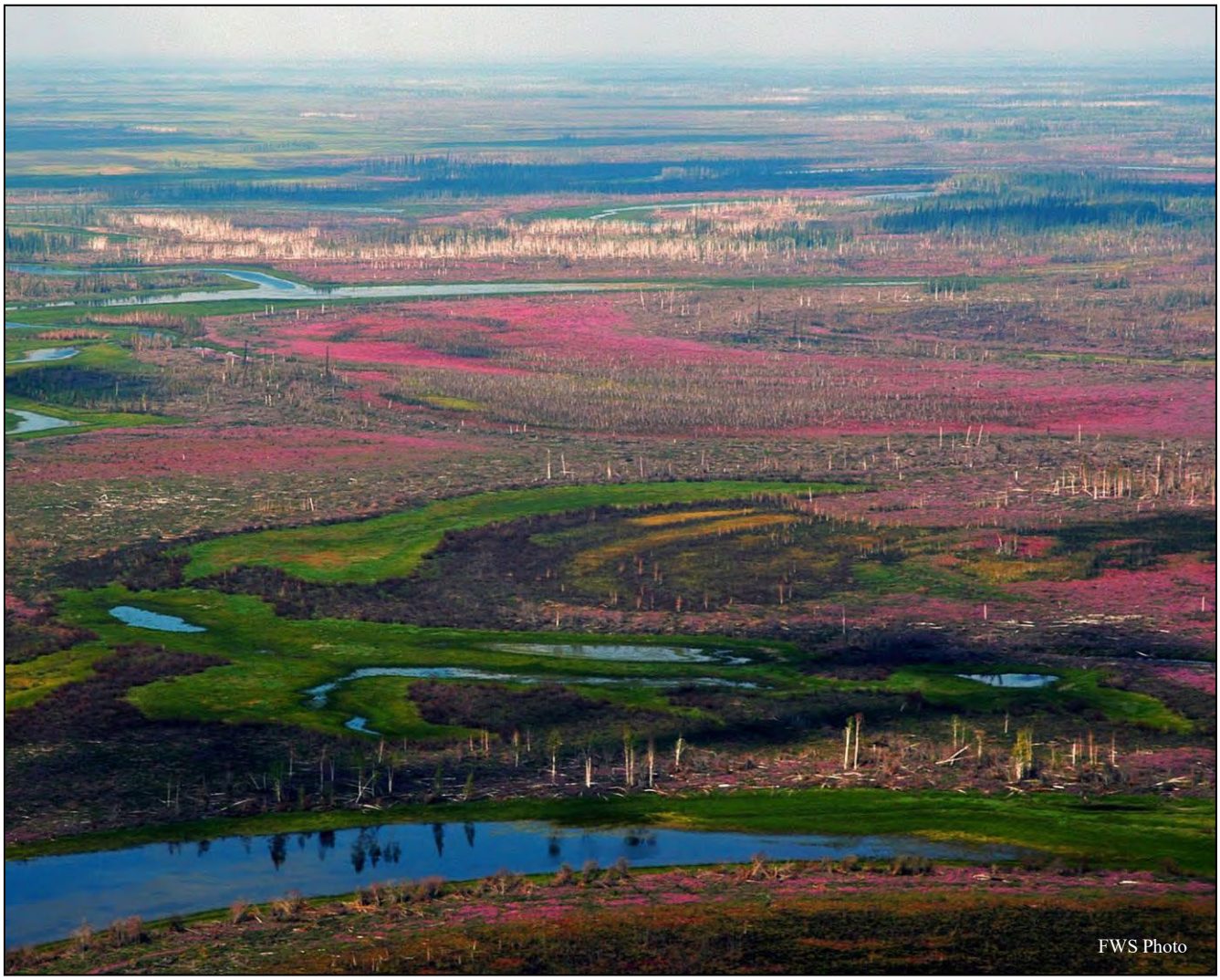
Yukon Flats National Wildlife Refuge

Annual Staff Report

October 2025 – September 2026



Refuge Overview

Yukon Flats National Wildlife Refuge (Refuge) was established in 1980 and has several purposes defined by law, including conserving fish and wildlife populations and habitats in their natural diversity, fulfilling the international treaty obligations of the United States with respect to fish and wildlife and their habitats, providing subsistence opportunities for local residents, and ensuring water quality and necessary water quantity within the Refuge. Home to over 1,200 mostly indigenous people who have occupied these lands for thousands of years, the Refuge boundary encompasses over 11 million-acres of land (8.63-million federally managed acres) in east-central Alaska. The Yukon River sculpts the vast Yukon Flats floodplain as it flows. Countless lakes, ponds, and streams in the basin support wildlife and humans as they have for generations. Through biology, outreach, and enforcement, Refuge staff partner with others to conserve resources and monitor animals and habitats that are important from local, national and global perspectives. This report is a summary of staff activities occurring between October 2025 through September 2026.

Staffing

Following a 50% reduction in our staff in 2025 we have added a new staff member this past July, Refuge Manager Laurie Boeck. Laurie, formerly the Deputy Refuge Manager at Yukon Delta Refuge in Bethel comes to the Yukon Flats with previous Refuge experience and extensive experience with the Alaska Department of Fish and Game. Our remaining staff include Mark Bertram, Supervisory Wildlife Biologist; Bryce Lake, Wildlife Biologist; and Clayton Merrill, Subsistence Coordinator. Despite 2025 losses in capacity, we managed to have a relatively productive field season, thanks in large part, to our regional pilot Brett Nigus. We are hopeful that we will be able to continue to rebuild our staff in the coming year. The following is an update on refuge activities.

Lynx Movement Study

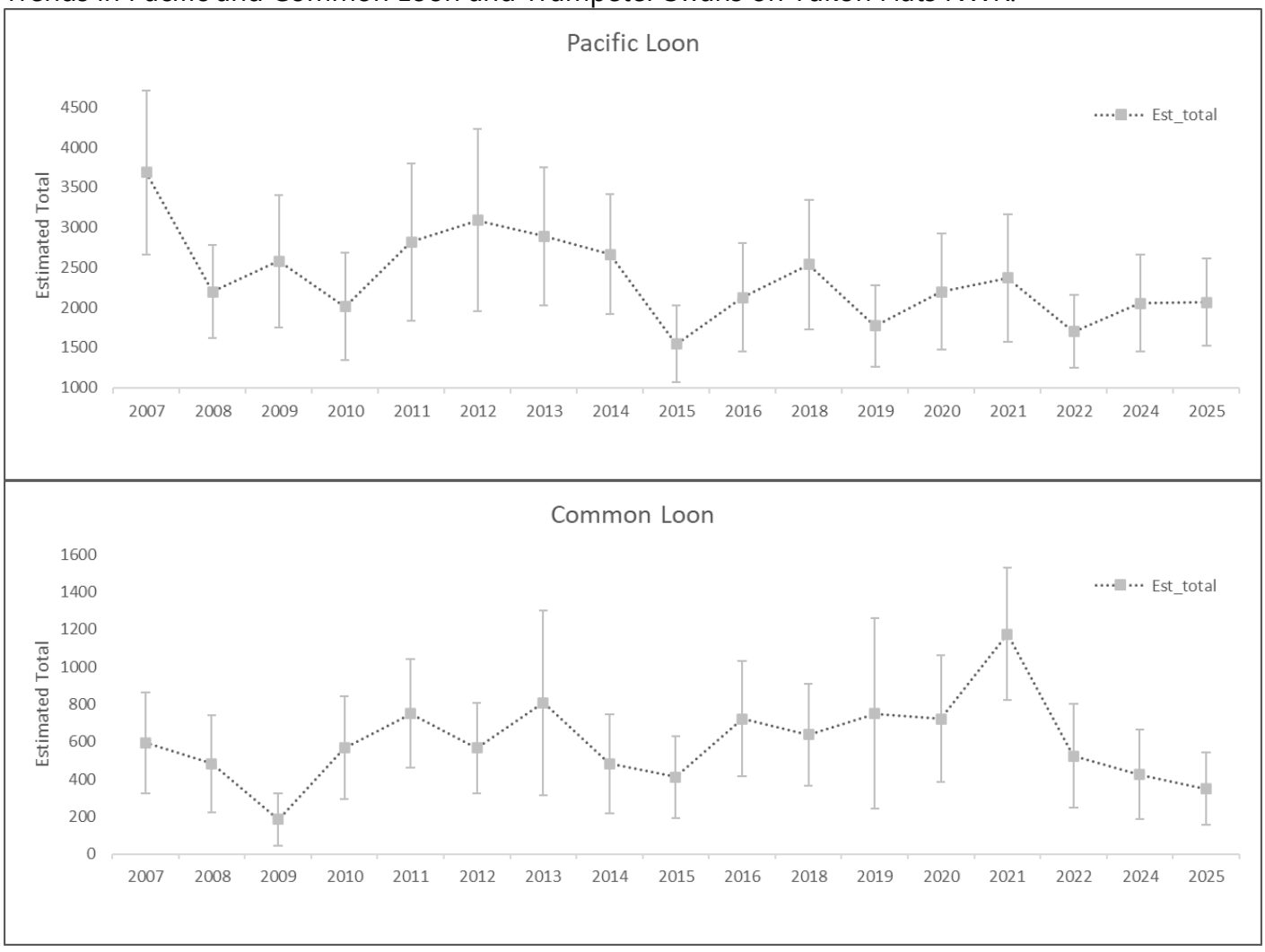
Refuge staff have been monitoring lynx movement patterns, dispersal behavior, and survival in relation to snowshoe hare abundance since 2017. Lynx and hare numbers are increasing from the low point in their population cycles. Two lynx were captured and collared in 2026 in the final year of this 10-year project. The project also included trapping areas in the Tetlin, Kanuti and Koyukuk refuges and in the Gate of the Arctic National Park and Preserve. A valuable and unique data set has been compiled tracking the movements of 172 lynx across Alaska and Canada from all these Alaska study areas. We have learned that lynx can disperse great distances, sometimes over 1,000 miles, when their food source- snowshoe hare, is depleted. There appear to be no barriers to lynx movements with direct crossings documented over mountain ranges and the largest rivers in Alaska and Canada. The dataset is available on the USFWS national database Servcat.

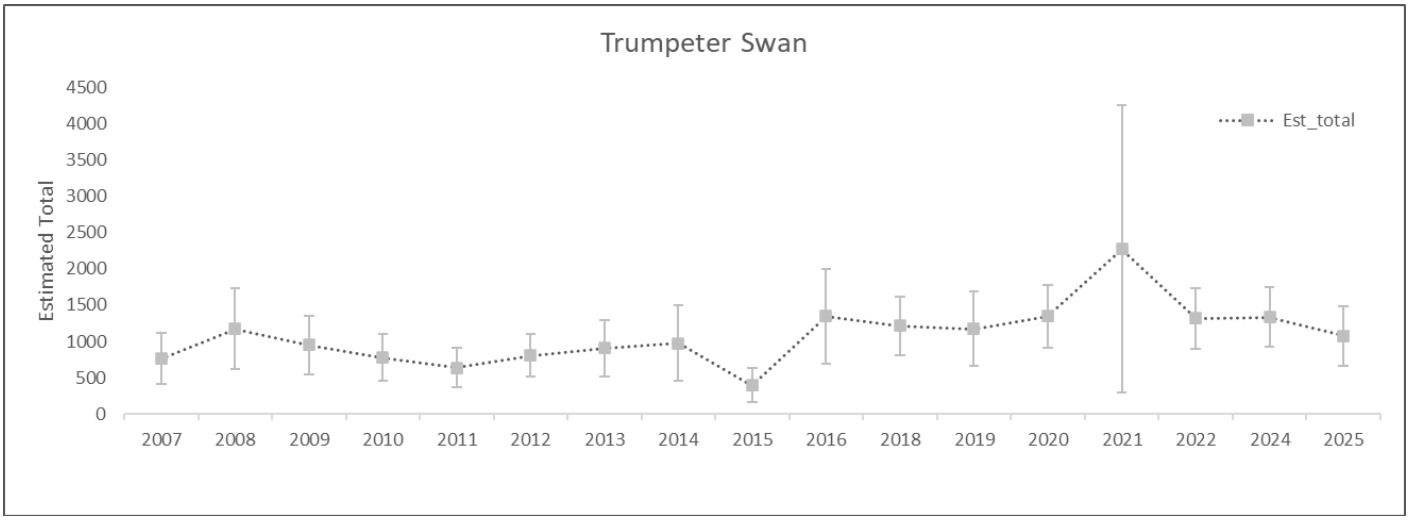
Waterbird Surveys – Scoters, Scaup and Loons

Yukon Flats has some of the highest nesting densities of scoters, scaup and loons in Alaska; therefore, these annual surveys to monitor their health in the Alaska boreal forest are important. After 23 consecutive years we were unable to conduct the spring aerial scoter/scaup surveys in 2025 due to loss of the Refuge pilot. In 2026, we contracted the survey to Survey Air Alaska and all survey areas in the Refuge were completed. The contract also included three other Refuges, Selawik, Kanuti and Tetlin, and all were completed as well. Results from the survey will be available later this year.

Loon surveys (including swans) are conducted in August to count both breeding pairs and their young. August 2025 data indicated stable populations of all loon species, Pacific, Common and Red-throated loons. August 2026 data has not yet been tabulated. Observers commented that swan production in 2026 may be up based on the high numbers of cygnets (young swans) observed.

Trends in Pacific and Common Loon and Trumpeter Swans on Yukon Flats NWR:





Survey of Bald Eagles and Other Stick-nesting Birds

We were able to conduct the eleventh annual survey of bald eagle nests and other stick-nesting birds on the Draanjik River on May 12, 2026. We observed one active Raven nest and eight active Bald Eagle nests, plus 16 empty nests. One-time inventory surveys were conducted in previous years (since 2014) along the Yukon, Hodzana, Beaver, Birch, Porcupine and Teedrinjik rivers. Inventorying and monitoring bald eagle nests and foraging sites provide information on their local densities, trends, and habitat use, and will provide a database needed for responsible management. Federal law (Federal Register: 50 Part 22) requires permits to disturb bald eagles. As management activities arise, such as requests for rights-of-way, special use permits, mining activities, land exchanges, seismic work and oil and gas activities, etc., we are required to protect nests (active and inactive) and foraging sites.

Sheep Survey

A White Mountains sheep survey was completed in July 2026 by ADF&G. Following is an excerpt from their survey report.

We observed a total of 96 sheep, including 39 on Mount Schwatka and Victoria Mountain and 57 on Fossil Ridge, Cache Mountain, Lime Peak, and Mount Prindle (Table 1). This total is below that observed during 2024 and 2025 surveys and well below the 2016–2026 (n = 7 surveys) average of 221 observed sheep (Figure 2). The reduction in the number of sheep we observed compared to previous years was mostly due to fewer adult sheep. We observed 79 sheep ≥1 year old in 2026 compared to 139 and 115 in 2024 and 2025, respectively. We observed 17 lambs in 2026 compared to 28 and 8 in 2024 and 2025, respectively, and our estimated lamb:ewe ratio was 29:100. This is an increase over the 2024 and 2025 surveys and is above the 2016–2025 (n= 7 surveys) average of 23 lambs:100 ewes indicating average to slightly above average productivity. Overall, the ram numbers observed (n=21), including those determined to be legal, was slightly below what was observed in 2025 (n=28). However, this year, no rams were judged to be legal during the survey.

Although the White Mountains sheep population is currently at the lowest observed level since periodic surveys began in the 1970s, it is only slightly below levels observed during the past. Before making management decisions based upon the low number of sheep observed during this year's survey, it will be critical to obtain another survey next year to determine if the low number of sheep observed is a potential artifact of missed groups or an actual decline in the population.

Table 1. 2026 White Mountains sheep counts by demographic group and survey area.

Survey area	Ewe-like[a]	Lamb	Full Curl Ram[b]	Stumphorn Ram	Sublegal Ram	Total	Survey time
Cache Mtn.	0	0	0	0	0	0	0:23
Fossil Ridge	9	3	0	0	6	18	2:10
Lime Peak	3	2	0	0	3	8	1:00
Mount Prindle	22	4	0	0	5	31	1:20
Mount Schwatka	24	8	0	0	7	39	3:45
Victoria Mountain	0	0	0	0	0	0	1:00
Total[e]	58	17	0	0	21	96	9:38

[a] Includes ewes, yearlings of both sexes, and rams of ¼ curl or less.

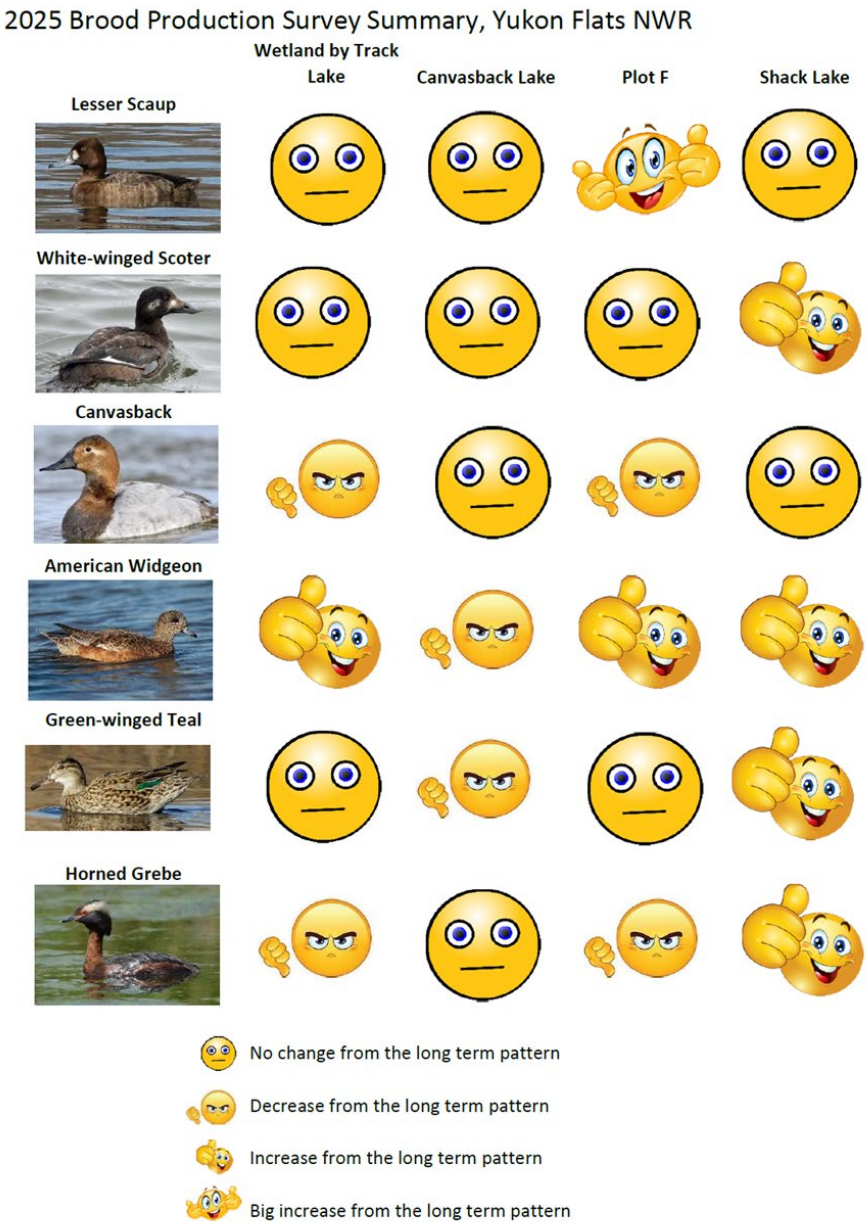
[b] Includes rams that are ≥full curl or rams with both horns broken.

Figure 2. Number of sheep, broken down by demographic group, observed during White Mountains sheep surveys, 2000–2026. The ewe-like category includes yearlings of both sexes and rams of ¼ curl or less.

OBJ

Duck Brood Production Survey

In July 2026, a duck brood survey was conducted at three wetland complexes, Canvasback Lake, Shack Lake, and Plot F. This survey is conducted late in the summer and targets primarily diving ducks such as lesser scaup. Data is currently being analyzed. High water was common in all areas, it appears that brood numbers for diving ducks, such as scaup are below average. Dabbling duck observations appeared also to be down. A report is anticipated in December. No evidence of sick ducks from avian influenza was observed. Results from the 2025 survey:



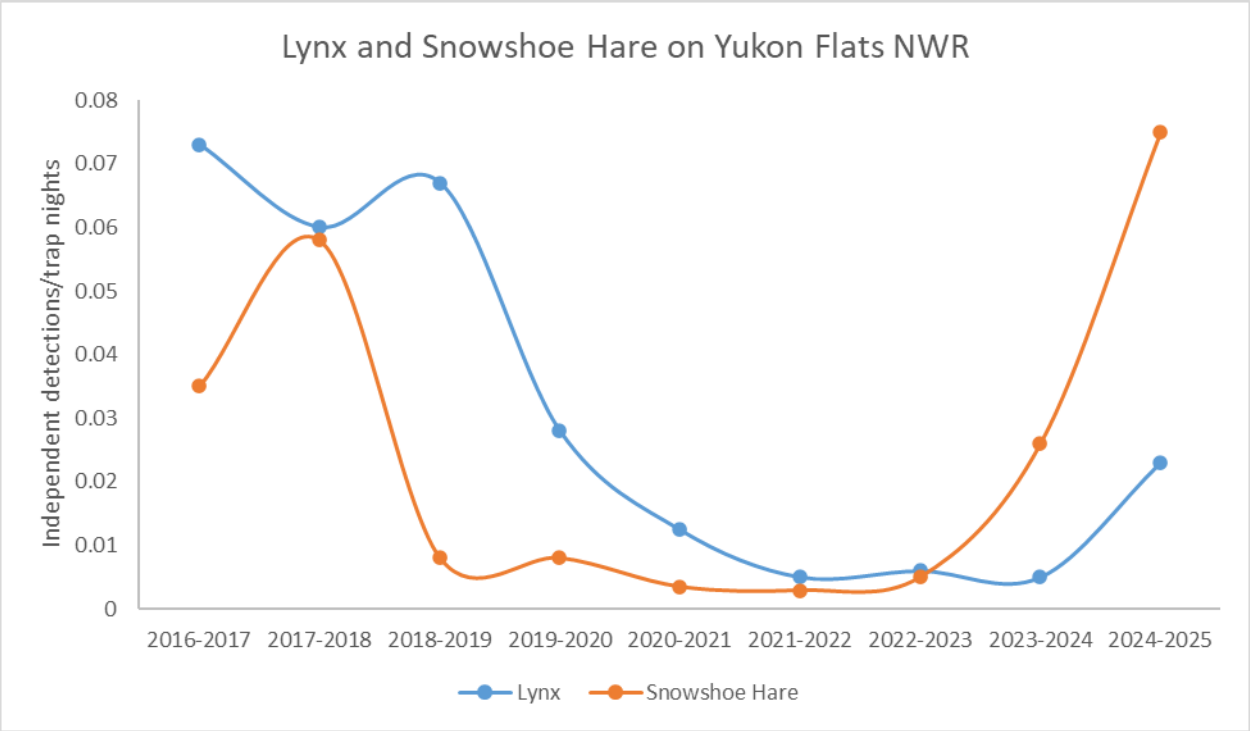
Furbearers and Trail Cameras

A long-term effort to monitor trends in the lynx population on the Yukon Flats National Wildlife Refuge (NWR) was conducted from 2016 through 2025. Up to 34 camera traps deployed across the Refuge captured images of lynx and other wildlife, which were then classified and stored in a centralized database. These data were used to estimate lynx occupancy and assess relative abundance within the broader mammal community.

Lynx occupancy remained high (greater than 0.70) during winters 2016–2019, declined to 0.40 in 2021, and fell to 0.31 in 2022. Recovery began in winter 2023 (0.56) and continued through 2024 (0.57) and 2025 (0.49). As snowshoe hare numbers declined, camera detections shifted from lynx being the most frequently photographed species to black bears dominating detections. By 2022, wolves were photographed more often than lynx. Trends in lynx annual relative abundance closely tracked fluctuations in snowshoe hare relative abundance with an estimated 1–2-year lag. Fur

trappers on the Yukon Flats NWR should expect increasing catch of lynx in the coming years. Camera data also indicated relatively stable populations of non-lynx medium- and large-bodied furbearers (wolf, wolverine, red fox, coyote) throughout the study period. Based on black bear indices, grizzly bear density in parts of the Yukon Flats NWR may be higher than previously recognized. These results can inform proposals to state and federal regulatory bodies and highlight future opportunities to explore abundance estimation approaches such as distance sampling, time-to-event, or space-to-event models, as well as spatial analyses of occupancy and species richness.

Cycle of snowshoe hare and lynx populations on Yukon Flats NWR, 2016-2025:



Duck Banding

A total of 179 ducks were banded at Canvasback Lake during August 2026. Water levels were high and this contributed to tough conditions for catching ducks. The goal of the project is to band mallard and northern pintail to inform harvest management. Young of the year numbers for all species were down which indicates poor production for dabbling ducks in 2026. Banded duck species included mallard (38), northern pintail (108), and green-winged teal (33). No sick or dead birds or other evidence of avian influenza was observed. One highlight was the recapture of a female northern pintail originally banded as a young-of-the-year in 2021.

Moose Management

A survey of the eastern half of the Yukon Flats (25D remainder) was conducted in March 11-14 2026 by the Alaska Department of Fish and Game. Following is a summary of the moose survey from an April 2026 moose memorandum prepared by Jordan Pruszenski: A spring survey was conducted due to the inability in recent years to have adequate snow coverage in early winter. One of the hesitancies around switching to a spring survey was that spring surveys are not directly comparable to fall surveys due to differences in sightability (detection), winter moose mortality, and moose habitat use between the fall and spring surveys. In general, this area has a low but stable moose population with a long-term fall moose density of 0.32 moose/mi2 (1999-2015). This was the only the second spring survey in this area since 2004.

Survey conditions were good due to adequate snow coverage, relatively new snow, and calm, clear days. The moose population was estimated at 745, which resulted in a moose density of 0.25 moose/mi2. This is similar to the 2004 spring survey where they found 0.20 moose/mi2. Other spring surveys conducted in 25D West, the neighboring survey area centering around Beaver, have also found similar densities over the years with a long-term average moose density of 0.24 (1999-2023; Lake and Guldager 2023). The results of the spring 2026 survey show that the moose population in 25D East is still a stable, low-density population. Questions about this survey can be directed to Fort Yukon Area Biologist Mark Nelson or Assistant Area Biologist, Jordan Pruszenski.

Pollinator (Bee) Sampling

Pollinators play a key ecological role in ensuring seed and fruit production for plants. In the past 50 years there have been significant declines in bee populations nationwide. We participated in the state-wide Alaska Bee Atlas project again this year and collected samples from Shack Lake, Plot F and Canvasback Lake in July 2026, the final year of the project. Collections from 2025 resulted in new bee species range extensions for Alaska.

Salmon Habitat Thermal Mapping

Aerial surveys are scheduled for the Teedrinjik River in early October to map hot spots (elevated water temperatures) that would indicate good spawning habitats for chum salmon. Thermal cameras will be used to identify the warm upwelling waters in the river. These surveys will also be conducted in other areas of the state to develop a remote method to identify chum spawning habitats.

Geospatial Application Developed to Measure a Changing Landscape

Refuge staff entered into a partnership with the Geographic Information Network of Alaska at the University of Alaska Fairbanks to develop a web application that will allow managers and biologists to easily display and summarize remotely sensed data to inform natural resource management. Staff will be able to spatially monitor the growing season, snow cover, surface water, wildfires and more through time. The new application will be highly interactive and easy to use allowing staff to produce maps, tables and figures that display change across the Yukon Flats Basin. Staff turnover has slowed completion of this project, but we hope to have a test version available this year.

Fire Season Update

As of August 26th, the Refuge has had three reported wildfires burning a total of 124 acres on the Refuge. All fires were determined to be started by lightning, and all 3 fires were detected between July 10th and 11th. These 3 fires plotted within a limited fire management option and no suppression actions were taken. All were called out on August 5th.

This summer, Alaska saw less than 90,000 acres burn. The long-term average for the state is approximately one million acres burned annually.

Fire Management Pilot Project

A fire management change was made in 2023 to protect persistence of Yedoma on the Refuge that moved eight areas (1.6-million acres) within the Refuge from fire management option "Limited" (i.e. less fire protection) to "Modified" (i.e. more fire protection). Yedoma is deep prehistoric permafrost. These eight areas have not had fire since 1990 and sit atop Yedoma permafrost.

Updates to the rationale and justification for continuing the option change were made in February 2026. The rationale of the option change is to preserve mid-to-late successional plant communities for habitat diversity, reduce impacts to water quality and quantity and significant fisheries spawning habitats, reduce air pollution and its impacts to subsistence users, and protect carbon-rich Yedoma to delay the release of greenhouse gases into the atmosphere. There were no Refuge fires in 2026 that started on or near Yedoma areas.

Woodwell Climate Research Center staff visited the refuge in August 2026 to gather data to characterize the above and below ground combustion and thaw depth of the National fire to serve as validation for modeling efforts to improve accuracy of specific maps for wildfire combustion and permafrost vulnerability to wildfire.

Law Enforcement Program

Fish and Wildlife Officer (FWO) Bill Catoe was recently assigned to the Yukon Flats Region and arrived on station in March 2026.

FWOs are working to minimize impacts to hunters while working with the Refuge Subsistence Coordinator to resolve permit distribution issues and ensure regulatory compliance.

FWO's are conducting regular river and air patrols working hunting and fishing seasons and are planning winter patrols.

Please reach out with any issues or observed violations to FWO Catoe at 907-720-3209 or william_catoe@fws.gov

Status of Doyon-Hilcorp Project

Hilcorp established two test drill sites east of Birch Creek village, near Canvasback Lake, on private lands adjacent to the Refuge in 2025 and performed drill tests on one of the sites. In spring of 2026 Hilcorp announced they were demobilizing activities at both test sites and by July 2026 had removed all infrastructure from the sites. The departure was abrupt and the cleanup complete. Prior to departure Hilcorp inquired if the Refuge wished to take over management of water gauges installed in Birch Creek but the Refuge declined due to lack of capacity and gauge design.

In a related issue, the Refuge also provided comment to AK Department of Natural Resources which issued a notice of intent solicitation for comment to evaluate oil and gas exploration proposals on State lands adjacent to the Refuge. The area of interest includes the entirety of the Yukon Flats Basin.

Old BIA School Contaminant Remediation Project

As we reported last year, the Refuge owns a lot in Beaver, Alaska, which contains the current school and old Bureau of Indian Affairs school and associated structures. The grounds and the old school are contaminated with an assortment of chemicals. In 2023, a site report and scope of remediation was completed. BIA has partially funded the project and this past August all above ground structures were removed from the site. The Service will continue to seek funds to remediate the site. Once remediated, a land exchange with Beaver Kwitch'in Corporation could be done so the corporation would own this valuable site within the community. There will also be an informational kiosk constructed that commemorates the old school and its rich history.

If you have any questions please contact Laurie Boeck, Refuge Manager at 907 545-6846, laurie_boeck@fws.gov or Mark Bertram, Supervisory Wildlife Biologist at 907 334-5259, mark_bertram@fws.gov.