

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Evergreen Colony (Spring Creek Holding Co. Ltd.)
NAME OF DEVELOPMENT: Evergreen Colony Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: Two
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 1650.10

OVERVIEW:

The Proposal was received on May 9, 2006. It was dated May 5, 2006. The advertisement of the proposal was as follows:

“A Proposal has been filed by Envirotech Ag Systems Ltd. on behalf of the Evergreen Colony for the re-construction and operation of a wastewater treatment lagoon for domestic wastewater from the colony. The facility would be located in NE 25-5-9W in the same location as the existing facility. Treated effluent would be discharged to a natural swale that drains towards Lyles Creek, a tributary of Roseisle Creek. Discharges would take place once per year after June 15 and before November 1. Construction of the project is proposed for 2006.”

The Proposal was advertised in the Carman Valley Leader and the Morden Times on Friday, May 26, 2006. It was placed in the Main, Winnipeg Public Library, Eco-Network, South Central Regional Library (Morden) public registries and in the office of the R. M. of Lorne as a registry location. The Proposal was distributed to TAC members on May 17, 2006. The closing date for comments from members of the public and TAC members was June 22, 2006.

COMMENTS FROM THE PUBLIC:

Roseisle Creek Watershed Association We provide the following as concerns regarding the application:

1. The Lyle/Roseisle Creeks are major contributors to the drinking water supply of the Stephenfield Reservoir. As both these creeks show high nutrient loads, the Pembina Valley Water Coop will be concerned about the proposal. But, I expect you have already consulted with them.
2. There are a number of private wells along the Roseisle Creek. Additional nutrients raise a risk to people's health.
3. Stephenfield is a recreational area and is already showing too high an algae growth.

The Manitoba Government should seriously consider the feasibility of funding the necessary add-on equipment to the proposal to treat nutrients. The funding could come

with a proviso that the plant be used in the future by nearby towns within the South Central Planning District.

Disposition:

All of these comments reflect concerns about the nutrient loading of the facility's effluent. As the facility would be a small contributor to nutrients in its watershed, it is appropriate to address this matter through the standard licence condition requiring participation in a future watershed based nutrient management plan.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Conservation – Sustainable Resource Management No concerns.

Manitoba Water Stewardship

- There has been tremendous effort by the stakeholders of the Stephenfield watershed to assess watershed health and provide direction to improve water quality concerns, particularly in Stephenfield Reservoir. As discharge from this facility will end up in Stephenfield Lake and may constitute the majority of flow in Lyles and Roseisle Creeks during discharge period, we would want to ensure that the effluent meets or exceeds the Manitoba Water Quality Standards, Objectives and Guidelines. Effluent monitoring should also be implemented in Lyles Creek and at the onset Stephenfield Reservoir.
- Regarding discharge timing windows, rate of discharge and construction works that could result in the addition of sediment to the creek, as long as Department of Fisheries and Oceans is involved in reviewing this proposal and manages fish habitat to meet the intent of their no net loss policy, provincial fisheries management interests should be met.
- It should be noted that the minimum standards for nitrogen and phosphorus included by the proponent in Table 1 are typical concentrations in lagoon effluent and do not represent nutrient removal targets.
- Given that no data were provided on the chemical constituents of the wastewater, we recommend that the proponent collect a sample of the proposed effluent and have it analyzed for the following variables:
 - Conductivity
 - Major anions and cations
 - Total phosphorus
 - Total dissolved phosphorus
 - Ammonia
 - Sodium
 - Chlorine
 - Nitrate-nitrite

Total Kjeldahl Nitrogen
 Biochemical oxygen demand
 Escherichia coli
 pH

An accredited laboratory should be utilized for sample analyses.

- We are 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 Lyles Creek, Roseisle Creek, Stephenfield Lake and associated waterways and watersheds.
- Locations of any potable water sources within the vicinity of the proposed wastewater lagoon were not mentioned. What is the source of the water supply in the proposed area?
- Section 4.3 identifies that softening is required as local groundwater has high mineral concentrations. It is very important to know whether the water is disinfected prior to consumption.
- Section 4.5 Decommissioning and Reconstruction - Because the domestic water is softened it is suggested that the sludge also be analysed for major elements and salts in addition to 'macro-nutrients and heavy metals' prior to land spreading.
- Section 7.2 Impact of Discharge to Waterways - The proposal states "As discharge is likely to occur in July or August during a period of no flow in Lyles Creek, the proportion of the discharge that would reach Stephenfield Lake would be significantly less than the full flow...". There was no elaboration on where the discharge would go if it does not reach Stephenfield reservoir. It would be assumed that some portion of this would infiltrate the creek bed and enter the local groundwater. There are water wells located on close to Roseisle Creek. What impact would there be on local groundwater by discharging effluent during low flow in the creek? It is unclear whether the consultant is proposing any monitoring methods.
- Section 7.3 Impact to Groundwater - The proposal states that "no impact to groundwater is anticipated". However, there is no indication of how any impact would be determined and monitoring groundwater was not included in Section 8.2 Monitoring Requirement. The site is situated in an area with little to no protection over the oxidized (permeable) shale. The shale forms the predominant potable water aquifer in the area. A thoroughly planned groundwater monitoring program, designed by a professional Hydrogeologist, should be implemented to monitor the liner integrity. The monitoring system should fully characterize the hydrogeology and include water table monitoring and monitoring at depth. The horizontal and vertical components of groundwater contaminant transport will be required to properly monitor the proposal and determine placement and depth of monitoring

wells. The monitoring system should also take into consideration the objectives for monitoring, the site specific geology, the aquifer characteristics, and the suite of potential contaminants to be monitored.

- The proposed activities should not degrade the groundwater and surface water qualities on adjacent properties unsuitable for use as drinking water sources. The consultant should identify such activities and recommend appropriate mitigation measures if required.
- Information within the report identifies that fractured shale (bedrock) in the test pits dug in the vicinity of the existing lagoon as shallow as a meter and one-half of the ground surface (the relationship or distance to the existing lagoon was not specified). Water inflows occurred, during the January investigation, as shallow as 0.6 metres. Because water tables decrease over the winter due to frozen soils and the consequent the lack of recharge during winter months, a water table or perched water table would be expected to be even higher after recharge. The local geology and hydrogeology indicate that the lagoon is located in an area very sensitive to groundwater pollution.
- It is implied within the report that the existing lagoon was built with insitu material, which during the process of the current work, was judged as “not acceptable quality or consistency to achieve the minimum acceptable hydraulic conductivity..” and therefore leakage to groundwater likely resulted over the past 30 years of operation from the existing lagoon. There was no indication within this report what type of work has been conducted to determine the amount of contamination and delineate existing contamination. The proposal is to ‘retrofit’ the existing lagoon with a HDPE liner and other appurtenances. If the area is contaminated from the operation of the existing lagoon early detection of new leakage will be more cumbersome and require a high degree of skill in monitoring and interpretation to separate whether contamination is coming from the new or old operation, if it will be possible at all.
- A groundwater monitoring program designed by a qualified Hydrogeologist should be submitted by the proponent.
- There was also no indication whether a new site was investigated as part of this process that would offer better natural protection to the groundwater.

Disposition:

Additional information was requested to address several of the above comments. Monitoring of water quality well downstream of the facility is not practical due to the contributions of other sources. A groundwater monitoring program for leakage from the new facility is not necessary. A number of the other comments also can be addressed through licence conditions.

Historic Resources Branch

No concerns.

Community Planning Services Branch

Please note that a correction is required in Section 2.0 Landownership and Municipal Land-Use Designation. The second paragraph should read:

“The land where the development is located, and the immediate surrounding land, is currently designated “Rural Policy Areas” according to the South Central Planning District Development Plan By-law No. 3-2003.”

Please note that the R.M. does not have a zoning by-law in place. The sentence beginning with “Under the provisions of the R.M. of Lorne Zoning By-law, ...” should be deleted.

Disposition:

This correction was forwarded to the consultant for information. The error in the Proposal does not affect the feasibility of the project.

Manitoba Agriculture, Food and Rural Initiatives

No agricultural concerns.

Canadian Environmental Assessment Agency The project information provided has been distributed to all federal departments with a potential interest. I am enclosing copies of the relevant responses for your file.

Responses were received from Environment Canada (EC), Health Canada (HC), the Department of Fisheries and Oceans (DFO) and the Department of Indian and Northern Affairs. None of the departments indicated they have a requirement to conduct an environmental assessment under the Canadian Environmental Assessment Act (CEAA).

EC, HC and DFO indicated that they possess specialist advice that may assist in the environmental assessment of the proposed project, if requested. EC indicated they were satisfied with the mitigation presented in the proposed project document. DFO sent a letter of advice requesting additional mitigation measures be implemented regarding sediment and erosion control and re-vegetating lagoon dykes to avoid negative effects on fish habitat.

None of the departments expressed an interest in participating in the provincial environmental review of the project.

ADDITIONAL INFORMATION:

Additional information was requested on December 6, 2006 to address Water Stewardship comments and design and construction issues. In June, 2006, the proponent decided to construct a new facility adjacent to the existing facility rather than reconstruct the adjacent facility. Revised drawings were provided on November 30, 2007 after several requests. The revised drawings showed the new location of the facility, but did not correct some minor deficiencies with the original drawings, and did not provide some

of the information requested on December 6, 2006. An updated request for information to address these matters was forwarded to the proponent's consultant by e-mail on December 19, 2007. A response was received on January 18, 2008. This response (attached) addresses additional information requirements and provides updated plans for the facility.

Remaining outstanding items can be addressed through licence conditions.

PUBLIC HEARING:

As no requests for a public hearing were made, a public hearing is not recommended. Public comments have been addressed through licence conditions.

RECOMMENDATION:

All comments received on the Proposal that require followup 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 Assessment and Licensing until construction is completed and the existing facility is decommissioned. Once this has been completed, enforcement should be assigned to the Central Region.

PREPARED BY:

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December 1, 2006
updated December 19, 2007, January 21, 2008

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