Information Request Form
Crystal Springs Lagoon Project

Information Request Number:	REPLY Second Round - Information Request No. 3 (Gimli)
Submitted by:	The Proponent
Date Submitted:	March 20, 2026
Subject Matter:	Groundwater Management (Quality)
Reference document:	Friesen Drillers Desktop Hydrogeological Review report dated March 2, 2021 **(Appendix A to Reply Information Request No. 3)**

Request: The project proposes using a geosynthetic liner to reduce infiltration to the groundwater from within the cells. Given the foregoing:

Request 1: Can the proponent advise whether they investigated if the effluent discharge to drain/creek would impact groundwater over years of release and if so, what conclusions they drew?

Proponent Reply 1: The lagoon is designed for a single discharge which will occur over an approximate period of 30 days. This discharge will occur during the summer months when plant growth is at a maximum to utilize any remaining nutrients within the effluent discharge. The discharge will also occur when evaporation rates are at

the highest point in the year. This coupled with the fact that there is over 100' of till & clay overburden between the surface and carbonate aquifer significantly reduces the potential for groundwater contamination.

The Proponent also investigated the flow along Willow Creek. The overburden from GW Drill logs was evaluated along Willow Creek from the proposed lagoon to PTH 9 with the following results.

- WELL_PID 7616, located SW 35-18-3E, clay till, sand gravel to 97 ft, well at 110 ft
- WELL_PID 192319 located NE 30-18-4E, clay till to 125 ft, well at 205 ft
- WELL_PID 142241 located NE 29-18-4E, clay till to 81 ft, well at 110

From the above it is the professional opinion of the Proponent's consulting engineers (BMCE) that flow from this creek and effluent discharge from the lagoon will have no or negligible impacts to groundwater based on the thickness of over burden above the aquifer.

Follow-Up Information Request 1: The Proponent has indicated that the potential for groundwater impact is minimal based in part on the thickness of overburden above the carbonate aquifer. Can the Proponent advise whether the assessment of groundwater risk considered the presence and behaviour of any shallow groundwater zones situated above the carbonate aquifer.

If so, please describe the nature and results of that evaluation. If not, please advise why.

Reply to Follow-Up Request 1: A hydrogeological review was conducted by Friesen Drillers in March of 2021 and included a review of surficial geology, known aquifers, and well logs within the project area and greater region. As part of the recommendations of the report, it was noted that shallow, local sand lenses were scattered within the till overburden, but the majority of local domestic water supplies were connected to the deeper carbonate aquifer, below the overburden.

Based on this, no additional assessment of groundwater risk was undertaken. The lagoon liner has a leak detection system built into the design. The discharge is within discharge limits and therefore the risk to groundwater contamination is minimal.

Request 2: Can the proponent comment on why there are no up gradient and down gradient monitoring wells that could be used to determine whether there is any impairment to the groundwater sources so that remedial action may be taken quickly.

Proponent Reply 2: Due to the thickness of overburden over the Carbonate aquifer and depth of the groundwater source, the decision was made that monitoring wells were not required.

Within the footprint of the proposed lagoon the Geotechnical Investigation identified a clay till layer to a depth of 51 ft at which point drilling was ceased. The GW Drill records in the local area identify clay till to an approximate depth of 100 ft before encountering the aquifer.

WELL_PID 149280, located SE28-18-3E, clay till and gravel to a depth of 130 ft.

The lagoon is designed with a liquid collection system and gas venting beneath the liner. This collection system will be utilized to monitor for any leaks within the liner system, this will allow for a more rapid response than that of monitoring of groundwater.

Request 3: Can the proponent produce a copy of the groundwater study report prepared by Friesen Drillers?

Proponent Reply 3: Friesen Drillers Desktop Hydrogeological Review report dated March 2, 2021, is attached here to as **Appendix A**.