

# Nunavut Water Board License 3BC-KAR1316: Annual Report

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Required information for annual reporting, as described in Section 2.1 of Nunavut Water Board's Guide 7:

## *Introduction : Data generated under the monitoring program*

Knowledge of survival and reproduction are vital to conservation and management of wildlife. Research occurring in the Karrak Lake Project Area (Queen Maud Gulf Migratory Bird Sanctuary, with camps at Karrak Lake, North Karrak River, and Perry River) focus primarily on the population, nutritional, and breeding ecology of Lesser Snow, Ross's, Cackling, and Greater White-fronted Geese, King Eiders, Long-tailed Ducks, and Arctic Fox, as well as the impact of habitat alteration by Lesser Snow and Ross's Geese on vegetation, small mammal, and avian communities. This research estimates annual adult survival and productivity (e.g. clutch size, nest survival) of each species, as well as factors affecting these vital rates (e.g. weather, abundance of small mammals).

## *Quantities of water used*

*Karrak Lake:* Water use during the 2016 field season (20 May to 17 July) was for domestic purposes only, at a rate of 20-40L per day. Prior to melt, water was obtained by melting ice from Karrak Lake. During and after ice-breakup on Karrak Lake, water was obtained by pumping into a 175 L holding tank located on the deck of the main cabin. Water was treated with 5% chlorine bleach prior to use.

*North Karrak River:* This site was not used in 2016.

*Perry River:* Water use during 2016 was for domestic purposes only, at a rate of 20L per day, 8-18 July and 1-15 August. Water was manually obtained from nearby fresh water bodies.

## *Quantities of waste discharged and disposed*

Water disposal at all two sites used in 2016 was by leaching into soil at least 31 m from normal high water marks, with quantities very similar to that described above.

*Summary of any modifications and/or maintenance work carried out*

*Karrak Lake:* No new construction in 2016, just regular camp maintenance (roof repairs, painting, etc.), including repairs due to minor bear damage.

*North Karrak River:* No new construction in 2016.

*Perry River:* No construction in 2016, minor repairs and upgrades only.

*List of unauthorized discharges and follow-up actions*

No unauthorized discharges occurred at any site during the 2016 field season.

*Summary of any abandonment and restoration work completed*

Research at all three sites is ongoing, and as such, no abandonment work has been undertaken to date. Progressive reclamation as described in the latest 'Abandonment and Restoration Plan' document is ongoing.

*Any updates or revisions to management plans and/or manuals*

The Spill Contingency Plan was updated for 2017 (attached to this email submission), in accordance with requirements for license renewal.

*Summary of any studies or reports requested by the Board and a description of any future studies planned*

One progress report is included with this Report. Research activities planned for 2017 are similar to 2016.

*Any other details requested by the Board that relate to water use and/or waste disposal*

None at this time.

We thank NWB and all interested parties for comments. Please direct any questions or concerns to Dana at the address listed above.