

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Rural Municipality of Stanley
NAME OF DEVELOPMENT: Rural Municipality of Stanley Wastewater Treatment Facility
CLASS OF DEVELOPMENT: Two
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4940.00

OVERVIEW:

The Proposal was received on January 30, 2003. It was dated January 17, 2003. The advertisement of the proposal was as follows:

“A Proposal has been filed by Steckley Consulting Engineers Inc. on behalf of the Rural Municipality of Stanley for the construction and operation of a wastewater treatment lagoon located in NW 11-2-5W, approximately 8 km west of the community of Schanzenfeld. It is proposed that the facility will accommodate truck hauled septage from the rural municipality. Construction of the project is proposed for the late summer of 2003, with operation commencing in the spring of 2004. The facility is intended to operate primarily through evaporation. If necessary, treated effluent would be discharged to the Hespeler Drain. Discharges would take place after June 15 and before November 1 each year.”

The Proposal was advertised in the Winkler Times on Monday, May 19, 2003. It was placed in the Main, Centennial, Eco-Network and South Central Regional Library (Morden) public registries. The Proposal was distributed to TAC members on May 12, 2003. The closing date for comments from members of the public and TAC members was June 16, 2003.

COMMENTS FROM THE PUBLIC:

George and Nettie Froese We are concerned about the effect this lagoon may have on our environment. The proposed site is prone to flooding and is located right next to the Hespeler Drain. The lagoon is across the road from where our cattle graze in the Hespeler Drain during the summer. Our cattle drink in this creek and our dugout is filled by this creek. We are concerned about the effect this will have on our watering system if and when treated effluent would be discharged to the Hespeler Drain.

Disposition:

Additional information was requested concerning the possibility of flooding at the project site. Any treated effluent release would have to comply with normal lagoon discharge requirements.

Petition (Received from Winkler Office January 28, 2003)

We are opposing the proposal site NW 11-2-5W for the Stanley lagoon. We farmers / landowners in the surrounding area are very concerned. The following are our concerns:

1. Flooding: The area proposed is right in between two water flows. During spring runoff and flash flooding, see attached photograph, this area becomes engulfed completely. If the lagoon is built on this site, the excess water would cause erosion to the banks of the lagoon and extreme flooding around the lagoon. In turn this could also divert water in unnatural directions causing damage to land.
2. Contamination: If erosion occurs and seeps into surrounding streams, many people will be affected downstream, possibly causing diseases.
3. Odor: extreme unpleasant odor in highly populated area.
4. Heritage Post Road: The Manitoba Mennonite Historical Society charter buses for tourists to follow the Post Road established in 1878. This road is on the road #26 that they travel on, which passes beside the proposed lagoon.
5. Location and Cost Effectiveness: The location is very inappropriate since the building of the lagoon is for developments 10 miles downstream. This makes no sense. They should not contaminate other areas. The sewage should stay in the development area.

Our suggestion would be for the R. M. of Stanley to go back to find other alternatives. (Approximately 34 signatures.)

Disposition:

Only one landowner signing the petition submitted comments during the advertised comment period. Additional information was requested concerning flood protection. Concerns about contamination and odor can be addressed as licence conditions. With respect to concerns about the location of the proposed facility, the rural municipality chose the location with the knowledge that local residents opposed it. Commentary was requested concerning how the proposed location was selected.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Conservation – Sustainable Resource Management This system should be designed and operated, if possible, for zero discharge. The department supports the allocation of additional land for the construction of a standby lagoon, which would receive water from the facultative lagoon if more evaporation is required, or be used as an anaerobic lagoon if sludge removal becomes necessary in the existing one. The required surface area for a zero discharge lagoon, as specified in the consultant's report, is 1.5 hectares.

There is uncertainty regarding the quality of any effluent that would be expected from this facility. The proponent should provide information on the projected effluent quality and there should be an assessment done as to the expected impacts of discharges under low flow stream conditions. As a minimum, should discharge from this facility be permitted to occur, limits for concentrations of ammonia and phosphorus in the effluent should be specified.

The proponent should be required to actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director, for the Hespeler Drain, Deadhorse Creek, the Red River and associated waterways and watersheds.

Disposition:

With respect to effluent quality, the proposed facility is intended to operate as a zero discharge facility. Should effluent discharge be required, the discharge conditions should be similar to those of other nearby facilities. Limits for nutrients should be specified on a

watershed basis. Accordingly, the suggestion to require participation in a watershed based nutrient reduction program can be included as a licence condition.

Historic Resources Branch No concerns.

Highway Planning and Design Branch No concerns.

Soils and Crops Branch No concerns.

Medical Officer of Health – Central Region The health concerns relate to fencing to protect against injuries and reduction in odors. Both issues appear to be addressed in the proposal.

Canadian Environmental Assessment Agency The application of the Canadian Environmental Assessment Act will not be required for this project. Environment Canada would be able to provide specialist information with respect to the project review. (No federal agency indicated a desire to participate in the provincial review of the project.)

Environment Canada Environment Canada has received a copy of the above proposal from CEAA. Since the proponent intends to rely on evaporation from the lagoon rather than discharging effluent to the environment (except in exceptional circumstances), we do not have a specific concern with the proposal at this time under our Fisheries Act mandate. Also, we are not requesting to participate in the provincial review under Clause 59 of the Canada-Manitoba Agreement on Environmental Assessment Co-operation. However, we would like to offer the following general comments for your consideration in licencing the proposed lagoon:

1. Since there are no government design criteria for this type of system, many of the design values apparently come from the literature, together with professional knowledge, experience and training. This makes this system somewhat unique from other typical lagoon operations. Some of the rationale, calculations and arguments used by the consultants in designing this system are not clear, and further clarification may be warranted. Examples include:
 - a) Referring to Section 3.0 (page 1) of the Environment Act Proposal, it is not clear how the consultant calculated the hydraulic loading to the lagoon system, and how the cells are to be operated and controlled (although there is some further information in Appendix B.) For example, the current number of septic tanks in the R. M. of Stanley is 775, but it is not clear how the consultant determined that the average number of new dwelling units per year over the last 20 years is 23 dwelling units per year. Accepting this information, it is clear how it was determined that, by the year 2023, there are expected to be 1235 septic tanks in the R. M. However, it is not clear how the 19% value was obtained and what specifically is meant by the related statement "when an adjustment of 80 persons is made for the 40 single family dwelling units in Rosebrook Place trailer park." Also, where did the numbers 5059 and 1.20 come from? The volume of the septic tanks is stated to be 3182 litres. Is this the entire volume of each tank or just the volume of the sedimentation chamber?

What is the source of this figure? Will all the septic tanks installed in the R. M. during the next 20 years be the same?

- b) Further clarification may be warranted on how the lagoon system will be operated, as this is not entirely clear from the report. If there are problems with insufficient evaporation, it seems the operator will have limited flexibility in operating the anaerobic cell. Also, it may be necessary to add water to the anaerobic cell from time to time to maintain a minimum operating depth. What flexibility will the operator have in operating the anaerobic cell in order to maximize treatment and to ultimately ensure the effluent is suitable for discharging? This could also be asked about the operation of the facultative lagoon cell.
2. It is not clear from the report what effluent quality can be expected if the lagoon has to be discharged to Hespeler Drain, and what the impacts to water quality, aquatic species, etc. might be. This will require an appropriate assessment.

Disposition:

The design calculations were reviewed in light of these comments. The calculations are based on population numbers and projections readily available to the RM and its consultant, and the design assumptions are reasonable. No additional information is needed to rationalize the calculations provided in the Environment Act Proposal.

ADDITIONAL INFORMATION:

Additional information addressing the above comments was requested from the Proponent's consultants on June 25, 2003. The Proponent responded on June 26, 2003 with information on siting. It was noted that the proposed site was chosen because of the separation distances available to adjacent residences, the central location within the municipality, and the availability of suitable clay for construction. The Proponent's consultant provided information concerning flood potential on July 24, 2003. The information indicated that the drain south of the proposed facility was considerably lower than the elevation of the secondary cell dyke, which is in turn 1.5 m lower than the primary cell dyke due to site topography and the proposed depth of the anaerobic (primary) cell. Additional topographic information was provided on July 29, 2003. This indicates that the land surrounding the proposed lagoon would drain to the north east before the dyke around the secondary cell was overtopped.

Additional commentary on odour issues was requested on September 24, 2003. The following information was provided in response by the proponent's consultants on December 1, 2003:

"RM of Stanley Wastewater Treatment Lagoon was designed, with a long retention time in the anaerobic digester cell, to achieve a significant BOD and TSS removal efficiency and thus reduce the organic and solids loads to the following facultative/evaporation lagoon cell. The anaerobic cells were sized as anaerobic digesters as a result of the high organic load delivered by septage to the plant. It is expected that a crust will build up on the surface of the anaerobic cell reducing odour emission from this stage. To further reduce odour formation, crust formation for this treatment step may be enhanced by adding hay to the surface of the cell. A significant portion of the odour would originate from the anaerobic treatment/digestion step. The design also provides two anaerobic cells (one designated as stand-by, or future) so that one could be drained and de-sludged as required.

The facultative cell will provide further treatment to reduce the organic content of wastewater and to provide a large surface area for evaporation. As wet sludge may periodically be exposed to the atmosphere, odour could be formed from this treatment step.

The RM of Stanley Wastewater Treatment Lagoon location proposed has the standard setback provision, for facultative lagoons, from the nearest residence.”

PUBLIC HEARING:

As no requests for a public hearing were made, a public hearing is not recommended.

RECOMMENDATION:

All comments received on the Proposal have been addressed in the additional information or can be addressed as licence conditions. Therefore, it is recommended that the Development be licensed under The Environment Act subject to the limits, terms and conditions as described on the attached Draft Environment Act Licence. It is further recommended that enforcement of the Licence be assigned to Environmental Approvals until construction is completed. Once the facility is commissioned, enforcement should be assigned to the Red River Region.

PREPARED BY:

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Environmental Approvals - Environmental Land Use Approvals
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