

Reasons for Determination

Date: April 19, 2024

EASB File No.: 2023-014
Transaction No.: 10061652

Project Title: Rural Municipality (RM) of Invergordon Landfill

Proponent: 102138921 Sask Ltd./Greenland Waste

Proposal: 102138921 Sask Ltd. (the proponent) is proposing to develop and operate a regional landfill in the northcentral region of Saskatchewan. The proponent has applied for approval as an industrial landfill, however has also indicated most of the waste accepted at the landfill will be municipal, with more details of waste composition included in a future Landfill Operating Plan. The site is located on SW 06-44-23-W2M, approximately 6 km west of Yellow Creek, Saskatchewan within the RM of Invergordon No. 430. The landfill will accept municipal waste sourced primarily from within the Greenland Waste Service Area, which spans about 70,000 km² in north-central Saskatchewan.

The anticipated waste deposition rate is approximately 46 tonnes per day, or 12,000 tonnes per year. A phased approach is proposed for the construction of the project where phase I includes two landfill cells on the southern half of SW 06-44-23-W2M which would have an operating lifespan of approximately 40 years, and phase II would expand the landfill into the northern half of the quarter section, including three or four additional landfill cells effectively doubling the capacity. Phase I would involve the construction of a fenced perimeter embankment, an operational area, two landfill cells with a total capacity of approximately 1,125,000 m³, two runoff holding ponds, and a leachate pond.

Phase II would involve the construction of three or four landfill cells with an additional capacity of approximately 2,185,000 m³, and one additional runoff holding pond, or the expansion of the phase I runoff holding pond. Currently, phase II is only at a conceptual design level.

The information provided in the project proposal has led to the determination that the described project **does** trigger criteria of section 2(d) of *The Environmental Assessment Act* (the Act) and is therefore considered a “development” that is required to undergo an environmental impact assessment (assessment).

The above determination is based on an evaluation of the project against the criteria of section 2 (d) of the Act as described below:

- a) likely to have an effect on any unique, rare, or endangered feature of the environment**

- The project study area consists of 8.7 hectares (ha) of forest, 10.2 ha of cropland, 4.2 ha of wetlands, and 0.7 ha of modified grasslands for phase I of the project, phase II would include 8.2 ha of forest, 18.1 ha of cropland, 20.5 ha of wetlands, and 1.0 ha of modified grasslands. The project would result in the temporary loss of 0.6 ha of wetlands during the operational life of the project, the permanent loss of 8.7 ha of forest, and the permanent loss of 20.5 ha of cropland.
- Eleven wetlands were identified within the study area, including two class V wetlands and nine class III wetlands. All but one of the class III wetlands will be impacted as part of phase I. Phase II would impact approximately 3.41 ha of the adjacent class V wetland.
- The project was designed to meet the *Standards for Landfills in Alberta* requirements as Saskatchewan does not have relevant standards and allows for the use of standards from similar jurisdictions as best management practices. The Alberta standards stipulate a 300-m setback from any permanent waterbody. Phase I of the project would adhere to this requirement; however, phase II would not.
- The only wildlife species of conservation concern identified during field surveys was a common nighthawk S4B (apparently secure/migratory species breeding population).
- Vegetation field surveys identified an occurrence of striped coral-root, provincially ranked as S3 (vulnerable/rare-uncommon).
- A heritage resource impact assessment was completed, and no heritage resources were identified. Should the project receive approval and heritage resources encountered during construction activities, all work in the immediate area would cease and the Heritage Conservation Branch or a qualified archaeologist would be contacted for direction.
- Based on the information in the application, the project is unlikely to have an effect on a rare, unique, or endangered feature of the environment.

This criterion has not been met.

b) likely to substantially utilize any provincial resource and in so doing pre-empt the use, or potential use, of that resource for any other purpose

- The landfill will only use water for washroom facilities in the administration building.
- There will be no substantial use of a provincial resource pre-empting its use for other purposes.

This criterion has not been met.

c) likely to cause the emission of any pollutants or create by-products, residual or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation

- The project would not cause emission of any pollutants or create by-products, residual or waste products which require handling and disposal in a manner that is not regulated by any other Act or regulation.

This criterion has not been met.

d) likely to cause widespread public concern because of potential environmental changes

- The proponent engaged stakeholders during four ratepayer meetings for the RM of Invergordon No. 430 held in December 2020, April, August 2021, and October 2023. The proponent notified stakeholders about the meeting, including landowners adjacent to the proposed site, and residents within a 2-mile radius of the site, notice of the meeting was also posted on the RM's website. At these meetings, ratepayers were given the opportunity to ask questions and voice their concerns. Concerns raised include the potential for wind-blown debris, groundwater contamination, impacts on the physical environment, and public health implications.
- Other concerns raised include the potential for broader regional implications including the potential for impacts to the feasibility of existing waste management facilities. There is a perception that the region is already well served with landfills and that a new landfill facility would put pressure on existing facilities resulting in sudden unplanned closures and accompanying environmental liability.
- The application does not describe plans for a road to access the landfill site and does not include trip generation details. Changes to traffic resulting from the project must be included to allow for an assessment of safety. Depending on the volume of traffic expected, a traffic impact assessment may be required.
- Based on limited engagement, the potential for widespread public concern regarding environmental change cannot be fully assessed for this project. Due to increasing public concern regarding the siting of greenfield landfill projects in Saskatchewan, there may be a need for additional engagement with key stakeholder groups (e.g., solid waste management organizations and environmental non-governmental organizations) to assess the level of concern associated with the project.

This criterion has not been met.

e) likely to involve a new technology that is concerned with resource utilization and that may induce significant environmental change

- No new technology would be used for the project. Conventional landfill facilities and operations are well understood and based on widespread implementation in the province and other jurisdictions. Standard methods and equipment would be used during construction and operation of the project.

This criterion has not been met.

f) likely to have a significant impact on the environment or necessitate a further development which is likely to have a significant impact on the environment

- The Floral aquifer, located approximately 38 meters below the proposed landfill, is currently utilized as a potable water source. Several private wells have been completed in the Floral aquifer within a 3-kilometer radius of the project.
- The proposed landfill cell design consists of a single compacted clay liner with a leachate collection system and a double-lined leachate storage system. The use of a single compacted clay liner in this location with underlying channelized sand deposits may not provide adequate containment. A detailed design, required as part of the assessment will allow for the evaluation of project impacts, the potential effectiveness of mitigation measures, and the significance of any residual impacts that would be expected to remain following mitigation.
- Leachate transport into the wetland located to the west of the local study area via the channelized sand unit also has the potential to impact surface and groundwater resources should the compacted clay liner not perform to design specifications.
- There are concerns regarding the potential for landfill leachate to contaminate groundwater and surface water resources, which could impact existing and potential future use of the resource.
- A previous landfill operated by the RM of Invergordon is located approximately 500 m east of the proposed landfill location. Operations at the former site ceased in 2019 and a closure plan was submitted to the ministry for approval as part of decommissioning. Due to exceedances of Saskatchewan Environmental Quality Guidelines related to soil and groundwater, ongoing monitoring of the site is required.

This criterion has been met.

Conclusion: Based on the above considerations, the ministry's review of the proposal concludes that the project **is a** "development" that is required to undergo an assessment and receive a Ministerial Approval as provided in Section 8 of the Act.