



UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE
Izembek National Wildlife Refuge
P. O. Box 127
Cold Bay, Alaska 99571



Activity Report
Izembek National Wildlife Refuge, February – August 2022

CARIBOU

Federal Subsistence Hunt—Unit 9D (Southern Alaska Peninsula)

The Izembek NWR 2022/23 Federal Subsistence Caribou Hunt in Unit 9D is split into two hunting periods. The first period runs from August 01-September 30, 2022. The second half begins on November 15 and ends on March 31, 2023. These dates run concurrently with the Alaska Department of Fish & Game (ADF&G) sport hunt. After consultation with ADF&G, they support US Fish & Wildlife Service mirroring the state resident harvest regulations. The harvest limit of caribou in Unit 9D is three per hunter. To date there have not been any harvest reports submitted to the refuge from the participating groups.

Federal Subsistence Hunt – Unimak Unit 10

The residents of Cold Bay and Nelson Lagoon have been added to the federal registration hunt in Unit 10- Unimak Island. The hunt period is from August 1 - September 30, 2022. In consultation with The Alaska Department of Fish & Game there has been an increase in hunter harvest from total 5 to a total of 10 bull in Unit 10 and 15 permits were allocated. To date there have not been any harvest reports submitted to the refuge from the participating groups.

Winter 2022 Caribou Surveys

Winter caribou surveys are a key management tool used to monitor population size estimates for the Southern Alaska Peninsula Caribou Herd (SAPCH) and Unimak Caribou Herd (UCH). Izembek NWR conducted the annual winter survey of the SAPCH on Game Management Unit 9D from 26-28 February 2022. In total, we observed 1,055 caribou in the range of the SAPCH. The SAPCH population estimate has fluctuated widely over time, as has the number of caribou counted during the winter survey. The results from 2022 further demonstrate the dynamic nature of this herd, as the count of 1,055 caribou is lower than the last winter count of 2,091, conducted in 2020. For a highly dynamic population such as caribou, high inter-annual variability in counts may not be as important as the long-term population trend. While all winter counts since the high of 4,100 in 2002 have been around or below 2,000, the long-term trend over the past 18 years has been relatively stable. Furthermore, since a fall composition count was not able to be completed in 2021, age composition and structure for this population is not precisely known. The fall 2020 composition survey suggested that the calf:cow ratio was moderately high (32:100) and bull:cow ratios have been in excess of the 35:100 target since 2011 (40-62:100). Without known metrics, it is difficult to understand how the population may be changing, but known data suggests that

the herd is in a relatively healthy status. Incidental observations included 10 moose, including a cow with 2 calves.

A survey was planned for Unimak Island, to survey the Unimak Caribou Herd, but was unable to be completed due to weather and time constraints. Izembek staff plan to survey Unimak Island and the Southern Alaska Peninsula for caribou in the winter of 2022-3.

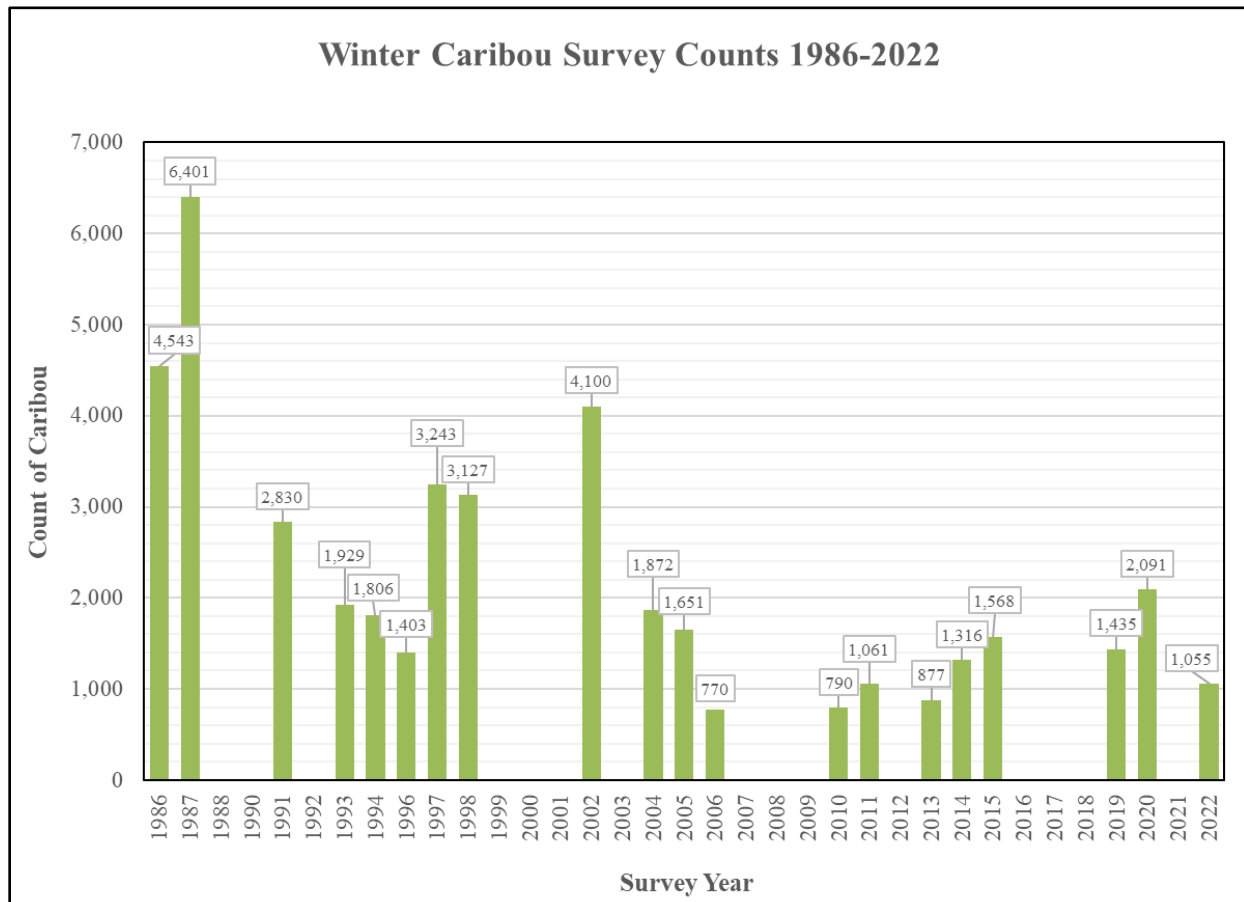


Figure 1. Bar graph indicating historic winter counts of the SAPCH 1986-2022. Winter counts were conducted by Izembek NWR Staff.

AVIAN

Annual Tundra Swan Population Survey

Izembek NWR completed the annual Tundra Swan Population Survey on May 21-23. Total survey time was 14 hours. Over the entire survey area, the survey crew observed a total of 1,003 swans, which was greater than the 2021 count. Within the Izembek survey unit, which represents the uniquely non-migratory population of Tundra Swans found on the southern Alaska Peninsula, we observed 72 swans in pairs or singly (likely indicating breeding birds) and 48 birds in flocks (likely indicating non-breeding birds). Within the Izembek area, the 2022 total count (120) was lower, and the proportion of breeding pairs was lower than in 2021. However, in the Pavlof area, the total count of swans was higher (883) and the proportion of breeding pairs was similar, indicating that there were more flocked and non-breeding birds in the area than in 2021.

Throughout the history of the spring tundra swan population survey, the Izembek unit has been characterized by low swan densities, long-term decreasing swan counts, and with periodic short-term declines in swan counts followed by slow recoveries. These low swan densities in the Izembek area may be attributed to sub-optimal habitat, low reproductive output, and predation of nests by brown bears, all of which may contribute to periodic emigrations from the population.

Highly Pathogenic Avian Influenza

In May of 2022, Izembek staff received several reports of sick, dead, and dying birds around Izembek Lagoon that were exhibiting neurological symptoms. Izembek staff conducted a survey of multiple beaches in the area and found dead brant, emperor geese, and glaucous gulls. Fresh carcasses were collected (1 brant and 1 glaucous gull) and sent to the Alaska State Veterinarian's Office for testing for Avian Influenza. Both carcasses were confirmed to have the H5N1 strain of Highly Pathogenic Avian Influenza that has been documented in domestic and wild birds across the country. No further reports of sick or dying birds have been received in the Izembek area at this time, but vigilance will be critical as migratory birds return to Izembek this fall.

Breeding Bird Survey

Izembek NWR staff surveyed the Cold Bay route of the Breeding Bird Survey June 28, 2022. The Breeding Bird Survey is a long-term and international monitoring program operated across North America as a joined effort between the U.S. Geological Survey (Patuxent Wildlife Research Center) and the Canadian Wildlife Service (National Wildlife Research Center). Breeding bird surveys first began at Izembek National Wildlife Refuge (NWR) in 1993. The survey route covers 25 miles of roads across the refuge and through Cold Bay, with survey points every 0.5 miles where an observer counts all detected birds for 3 minutes. During the survey, 31 unique species were detected. Observations of note included 1 Whimbrel and 2 Pacific Golden-Plovers, which have not been previously recorded during the breeding season at Izembek.

HABITAT

Eelgrass Abundance and Productivity Monitoring

Izembek NWR staff, completed an annual spring survey of eelgrass in Izembek lagoon on April 28-29 along 2 permanently established 100-m transects at Grant Point. Izembek staff also completed the established 100m transects at Grant Point again on August 12. At these same sites, sensors monitor light intensity, water temperature, and water depth to understand how environmental variables influence eelgrass growth throughout the year.

An eelgrass survey of Izembek Lagoon was completed August 13-19, 2022. This survey is a long-term monitoring study designed to assess changes in the status and trends in distribution and abundance in eelgrass. This year was the first year that a complete survey was conducted since 2019, due to the COVID-19 Pandemic. Staff from the USGS Alaska Science Center traveled to Izembek to assist with the surveys. During the survey, observers visited 118 systematically selected points in the lagoon and recorded information on eelgrass cover and length, seaweed cover, water temperature, water salinity, water depth, and invertebrate presence. Data are currently being processed and will be analyzed by USGS Research Biologists.

Invasive Species

USFWS Staff from the Invasive Species Program visited Izembek NWR July 11-30, 2022. During their visit, they conducted surveys for invasive species on and around Izembek and Alaska Peninsula National Wildlife Refuges, as well as the towns of Cold Bay and King Cove. Invasive species compete with native plant and wildlife species and disrupt the ecosystems that subsistence users rely on.

During the visit to King Cove, Invasive Species Program and Izembek NWR staff identified some isolated populations of invasive plants, including creeping buttercup (*Ranunculus repens*) and oxeye daisy (*Leucanthemum vulgare*). Staff also set traps for crab in areas of high use in the King Cove Harbor to survey for the invasive European Green Crab (*Carcinus maenas*), which can have significant effects on native aquatic plants and crustaceans, and which has just been discovered in southeast Alaska for the first time.

Cold Bay was previously known to have populations of creeping thistle (*Cirsium arvense*), orange hawkweed (*Hieracium aurantiacum*), and oxeye daisy, and during the 2022 field season, staff also identified a few isolated populations of creeping buttercup in town. During July, Invasive Species Program staff began treatments on creeping thistle, orange hawkweed, and oxeye daisy. Treatments will continue through 2024 under the direction of the Invasive Species Program. Since these species populations are relatively small in scale and isolated, addressing them over the next few years offers the possibility of complete eradication within Cold Bay. Izembek NWR Staff also conducted surveys for invasive plant species along the Cold Bay road system onto the Refuge, as well as surveys for aquatic invasives at Blinn Lake, and trapping for crabs at the Cold Bay Pier.

OUTREACH

Alaska Migratory Bird Calendar Contest

The Migratory Bird Calendar Contest is a state-wide art and literature competition which encourages K-12 students to learn about Alaska's migratory bird populations and how they can participate in bird conservation. Formerly known as the "Goose Calendar" from the Yukon-Kuskokwim Delta Goose Management Plan, the project underwent numerous changes as it grew to include more Refuges and drew more participants. Today, the Alaska Migratory Bird Calendar Contest receives participation from throughout rural villages of Alaska, facilitated by the efforts of many of Alaska's National Wildlife Refuges and field offices. Izembek National Wildlife Refuge hosts the annual Migratory Bird Calendar Contest for Aleutians East Borough schools and villages. Participating villages include King Cove, False Pass, Akutan, Sand Point, and Cold Bay. The theme for the 2023 calendar is "Fill Your Bill: The Neat Beaks of Alaska's Migratory Birds". Residents in the Community of Cold Bay volunteer each year to participate as judges in our local contest. This year we had a total of 50 posters and 4 literature submissions across four age categories, from which first, second, and third place winners were chosen. The winners were then sent to the U.S. Fish & Wildlife Service Regional Office in Anchorage for a state-wide contest. The state winners of the contest are published in each year's calendar, and every student that participated receives a certificate of appreciation from the U.S. Fish and Wildlife Service.

Sand Point Culture Camp

Izembek NWR staff traveled to Sand Point to assist with the annual Culture Camp event, held from July 11 – July 21. The two-week program provided children from Sand Point and other nearby communities with an experience to learn about the cultural and natural history of the area through arts & crafts, outdoor education, and daily classes on language, song, and dance. Izembek Biological Technician, James Fess, Volunteers Colby Banks and Paige Gray, and Alaska Maritime Park Ranger, Betsy Rogers, led environmental science lessons and activities on food chains and food webs, flowering plants, tide pools, and macroinvertebrates.

Artist in Residence - Lindsay Carron

Izembek NWR hosted artist in residence Lindsay Carron from August 5 – August 22 as part of the ongoing Within Refuge Lands art Project. Ms. Carron is an artist, muralist, and educator. During her artist in residency at Izembek NWR, she participated in the week-long King Cove Culture Camp, where she immersed herself in, and learned about the Unanga culture and traditions. Lindsay's passion for art and her experience as an educator allowed her to work closely with other culture camp instructors and to actively engage with culture camp participants through sketching, painting, and nature hikes. Lindsay spent the remainder of her time in the community of Cold Bay where she participated in Izembek NWR fieldwork, learned about the biological importance of the area, and spent time getting to know the community. Lindsay was instrumental in facilitating a community art outreach event for Cold Bay during which youth sketched and painted wildlife and adults collaborated on a panoramic painting of the community.

Ferry Tours

A welcome return to pre-COVID times, Izembek NWR has once again started giving refuge tours to ferry passengers traveling through on the Tustumena! Izembek staff coordinate with the Alaska Marine Highway System to provide tours to Tustumena ferry passengers. Upon arriving in Cold Bay, passengers disembark the Tustumena, jump in our tour bus, and head out to Grant Point to overlook Izembek Lagoon. Along the way, passengers are treated to a wealth of information as they learn about the community, Izembek Refuge, and the cultural and military history of the area. Once at Izembek lagoon, they are able to witness one of the world's largest eelgrass beds, observe Pacific black brant flying overhead, and listen to all the wildlife that abound.

OTHER UPCOMING WORK

Annual Brown Bear Stream Survey

The Annual Brown Bear Stream Survey is scheduled for August 24-September 2. This survey is used to understand population trends and composition of brown bears on the lower Alaska Peninsula and Unimak Island.

Avian Influenza Monitoring

USGS staff will be at Izembek NWR from August-November for research and monitoring projects with Avian Influenza. Samples will be taken from hunter-harvested birds, fecal material at roost sites, and water bodies to detect presence of Avian Influenza.

Brant Age Ratio Survey

The 2021 Brant Age Ratio survey is scheduled for October 3-14, which will mark the 60th consecutive year of collecting brant productivity data at Izembek NWR. Accurate estimates of the age composition can inform past reproductive success and future population trajectories. The productivity index for the entire Pacific brant population is generated from ground- and boat-based count ratios of adult to juvenile birds conducted in Izembek Lagoon and adjacent areas each fall when the birds are staging for migration. Data are shared with USGS, run through modeling processes, then shared with managers to aid in management decisions. In 2021, the proportion of juveniles was higher than in previous years. This year, the survey may be important in understanding how the outbreak of Avian Influenza influenced nestling survival and fledging.