

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Town of Niverville
PROPOSAL NAME: Town of Niverville Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 5124.00

OVERVIEW:

On July 19, 2005, the Department received an Environment Act Proposal (EAP) on behalf of the Town of Niverville for the construction and operation of a wastewater treatment lagoon located in SW Section 7-8-4EPM in the Rural Municipality of Ritchot. Treated wastewater from the wastewater treatment lagoon would be discharged between June 15th and November 1st of any year into Prefontaine Drain that flows into St. Adolphe Coulee that flows into the Red River. The wastewater treatment lagoon located in SW Section 30-7-4EPM in the Rural Municipality of Hanover that currently serves the Town would be decommissioned.

The proposal and supporting documentation prepared by Cochrane Engineering Ltd., identified clay soils at the proposed site. The supporting documentation indicated that the clay soil is expected to meet provincial standards regarding hydraulic conductivity of soils used for construction of wastewater treatment lagoons.

The Department, on August 9, 2005, placed copies of the EAP report in the Public Registries located at 123 Main St. (Union Station); the St. James Assiniboia Public Library, the Jake Epp Public Library, Manitoba Eco-Network and the Town of Niverville office and provided copies of the EAP report to the Canadian Environmental Assessment Agency, the Clean Environment Commission, and TAC members. As well, the Department placed public notifications of the EAP in the Steinbach Carillon on Thursday, August 18, 2005. The newspaper and TAC notifications invited responses until September 15, 2005.

On September 20, 2005, Manitoba Conservation submitted responses from the TAC members to the appropriate Public Registries. Six TAC responses were received. There were no comments from the public. Environment Canada and Fisheries and Oceans Canada indicated that they may have specialist advice. Through a letter of advice dated August 29, 2005, Fisheries and Oceans provided recommendations for this project. In a September 22, 2005 letter, Health Canada requested additional information.

On September 26, 2005, Manitoba Conservation forwarded Health Canada's requests for additional information to the Town of Niverville for response. On October 5, 2005 the Town's consultant responded to the requests.

On October 11, 2005, Manitoba Conservation forwarded the response to Health Canada for review, requesting a response, if any, within three weeks of that date. No response was received.

On December 2, 2005, Manitoba Conservation requested confirmation of the proposed method of disposal or alternate use of the sludge from the Town of Niverville wastewater treatment lagoon that is to be decommissioned. The Town responded on December 2, 2005 and confirmed that it is their intention to dispose of the sludge at a waste disposal ground.

At the request of the Town of Niverville, a draft Environment Act Licence was provided for their review on December 5, 2005. On December 28, 2005, representatives of the Town of Niverville and the Environmental Assessment and Licensing Branch met to discuss the draft Licence before distributing the draft Licence for TAC review. Minor revisions to the draft Licence were made.

COMMENTS FROM THE PUBLIC:

There were no comments from the public.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Historic Resources

- *No concerns.*

Sustainable Resource Management Branch

- *No concerns.*

Transportation & Government Services

- *No concerns.*

Ecological Services Division – Water Stewardship

- *No concerns.*

Water Science and Management – Water Stewardship

- *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 Red River, Lake Winnipeg and associated waterways and watersheds.*

Disposition:

- The draft Environment Act Licence contains a clause that requires that the proponent will actively participate in such a study, plan/or program approved by the Director.

Canadian Environmental Assessment Agency

- *The September 15, 2005 CEAA responses have indicated that application of The Canadian Environmental Assessment Act with respect to this proposal will not be required. Environment Canada and Fisheries and Oceans Canada offered specialist advice while Fisheries and Oceans Canada also included recommendations for this project. Health Canada was not expected to have significant involvement with the EAP review.*

Department of Fisheries and Oceans

- *No in-water construction is conducted during the spring spawning and incubation period of April 1 to June 15 in any year;*
- *The deposit of deleterious substances into water frequented by fish is prohibited under the Fisheries Act. Appropriate precautions must therefore be taken to ensure deleterious substances (e.g. gasoline, grease, sediment, etc.) do not enter the watercourse;*
- *Rock riprap should be clean, free of fine materials (dirt and mud), and be of sufficient size to resist displacement during peak storm events; and*
- *Effective sediment and erosion control measures are implemented. Any disturbed areas are seeded and re-vegetated or otherwise protected (e.g. cover exposed soil with biodegradable erosion control blankets) to prevent erosion. If re-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. Shoreline vegetation should not be removed to maintain bank stability.*

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.

Health Canada

- *Section 3.3.1 indicates that the ponds in this flood prone area will be constructed to 1997 flood level (approx 1/100 year event) plus 0.61m freeboard. Appendix D – Geotechnical Report recommends a 1.0m freeboard to minimize the effects of interior wave action and provide stability from within the relatively small surface area of the ponds. Would a similar or greater freeboard be prudent against such exterior flood conditions at the 1/100 year level;*

- *Section 3.3.1 indicates that due to silt deposits in the area, the berms of the ponds will be keyed into the liner to provide containment. Will a contingency plan be required? Will wells be used to monitor the quality of the groundwater at the project site? Are the nearby residents (>300m) using groundwater for drinking, livestock, or irrigation purposes? Which direction does the 22-25 m deep aquifer flow?;*
- *Section 4.10 indicates that public meetings were held in the Town of Niverville and the RM of Ritchot. What was the result of the consultations? Were any aspects of the project altered to mitigate any public concerns brought forward?;*
- *Section 3.3 does not indicate whether the access road to the south of the facility will be routed/constructed from the mile road to the west, or past the nearby residences to the east. If the later, will the residents have concerns with the additional noise, dust and traffic that can be expected during the construction and operation phases? Has the proponent consulted these residents?;*
- *Section 3.3.2 indicates that the existing lagoon will be decommissioned, with sludge dewatered and placed in a landfill. Will the sludge be partially or completely treated to any biological standards to guidelines? Will the sludge be disposed of into an approved class or landfill? Will the transport vehicles be capable of transporting the sludge in a manner that will not disseminate potentially biologically active agents, and how will they be decontaminated?*
- *Will the workers at the construction sites be exposed to partially treated wastewater, heavy equipment, dust, noise, etc. What mitigation measures are planned?;*
- *The existing lagoon is adjacent to the South side of Niverville (Figure 2-1). Are sensitive receptors located by the site, or on the vehicle routes (schools, day-cares, nursing homes residences)? Are any mitigation measures planned/required for the decommissioning activities (e.g. measures to control dust, odour, noise, contamination, traffic safety)?; and*
- *The proposal should include a description of the truck dump site. What method will be used to unload the trucks safely? Will mitigation measure be required (high curb, lighting, outfall pad)?*

Response from Proponent

- The 1.0 metre freeboard on the interior of the lagoon cells is mainly a requirement of all lagoon licences to prevent over-topping and to minimize effects of wave action. The 1997 flood level plus 0.61 m freeboard is the recommended height for all dyking in the Red River Valley for flood protection. As per P.17 of the EAP, the top of the lagoon berm will be 236.9 m, which is 0.58 m above the required level, 236.3 m at the location, so there will be 1.19 m or 4.5 feet above the 1997 flood level for this facility;

- A silt layer was found in most testholes, so a clay key is proposed around the cells to tie the berms into the thick, underlying, high plasticity clay that extends to at least 10.7 metres below grade as per TH 2 & 3. This should provide adequate containment and a contingency plan is usually not required for this type of application. Monitoring wells can be installed around the lagoon if required. I don't believe they should be required in this case as the aquifer is a deep bedrock aquifer and well covered by a thick layer of good clay. The closest residence to the east is presumably using groundwater for household uses only. The aquifer in general flows from the east towards the river, but local usage in the Town may impact this somewhat;
- The meetings were mainly for informational purposes to explain the Project. There were not very many questions or comments as a result of the meetings. In consultation with the RM of Ritchot, it was decided to accept septage from residents of the RM of Ritchot who live within a two-mile radius of the lagoon;
- Access to the site will be from the south on the mile road between the lagoon site and the residences. Access from the west is cut-off by the rail line and the Prefontaine Drain. Traffic will not access the site from the east past the residences. Construction activities may generate some noise, dust and traffic for a short period of time, but this will be similar to hog lagoons, of which several have been built in the area. During operation, there will be minimal traffic to the site, except during September/October when septage will be hauled from the nearby residences to the site. The proponent has spoken to the nearest residents;
- The proponent wishes to study the option of disposing of the sludge either for land application or to a landfill. In either case, the Environmental Regulation for Treatment and Disposal of Biosolids in Manitoba will be followed;
- The construction of the new facility will be a typical earth-moving project undertaken by a contractor, who is subject to Workplace Safety and Health requirements, similar to any other earth moving project. Work at the existing site will be similar depending on disposal method chosen. If land spreading is chosen, contractors specialized in this work will be utilized and if a landfill is chosen, de-watering and storage of solids will be undertaken with limited worker contact with any wastewater;
- Access to the existing lagoon is from the mile road south of the lagoon, thus there is no need to travel through Town and past potential receptors other than a few residences. Depending on the alternative chosen for solids disposal and the location of the disposal spot, dust, odour, noise, contamination, traffic safety, will be dealt with as appropriate;
- A typical truck dump station is attached. The truck dump will be located on the primary cell with a graveled access and turnaround. The truck dump is a concrete ramp built down the inside of the berm with a smooth surface for washing down and concrete curbs to contain liquid and prevent erosion, and a concrete curb at the top to stop the truck. As well, bollards may be installed to help in locating the truck in line with the ramp. This type of structure has been used at many lagoon truck dumping facilities.

Disposition:

- Limits, terms and conditions of the draft Environment Act Licence provide operating criteria regarding organic load, odours, containment and quality of treated wastewater that are conventional for standard lagoons in Manitoba; and
- The draft Environment Act Licence contains a clause that requires that sludge from the lagoon that is to be decommissioned as a component of this project must be disposed of at a waste disposal ground operated under the authority of a permit issued under Manitoba Regulation 150/91 or a Licence issued pursuant to The Environment Act.

SUPPLEMENTARY INFORMATION SUBMITTED BY PROPONENT;

1. Road Access – it has not been decided yet whether the access road will enter the site from the south along Secondary Cell #3 or from the east where the Primary Cell is close to the north-south mile road. The area to the south of the primary, east of Secondary Cell #3 may be used for any aerated cell in the future if required. The final road alignment will be decided in the detailed design;

Disposition:

- The draft Environment Act Licence contains a clause that requires that an all-weather access road be constructed and maintained for the wastewater treatment lagoon.
2. Rip Rap Material – it has been proposed that all cells will have some rip rap on their inner berms to protect against erosion as has been experienced recently at several facilities with large cells. It is proposed to re-use material from the existing lagoon and from the local Niverville Concrete rubble pile as well as imported stone material as is presently being done for Lorette lagoon. The details have not been finalized at this time, but initial thought was to protect the north, south and east berms of all cells and maybe the primary west berm as it would be more difficult to do at a later date if required. The west berms of the secondary cells may be left for now and either monitored or gradually covered as additional waste concrete becomes available. It is proposed to cover the upper 5 metres of slope similar to the Loretter remediation project to protect the area most vulnerable to erosion;

Disposition:

- The draft Environment Act Licence contains a clause with the following requirement: if in the opinion of the Director, significant erosion of the interior surfaces of the dykes occurs, the Licencee must repair the dyke and install rip rap as necessary.
3. Key way Location – the clay cut-off will be constructed in the middle of the berm as shown on drawing C02;
 4. Fence Location – the fence location has not been finalized as the Town will be planting two rows of trees on the south and east sides of the property. This will be

finalized at the detailed design stage. The facility will be properly fenced and gated as per similar facilities;

Disposition:

- The draft Environment Act Licence contains a clause that requires that a fence and gate be constructed and maintained around the wastewater treatment lagoon to limit access.
5. Sludge Disposal (old lagoon) – the Town would like to look into the possibility of applying the sludge to land they own as an option to drying the sludge and hauling to a landfill. This will be dealt with as a separate issue when the time comes.

Disposition:

- Conforming with information provided in the December 2, 2005 correspondence from the Town of Niverville, the draft Environment Act Licence contains a clause that requires that sludge from the existing lagoon, that is to be decommissioned as a component of this project, must be disposed of at a waste disposal ground operated under the authority of a permit issued under Manitoba Regulation 150/91 or a Licence issued pursuant to The Environment Act.

PUBLIC HEARING:

A public hearing has not been requested.

RECOMMENDATION:

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

PREPARED BY:

Robert Boswick, P. Eng.
Environmental Engineer
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Telephone: (204) 945-6030
Fax: (204) 945-5229
E-mail Address: rboswick@gov.mb.ca