

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPOSER:** Rural Municipality of Alonsa  
**PROPOSAL NAME:** R.M. of Alonsa Wastewater Treatment Lagoon  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Waste/Scrap Wastewater Treatment Lagoons  
**CLIENT FILE NO.:** 5404.00

### **OVERVIEW:**

On April 3, 2009, the Department received a Proposal from Genivar on behalf of the Rural Municipality of Alonsa for the construction and operation of a wastewater treatment lagoon to serve the R.M. of Alonsa and Ebb and Flow First Nation. The lagoon will be located in the SE quarter of Section 20-22-11WPM in the R.M. of Alonsa. The treated wastewater from the wastewater treatment lagoon will be discharged between June 15th and October 31st of any year into a second order drain which flows into Reedy Creek which drains into Ebb and Flow Lake. Ebb and Flow Lake drains into Lake Manitoba.

The Department, on April 17, 2009, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Millennium Library, the Manitoba Eco-Network, the Dauphin Public Library, the R.M. of Alonsa office and Ebb and Flow First Nation. Copies of the Proposal were also provided to the Technical Advisory Committee (TAC) members. The Department placed a public notification of the Proposal in the Dauphin Herald on Tuesday, April 28, 2009 and in the Grassroots News on Tuesday, May 5, 2009. The newspaper and TAC notification invited responses until June 2, 2009. On June 8, 2009, TAC comments were forwarded to the consultant for response. On July 13, 2009, a response from the consultant was received and was forwarded to the TAC members who had requested additional information on July 15, 2009. On September 10, 2009 a draft Licence and Summary of Recommendations was sent to TAC with a September 24, 2009 deadline for comments.

### **COMMENTS FROM THE PUBLIC:**

No responses were received from the public notification.

### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

#### **Agriculture, Food and Rural Initiatives**

- *No comments received.*

#### **Conservation – Wildlife and Ecosystem Protection Branch**

- *The proposal indicates that a search of the Conservation Data Centre (CDC) database did not find any records of rare or endangered species within the project area. However, the proponent should be aware that since many areas of the province*

*have not been thoroughly surveyed, the absence of data in the CEC database in any particular geographic area does not necessarily mean that species or ecological communities of concern are not present. The information should therefore not be regarded as a final statement on the occurrence of any species of concern nor can it substitute for on-site surveys for species that will be impacted by the development. It is the responsibility of the proponent to inspect the project area prior to and during construction to determine if any rare or endangered species may be impacted. The proponent needs to be aware that if rare or endangered species are present, removal or destruction of individuals or their habitat may be in contravention of Subsection 10(1) "Prohibition" of The Endangered Species Act (Manitoba). In addition, the federal Species at Risk Act prohibits destruction of habitat for these species. If species of concern are present, the proponent must contact the Biodiversity Conservation Section of the Wildlife and Ecosystem Protection Branch to discuss possible mitigation options well in advance of any disturbance.*

- *Killing or harming migratory birds and disturbance, destruction or taking of their nests or eggs is prohibited under the Migratory Birds Convention Act. The proponent is responsible for ensuring that no migratory birds will be harmed and no active nests of migratory birds will be destroyed as a result of the development. If migratory birds or their nests may be harmed by this development, the proponent must contact the Canadian Wildlife Service for further direction.*
- *According to the proposal, the new lagoon will be constructed on Crown land currently occupied in part by a stand of aspen. The proposal indicates that approximately 4 Ha of trees will have to be removed from the site to accommodate the new lagoon. The proponent should provide a list of plant species present within the proposed project area and ensure that there are no nesting bird species that may be impacted by the development.*

Proponent Response (received July 13, 2009):

- All comments noted. Any action taken prior to construction concerning the wildlife in the area will be done as required by Manitoba Conservation in the Environment Act Licence.

Disposition:

- Clauses 31, 32 and 33 have been added to the draft Licence requiring the Licencee to investigate the site prior to construction for possible endangered vegetation and/or migratory birds which may be affected by the Development. A report on the investigation findings is to be submitted to the Director prior to construction.

**Conservation – Parks and Natural Areas Branch**

- *No concerns.*

**Conservation - Sustainable Resource & Policy Management**

- *No comments received.*

### **Science, Technology, Energy and Mines – Mines Branch**

- *No concerns.*

### **Culture, Heritage and Tourism - Historic Resources**

- *No concerns.*
- *If at any time however, significant heritage resources are recorded in association with these lands during development, the Historic Resources Branch may require that an acceptable heritage resource management strategy be implemented by the developer to mitigate the effects of development on the heritage resources.*
- *Although not stated in the body of the document, the Historic lime kiln will be avoided during development.*

### **Water Stewardship**

- *The proposal mentions a constructed “pilot” drain. Although the proposed route of this drain is identified, the proposed gradient and ditch cross-section is not. In order to assess if this “pilot” drain will have an impact to any wetlands along the proposed route, Manitoba Water Stewardship recommends this information be provided by way of a drainage licence application. Section 5.2.3 suggests that the depth of the outside drain and the pilot channel is such that it will not activate the requirement for water control works licensing. There is no longer an exemption as identified in the Manitoba Ombudsman’s report on drainage licensing.*

*The Water Rights Act suggests that no person shall control water or construct, establish or maintain any water control works unless he or she holds a valid license to do so. 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 of water, including but not limited to water in a water body, by any means, including drainage. If the proposal in question advocates any of these activities, please apply for a Water Rights License to Construct Water Control Works.*

*To apply for a water rights licence, a completed licence application form along with the licence fee must be submitted to Manitoba Water Stewardship at the address indicated on the application form.*

- *The Lake Winnipeg Stewardship Board has recommended that all small wastewater treatment facilities, including municipal lagoons, 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 effluent irrigation.*
- *Development around Lake Manitoba is occurring at a rapid rate. Although cottaging is an important use of the Lake Manitoba shoreline, recreational activities can impact water quality and quantity. Water Quality Management Section stresses the*

*importance of advocating water conservation to the local cottage associations. Seasonal cottages are becoming full-time residences, leading to higher grey water production year round and potentially resulting in greater impacts on the lake's water quality. Recommends the R.M. of Alonsa launch a water conservation education program.*

- *Trickle discharge (at least two (2) weeks) will provide time for the nutrient rich effluent to be assimilated in the drainage path, prior to reaching Lake Manitoba. The discharge period should be lengthened to at least two (2) weeks or more.*
- *The water quality of Lake Manitoba has declined over the years and many scientists are concerned with the future impacts and they do not want to see Lake Manitoba in a similar situation as Lake Winnipeg. The Water Quality Management Section would like to make the proponent aware of steps being taken else where to increase nutrient removal. Dischargers to Lake Winnipeg such as the Town of Gimli have implemented phosphorus removal to 1 mg/L. In addition, phosphorus removal to 1 mg/L is now implemented at new and expanding provincial park facilities. Minnesota, which shares a portion of the Red River watershed with North Dakota and Manitoba, has a similar phosphorus standard to protect lakes and rivers from the negative effects of excess nutrients. Finally, the Ste. Anne's facility is recently required to meet 1 mg/L phosphorus limit. Multilaterally reducing phosphorus limit is consistent with measures underway elsewhere.*
- *Proposal indicates the lagoon provides a lengthy storage capacity. At the present hydraulic loading, what is the maximum reasonable retention time?*
- *The Water Quality Management Section is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and/or future use of the water. Therefore it is recommended that the license require the proponent to actively participate in any future watershed based management study, plan or nutrient reduction program, approved by the Director.*

Proponent Response (received July 13, 2009):

- Any nutrient mitigation will be carried out as required by Manitoba Conservation. We await public consultation stage of the proposal to implement the phosphorus limitation of 1 mg/L. Implementation of this limitation prior to its full adaptation is premature.
- Manitoba Water Stewardship is welcome to contact the R.M. of Alonsa about implementing a water conservation education program.
- The treated lagoon effluent will travel through a 120 metre swale constructed from the lagoon to the road allowance south of the lagoon and then enter a 0.5 km ditch to be constructed along the road allowance that eventually converges with a small existing pilot drain. The existing pilot drain runs northerly for approximately 3.4 km and connects with an existing second order drain that first runs east for 1.2 km before reaching the west ditch of PR 278. No construction of the pilot drain is proposed as part of this project.
- The R.M. of Alonsa lagoon is a good candidate for trickle discharge based on the truck hauled wastewater and the design for a 1-year storage. When the lagoon is close to full design loading, trickle discharge may cause the primary cell to temporarily exceed a depth of 1.5 metres while waiting for the completion of the

lengthened discharge process. If trickle discharge is mandated, this temporary condition will preferably be permitted by the Licence or, as an alternative, an accelerated discharge should be permitted under these circumstances.

- The Town of Gimli has an advanced wastewater treatment plant, for which among other parameters, a 1.0 mg/L phosphorus effluent limit is required. We understand that Manitoba Conservation will implement the need for phosphorus removal on a case-by-case basis for lagoon projects. The Town of Ste. Anne is in a considerably different situation than the R.M. of Alonsa when considering size, location and discharge route of the facility.
- The lagoon is designed with a storage capacity of 23,180 m<sup>3</sup>. In order to fill the lagoon, when empty, a wastewater volume of 40,760 m<sup>3</sup> is required. At the present hydraulic loading, the lagoon will take approximately 2.5 years to fill.
- Any party involved in a future watershed based management study, plan/or nutrient reduction program for the area are welcome to contact the R.M. of Alonsa.
- All general comments are noted.

Water Stewardship Comments (received September 30, 2009):

- *The proposed site is located near the edge of a local bedrock (limestone/dolomite) high, based on well logs there is an uncertainty as to whether the bedrock, which forms an aquifer in this area, may be as close as 2-5 metres to the surface or as deep as 25 metres from the surface. The proponent did not explore below 3 metres at the proposed site and did not resolve this question. It is also noted that the subsurface in two of the three test pits at the preferred site encountered sand or sand/gravel and the pits were not excavated to a sufficient depth to determine the thickness of these gravels and the composition of the underlying material (bedrock or till). Seepage occurred in all three pits with the water table measured as shallow as 1.8 metres below ground surface. It appears from the drawings that the base of the lagoon cells will not be more than about 0.3 metres below ground but the question still remains as to whether the water table may be at or above the bottom of the cells at some times of the year. Given the materials encountered in the test pits it is uncertain where appropriate material will come from to construct the berms.*

Disposition:

- A Clause requiring a two-week discharge has been included in the draft Licence. (Clause 23).
- A Clause requiring the undertaking of a detailed geological and groundwater investigation in the local area to evaluate the need for a groundwater monitoring network to be installed at the site, and the submission of the findings and recommendations in a report to be implemented as approved by the Director has been included in the draft Licence. (Clause 30).

Infrastructure and Transportation

- *The proposed development is located adjacent to PR 276. As such, the proponent should be informed that a permit will be required for any construction (above or*

*below ground level) within 38.1 m (125 ft) or for any plantings within 15.2 m (50 ft) from the edge of the right-of-way of PR 276 and 254.*

- *Ensure that all drainages into the highway ditches be free from contaminants harmful to the environment, particularly at the W ½ of 34-22-11W which is classified as a class B fish Habitat.*
- *The R.M. of Alonsa should agree to control accelerated weed/cattail growth in the west ditch of PR 276 east of 33-22-11W and through 3-23-11W due to higher nitrate levels in the discharged treated sewage.*
- *It is recommended that as a condition to the Environmental License, the applicant be requested to include Manitoba Infrastructure and Transportation, West Central Region, into their insurance policy. This is to cover potential liability issues that may be associated with such discharge. Should the proponent need further information on this concern, please contact Chuck Lund, Technical Services Engineer at 204-622-2262 or Forouzandeh Kasrai, Planning Technologist at 204-622-2307.*

Proponent Response (received July 13, 2009):

- No construction is proposed within the designated 38.1 metre area from the edge of right-of way of PR 278.
- As typical, the lagoon will be successfully tested for the licensed effluent parameters prior to discharge.
- The treated lagoon effluent will travel through a 120 metre swale constructed from the lagoon to the road south of the lagoon and then enter a 0.5 km ditch constructed along the road allowance that eventually converges with a small existing pilot drain. The existing pilot drain runs northerly for approximately 3.4 km and connects with an existing second order drain that first runs east for 1.2 km before reaching the west ditch of PR 278. After traversing approximately 5.2 km of ditching, it is not expected that accelerated weed/cattail growth will occur in the west ditch of PR 278. We understand the concern over the potential nutrient levels in the effluent from the lagoon discharge, however because of the length and quality of the discharge route before the effluent may reach the west ditch of PR 278 as well as the actual volume to be discharged, the need to include Manitoba Infrastructure and Transportation into the municipal policy does not seem justified.

Disposition:

No further comments were received from Manitoba Infrastructure and Transportation. This was assumed to indicate that the original concerns submitted were satisfied.

**Intergovernmental Affairs**

- *No comments received.*

**Canadian Environmental Assessment Agency**

- *Following a review by all federal departments with a potential interest in the proposed development, the application of the CEAA will not be required.*
- *Health Canada has offered to provide specialist advice with respect to the project if specifically requested.*

- *Fisheries and Oceans provided list of recommended mitigation measures to be applied to reduce potential impacts to fish and fish habitats.*

Proponent Response (received July 13, 2009):

- All additional mitigation measures were reviewed and generally agree with our EAP information, construction specifications and/or the typical clauses in an Environment Act Licence. We will endeavour to contact DFO 10 days before beginning construction.

**PUBLIC HEARING:**

A public hearing was not requested by the public and is not recommended for this Development.

**RECOMMENDATION:**

The Proponent should be issued a Licence for the construction and operation of the wastewater treatment lagoon in accordance with the specifications, terms and conditions of the attached draft Licence. Enforcement of the Licence should be assigned to the Environmental Assessment and Licensing Branch until the liner testing has been completed and the Development is commissioned.

**PREPARED BY:**

Jennifer Winsor, P.Eng.  
Environmental Engineer  
Municipal, Industrial and Hazardous Waste Section

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Telephone: (204) 945-7012  
Fax: (204) 945-5229  
E-mail Address: Jennifer.Winsor@gov.mb.ca