

## 3AM-GRA1624 GN-CGS Rankin Inlet Water Licence Amendment

The Government of Nunavut, Department of Community and Government Services (GN-CGS) is seeking an amendment to Water Licence 3AM-GRA1624 issued on May 2, 2016 to allow for water to be transferred directly from Lower Landing Lake to Nipissar Lake, instead of from the currently authorized location at Char River.

Lower Landing Lake feeds Char River which then flows into the Hudson Bay. The authorized Char River pumping location is at the beginning of Char River near Lower Landing Lake. The new intake location in Lower Landing Lake will be approximately 200m to the north-west of the current intake location in Char River. Both locations are within the Hamlet of Rankin Inlet municipal boundaries. The Licensee is not requesting an amendment to the volume of water authorized for the transfer of water to Nipissar Lake of 3,485m<sup>3</sup>/day.

The same equipment currently used for the seasonal transfer of water from Char River to Nipissar Lake will be used at the proposed Lower Landing Lake intake location. The temporary floating intake, with fish screen, will be used with the same pump and generator within the relocated seacan. An extension of approximately 200m to the 4.05km overland pipeline will be installed to bring the pipeline from Char River to Lower Landing Lake.

The existing intake location at Char River is located on a previously disturbed area that was the location of the former bridge over the Char River (the bridge was removed well before the Nipissar Lake resupply project began). As such there is an existing road to the north of Char River that will be used to access the new intake location on Lower Landing Lake.

Golder Associates prepared the "Nipissar Lake and Lower Landing Lake Water Balance Assessment" with "Char River Theoretical Rating Curve Based on Field Data" (February 2016) for GN-CGS. A translation of the report Executive Summary is also submitted. This report was done to address concerns that Char River was not a sustainable secondary water source for the Hamlet of Rankin Inlet. The water balance assessment of Lower Landing Lake outlines that this water source would be able to provide sufficient supplementary water to Nipissar Lake, while still maintaining the in-stream flow objectives outlined in the Licence for Char River.

Lower Landing Lake and Char River are part of the same watershed. Water quality has been annually monitored in both water bodies (GRA-6, GRA-7), along with Nipissar Lake (GRA-1), since 2014. The water chemistry for Nipissar Lake, Char River and Lower Landing Lake is very similar. No impacts on the water quality of Nipissar Lake have been apparent or are anticipated.