

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Glenway Holding Co. Ltd.
PROPOSAL NAME: Glenway Holding Co. Ltd Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Waste/Scrap Wastewater Treatment Lagoons
CLIENT FILE NO.: 5509.00

OVERVIEW:

On March 8, 2011, the Department received a Proposal on behalf of the Glenway Holding Co. Ltd for the construction of a domestic wastewater treatment lagoon to service a new, unnamed colony farmsite. The wastewater treatment lagoon, consisting of both primary and secondary cells, will be located in NW 28-2-4 EPM in the Rural Municipality of Franklin. Treated wastewater will be trickle discharged between June 16th – October 31st of any year, into the Casson Drain approximately 6.5 kilometers to the north and west of the proposed lagoon before it reaches the Roseau River.

The Department, on March 24, 2011, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station) Main Floor, Winnipeg; the Millennium Public Library, 4th Floor, 251 Donald St., Winnipeg; the Manitoba Eco-Network, 3rd Floor, 303 Portage Ave., Winnipeg; and the RM of Franklin, 115 Waddell Avenue, Dominion City. Copies of the Proposal were also provided to the Canadian Environmental Assessment Agency and to the Technical Advisory Committee (TAC) members. The Department placed a public notification of the Proposal in the Emerson Southeast Journal on March 26, 2011. The newspaper and TAC notifications invited responses until April 25, 2011.

COMMENTS FROM THE PUBLIC:

- No comments.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Agriculture, Food and Rural Initiatives– Land Use

- No Comments

Conservation – Sustainable Resource Management and Land Programs

- *No concerns.*

Conservation – Environmental Operations

- *Volume for the primary treatment is based on 150 people and no processing. With the information provided it is understood no additional BOD5 input from the processing of materials is to be included in this facility.*

- *None of the four test holes are taken from the floor of the lagoon where the proposed earthwork for the liner is to occur, rather they are all outside of the proposed facility area.*

Proponent's Response

- *a) As it not intended to have any livestock on site or any commercial activities generating a liquid or solid waste stream that will be introduced into the wastewater treatment lagoon, the primary treatment has been based solely on the 150 people. Although additional treatment capacity is available by increasing the BOD₅ loading from the current design level of 35 kg/ha/day to the maximum allowable of 56kg/ha/day, no allowance has been made to facilitate increased hydraulic loading. Any changes to the proposed practices of the colony shall be conveyed to the Environmental Assessment and Licensing Branch for review.*
- *b) It is our practice to perform the exploratory test holes around the perimeter of the proposed development firstly in order to leave the in-situ soils within the construction area in an undisturbed state. By performing this perimeter investigation, soil and groundwater conditions can be assessed and any potential problems with sealing the test holes with bentonite can be identified. Only in the event that highly variable soil conditions are found in the perimeter exploration or the need to determine the extent of unsuitable material, would test holes be conducted beneath the proposed facility.*

Conservation – Air Quality

- *The Air Quality Section does not have any air-related comments or concerns on the above developmental proposal application.*
- *The proposal has no significant impact on air quality.*

Conservation – Pollution Prevention

- *No comments.*

Conservation – Wildlife

- *No concerns.*

Conservation – Parks

- *No concerns.*

Conservation – Forestry

- *No comments.*

Conservation – Environmental Services

- *The design indicated that there will not be any slaughterhouse operation or other commercial activity at the colony that generate wastewater. Hence the design excluded the wastewater from such practices and the lagoon has no capacity to accommodate any future change in the activity of the colony with respect to this*

practices. The licence should address this issue and indicate that the lagoon can be used only for handling domestic wastewater or any change activity of the colony that will generate more wastewater shall be reported to the Environmental Assessment Licensing Branch.

Proponent's Response

- *As it not intended to have any livestock on site or any commercial activities generating a liquid or solid waste stream that will be introduced into the wastewater treatment lagoon, the primary treatment has been based solely on the 150 people. Although additional treatment capacity is available by increasing the BOD₅ loading from the current design level of 35 kg/ha/day to the maximum allowable of 56kg/ha/day, no allowance has been made to facilitate increased hydraulic loading. Any changes to the proposed practices of the colony shall be conveyed to the Environmental Assessment and Licensing Branch for review.*

Conservation – Aboriginal Relations

- No comments.

Conservation – Climate and Green Initiatives

- No comments.

Culture, Heritage and Tourism – Heritage

- No comments.

Health – Environmental Health Unit

- No comments.

Infrastructure and Transportation – Environmental Services

- *No concerns.*

Innovation Energy and Mines - Mines

- *No concerns.*

Local Government

- *The land within the study area is located in the NW ¼ 28-2-4 EPM. The parcel is in the RM of Franklin, west of Provincial Road (PR) 218 approximately 7 miles east of Dominion City.*
- *Due to population growth, Glenway Colony has found it necessary to begin a new colony on the NE ¼ 28-2-4 EPM. According to the assessment database, the subject parcel is 153.53 acres and there are two one storey frame workshop structures on the site. To facilitate the multi-family dwellings the establishment of a wastewater lagoon is proposed for the NW ¼ 28-2-4 EPM. Assessment data indicates that NW ¼ of 28-2-4 EPM is 160 acres and has no buildings or structures.*

- *The land is designated Rural Policy Area 1 according to the RM of Franklin Development Plan. Land surrounding the proposed use is primarily held in large tracts and appears to be agricultural in nature. The engineering report indicated the closest residential dwelling (excluding the colony) is 1000 metres away.*
- *The RM of Franklin has not adopted a Zoning By-law. Our office has no concerns with respect to the proposal.*

Water Stewardship

- *Manitoba Water Stewardship recommends an Environment Act Licence to include the following requirements:*
 - *The discharge of wastewater effluent shall occur between June 15th and November 1st of each year. The discharge periods shall occur for at least four weeks (at least two weeks during each discharge period) maximizing the nutrient uptake in the drainage path.*
 - *The minimum standard for organic effluent quality is BOD₅ 25 mg/L.*
 - *The installation of the effluent discharge pipe to the Casson Drain is implemented during low flow and/or no-precipitation events.*
 - *A Licencee shall actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director, Water Science and Management Branch, Manitoba Water Stewardship.*
 - *Note: Manitoba Water Stewardship is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses of the water.*
- *Manitoba Water Stewardship submits the following concerns:*
 - *The nutrient loads (total nitrogen and total phosphorus) in the Rosseau River have been estimated to have increased substantially in recent years. The Glenway Holding Company should consider effluent irrigation. Besides, the proponent mentions discharge would be based on twice per year discharge and indicates on page 11 that trickle discharge would be implemented.*
- *Manitoba Water Stewardship submits the following comments:*
 - *Manitoba Water Stewardship does not object to this proposal, at this time.*
 - *The Lake Winnipeg Stewardship Board has recommended that all small wastewater treatment facilities, should meet a phosphorus limit of 1.0 mg/L. The proposed phosphorus limit of 1.0 mg/L is consistent with efforts underway across Manitoba and in upstream jurisdictions to reduce nutrient loads to Lake Winnipeg and its watershed. In the Lake Winnipeg Stewardship Board's*

December 2006 report to the Minister of Water Stewardship, the Board provides several strategies on how nutrient reduction could be achieved for small wastewater treatment facilities (see recommendations 14-20) including trickle discharge and effluent irrigation.

- *The Manitoba Department of Water Stewardship is mandated to ensure the sustainable development of Manitoba's water resources. Manitoba Water Stewardship is committed to the goals of: protecting aquatic ecosystem health; ensuring drinking water is safe and clean for human health; managing water-related risks for human security and stewarding the societal and economic values of our waterways, lakes and wetlands; for the best water for all life and lasting prosperity. Manitoba Water Stewardship achieves these goals, in part through administering legislations, including The Water Protection Act, The Water Rights Act, and The Water Power Act.*
- *The proponent needs to be informed of the following for information purposes:*
 - *Erosion and sediment control measures should be implemented until all of the sites have stabilized.*
 - *The Water Rights Act requires a person to obtain a valid licence to control water or construct, establish or maintain any "water control works.:" "water control works" are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow, by any means, including drainage. If a proposal advocates any of the aforementioned activities, a person is required to submit an application for a Water Rights Licence to Construct Water Control Works. A person may contact the following Water Resource Officer to obtain an application and/or obtain information.*
 - *A contact person is Mr. Geoff Reimer, CET, Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, Box 4558, Stonewall, Manitoba R0C Z0, telephone: (204) 467-4450, email: geoff.reimer@gov.mb.ca.*

Proponent's Response

- *As outlined in Section 4.3 of the EAP, it is anticipated that the repeated application of the wastewater containing backwash water from the water softening process to agricultural land will affect the agricultural capability over the long term due to the fine textured, low permeability surface soils which are prominent in the area. In addition to this hurdle, irrigation of effluent is strongly*

encouraged only on actively growing crops and timing of this application would need to coincide with the already busy farming schedule which consumes most, if not all of the available equipment and manpower. The absence of actively growing crops during October, which would correspond to the second discharge period, would leave the applied product susceptible to runoff during the subsequent spring thaw and late fall rains. Based on the weather experienced the last several years, the wastewater applied during the fall discharge would be applied to already saturated soil conditions or not be able to be applied due to lack of accessibility to the application fields as a result of waterlogged soils, and require permission for surface discharge regardless, in order to continue operating.

- *The lagoon has been sized such that twice per year discharge is anticipated once the population of the new development approaches 90 persons. During these events, it is intended to implement trickle discharge in order to regulate the period of time over which the effluent is introduced into the Casson Drain in an attempt to maximize the contact time within the drain such that nutrients within the effluent can be absorbed within the soil and vegetation encountered over the 6.5 km travel distance from the site to the Rosseau River.*
- *Due to the additional costs associated with obtaining irrigation equipment required solely for the purpose of effluent irrigation, the difficulty in scheduling the discharge events at a time when agricultural activities are at their peak and the uncertainty of having access to the application fields when resources are better suited to committing to and participating in nutrient reduction strategies and trial programs facilitated through Water Stewardship and Manitoba Conservation. Each scenario, effluent irrigation or surface discharge, both represent a potential contribution of nutrients to the Rosseau River. Monitoring of nutrients levels will be performed to ensure compliance with regulatory requirements at each discharge event. Although it is not anticipated that excess nutrient levels will be a problem, if a persistent problem is identified, alternate methods of treatment and discharge will be explored.*

Disposition:

- The draft Licence requires the Licencee to discharge the wastewater treatment lagoon over at least a two-week period, while accelerating discharge as necessary to maintain normal operation of the wastewater treatment lagoon, such that the increased nutrient uptake from the wastewater effluent may occur along the discharge route.
- The draft Licence includes a clause requiring the Licencee to actively participate in any current or future watershed-based management study, plan and/or nutrient reduction program, approved by the Director, for the Casson Drain, the Rosseau River and associated waterways and watersheds.

- The draft Licence includes a clause requiring the Licencee to comply with the provisions of the Department of Fisheries and Oceans Canada/Manitoba Natural Resources publication, “*Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat*” (May, 1996).
- The draft Licence includes a clause that requires the Licencee to not discharge effluent from the wastewater treatment lagoon where the phosphorus content is in excess of 1.0 mg/L.
- The draft Licence contains a clause that requires the Licencee to implement effective erosion and sediment control measures during construction and until vegetation is established.
- The draft Licence includes effluent quality discharge criteria in accordance with the draft Manitoba Water Quality Standards, Objectives and Guidelines.
- The draft Licence includes a clause that requires the Licencee to conduct all ditch related work activities during no flow or dry conditions and not during the April 1 to June 15 fish spawning and incubation period.
- The draft Licence includes a clause requiring the proponent to obtain all necessary federal, provincial and/or municipal licences, authorizations, permits and/or approvals for construction of relevant components of the Development prior to commencement of construction.

Canadian Environmental Assessment Agency

- *I have undertaken a survey of federal departments with respect to determining interest in the project (noted above). I can confirm that the project information provided has been distributed to all federal departments with potential interest. Based on the responses to the survey the application of the Canadian Environmental Assessment Act (the Act) by a federal authority will not be required for this project. I have enclosed copies of the received responses for (your) file.*
- *I can confirm that the project information was shared with the Department of Fisheries and Oceans Canada (DFO), the Department of Indian and Northern Affairs (INAC), Health Canada (HC), and Environment Canada as part of the federal coordination process. Two departments have indicated they possess expert knowledge related to their department’s mandate, which could be provided to a Responsible Authority if requested.*

Indian and Northern Affairs Canada

- No federal interest

Department of Fisheries and Oceans

- No federal interest

Health Canada

- Health Canada has determined it can provide expert advice related to human health if a written request is submitted to HC.

Environment Canada

- Environment Canada (EC) has determined it may possess specialist or expert information or knowledge that may apply to the project. EC has also provided a letter of advice for the proponent outlining key points related to proper design, operation, management, monitoring, training and decommissioning of the wastewater lagoon.

PUBLIC HEARING:

A public hearing is not recommended.

RECOMMENDATION:

All comments received on the Proposal that required follow-up have been addressed as licence conditions and additional information. Therefore, it is recommended that the Development be licensed under *The Environment Act* subject to the limits, terms and conditions as described in the attached Draft Environment Act Licence. It is further recommended that the enforcement of the Licence be assigned to the Environmental Assessment and Licensing Branch until construction is completed. Once the facility is commissioned, enforcement should be assigned to the Western Region.

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