



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
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2020 Seabird Report to the North Pacific Fishery Management Council

The Alaska Groundfish and Halibut Seabird Working Group (Working Group) held its 2020 annual meeting in Juneau from March 11th – 12th. Due to on-going concerns over the spread of COVID-19, this meeting was conducted virtually with contributions from staff from NMFS (Alaska Regional Office, Alaska Fisheries Science Center, Northwest Fisheries Science Center, and Pacific Islands Regional Office), U.S. Fish and Wildlife Service (USFWS), the North Pacific Fishery Management Council (Council), and Washington Department of Fish and Wildlife. The meeting was joined by staff from other management agencies and institutions, as well as, several members from the public who represent various fishing industries.

This report broadly summarizes 1) estimated 2019 seabird bycatch in Federal fisheries operating off Alaska, 2) seabird population status and trends and seabird mortality events in 2019, and 3) meeting notes and recommendations from the 2020 Working Group meeting. For more detailed information on the 2020 Working Group meeting, including copies of presentations, full meeting notes, and information documents discussed, please visit the Google Drive accessible here (must copy directly into browser): https://drive.google.com/drive/folders/1rToFWCrxldo6k--wQSPMJFfa_a7sSJz?usp=sharing

Seabird Bycatch in Federal Fisheries off Alaska

Please note that all bycatch values are reported as “estimates” and not actual numbers of seabirds. For a detailed explanation of seabird bycatch estimation procedures please refer to NMFS annual seabird bycatch report (Krieger et al. 2018): <https://www.fisheries.noaa.gov/resource/document/seabird-bycatch-estimates-alaska-groundfish-fisheries-2018>

The 2019 estimated seabird bycatch for the combined groundfish and halibut fisheries (8,846 birds) was above the 2010 through 2018 annual average of 6,504 birds. However, this trend was largely influenced by an extreme increase in the estimated bycatch of shearwaters (sooty and short-tailed) (5,103 birds in 2019). This is the highest estimated bycatch of shearwaters reported in the federal fisheries off Alaska in the 2010 through 2018 time series reported in NMFS annual seabird bycatch report referenced above (957 birds are the estimated annual average from 2010 through 2018). The unusually high amount of shearwater bycatch in 2019 corresponds to the shearwater mortality event discussed below. It is believed that changing ocean conditions have resulted in depleted food resources for shearwaters and other species of seabirds. In response, hungry or starving shearwaters may have more aggressively targeted fishing vessels, attracted by



baited hooks and offal. The largest numbers of shearwater bycatch occurred in the Bering Sea, primarily in the Pacific cod hook-and-line fishery (3,443 birds), and in the Atka mackerel (606 birds) and Rockfish (989 birds) trawl fisheries.

If shearwaters are excluded from the seabird bycatch estimates, 2019 had a noticeable decrease in overall bycatch values compared to 2018 (3,743 and 5,344, respectively). Estimated bycatch of all albatross sp. was also lower in 2019. An estimated 243 black-footed and 52 Laysan albatross were taken in 2019. These values are well below the annual average from 2010 through 2018 (319 and 173, respectively). No short-tailed albatross were taken in 2019 and there has not been a reported take since 2014.

NMFS annually produces a comprehensive summary of seabird bycatch estimates for Alaska Groundfish and Halibut fisheries. Please refer to this report for a more detailed description of seabird bycatch estimates for federal fisheries off Alaska. The 2018 report is available here: <https://www.fisheries.noaa.gov/resource/document/seabird-bycatch-estimates-alaska-groundfish-fisheries-2018>.

The 2019 report will be available on NMFS seabird bycatch webpage in June 2020: <https://www.fisheries.noaa.gov/alaska/bycatch/seabird-bycatch-alaska>.

In addition to the annual seabird bycatch update, the Working Group was also briefed on a mortality event that involved an Endangered Species Act (ESA) – listed seabird which occurred in October, 2019. The event occurred near 64° N and several miles westward of 170° W, just north of St. Lawrence Island in NMFS reporting area 524 (see Figure 1). Twenty-two threatened spectacled eider were reported taken as the result of striking a vessel in the hook-and-line groundfish fishery of the Bering Sea/Aleutian Islands Management Area (BSAI). The vessel strike occurred in the early morning while the vessel was transiting between fishing locations. When the observer later came on duty they noticed several dead spectacled eider on the back of the vessel, along the wheelhouse, and outside the companionways. Voucher specimens were collected and retained for USFWS. This is the first recorded take of spectacled eider by any fisheries operating in the BSAI or Gulf of Alaska Management Area (GOA).

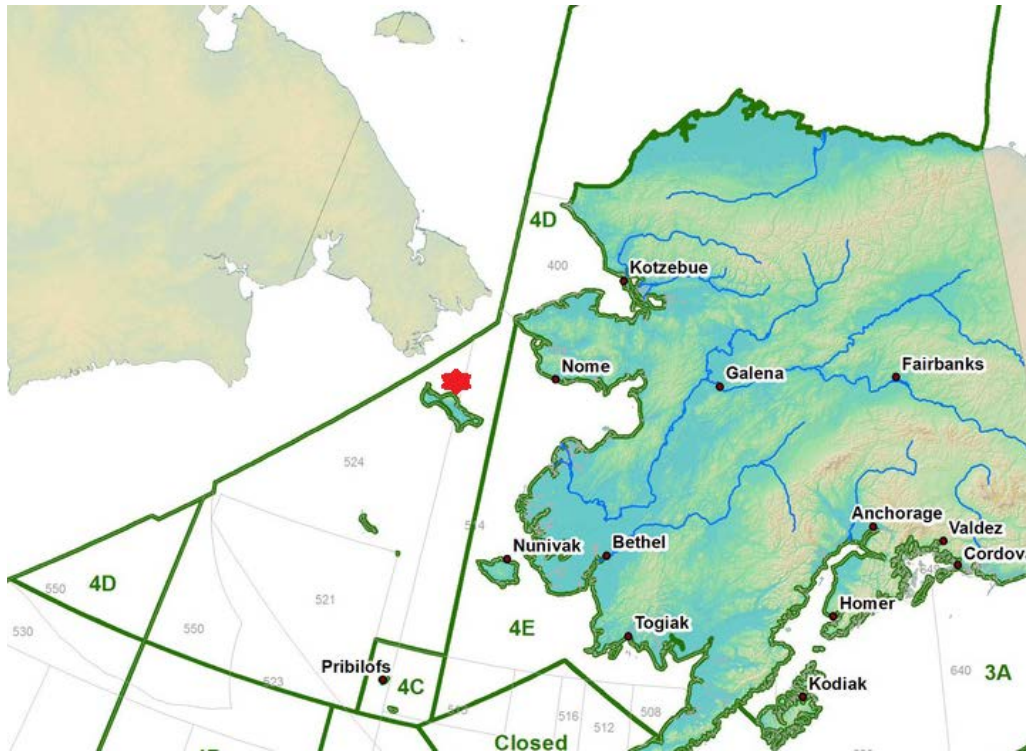


Figure 1. Approximate location of spectacled eider mortality event on October 10, 2019 (red star).

After the Working Group meeting concluded, USFWS informed NMFS of a second mortality event involving an ESA-listed seabird which occurred during the first week of March. The mortality occurred near Cape Krenitzin, just north of False Pass in NMFS reporting area 509 (see Figure 2). A Steller's eider considered to be from the threatened Alaska-breeding population was reported taken as the result of striking a vessel in the trawl groundfish fishery of the BSAI. The vessel strike occurred at night while the vessel was in transit. The vessel strike was recorded on the vessel's electronic monitoring system and the mortality was reported by the vessel captain to USFWS using the Threatened and Endangered Bird Species Encounter and Reporting Form found here on <https://www.fisheries.noaa.gov/alaska/bycatch/seabird-avoidance-gear-and-methods>. This is the first recorded take of a Steller's eider considered to be from the Alaska-breeding population by any fisheries operating in the BSAI or GOA.

There are three distinct populations of Steller's eider worldwide. Two distinct Russian populations and the Alaska-breeding population. The Alaska-breeding population is the only population of Steller's eider listed as threatened under the ESA.

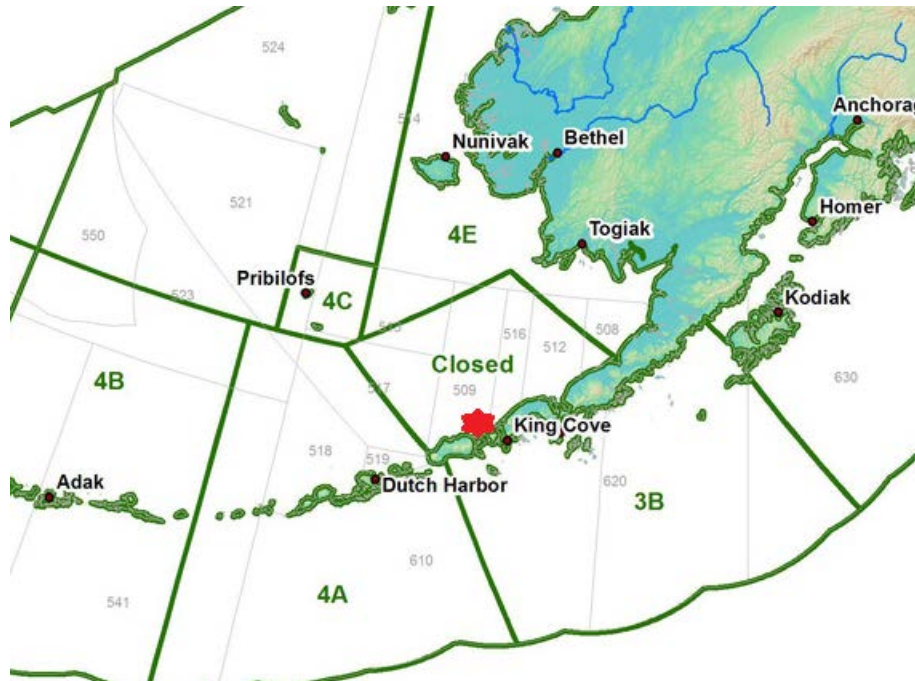


Figure 2. Approximate location of vessel strike of an Alaska-breeding population Steller's eider on March 2, 2020 (red star).

The NMFS Alaska Regional Office, NMFS Alaska Fisheries Science Center, and USFWS are actively coordinating efforts and communicating with each other in response to these mortality events and are complying to the fullest extent with ESA requirements to protect these species.

NMFS has reinitiated formal consultation under section 7 of the ESA with USFWS to ensure that the BSAI and GOA groundfish fisheries are not likely to jeopardize the continued existence of the either eider or adversely modify their designated critical habitat.

U.S. Fish and Wildlife Service Update

The USFWS annually monitors select seabird species at several colony sites across Alaska. In 2019 the results from monitored colony sites indicate the overall seabird reproductive success was generally higher, and seabirds nested earlier compared to 2018 surveys. Figure 3 summarizes the 2019 seabird productivity and improved nesting success of several major seabird species at colony sites in Alaska. While 2019 was an overall better year for seabirds in Alaska, the population counts for some seabird like murres continue to remain lower than historic records at several colony sites.

In 2019 seabird mortality events were reported in the Bering and Chukchi seas from May – October. The USFWS received reports of dead and dying birds including murres, puffins, auklets, shearwaters, and kittiwakes. The largest mortality event occurred in July-August in the greater Bristol Bay region where thousands of shearwaters were documented washed up on the beaches. The shearwater mortality event later expanded into northwestern Alaska and along the Chukotka Peninsula, but at much lower mortality rates. Starvation was determined to be the likely cause of death of all of the seabird carcasses sampled in 2019, but we have not ruled out contributing factors like the potential exposure to biotoxins produced by harmful algal blooms.

The USFWS did not receive any reports of additional seabird mortality during the winter 2019-2020. We will continue to work with partners, including local community representatives, the State of Alaska, National Park Service, U.S. Geological Survey, National Oceanic and Atmospheric Administration, and the Coastal Observation and Seabird Survey Team to regionally monitor and respond to potential mortality events in the coming months. We anticipate that in 2020 seabird mortality events may occur if regions experience abnormally high sea temperatures again.

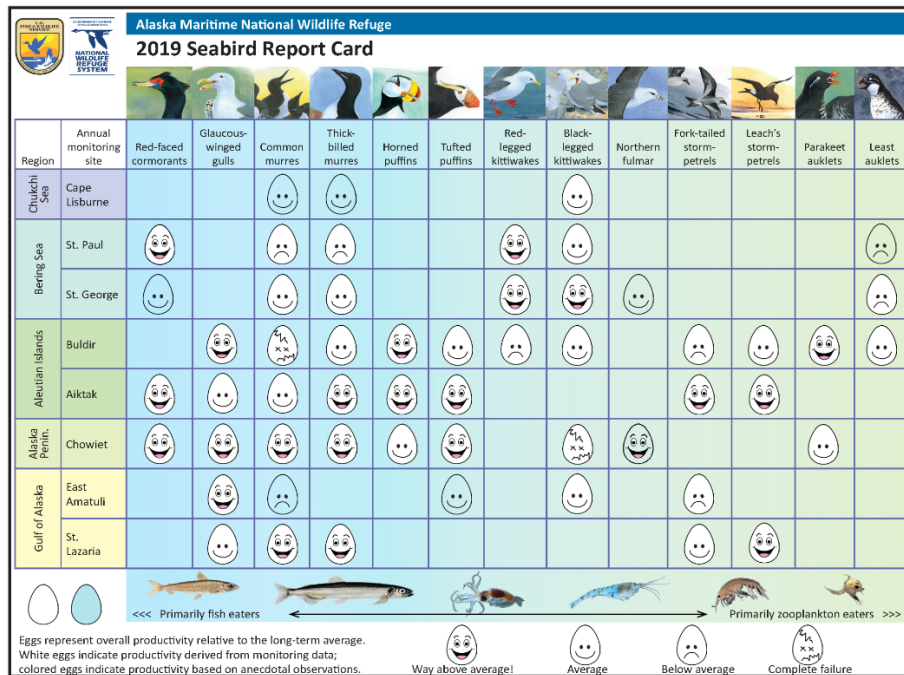


Figure 3. The 2019 Alaska Seabird Report Card summarizing seabird productivity at colony sites monitored by the U.S. Fish and Wildlife Service Alaska Maritime Refuge.

Meeting Notes and Recommendations

The Seabird Working Group identified three areas of special interest that warrant further investigation.

#1 The use of cameras to better identify Endangered Species

During the meeting, the Working Group saw a presentation by electronic monitoring specialists at the Alaska Fishery Science Center which described their work on using EM paired with machine learning/ artificial intelligence methods for enabling vessel cameras to identify seabirds caught incidentally by fishing vessels. The group felt this could be especially useful for positively identifying instances of take of ESA-listed species in addition to advantages it could bring to bycatch sampling in a variety of circumstances.

Some specific points of discussion and recommendations from the Working Group include:

- Cameras are already used to monitor for potential seabird take. However, species identification has been challenging. The results provided in the presentation showed great

promise for improved monitoring of seabird take. The Working Group is interested in the continued development of this technology and would like to stay updated on the staff's progress.

- NMFS is working with participants in the trawl EM EFP to make modifications to help identify seabird bycatch as it occurs. The EFP is being discussed during the Council's Trawl EM Committee meeting.
- The Council has a Trawl Electronic Monitoring (EM) Committee (formerly known as the EM Workgroup); the Working Group should look to engage them on the topic of seabird bycatch. As the use of EM on trawl vessels could move from an EFP into a regulated program, one of the priorities of this Working Group is having seabirds as one of the species groups that should be monitored using EM technology.

#2 Vessel Specific Seabird Bycatch – Update

The topic of vessel-specific bycatch has been a concern of both the Working Group and the Council for several years. The Working Group heard presentations from NMFS Alaska Regional Office, the NMFS Pacific Islands Regional Office, the Alaska Fisheries Science Center, and the Northwest Fisheries Science Center on the issue of vessel-specific seabird bycatch and how it is being addressed.

Some specific points of discussion and recommendations from the Working Group include:

- Data indicate that there are usually 3 to 5 vessels that have disproportionately high bycatch every year, but those vessels are not the same every year – at least for catcher processors. What can be done about this? Are boats just in the wrong place at the wrong time? Need to develop the vessel specific bycatch analysis more to help understand high seabird bycatch trends for individual vessels.
- Another issue is the different observer coverage levels among catcher processors (100%) and catcher vessels (15%). The catcher vessels are randomly selected and do not always get coverage in a particular year. Therefore, observer coverage could also influence annual bycatch rates on catcher vessels from year to year. How do we account for this?
- There was general belief by the Working Group that some of these vessels do not realize that they are taking more birds than other vessels. In the past, industry (specifically the Freezer Longline Coalition, among others) has demonstrated a strong desire to avoid birds and voluntarily adopting seabird bycatch mitigation measures (streamer lines) in 2002 even before they were put into regulations in 2004. Previous efforts from staff at the Alaska Fisheries Science Center and Washington Sea Grant offer one possible solution: take the top 3 to 5 vessels and talk to them about their high rate of take.
- Some discussion of another possible solution centered on establishing an “awards” program for low seabird bycatch. An example discussed was an award given in the Eastern Tropical Pacific tuna purse seine fishery. The Golden Porpoise Award was given to vessels with the lowest porpoise bycatch. Seen as badge of honor among fleet. Would not quite work for fisheries that only have partial coverage of fishing fleet.

#3 Taking a closer look at bycatch caused by 3rd wire/cable strikes and birds that do not show up in codend samples.

The Working Group was given a presentation by staff from the Northwest Fisheries Science Center on seabird bycatch caused by 3rd wire cable strikes that do not show up in observer samples. The study looked at black-footed albatross (BFAL) interactions in the Pacific hake fishery. Many vessels that participate in the hake fishery also fish in the BSAI pollock fishery.

Here is a summary of those data and some specific points of discussion from the presentation:

- Data Collection: hake observers watch randomly selected cables during tows for 15 minute intervals, sunrise to sunset (no night observations); estimated mortality of BFAL hard strikes at ~1% from observations from 2016-2019 across all seasons.
- In 2019 there was a spike in the number of BFAL mortality- likely associated with atypical event where BFAL were tangled in a net.
- Most of these vessels now have 4 wires (2 trawl cables plus 2 electronic wires) instead of 3 wires; unclear if 4th wire poses additional risk to seabirds.

Working Group discussion points:

- There are a lot of difficulties extrapolating data to whole haul and fleet. But, right now we are missing the birds that are taken by wires/cables in our traditional annual bycatch estimates. By including the additional observations we have a better idea of the actual bycatch.
- Can we have a dedicated observer on a vessel to specifically monitor seabird mortality? Answer: There are so many other tasks that observers must do as part of their job to help information fishery management (higher priority tasks), we cannot ask them to put those tasks aside.
- For a comparison to Alaska fisheries, current NMFS bycatch estimates do not include mortality from 3rd wire/warp cables but there is evidence that significant mortalities do occur. Several studies have attempted to quantify these mortalities and two reports are currently being reviewed. Both the Alaska and Northwest Fisheries Science Centers are working to gain a better understanding of this issue.

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https://drive.google.com/drive/folders/1rToFWCrxlxd06k--wQSPMJFfa_a7sSJz?usp=sharing