

Research Summary

Title: Cooperative Waterfowl Population Surveys in the Northwest Territories

Period: May 19 -June 10, 2022

Main Investigator: Mark Koneff, Chief, Migratory Bird Survey Branch, United States Fish and Wildlife Service

Research Permit: WL500658

LOCATION

The survey covers much of the Mackenzie Valley region from the southern border of the NWT to the Mackenzie Delta Region. The survey in the NWT is part of the Waterfowl Population Survey Program. This program conducts annual aerial surveys for waterfowl in many of the important waterfowl breeding areas in North America.

RATIONALE

The Northwest Territories is one of the most important breeding and summering areas for ducks, geese, and swans in North America. Information on bird numbers, distribution, and population trends is needed to determine if current harvest levels are sustainable. This will help ensure that waterfowl populations are conserved for the long-term use and appreciation by northern residents and all other people residing within the migratory range of these species.

OBJECTIVES

The objective is to determine the species and number of ducks and other waterfowl in the Mackenzie River drainage during the breeding season.

METHODS

The survey followed standard operating procedures for aerial waterfowl surveys. A small airplane flew a single pass along straight-line transects at a height of 46 m (150 feet). Two observers recorded the number and species of waterfowl observed within 200 m (660 feet) on each side of the aircraft. The location of all observations was also recorded.

RESULTS AND MAIN CONCLUSIONS

2022 was the first year of conducting the waterfowl surveys since 2019 due to the COVID-19 (SARS-CoV-2) pandemic. Much of Northern Alberta and Northwest Territories generally received average to above-average precipitation and varied temperatures since fall 2021. The Peace-Athabasca Delta was impacted significantly, resulting in marginal waterfowl-nesting habitat conditions. Between Fort Chipewyan, AB, and Hay River, NT, above-average precipitation led to full wetlands and widespread riverine flooding, but waterfowl habitat conditions were good, with waterfowl making use of nearly every wetland surveyed. Habitat conditions remained good until the northern portion of the Mackenzie Delta, where river levels were well above normal, causing deep flooding that offered little suitable waterfowl nesting habitat.

In this survey area, the total duck estimate for 2022 was 26% lower than the 2019 estimate and similar to the long-term average. Mallard numbers were 28% below the 2019 estimate and similar to the long-term average. The American wigeon estimate was 52% lower than 2019 estimate and 22% lower than the long-term average. Green-winged teals were 36% lower than the 2019 estimate and 18% above their long-term average. Northern shovelers were 23% above the 2019 estimate and 66% above the long-term average. The Northern pintail estimate was 44% lower than 2019 and 21% lower than the long-term average. Canvasbacks were 12% higher than the 2019 estimate and 52% above the long-term average. The scaup estimate was similar to 2019 but 28% below the long-term average.

<https://www.fws.gov/media/waterfowl-population-status-2022>

LONG-TERM PLANS AND RECOMMENDATIONS

The Waterfowl Population Survey Program has evolved into the largest and most reliable wildlife survey effort in the world. For more than 50 years, cooperative waterfowl surveys have been performed by United States Fish and Wildlife Service, Canadian Wildlife Service, state and provincial biologists and non-government partners. Survey results determine the status of North America's waterfowl populations, play an important role in setting annual waterfowl hunting regulations, and help guide the decisions of waterfowl managers throughout North America. The surveys are planned to continue annually.

PARTNERS

United States Fish and Wildlife Service

Canadian Wildlife Service

COMMUNITY INVOLVEMENT

Canadian Wildlife Service has reviewed all concerns and comments provided by the communities and have discussed solutions directly with them. The main concerns received by the communities are opportunities for local hiring and potential disturbance to wildlife. The United States Fish and Wildlife Service is unable to hire local help because of liability and legal issues as well as constraints in the United States civil service hiring regulations. It is expected that the surveys will have a negligible effect on waterfowl and other wildlife because transects are widely spaced over a vast area and areas are only surveyed once annually.

CONTACTS

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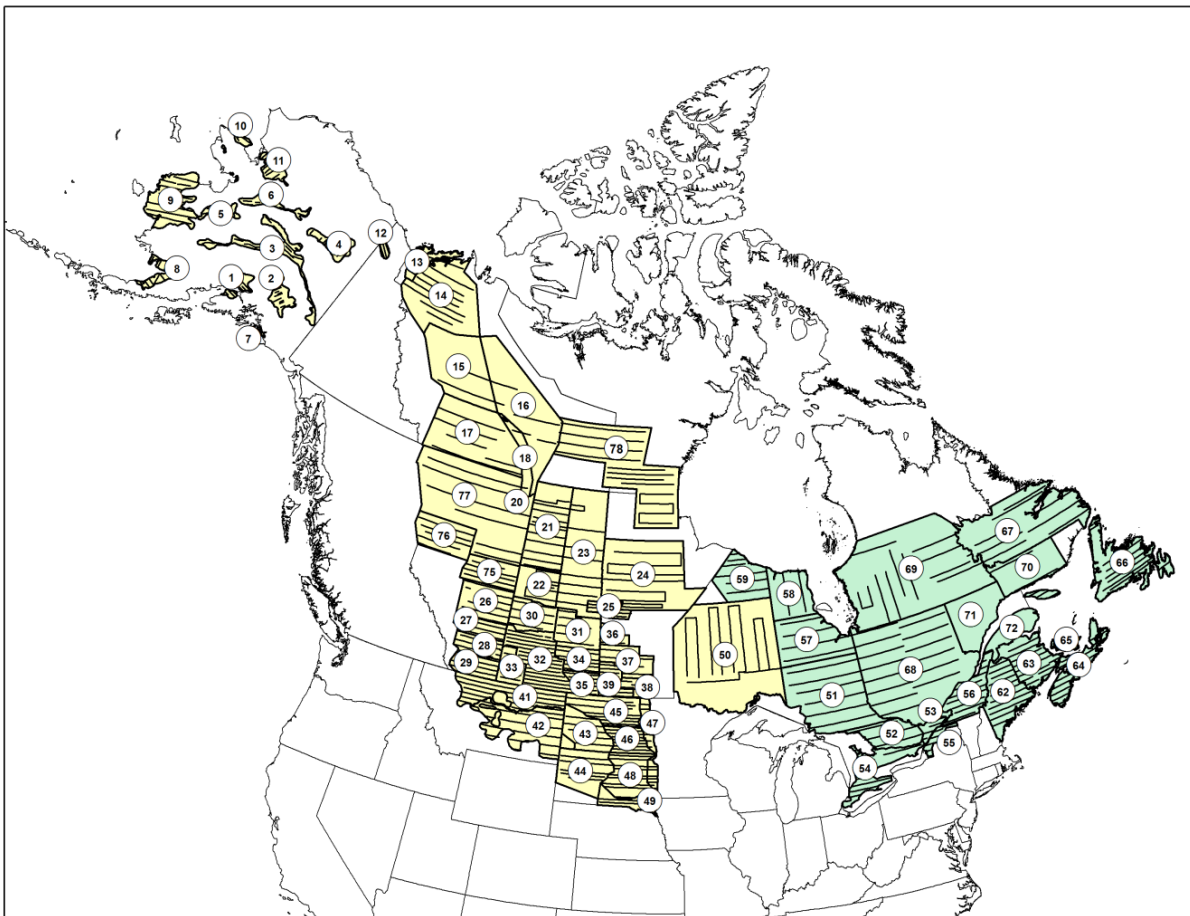


Figure 1: Transects flown by small airplanes during annual breeding ground surveys of waterfowl in North America. Twenty-three widely spaced transects are surveyed in the Northwest Territories. Circled numbers indicate different survey regions (strata)