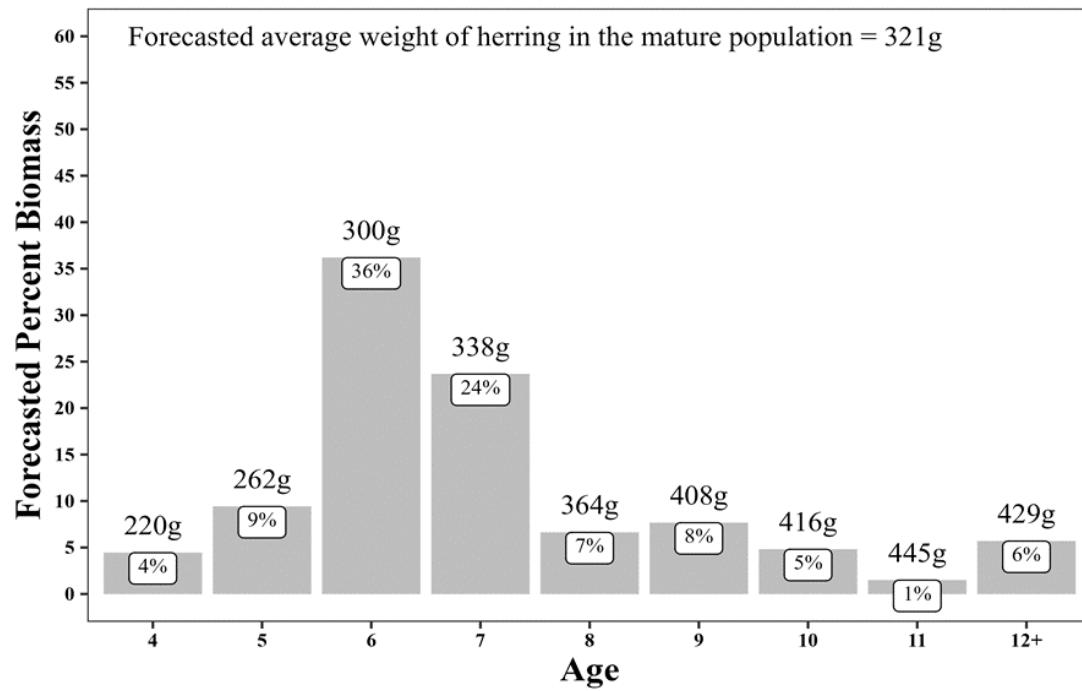


Figure 2.– Forecasted percent mature biomass by age with average weight (grams) for each age class as well as the average weight of the forecasted 2023 mature biomass as a whole (321g).