

## SUMMARY OF COMMENTS/RECOMMENDATIONS

**PROPOSER:** R.M. of La Broquerie  
**PROPOSAL NAME:** La Broquerie Wastewater Treatment Lagoon Expansion  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Wastewater Treatment Lagoon  
**CLIENT FILE NO.:** 2833.10

### OVERVIEW:

On January 14, 2005, the Department received an Environment Act Proposal (EAP) on behalf of the Rural Municipality of La Broquerie for the expansion of the Community of La Broquerie wastewater treatment lagoon located in the north half of 31-6-8EPM. The proposed expansion consists of the construction of one new, additional primary cell and one new, additional secondary cell that will be located in the north half of 31-6-8EPM immediately adjacent to the south perimeter dyke of the existing wastewater treatment lagoon. Treated wastewater from the wastewater treatment lagoon will be discharged to the Seine River via existing and proposed ditches between June 15<sup>th</sup> and November 1<sup>st</sup> of any year.

The EAP indicates that clay type soils are available at the site and it is expected that the soils will meet provincial standards regarding hydraulic conductivity of soils used for construction of wastewater treatment lagoons.

The Department, on January 31, 2005, placed copies of the EAP report in the Public Registries located at; 123 Main St. (Union Station); the St. James Assiniboia Public Library (Winnipeg); the Jake Epp Public Library (Steinbach); and the Manitoba Eco-Network and provided copies of the EAP report to the Canadian Environmental Assessment Agency (CEAA), the Clean Environment Commission, and TAC members. As well, the Department placed public notifications of the EAP in and in the Steinbach Carillon on Monday, February 7, 2004. The newspaper and TAC notifications invited responses until March 10, 2005.

On March 17, 2005, Manitoba Conservation submitted responses from the TAC members to the appropriate Public Registries. The responses consisted of comments and requests for additional information. No comments were received from the public. On March 21, 2005, Manitoba Conservation submitted pertinent comments and requests for additional information from the TAC to the consultant.

On May 2, 2005, Manitoba Conservation received responses from the consultant. On May 5, 2005 the responses were forwarded to the appropriate TAC representatives for

review and comment. No additional comments were received from the provincial TAC representatives.

On June 13, 2005, Manitoba Conservation received a copy of Specialist Advice that was directed to CEAA from the Department of Fisheries and Oceans (DFO) for inclusion with the TAC review. DFO indicated that they would not be a Responsible Authority for this proposal.

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

There were no comments from the public.

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

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

- *No concerns.*

##### **Intergovernmental Affairs & Trade**

- *Our office has no concerns with the expansion provided no dwellings are built within 300 metres of the expanded lagoon;*
- *We note that Lot 6, Plan 43188 is adjacent to the site of the proposed expansion and is undeveloped;*
- *Also, Section 2.4 of the report RM of La Broquerie Environmental Act Proposal for Proposed Wastewater Treatment Lagoon Expansion states: "The west half of the lagoon expansion site is zoned Agricultural Limited and east half is zoned Rural Residential;*
- *Please note that the site of the proposed lagoon expansion, as shown in Plan LI of the aforementioned report, is;*
  - *Entirely within an "AC" Agricultural Conservation Zone; and*
  - *Partly in an area designated in the Development Plan as Urban Development Area and partly in an area designated Rural Residential Area.*

##### **Historic Resources**

- *No concerns.*

**Sustainable Resources Management Branch**

- *There is no discussion in the proposal on how the two lagoons will be operated and in particular the intended discharge routine;*
- *It would be preferable to use the existing discharge outlet;*
- *Depending on the quality of the discharge the potential exists for the silt fence to back up the wastewater with resulting flow around the end of the fence. There is no indication in the proposal if the silt fence is long-term and if so, who is going to maintain it;*
- *As soils along the discharge route are sand underlain by clay does the potential exist for the discharge to percolate through this sand directly into the river?;*
- *During and after construction sediment and erosion control measures must be implemented until the site has stabilized; and*
- *It is important to achieve optimum discharge quality as there is a short discharge route and water quality in this river is already an issue.*

Response From Proponent:

- The lagoon would be operated as outlined in the Province of Manitoba "Recommended Operation and Maintenance of Wastewater Treatment Lagoons" document. The proposed expansion layout, piping and valves would allow for independent operation of the four cells. A tee connection and valves along the forcemain would allow for the flow of wastewater to either the existing or the new primary cell or both primary cells at the same time. There is an intercell pipe between the existing primary and the existing secondary cell. An intercell pipe would be placed between the proposed primary and secondary cells. Both secondary cells would have independent discharge pipes. Therefore, the primary cells could be emptied independently and the secondary cells could be emptied independently. The operator would sample the wastewater in each of the secondary cells prior to discharge to ensure the discharge requirements are met. The lagoon would only be discharged between June 15 and November 1 of any year;
- The proposed discharge route has been changed. The perimeter ditch east of the proposed secondary cell will be connected to the existing perimeter ditch located east of the existing lagoon. Discharge from the proposed secondary cell will flow north along the proposed and existing eastern perimeter ditches and then east along the existing discharge ditch. There will not be a separate discharge ditch to the river from the proposed secondary cell. A silt fence would be placed in the existing eastern perimeter ditch to control sediments until vegetation is established in the new ditches;

- It is possible that some of the treated discharge would infiltrate the sandy soils at the bottom of the discharge ditch and flow to the River within the subsoils. This is not considered a problem as the discharge ditch is intended to drain the treated effluent from the lagoon directly to the River;
- The silt fences would be removed once the area has been re-vegetated; and
- The lagoon expansion was sized based on Manitoba Conservation guidelines. The municipality will participate in any water quality studies pertaining to the lagoon discharge that are required by Manitoba Conservation.

Disposition:

- The draft Environment Act Licence contains Clauses that require the Licencee to construct and operate the wastewater treatment lagoon in such a manner as to prevent the disruption of natural wildlife and fish habitats.

**Water Quality Management Section**

- *No information was provided concerning the age or condition of the existing lagoon. The proponent should ensure that the existing wastewater treatment lagoons are operating effectively and without leakage prior to constructing the expanded primary and secondary cells;*
- *The proponent has indicated effluent quality will improve with the lagoon expansion. However, no current or projected effluent quality data were provided for review;*
- *The proponent has not provided an assessment of the impacts of the lagoon expansion on water quality in the Seine River. The impact of the existing facility on water quality in the Seine River was evaluated with only three samples, collected 20 km downstream of the existing facility in 2000 and 2001. Given that the proponent has not provided information to describe the quality or rate of discharge of the proposed effluent or the quality of the receiving environment, it is not possible to determine the impact of the proposed expansion on the Seine River;*
- *The proponent is proposing to construct a second discharge route from the proposed secondary cell that would operate in addition to the existing discharge route from the existing secondary cell. To minimize impacts to the riparian vegetation along the Seine River and to limit the extent of the Seine River that is exposed to the initial effluent, it is recommended that the proponent construct a single discharge ditch that would transport effluent from both secondary cells to the Seine River. It would be favourable to use the existing discharge ditch to the Seine River. However, the proponent should ensure that appropriate erosion control measures are in place to accommodate the additional effluent discharge.*
- *Total nitrogen and total phosphorus concentrations in the Seine River have increased 75 and 188 %, respectively, between 1973 and 1999 (Jones and Armstrong 2001). The*

*proponent is proposing to expand an existing facility that discharges to the Seine River. Presumably the proposed expansion of the La Broquerie wastewater treatment facility will further increase the load of nitrogen and phosphorus that will be discharged to the Seine River. No information has been provided with which to evaluate the impact of the additional nutrient load on the Seine River. It is recommended that in addition to the standard lagoon effluent monitoring requirements, the following variables also be monitored in the effluent during each lagoon discharge event:*

- *Total phosphorus*
- *Total Kjeldhal Nitrogen*
- *Nitrate/Nitrite*
- *Ammonia*
- *pH*
- *Temperature*
  
- *Sampling Protocol:*
  - *Effluent discharge site: three samples to be collected during the beginning, middle and end of discharge period. These can be used to create one composite sample.*
  - *An accredited laboratory should be utilized for sample analyses.*
  - *The volume of discharge should also be reported.*

*Data should be collected for a minimum of a five-year period, at which time the Director should determine whether a continuation of the monitoring program will be required; and,*

- *The Water Quality Management Section is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses 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, for the Seine River, the Red River, Lake Winnipeg, and associated waterways and watersheds.*

#### Response From Proponent:

- The existing lagoon was constructed in 1989 under the project construction management of The Manitoba Water Services Board. Based on information from the soils investigation completed at the existing lagoon site prior to the construction of the lagoon, high plastic clay was available at the site for construction of the lagoon liner. Therefore, the lagoon liner should be in accordance with Manitoba Conservation's guidelines. There are no signs of leakage from the lagoon on the adjacent properties. The lagoon appears to be well maintained and no functional problems have been reported;
- The Environment Act Proposal indicated that at the time the lagoon expansion is completed, the quality of the effluent discharged from the lagoon will be of better

quality than what is currently discharged. It is assumed that a larger primary cell area would allow for improved treatment of the wastewater that is currently directed to the lagoon. The lagoon expansion was sized based on Manitoba Conservation guidelines;

- The Municipality will participate in any water quality studies pertaining to the lagoon discharge that are required by Manitoba Conservation; and
- The proposed discharge route has been changed. The perimeter ditch east of the proposed secondary cell will be connected to the existing perimeter ditch located east of the existing lagoon. Discharge from the proposed secondary cell will flow north along the proposed and existing eastern perimeter ditches and then east along the existing discharge ditch. There will not be a separate discharge ditch to the river from the proposed secondary cell. Plan L2 in Appendix E of the Environment Act Proposal has been altered to reflect this change. A silt fence would be placed in the existing eastern perimeter ditch to control sediments until vegetation is established in the new ditches.

**Disposition:**

- Clause 24 of the draft Environment Act Licence requires that the Licencee monitor effluent being discharged during each discharge campaign for a period of at least five years. The liquids shall be analyzed for total phosphorus, total Kjeldahl nitrogen, ammonia and nitrate-nitrite, field temperatures, and field pH. The results of the analyses shall be reported to the Director in accordance with the requirements of Clause 3 c) of the Licence;
- The draft Environment Act Licence contains Clauses that require the Licencee to construct and operate the wastewater treatment lagoon in such a manner as to prevent the disruption of natural wildlife and fish habitats; and
- The draft Environment Act Licence contains a Clause that requires that the proponent actively participate in any future watershed based management study, plan/or nutrient reduction program approved by the Director, for the Seine River and associated waterways and watersheds.

**Transportation and Government Services**

- *No concerns.*

**COMMENTS FROM FEDERAL REPRESENTATION:**

**Department of Fisheries and Oceans Canada**

- *DFO – WD required the following additional information:*
  - *Details regarding the slope and condition of the river bank at the proposed discharge ditch/outfall;*

- *Details regarding the dimensions of the proposed discharge ditch including its proximity to the Seine River. Please include detailed description of all work to be completed below the average annual high water level including any excavation, disturbance/removal of riparian vegetation and sediment and erosion control works;*
- *Details regarding the construction methods and machinery to be used in the construction of the discharge ditch. Please include the location from which the machinery will operate (will any machinery operate from the bed or bank of the Seine River?);*
- *Additional details regarding sediment and erosion control measures to prevent any construction activities from contributing sediment to the Seine River; and*
- *Details regarding proposed monitoring during and after construction to ensure that sediment and erosion control methods are effective and that the stability of the river bank is maintained.*

Response From Proponent:

- The lagoon expansion is to be located on a relatively flat piece of land adjacent to the existing lagoon. From the location of the toe of the east dike of the proposed lagoon expansion, the land slopes down approximately 4 m over a minimum distance of 70 m up to the tree line that borders the river. The area between the proposed eastern dike and the tree line is grassed. The land slopes very gently (relatively flat) from the tree line up to the river. The minimum distance between the tree line to the river is 40 m. The vegetation in the area between the tree line and the river consists of trees and grassed clearings;
- The proposed discharge route has been changed. The perimeter ditch east of the proposed secondary cell will be connected to the existing perimeter ditch located east of the existing lagoon. Discharge from the proposed secondary cell will flow north along the proposed and existing eastern perimeter ditches and then east along the existing discharge ditch. There will not be a separate discharge ditch to the river from the proposed secondary cell. A silt fence would be placed in the existing eastern perimeter ditch to control sediments until vegetation is established in the new ditches.
- No machinery will operate within at least 100 m of the river; and
- The contractor will be responsible to monitor the silt fences to ensure they are controlling sediments from the construction site until vegetation is established in the new ditches.

Disposition:

- The draft Environment Act Licence contains Clauses that require the Licencee to construct and operate the wastewater treatment lagoon in such a manner as to prevent the disruption of natural wildlife and fish habitats.

**Canadian Environmental Assessment Agency**

- *CEAA responses have indicated that application of The Canadian Environmental Assessment Act with respect to this proposal is required.*
- *Department of Fisheries and Oceans has requested additional information prior to proceeding with its screening. Environment Canada would be able to provide specialist information with respect to the project review.*

**Department of Fisheries and Oceans Canada – Supplementary**

- *Based on the information provided, DFO – WD concludes it has enough information to determine that an Authorization under Section 35(2) of the Fisheries Act for the project as described will not be required. As such DFO will be not be a Responsible Authority pursuant to the CEAA. However, DFO is able to provide the following recommendations for this project as specialist advice pursuant to Section 12(3) of the CEAA:*
  1. *The deposit of deleterious substances into water frequented by fish is prohibited under the Fisheries Act. Appropriate precautions are to be taken to ensure that potentially deleterious substances (such as fuel, hydraulic fluids, oil, silt, clay, etc.) do not enter any watercourse;*
  2. *Equipment operating near any water body should be free of external fluid leaks, grease and oil. Fuel is to be stored and the cleaning, fuelling and servicing of equipment is to be conducted in a manner to prevent the entry of deleterious substances into any watercourse;*
  3. *Effective erosion and sediment control measures (e.g. erosion control blankets, sediment barriers, straw mulch, silt curtains) are to be used to prevent any construction activities from contributing sediment to the Seine River;*
  4. *All excavated material should be disposed on land above the high water level, where it will not be a potential source of sediment for any water body;*
  5. *Effective, long term erosion control measures are to be implemented. This includes stabilizing and seeding disturbed areas immediately after construction and ensuring they are reclaimed to vegetation within one growing season; and*
  6. *The construction site should be monitored to evaluate the effectiveness of sediment and erosion control measures. If monitoring identifies any problems, then appropriate actions are to be taken to rectify the situation.*

- *Any harmful alteration, disruption or destruction of fish habitat occurring as a result of a change in plans for the proposed works or as a result of failing to comply with the above mitigation measures may result in contravention of the Fisheries Act.*

Disposition:

- The draft Environment Act Licence contains Clauses that require the Licencee to construct and operate the wastewater treatment lagoon in such a manner as to prevent the disruption of natural wildlife and fish habitats.

**PUBLIC HEARING:**

A public hearing was not requested.

**RECOMMENDATION:**

Issue an Environment Act Licence be issued in accordance with the attached draft. Enforcement of the Licence should be assigned to the Environmental Assessment and Licensing Branch until the soil testing has been completed.

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