ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF COMMERCIAL FISHERIES
NEWS RELEASE

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2015 Arctic-Yukon-Kuskokwim Herring Outlook

The 2015 Arctic-Yukon-Kuskokwim herring forecast and guideline harvest levels (GHLs), given a maximum 20% exploitation rate of the projected biomass, are listed below for the northeastern Bering Sea herring stocks (Table 1).

Table 1. Projections of Pacific herring spawning biomass and GHLs for commercial fishing districts in the northeastern Bering Sea, Alaska, 2015.

District	Threshold	2015 Projected Biomass (short tons)	Exploitation Rate (%)	2015 Harvest Guideline (short tons)
Security Cove	1,200	12,876	20	2,575
Goodnews Bay	1,200	18,532	20	3,706
Cape Avinof [a]	500	10,423	15	1,563
Nelson Island [b]	3,000	30,228	20	5,846
Nunivak Island	1,500	5,657	20	1,131
Cape Romanzof	1,500	4,813	20	963
Norton Sound [c]	7,000	53,786	20	10,757
Port Clarence [d]	–	–	–	165
Totals		136,315		26,707

[a] Cape Avinof commercial harvest is 15% of projected biomass (5 AAC 27.895(a)).

[b] Nelson Island commercial harvest is 20% of projected biomass minus 200 tons for subsistence harvest (5 AAC 27.895 (d)).

[c] See Norton Sound District management strategies for more details on GHL allocations.

[d] See Port Clarence District management strategies for GHL allocation details.

This news release is to inform fishermen of projected herring biomass and GHLs, and the strategies employed if commercial fishing does occur. At this time, it is anticipated that some level of commercial herring fishing will occur in the AYK Region in 2015, most likely in the Norton Sound District. Each district may be opened by emergency order and the fishery will close by emergency order when GHLs are reached for each location. Under the Bering Sea Herring Fishery

Management Plan 5 AAC 27.060, commercial fishing will not open in a district unless the minimum threshold biomass is observed in that district.

Based on postseason escapement projections, the 2015 estimated spawning biomass for northeastern Bering Sea herring stocks (Security Cove to Norton Sound Districts) will be 136,315 tons. If the return is as anticipated the total allowable harvest could be 26,707 tons. A harvest of this magnitude in the AYK herring fishery would be one of the largest on record.

In previous years, the AYK region herring biomass projection was based on an age-structured assessment (ASA) model. The ASA model requires age composition information, harvest data, and good aerial survey biomass estimates from each of the northeastern Bering Sea stocks. In 2014, test fishing projects only occurred in Norton Sound and Goodnews Bay; therefore, stock-specific age composition information is only available for these two areas. Aerials surveys in 2014 were conducted for Security Cove, Goodnews Bay, Cape Avinof, and Nelson Island. Only a small commercial harvest, approximately 2,448 tons for bait, occurred in the Norton Sound District in 2014. Due to the limited data available from 2014, the AYK region herring biomass was not assessed using an ASA model. The 2015 projected biomass is the average of biomass estimates of "good" (rating 3 or higher) aerial surveys from the last five years. If "good" aerial surveys were not available in the last five years then the last "good" aerial survey biomass estimate was used.

The actual biomass observed in 2015 may fall above or below the preseason projections based on variability in the quality of aerial biomass assessments and annual fluctuations of survival and recruitment rates.

2014 Test Fishery Data

Goodnews Bay District

Test fishing using variable mesh gillnet gear occurred in Goodnews Bay in 2014. Length, weight, and age were recorded for a subsample of the catch. A total of 581 scales were taken with 6% age-4 fish, 29% age-5 fish, 11% age-6 fish, 15% age-7 fish, and 12% age-8 fish. Additionally, 22% of the sample was fish aged nine and older, 3% were unable to be read, and there were no age-3 fish encountered through test fishing. Ages ranged between 4 and 18 years with an average age of seven. Lengths ranged from 177–399 mm with an average length of 284 mm. Weights ranged from 83–609 g with an average weight of 247 g.

Norton Sound District

Test fishing using variable mesh gillnet gear occurred in Norton Sound in 2014. Length, weight, and age were recorded for a subsample of the catch. A total of 222 scales were taken with 3% age-4 fish, 23% age-5 fish, 8% age-6 fish, 25% age-7 fish, and 16% age-8 fish. Additionally, 26% of the sample was fish aged nine and older. Ages ranged between 4 and 19 years with an average age of eight. Lengths ranged from 220–325 mm with an average length of 271 mm. Weights ranged from 126–439 g with an average weight of 240 g.

2015 Management Strategies

The department will conduct aerial surveys and monitor catch statistics inseason if commercial fishing occurs. Guideline harvest levels may be adjusted according to inseason aerial assessments of herring biomass, except for the Norton Sound District where the preseason projection cannot be adjusted inseason. Given the new projection method requires reliable estimates of biomass from aerial surveys, the department will increase and prioritize efforts to conduct aerial surveys

throughout the herring season. In accordance with the AYK Region harvest strategy, any operational commercial fishery will not target newly recruited age classes (age 2 through age 5 herring). The duration of fishing periods and harvests will vary in each district depending on inseason biomass estimates, roe quality, spawning activity, weather conditions, fishing effort, and processor input.

Cape Romanzof District

Since water turbidity in the Cape Romanzof area generally prevents aerial observations of herring, spawn deposition and commercial catch rates will be used to determine the timing and duration of commercial fishing periods if fishing occurs.

Norton Sound District

The 2015 projected biomass for the Norton Sound District is 53,786 tons which surpasses the minimum biomass threshold of 7,000 tons. A 20% exploitation rate would result in a guideline harvest of 10,757 tons. A maximum of 320 tons of herring are reserved to allow for the pound fishery to harvest a maximum of 90 tons of product (combined weight of herring roe and kelp; 5 AAC 27.965 (d,e)) leaving10,437 tons for sac roe harvest. The beach seine harvest is allocated 10% of the sac roe projected harvest, or 1,044 tons (5 AAC 27.960 (a)). Varied harvest rates may be applied to individual subdistricts based on biomass distribution, roe quality, weather, and sea ice conditions.

Port Clarence District

The department does not project an outlook for the Port Clarence fishery because of the lack of data and the limited scope of the fishery. The Alaska Board of Fisheries set a guideline harvest of 165 tons in 1981 and this will be the allowable harvest in 2015. This harvest guideline is based on 2 years of research conducted by the department in both the Port Clarence and Kotzebue Districts. Even though this guideline has not appeared in the regulation book since 1984, it still represents the best estimate of harvestable biomass.