

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 2014 field season (5 May to 15 August) 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 visited 19 June, to repair damage caused by bears, and it is unlikely that any water from nearby sources was used.

Perry River: Water use during 2014 was for domestic purposes only, at a rate of 20L per day, 11-20 July. Water was manually obtained from nearby fresh water bodies.

Quantities of waste discharged and disposed

Water disposal at all three sites 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 2014, just regular camp maintenance (roof repairs, painting, etc.), including repairs due to extensive bear damage.

North Karrak River: No new construction in 2014. Regular maintenance only, including repairs due to bear damage.

Perry River: No construction in 2014, minor repairs and upgrades only. Purging the site of garbage began in 2011 and continued this year. Refuse was shipped to Cambridge Bay for disposal.

List of unauthorized discharges and follow-up actions

No unauthorized discharges occurred at any site during the 2014 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 *Abandonment and Restoration Plan* has been updated to address deficiencies (request for open burning of painted lumber upon abandonment) identified in AANDC's July 2014 inspection.

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

Two progress reports are included with this Report, and a third is forthcoming. Research activities planned for 2015 are similar to 2014.

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.