



# United States Department of the Interior



U.S. FISH AND WILDLIFE SERVICE  
Kodiak National Wildlife Refuge  
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## Federal Subsistence Activity Report Kodiak National Wildlife Refuge, February – August 2020

### Fisheries

*Please note that results of salmon counts presented below were provided by the Alaska Department of Fish and Game (ADF&G).*

#### Western Area

Escapement goals were exceeded for early-run sockeye salmon in both the Ayakulik and Karluk rivers. Salmon counted through the weirs totaled 220,935 in the Ayakulik and 195,548 in the Karluk.

The Ayakulik River late-run sockeye salmon totaled 71,660 fish, which was within the escapement goal range of 60,000 to 120,000 fish. The Karluk River weir will continue to operate into September.

Strong returns of sockeye salmon were reported for rivers on the southern end of Kodiak Island. Frazer and Olga Lakes (Upper Station) exceeded lower escapement goals. At Frazer Lake, the sockeye return totaled 135,740 salmon. At Upper Station, the late-run return totaled 104,899 through August 24.

Escapement of Chinook salmon in the Karluk River was 3,301 fish, which exceeded the lower goal of 3,000 fish. In the Ayakulik River, escapement totaled 2,402 Chinook salmon, which was below the lower goal of 4,000 fish. Harvest restrictions for Chinook salmon were imposed within the freshwaters of both these systems due to low numbers.

#### Northern Area

The Litnik (Afognak Lake) weir was pulled on August 7, 2020, with a final total of 24,284 sockeye salmon migrating into the system. With the exception of 2018 (17,587 fish), Litnik has consistently met its lower escapement goal of 20,000 fish.

In the Buskin River, escapement totaled 7,629 sockeye salmon, which exceeded the lower escapement goal of 5,000. Subsistence users from Kodiak, Port Lions, and Ouzinkie routinely target these runs; however, due to late timing of returns, users found it difficult securing high catch per unit effort.

### Akalura Creek Salmon Escapement Monitoring

The Refuge initiated this survey in 2015 in response to concern about trend of diminished escapement and availability of sockeye salmon for human and brown bear subsistence. In 2020, monitoring started on July 17 and is scheduled to conclude by September 30. This project includes a combination of automated time-lapse photography and video to document fish passing over panels mounted on the stream substrate. In the office, salmon are enumerated from time-lapse digital images and associated video is used to calibrate time-lapse counts. The data from 2019 is currently being analyzed by a biometrician. Results will be reported at the Council's next meeting.

## **Brown Bear**

### Population Assessment

We were unable to conduct our annual aerial bear density and composition surveys in 2020 due to flight restrictions related to Covid-19.

We have continued to discuss the results of our 2019 aerial density survey (Intensive Aerial Survey; IAS) with partners at ADF&G. Results from that survey showed a significant decrease in bear density in the Sturgeon watershed during 2018/2019 compared to previous years. Discussions have primarily focused on whether the decrease observed in the IAS is supported by other available data (e.g., bear stream use surveys, harvest records); whether low numbers observed are a result of bears leaving the area for more profitable areas or more likely to be caused by true population declines; what potential causes of the low numbers observed may be (e.g. berry production, salmon abundance, weather patterns, harvest); implications for the population if trends continue; potential management actions required; and ways to collect future data that will best meet our needs.

We are also presently conducting an overhaul of the refuge's bear databases to ensure that all historical data are accurately recorded, archived, and summarized. Summaries of all available IAS density trend data have been completed and data from bear stream use surveys are in process. Berry phenology and abundance, salmon abundance, and bear harvest data will also be a part of ongoing analyses aimed at developing a cohesive understanding of the present status of bear populations throughout the refuge.

### Bear-Berry Monitoring

The Refuge continued to monitor phenology of selected berry species in Kodiak and Karluk Lake in 2020. Monitoring of berry abundance usually occurs in four study sites. In 2020, only one of these sites, the Kodiak road-connected area, was monitored due to restrictions on fieldwork during the Covid-19 pandemic. We will present a summary of monitoring results at the Council's next meeting.

### Mountain Goat

Joy Erlenbach, Kodiak NWR, and Shay Hurd, pilot affiliated with Kenai NWR, surveyed primary summer range of mountain goats in hunt area 480 over 25 hours of four days between July 21 and July 27. They counted 1,703 total goats composed of 1,333 adults, 369 kids, and 2 unknown individuals. The kid:adult ratio was 0.28. In general this level ratio is indicative of relatively high herd productivity.

The number of mountain goat observed in 2020 was higher than in 2019 (1,471 total, 1,130 adults, 326 kids, 15 unknown; kid:adult ratio 0.29) but lower than in 2017 (1,950 total, 1,544 adults, 406 kids; 0.26 kid:adult ratio).

## **Migratory Birds**

### Aleutian and Arctic Tern Research

Robin Corcoran, Kodiak NWR, and Jill Tengeres, graduate student at Oregon State University, reported preliminary results from monitoring of two active tern colonies (Kalsin Bay, Middle Bay) in the Kodiak road-connected area. Kalsin Bay has had high but variable numbers of terns, at the peak of nesting we estimated 120 Aleutian terns and 75 Arctic terns. Both tern species successfully produced fledglings this year, though we observed a higher rate of fox depredation than in recent seasons. Aleutian tern fledglings were also seen at Middle Bay this season for the first time since 2016. Early in the season there were 50-60 Aleutian terns regularly fluttering over the nesting habitat, but many nests were lost primarily to foxes. Only about 20 adult terns remained during the long chick/fledgling period.

Additionally, the tern research team completed a survey of Aleutian tern colonies in the Kodiak Archipelago from July 24 - August 5 using the refuge research boat, the Ursa Major II captained by Jeff Lewis. They located six colonies where Aleutian terns had breed successfully, including a colony of over 200 terns on Aiaktalik Island, the largest colony located in the archipelago since 2017.

### Nearshore Marine Bird Surveys

The planned 2020 re-survey of Afognak and Shuyak Islands was deferred to 2021 due to safety concerns and restrictions associated with the Covid-19 pandemic.