

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Town of Morden  
**PROPOSAL NAME:** Proposed Wastewater Stabilization Pond Expansion  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Wastewater Treatment Lagoon  
**CLIENT FILE NO.:** 55.40

### **OVERVIEW:**

On January 18, 2006, the Department received an Environment Act Proposal (EAP) from the Town of Morden for the expansion of its wastewater treatment lagoon located in the east half of Section 9-3-5WPM. The proposed expansion consists of the construction of an additional secondary cell that will be located in NE 9-3-5WPM immediately adjacent to the north perimeter dykes of the existing wastewater treatment lagoon. Treated wastewater from the wastewater treatment lagoon will be discharged between June 15<sup>th</sup> and November 1<sup>st</sup> of any year via existing discharge piping and a related outflow channel into Deadhorse Creek.

On April 5, 2006, prior to initiating the EAP review, a meeting with representatives of the Town of Morden, City of Winkler and Rural Municipality of Stanley was held to discuss the concept of establishing a regional wastewater treatment facility in lieu of each jurisdiction operating independent facilities such as lagoons. Representatives of each jurisdiction displayed interest in the concept but suggested that such an endeavor would likely be years away from becoming a reality and that, for the time being, they would continue operating independent wastewater treatment facilities.

The Department, on April 11, 2006, placed copies of the EAP report in the Public Registries located at 123 Main St. (Union Station), the Winnipeg Public Library, the South Central Regional Library (Morden), 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 the Morden Times on Friday, April 14, 2006. The newspaper and TAC notifications invited responses until May 16, 2006.

On May 19, 2006 Manitoba Conservation forwarded requests for additional information from the TAC to the proponent. The proponent's June 21, 2006 response to the requests was then provided to the participating TAC for review and comment on June 28, 2006.

On August 16, 2006 Manitoba Conservation forwarded a supplementary request for additional information from the TAC to the proponent. On September 8, 2006 the

participating TAC representative provided correspondence to Manitoba Conservation that their comments had been addressed and provided a suggestion that an Environment Act Licence relative to this proposal should contain requirements for the licensee to assess options and develop a plan for a regional sewage treatment facility that will be capable of accommodating public demand as well as changing regulatory requirements.

There were no additional comments from the TAC.

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

There were no comments from the public.

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

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

- *No comments or concerns.*

#### **Historic Resources**

- *No concerns.*

#### **Intergovernmental Affairs and Trade**

- *The proposed expansion is located in NE 9-3-5W in the Town of Morden. Wastewater treatment facilities are listed as conditional use in the Town of Morden Zoning By-Law;*
- *This office has no land use concerns with this proposed expansion of the Town of Morden wastewater treatment lagoon.*

#### **Sustainable Resource Management Branch**

- *No concerns.*

#### **Transportation and Government Services**

- *No concerns.*

#### **Water Stewardship – May 10, 2006**

- *With regard to groundwater, the concern would be seepage of effluent water from the existing cells or proposed expansion into the apparent silt/sand aquifer underlying the site. The expansion is proposed to be lined with an HDPE liner which should minimize seepage but the existing facilities are proposed to remain as they are, which we understand to be that they are underlain by materials having a significantly higher hydraulic conductivity than  $10^{-7}$  cm/s. A seepage*

*calculation was included in the geotechnical report but it is difficult to understand whether the seepage rates calculated are for all of the existing facilities or simply for the planned expansion should it not be lined with an HDPE liner. It is unclear what monitoring will be provided to check the integrity of the cells including the newly proposed HDPE liner.*

- There was also a reference to a monitoring well or monitoring network but no additional information was supplied as to how many monitoring wells there are, when they were installed, and the results from sampling of these wells.*
- In addition, there was reference to a tile drain system but again, no details were provided as to how this was constructed, its intent, and whether it is expected that the tile drains will intercept leakage from the existing and proposed cells.*
- Any such facility located in an area underlain by a shallow aquifer should include a well designed groundwater monitoring network to detect impacts on the groundwater system caused by leakage from properly lined cells or cells which are “non-standard”. At the current time, we are left to wonder how much seepage has occurred from the existing cells and what the impact of this seepage has been on the underlying aquifer, what groundwater monitoring is currently undertaken and what are the results from that monitoring, what future groundwater monitoring is planned, and what response plans are in place if the amount of seepage which has or is occurring is having an impact on groundwater quality in the underlying aquifer. The EAP should be expanded to provide answers to these questions, after which a more complete review can be undertaken.*
- Locations of any potable water sources within the vicinity of the proposed wastewater stabilization pond were not mentioned.*
- The wastewater effluent quality could be included. What contingency plans are made in the event the cells hydraulic capacities are exceeded but the discharge qualities have not been met?*
- While there is a sport fishery in Lake Minnewasta and immediately downstream in the plunge pool created by the spillway, once the reservoir reaches supply level it is our understanding that no additional water is discharged downstream. This results in minimal instream flows negating the ability of the river to support fish it might normally have. Given this current situation there is limited fisheries value associated with the area of discharge. As DFO has the mandate for Section 35(1) under the Federal Fisheries Act we defer specifics pertaining to habitat concerns to them.*
- The proposal outlines a short-term option for wastewater treatment that does not address the lack of integrity of the existing cells or projected population increases beyond 2013. As such, we recommend that the Town of Morden, in cooperation with the Town of Winkler and the Rural Municipality of Stanley, develop a long-term plan for regional wastewater treatment that addresses future growth and the lack of integrity of existing facilities. The long-term regional plan should include*

*provisions for nitrogen and phosphorus removal to 15 mg/L and 1 mg/L, respectively. We recommend that the long-term regional plan be provided to Conservation for review by the Technical Advisory Committee by 2009 with the regional system in place and operational by 2013.*

**Proponent Responses – June 21, 2006:**

- General area information was provided in the geotechnical report with regard to the sand aquifers. Since the saturated thickness of the aquifer ranged from less than 3 m to less than 1 m, it is subject to regular periods of drying up and therefore would likely not be used for domestic purposes. Based on well logs in the near vicinity, the yield in this surface sand layer is low. Within 800 metres of the lagoon, no domestic wells obtain water from this surficial layer;
- The seepage rates, included in Appendix C of the geotechnical report, were intended to quantify potential losses from the existing cells. Monitoring of the existing cell integrity and the newly proposed HDPE liner will be performed as required by Manitoba Conservation;
- There is no monitoring well network currently in service for the existing lagoon, nor is it required in their existing lagoon licence;
- The maintenance of the subsurface tile drainage system surrounding the existing cells is required in the existing lagoon licence. The installation was completed in 1992 to intercept seepage and manage the groundwater condition;
- Groundwater monitoring is not required in the existing Environment Act Licence and will be performed as required by Manitoba Conservation;
- Past results of effluent sampling from the Morden lagoon has generally shown a consistency in meeting the requirements of the licence for discharge. Presently, the Town of Morden is challenged due to a shortage of storage capacity, outfall capacity and the need for discharge valve upgrading. The storage cell capacity of the lagoon will be increased by the construction of a new secondary cell, and is expected to service wastewater needs of the community until 2013; and
- Currently, the short-term option for wastewater treatment is the extent of the lagoon expansion until discussions conclude on the regional treatment system.

**Water Stewardship – July 7, 2006**

- *The response from Cochrane Engineering dated June 21, 2006 commits the proponent to carrying out groundwater monitoring: “monitoring of the existing cell integrity and the newly proposed HDPE liner will be performed as required by Manitoba Conservation” and groundwater monitoring “will be performed as required by Manitoba Conservation”. Although there was originally a reference to monitoring wells near the existing structures, the consultant now indicates that there were none;*

- *The commitment to groundwater monitoring “as required by Manitoba Conservation” satisfies our concerns, under the assumption that Manitoba Conservation will take our concerns into consideration when developing the licence;*
- *Water quality concerns, as noted in the last point of our memo to you dated May 10, 2006 have not been addressed in the response by the proponent; and*
- *We have no fisheries concerns with this proposal that we feel would not covered under DFO’s review given their mandate for fish habitat under the Fisheries Act.*

### **Water Stewardship – July 7, 2006**

- *Water Stewardship has been in telephone contact with Jason Bunn of Cochrane Engineering regarding the items outlined in the memo dated July 7, 2006 Schwartz to Boswick on the above subject;*
- *Water Stewardship is satisfied that the proponent has addressed our comments on the lagoon expansion proposal;*
- *In our conversation, Mr. Bunn indicated that the Town of Morden, the Town of Winkler and the RM of Stanley have initiated discussions on the development of a long term regional wastewater treatment plan that would address expansion requirements and include provisions for nitrogen and phosphorus removal to 15 mg/l and 1 mg/l respectively. Notwithstanding this action, Water Stewardship recommends that the development of a long term regional wastewater treatment plan should be a condition of the Environmental Licence for the lagoon expansion. The following is a suggested wording for such a condition:*
  - *The Licencee, cooperatively with the Town of Winkler and the RM of Stanley;*
    - a. undertake the assessments of options for a regional sewage treatment facility and ancillary components;*
    - b. develop a plan for a regional sewage treatment facility and ancillary components that will satisfy public demand and changing regulatory requirements; and*
    - c. submit the plan to the Director by January 31, 2009.*

### **Disposition:**

- **Previous Environment Act Licences for the Town of Morden wastewater treatment lagoon included a clause requiring that a subsurface tile drainage system surrounding the wastewater treatment lagoon be maintained. The draft Environment Act Licence contains a similar clause that specifically identifies the cells of the wastewater treatment lagoon to which it applies, namely the primary cell and four secondary cells that relate to the previous licences;**
- **The draft Environment Act Licence contains clauses that apply minimum physical characteristic and testing requirements for the HDPE liner of the secondary cell number 5 that is to be constructed;**

- The draft Environment Act Licence contains a clause that requires the proponent, for each effluent discharge campaign after commencing operation of the altered lagoon, to sample the effluent and have the samples analyzed for total Kjeldahl nitrogen, nitrate-nitrite nitrogen, ammonia nitrogen, total dissolved phosphorus, total particulate phosphorus, total inorganic phosphorus, and total suspended solids concentrations as well as the pH and temperature and report the results to the Director;
- The draft Environment Act Licence contains a clause that requires the proponent, for each effluent discharge campaign after commencing operation of the altered lagoon, to sample water from specific locations in the Deadhorse Creek and have the samples analyzed for total Kjeldahl nitrogen, nitrate-nitrite nitrogen, ammonia nitrogen, total dissolved phosphorus, total particulate phosphorus, total inorganic phosphorus, and total suspended solids concentrations as well as the pH and temperature and report the results to the Director;
- The draft Environment Act Licence contains a clause that requires the proponent to propose a groundwater investigation and monitoring plan to the Director for approval within six months of the date of the Licence; and
- Manitoba Conservation has met with representatives of the City of Winkler, Town of Morden and Rural Municipality of Stanley to discuss the concept of establishing a regional sewage treatment facility. Each jurisdiction is aware that options exist for a jointly operated sewage treatment facility and has indicated that such an endeavor would be given consideration. However, the Environment Act Licence is not considered to be an appropriate mechanism to influence a municipality, town or city to establish a relationship with other municipalities, towns or cities for the purpose of establishing a regional sewage treatment facility.

#### **COMMENTS FROM FEDERAL REPRESENTATION:**

##### **Canadian Environmental Assessment Agency**

- *Based on the responses to the CEAA survey, application of The Canadian Environmental Assessment Act with respect to this proposal will not be required. Environment Canada, Fisheries and Oceans Canada and Health Canada would be able to provide specialist if requested. DFO in addition provided a copy of letter of advice addressed to the proponent providing additional mitigation measures for construction of the project.*

##### **Fisheries and Oceans Canada**

- *We have reviewed your environmental assessment project description under the habitat protection provisions of the Fisheries Act. The measures described in your plans are not adequate to protect fish and fish habitat. Therefore, please ensure that the following additional measures are incorporated into your plans;*

- *Effective sediment and erosion control measures are implemented until seeded areas are re-vegetated. Any disturbed areas area seeded and re-vegetated or otherwise protected (e.g. vegetation cannot be undertaken within a reasonable time frame, or the work is conducted outside of the growing season, alternate erosion control measures are applied to stabilize exposed soils until re-vegetation occurs; and*
- *Planting native vegetation (e.g. willows, sedges, deep rooted grasses, etc.) within and behind the rip rap, or using bioengineering stabilization treatments is encouraged as deep rooted native plants can improve the ability of the banks to resist erosion. Consult a riparian (shoreline) plant specialist to determine the appropriate plant species and maintenance activities that are required to establish this vegetation.*

**PUBLIC HEARING:**

A public hearing was not requested.

**RECOMMENDATION:**

Issue an Environment Act Licence in accordance with the attached draft. Once the HDPE liner component is installed and before commencing operation, an inspection should be completed by an Environment Officer from the Environmental Assessment and Licensing Branch. Upon commissioning lagoon and transferring the Licence to the Region for enforcement.

**PREPARED BY:**

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November 30, 2006

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