

Lower Mackenzie Water Bird Survey Update - September 2003

**Jason Charlwood, Alicia Korpach
and Keith Patton**

**Western Boreal Forest Program
Ducks Unlimited Canada**

The Lower Mackenzie waterbird surveys were conducted over a three-year period, starting in 2001. These water bird surveys are part of the Western Boreal Program of Ducks Unlimited Canada (DUC) in partnership with Ducks Unlimited Inc., Gwich'in Renewable Resources Board (GRRB), Wildlife Management Advisory Council (WMA-C-NWT), Inuvialuit Game Council (IGC), Government of Northwest Territories, United States Forest Service, North American Waterfowl Management Plan and the Pew Charitable Trusts. Interest in the Lower Mackenzie project area was sparked by concerns of local people about the apparent decline of Scoter *spp.* (Black Ducks) and Scaup *spp.* (Blue-bills). Through local Gwich'in hunter knowledge the project area was identified to help address the issues surrounding the decline of these species. There is also interest in documenting the importance of the Mackenzie Delta and surrounding area to breeding, molting, brooding and staging waterfowl. DUC was interested in identifying the use of this area by the various species of boreal waterbirds in greater detail than has ever been studied in this area before.

The main Lower Mackenzie project components consisted of the development of an accurate satellite based landcover classification, waterbird surveys, water chemistry and Traditional Ecological Knowledge (TEK) of wetlands in the project area. As of September 2003, all components, with the exception of additional TEK, have been completed. Landcover classification was completed in 2002 and the collection of water chemistry data as well as the third year of waterbird surveys was completed in 2003. The TEK component is ongoing, consisting primarily of communications with local community partners during information updates. In the future, we will incorporate TEK with land use planning decisions and in a decision support system (DSS).

Project Area

The Lower Mackenzie Project Area is approximately 32,000-km² (8 million acres) and centered on Inuvik, NT (68° 18' N, 133° 29' W) (Figure1). This includes a large portion of the Mackenzie River Delta (Canada's largest fresh water delta) approximately 12,170 km² in size, of which 64% (7,795 km²) is within the Lower Mackenzie project area. This delta portion represents 24% of the entire project area.

- See Map Below -

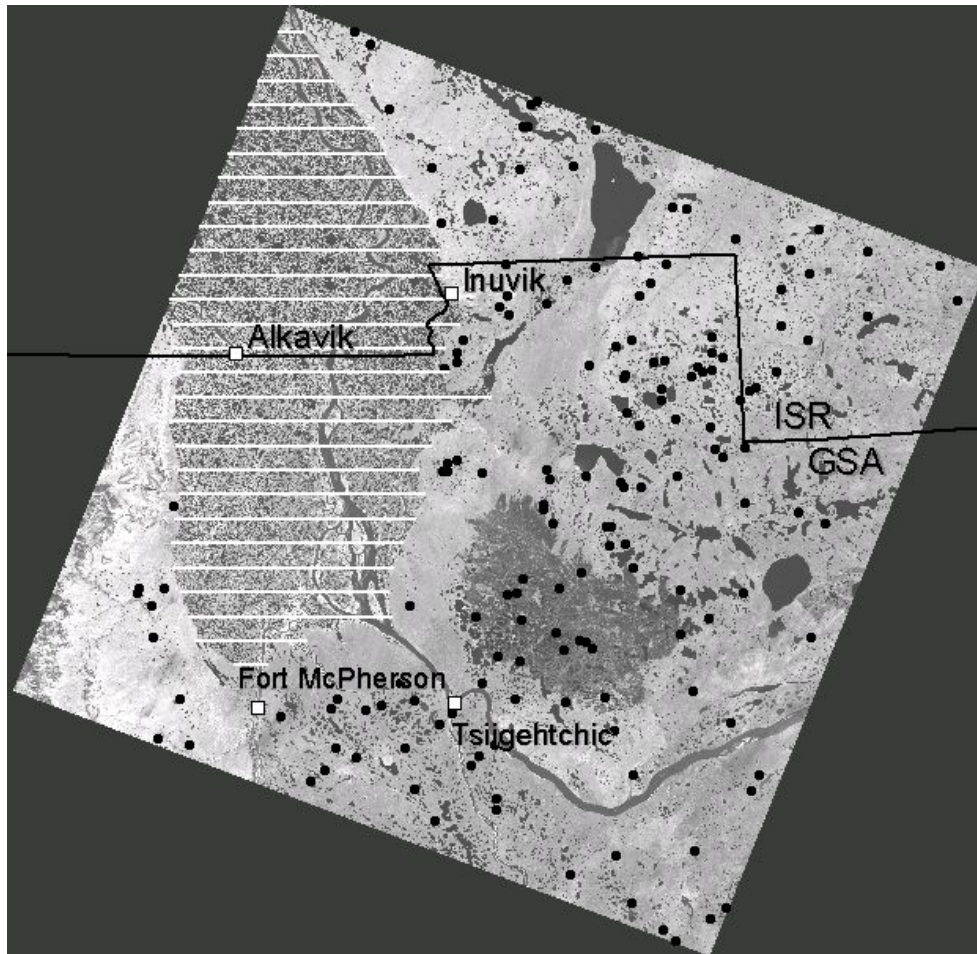


Figure 1. LANDSAT image of the Lower Mackenzie project area showing wetland basins surveyed (black dots) during pair and brood surveys in 2003, Delta transects (white lines) and the Gwich'in Settlement Area (GSA)/Inuvialuit Settlement Region (ISR) border.

Methods & Preliminary Observations in 2003

In the project area, approximately 159 specific wetland basins were surveyed by helicopter, while the Delta portion was surveyed from a floatplane along 27 transect lines during two pair (June 4-8, 26-30) and two brood (July 24-28, August 4-6) surveys (Figure 1). For the two staging surveys (August 19-24, September 6-10), approximately 150 wetland basins and all 27 Delta transect lines were surveyed using a floatplane.

Although all the data is not yet compiled and analyzed, we have preliminary waterbird observations from the project area. Timing of pair surveys seemed to be on target. The most abundant breeding duck species observed were Scaup, Wigeon, Mallards, and Scoters. Other ducks observed in lower numbers included Ring-necked ducks, Canvasbacks, Green-winged Teal, Goldeneyes, Northern Pintails, Buffleheads, Northern Shovelers, and Long-tailed ducks (Oldsquaw). During the second pair survey several forest fires were burning in the study area, one only 3km from the Inuvik airport, which created logistic difficulties and five of the basins were not surveyed. This was due to their close proximity to the Inuvik fire, those basins being within the “no-fly” zone.

On the wetland basin surveys, Mallards, Scaup and Wigeon broods were most common. Yet, American Greenwing Teal and Long-tail ducks were also observed with broods but the number of these broods were much lower than the other species mentioned above. Loon numbers appear high in this area compared to other study areas in the Western Boreal Forest. A majority of wetland basins had at least 1 pair of Pacific Loons nesting on them. The Delta portion of the project area had larger groups of divers, Scaup, Ring-neck Ducks, Scoters and Canvasbacks. Wigeon and Mallards were also relatively common on the Delta. Common loons were more prevalent on the Delta portion than Pacific Loons, and several Red-throated loons were also observed in this area.

Staging surveys were completed prior to the first snow, with congregations of waterbirds still using the Delta and larger lakes in the area. The most common species were Scaup, Wigeon, White-winged Scoters and Ring-necked ducks. Other species such as Canvasbacks, Mallards and Goldeneyes were also seen in larger flocks preparing for their winter flight. Tundra Swans were observed regularly on the surveys but they were most abundant in early September (staging survey two) when a few thousand were observed both on the delta and in the surrounding wetlands.

Water samples from a number of wetland basins on both Delta and non-Delta portions of the project area were sampled in 2003. These samples will be analyzed to assess wetland productivity among other issues. Through consultation with the Tsiigehtchic RRC, a number of the Fishing Lakes were included in the water chemistry sampling.

Discussion

The waterbird surveys and water chemistry data collection were successfully completed in the summer 2003. With all the water bird surveys now being complete, a final report describing the results of these surveys will follow the annual report in spring/summer 2004. There will also be a report of the finding from the water chemistry analysis prepared in 2004. These reports will be distributed to all partners for their input and review. We would like to take this opportunity to thank all our partners for their expertise, interest and support with the Lower Mackenzie Project over the last few years. We have greatly enjoyed working together and we look forward to working with everyone in the future. The Lower Mackenzie area is a treasure and we hope to be part of the continued conservation efforts in this area so that generations of people will be able to enjoy the beauty and bounty of this great land.



Ducks Unlimited Canada

Ducks Unlimited is a non-profit organization, whose mission is to conserve wetland and associated habitats, which provide healthy environments for wildlife and people.