NWB Tools

Richard Dwyer <richard.dwyer@nwb-oen.ca>

Modifications to Water Supply Facilities for water licence 3AM-GRA1631

CommunitySupportDivision <communitysupportdivision@gov.nu.ca> Thu, Mar 27, 2025 at 2:28 PM
To: Nidhi Singh <nidhi.singh@nwb-oen.ca>
Cc: Richard Dwyer <richard.dwyer@nwb-oen.ca>, "Ummat, Ramesh" <RUmmat@gov.nu.ca>, "Saha, Shuvasish" <SSaha@gov.nu.ca>, "Mirza, Asghar" <AMirza@gov.nu.ca>, "Lusty, Megan" <MLusty@gov.nu.ca>, "Kum, Ryan" <RKum@gov.nu.ca>

Hello Nidhi,

Thank you for email.

The new water supply facility was designed to meet existing regulations, including the terms of Water Licence 3AM-GRA1631. The design ensured compliance with Part H, Item 2 of the Licence: *"The Licensee shall prevent any chemicals, petroleum products or Wastes associated with the activities under this Undertaking from entering Water. All Sumps and fuel caches shall be located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis".*

The setback distances of the fuel tanks to water bodies are as follows:

- 43.54 m to Nipissar Lake; and
- 31.98 m to Williamson Lake.

Furthermore, the fuel tanks will be regularly inspected as part of operations and maintenance, will be double-walled, and have a secondary containment pad in the event of a spill as per CSA B139.

The fuel tanks for the new water treatment plant at Williamson Lake and new pumphouse at Nipissar Lake have been located more than 31 metres away from the water bodies. It also should be noted that the existing buildings are within 31 metres of water bodies and no impacts to water quality or habitat have been observed.

For the Board's clarification, alternate sites were considered during the planning phase of the project.

At that time, a potential alternate site for the new water treatment plant was identified approximately midway between Nipissar Lake and Williamson Lake; however, as the piped distribution system (utilidor system) is composed of 5 loops that connect and return to the existing Williamson Lake site, itwas determined that the water treatment plant must be placed at existing site to connect with the utilidor system to avoid major design, construction, and integration complications and substantial costs that go beyond the scope of this project and approved budget. Furthermore, if the water plant were placed at the alternate site, there would be greater risks to disruption of service and personnel safety during extreme weather (i.e. site located to the north of the community and is subject to severe snow drifting and whiteout conditions).

The existing site also faces constraints due to the proximity of Williamson Lake and being located at the intersection of 2 major roads in the community. For all these reasons, the water treatment plant and water tanks have been sited at the existing location at Williamson Lake with the following setback distances:

- Williamson Lake to closest point of water treatment plant 15.64m;
- Williamson Lake to closest water storage tank 17.57m.

As the primary water source is Nipissar Lake, the new pumphouse was placed at the same site at Nipissar Lake. Likewise, the pumphouse was built to connect to the existing water main loop to the Williamson Lake pumphouse, which changing is beyond the scope of the project and approved budget. It should be reiterated that it is most practical for the intake line to be shorter as designed to reduce system friction losses.

We hope this response clarifies the concerns and reiterates that the design was developed to meet the requirements of the Water Licence. Please let us know if you have any further questions.

Kind regards,

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Nunallaani Ikayurvikhat Havagviat | Division du soutien communautaire

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