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## United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

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FWS/AFES

Report # B-5: U.S. Fish and Wildlife Service Report to the North Pacific Fisheries Management Council, October 2016.

The following information is a summary of the major updates from the U.S. Fish and Wildlife Service (Service) that the Service is involved in related to the affairs of the North Pacific Fisheries Management Council.

### **I. Migratory Bird Management Issues:**

#### *Update on Seabird Mortality Events and Monitoring*

Beginning in March 2015, a seabird die-off of unprecedented size, duration, and geographic extent was recorded; tens of thousands of dead murres (primarily common murres) have been observed across Alaska. Following severe winter storms in December 2015 and January 2016, >17,000 dead murres were counted at-sea and on beaches in Prince William Sound for an estimated mortality of ~25,000-60,000 birds. Similar mortality rates were recorded at Kodiak Island and along the Alaska Peninsula. In all cases, starvation appears to be the proximate cause of death; however, causes of the starvation remain speculative. We suspect that unusual warm water conditions created by El Niño and other anomalous oceanographic events in Alaska during 2014-2015 may have affected the distribution or abundance of their prey. Mortality may have also resulted from harmful algal blooms, also associated with warm ocean conditions. Anomalously warm temperatures continued in the Bering Sea and Gulf of Alaska through the summer and into fall 2016.

Nearly 120 murre carcasses, and 30 from other bird species, have been sent to the U.S. Geological Survey's National Wildlife Health Center (NWHC) in Madison, Wisconsin for disease and toxicological testing. Necropsies indicate birds were emaciated and died of starvation. In June, the Service's Migratory Bird Management Division received report updates from the NWHC for algal toxin analysis from sampled carcasses. Trace levels of saxitoxin (1.08-3.82 ng/g) were detected in 7 of 19 murre carcasses tested from Kodiak Island. The significance of low dose neurotoxin exposure and how it may

influence behavior and feeding in emaciated birds is not known, but may play a role in the 2015-2016 seabird die-offs.

In September 2016, the National Science Foundation (NSF) issued its first-ever awards to the NSF Inclusion Across the Nation of Communities of Learners and Underrepresented Discoverers in Engineering and Science program, which includes the Coastal Almanac project. The Service is a partner in this project and is working on a project to expand citizen science and agency science into coastal communities, including Alaska, and aims to provide community partners direct access to their contributed data, as well as the data of others, including mainstream science. The Coastal Observation And Seabird Survey Team is a key contributor to the Coastal Almanac project, collecting crucial baseline information on marine bird and mammal die-offs and strandings.

The Service will provide the seabird component of the Arctic Integrated Ecosystem Research Project (AIERP), a five-year project (with two field seasons) led by National Oceanic & Atmospheric Administration and funded by the North Pacific Research Board and Bureau of Ocean Energy Management. Seabird data collected during other marine ecosystem monitoring projects and fisheries surveys will be combined with that of the AIERP to improve our understanding of seabird distribution, abundance and prey use in the Bering Sea and Arctic. In the northern Gulf of Alaska, similar studies will continue via the Seward Line Monitoring Project and seabird surveys in Prince William Sound.

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