

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Rural Municipality of Ste. Anne
NAME OF DEVELOPMENT: R. M. of Ste. Anne - Wastewater Treatment Lagoon and Forcemain
CLASS OF DEVELOPMENT: Two
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4095.10

OVERVIEW:

The Proposal was received on December 27, 2007. It was dated December 20, 2007. The advertisement of the proposal was as follows:

“A Proposal has been filed by J. R. Cousin Consultants Ltd. on behalf of the Rural Municipality of Ste. Anne for the expansion and operation of a wastewater treatment lagoon and for the construction and operation of a forcemain to convey wastewater to the lagoon. The lagoon facility would be located west of the Village of Ste. Anne and north of the Seine River Diversion in portions of river lots 24, 25 and 26 in the Parish of Ste. Anne. The primary cell of the existing facility would be expanded and an additional secondary cell would be constructed. Treated effluent from the expanded facility would continue to be discharged into the Seine River Diversion after June 15 and before November 1 each year. The facility would receive wastewater via the proposed forcemain from a portion of the Village of Ste. Anne, Paradise Village, Lilac Resort, the L.U.D. of Richer, Lake Riviera and the Oakwood Golf Course, as well as truck hauled wastewater from areas of the rural municipality not serviced by the forcemain. Construction of the project is proposed for the summer of 2008.”

The Proposal was advertised in the Steinbach Carillon on Thursday, January 31, 2008. It was placed in the Main, Millennium Public Library (Winnipeg), Eco-Network, and Jake Epp Public Library (Steinbach) public registries. The Proposal was distributed to TAC members on January 21, 2008. The closing date for comments from members of the public and TAC members was February 25, 2008.

COMMENTS FROM THE PUBLIC:

No public comments.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Conservation – Sustainable Resource and Policy Management No concerns.

Manitoba Conservation – Eastern Region

I have yet to see any of the documents on this but do have comments based on local knowledge/inspection of the existing facility as follows:

1. General Comments:

Development: the RM has seen recent spurts of growth

- expansion of Lilac Resort and Paradise Village ;
- development of new campgrounds (Gagnon, Trudeau):
- steady new rural residential growth (owms installations 2004= 24, 2005= 39, 2006 = 30, 2007 = 32)

All of Paradise Village are on septic holding tanks as will be any new campgrounds.

Richer has urban size lots (½ acre, 50 to 100 foot wide lots) limiting on-site sewage options coupled with a high water table (community sewer would be beneficial).

2. Existing Licence Comments:

RM of Ste. Anne existing lagoon (has EAL) issues that may need consideration: inspection found the dump station pad area needs grading/leveling and excessive cat tails on inner banks require elimination. Current clause 4 limits septage hauling to the lagoon to between June 1st and Oct 15th (perhaps will need to be reviewed per anticipated loading) : the RM has yet to develop a clause 18 reporting mechanism (annual report of all waste hauled to the facility).

Manitoba Conservation – Environmental Services

1. Is the perimeter berm to maintain the 251.45m elevation of the original dikes (p5 of the report)? What is the elevation difference between the top of the interior berms and the top of the perimeter berms?
2. What is the high ground water table elevation?
3. What are the proposed operating pressures of the forcemain?
4. Does this expansion include lift stations? If so are the design specifications & details available?
5. There is a seasonal population of 2566 persons indicated for the 20 year design period. What is the projected growth rate used, and does this include proposed and existing subdivisions already applied for but not completed?
6. The resident population is indicated as 2380 persons for the 20 year design period. What growth rate was used and does this include bussed in school populations?
7. What is the value utilized for per person hydraulic and organic loading for permanent residents? For seasonal residents? what rate was applied for seasonal

- resident occupancy? Was septage hauled to the lagoon included in the organic & hydraulic loading calculations and at what hydraulic and organic loading rates? Is there a municipal or other by-law in place to restrict weeping tile water from entering the wastewater system? Is this to be considered?
8. Will there a continuation of the restriction for truck haul waste in the winter months?
 9. For preparation for the removal of the current perimeter berm to expand the current primary cell, what actions will be taken to dyke and clear any non-construction grade clay materials (ie sludge, saturated clays, etc) to tie in the proposed primary cell floor and the existing primary cell floor? Is there a proposed cleaning of the primary sludge as part of the construction activities?
 10. What pressure testing criteria is followed prior to commissioning of the forcemain?
 11. Are their plans to re-vegetate the forcemain path? Are cleanouts to be installed along the forcemain? At what locations and frequency?
 12. any details available regarding the quality or location of the bedding sand source.

The other thing I noted was the fact that there is very limited information regarding the pipeline, only some generic trench details at the end of the packet.

- Do they sleeve the pipe going under roadways? Are the roadway crossings to be bored?
- Do they have written authorization to cross under the PTH, the PR and the railway?
- Do they have written authorization (or do they need authorization) to cross the Seine River from DFO

What specification /details are required by the railway, I would expect we should get a copy of that agreement.

Disposition:

Some of the requested information is/will be addressed in detailed design specifications to be reviewed pursuant to the Drinking Water Safety Act by the Office of Drinking Water. Additional information was requested to address items covered in the Environment Act process.

Manitoba Water Stewardship

- The Water Rights Act indicates that no person shall control water or construct, establish or maintain any “water control works” unless he or she holds a valid license to do so. “Water control works” are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage. If the proposal in question advocates any of these

activities, application for a Water Rights License to Construct Water Control Works is required.

- The Department recommends that consideration be given to installing monitoring wells around the proposed expanded primary cell where till has been found at relatively shallow depth and that the proponent's consultant provide supporting information for their assertion that the shallow clays will meet the 10^{-07} cm/s hydraulic conductivity specification. Further, the Department has concerns with two aspects of this proposal:
 - 1) The occurrence of silt till (which appears to be relatively permeable) at about 12 feet in test hole no. 1, located within the proposed area of the extension of the primary cell. The static water level was reported to be 0.1-metres, which seems somewhat high for this area. This high static water level raises concerns as to whether this may reflect the water level in the adjacent lagoon cell (indicating a hydraulic connection?). Sand and gravel has been reported within the till unit which is used locally as a source of water supply.
 - 2) The manner in which the proponent's consultant carried out the process of estimating the hydraulic conductivity of the clays by requesting for a "professional assessment" of the K value from the commercial geotechnical lab that performed the soils analyses. The lab offered an opinion (signed by their C. Tech., not by an engineer) without providing supporting evidence. The lab also said the samples "may" achieve an in-situ K value of 10^{-07} cm/s or less, then qualified their opinion by indicating that the materials would be suitable if "the clay deposit is uniform throughout and contains no fissures, preferential flow paths, silt layers, or silt pockets". The proponent's consultant did not discuss the uncertainties raised by the lab or if fissures or other flow paths were common occurrences in shallow clays in Manitoba. The proponent's consultant simply stated that the clay materials would meet the 10^{-07} cm/s in-situ criterion. This is not the full context of the opinion offered by the lab.
- The proponent is proposing to expand the existing lagoon currently sized at 6.9 ha. to 32.3 ha. This additional expansion will allow this facility to become a regional system servicing the following: Ste. Anne, Richer, Lilac Resort, Lake Riviera, Paradise Village and Oakwood Golf Course. Although regionalizing sewer services for this region is commendable, the proposal does not include any nutrient management strategies for this expanded facility. This expanded lagoon will be one of about 13 municipal lagoons and 43 intensive livestock operations within the Seine River Diversion watershed. There has been no attempt to evaluate the potential cumulative impact of these facilities on the fishery and water quality. The discharges and runoff from all these facilities flow into the Seine River Diversion, to the Red River, and then to Lake Winnipeg.
- Manitoba Conservation Report No. 2001-07 (Long-term trends in total nitrogen and total phosphorus concentrations in Manitoba streams, by Jones and Armstrong) reported that total phosphorous concentrations have increased by over 28.8 % in the Red River (as measured at Selkirk) from 1978 to 1999, while total nitrogen concentrations have increased by 57.8 % over the same time period. This trend

analysis study also found that total nitrogen levels in the Seine River have increased 74.9 % between 1973 and 1999, while total phosphorous levels in the Seine River have increased dramatically (187.7%) over the same time period. Clearly, more needs to be done to recycle valuable nutrients on land, rather than discharging them directly into waterways where they impair the health of Lake Winnipeg and its tributaries.

- The Minister of Water Stewardship has accepted the Lake Winnipeg Stewardship Board's recommendations, related to nutrient management strategies for small wastewater treatment facilities. The Board has recommended that all small wastewater treatment facilities, including municipal lagoons, should meet a phosphorus limit of 1.0 mg/L. The proposed phosphorus limit of 1.0 mg/L is consistent with efforts underway across Manitoba and in upstream jurisdictions to reduce nutrient loads to Lake Winnipeg and its watershed. It is desirable to recycle these nutrients on land where feasible, rather than releasing them to waterways. In the Lake Winnipeg Stewardship Board's December 2006 report to the Minister of Water Stewardship, the Board provided several strategies on how nutrient reduction could be achieved for small wastewater treatment facilities (see recommendations 14-20). The proponent has not investigated alternative disposal/treatment options, such as effluent irrigation, chemical precipitation, or construction of a mechanical plant with nutrient removal capabilities (e.g. SBR plant). The Department recommends:
 - This facility be required to remove phosphorus to 1.0 mg/L and
 - A full review of nutrient removal options be explored by the proponent.
- The proponent has not provided specific details on the setback distances of the expansion from the bank of the Seine River Diversion. The map in the Appendix shows the proposed expanded cell to be very close to the Seine River Diversion dyke. The license for this facility should ensure that there is an adequate set-back distance to comply with the proposed Nutrient Management Regulation under The Water Protection Act.
- The Department recommends that erosion and sediment control measures should be implemented, during lagoon construction, until the site has stabilized to minimize sediment entering the diversion. The effluent discharge routes should be monitored for erosion on a regular basis.
- Dillon Consulting Limited's Draft Report for "Seine River Survey and Restoration Planning Project (December 2004)" states:
 - "Results of the computer model revealed exceedances of Surface Water Quality Objectives for coliform, dissolved oxygen, ammonia and phosphorus. The majority of these exceedances occurred upstream of the Youville Drain. It would seem, therefore, that during low flow events water quality objectives will be exceeded in the Seine River Diversion."

This study suggested that focus should be directed to those projects more likely to protect aquatic health through improved water quality. From a fisheries perspective, ensuring that effluent from this lagoon adheres to the minimum values allowed under the Water Quality Standards and Objectives would be a pathway to protecting the aquatic environment. Furthermore, as fish kills have been documented in this river, it

would appear that water quality is among one of the factors that limit their ability to survive.

- The Department's primary concern regarding the forcemain installation would be the crossing of the Seine River. The proponent has indicated they intend to horizontal drill this crossing. The proponent should be required to adhere to this technique and develop and implement a "frac-out" monitoring and response plan.
- The Department of Fisheries and Oceans Canada should be involved in reviewing this proposal and manage fish habitat to meet the intent of their "no net loss" policy.
- Under The Water Resources Administration Act (Manitoba), authorization must be granted for any works or structures on a "provincial waterway." A "provincial waterway" is a water control work, natural water channel, or lake designated under The Water Resources Administration Act (Manitoba). An application will be reviewed by the Manitoba Department of Water Stewardship and the regional offices of the Manitoba Department of Infrastructure and Transportation. A contact person for Water Control Systems Management is Mr. Eugene Kozera, Manager (telephone: 1-204-945-7474).

Disposition:

Additional information was requested to address several of the above comments. Comments concerning other regulatory requirements were forwarded to the proponent's consultant for attention.

Historic Resources Branch

No concerns.

Manitoba Infrastructure and Transportation – Highway Planning Branch

- Permits are required from this Department (under the Highways and Transportation Act) for any proposed driveway accesses (or modifications thereto) or installation of any structure within the control area adjacent to Provincial Road (PR) 210 and PR 207 (within 38.1 metres (125 feet) from the edge of the road right-of-way).
- Permits are required from the Highway Traffic Board (under the Highways Protection Act) for any proposed forcemain crossing or adjacent to Provincial Trunk Highway (PTH) 12 (within 76.2 metres (250 feet) from the edge of the highway right-of-way).
- An agreement will be required with MIT for the for the proposed forcemain crossing and/or adjacent to the Provincial Highway/Provincial Road.

Contacts were provided for MIT permits and agreements.

Disposition:

This information was provided to the proponent's consultant.

Community Planning Services Branch

The land within the study area falls within Parts of River Lots 24, 25 & 26 immediately north of the Seine River Diversion and west of Provincial Trunk Highway (PTH) 12, approximately one and a half kilometres southwest of the Town of Ste. Anne. The affected parcels are located adjacent to the existing RM of Ste. Anne sewage lagoon. The RM of Ste. Anne identified the need to improve the management of wastewater within the Municipality. As such the RM hired JR Cousin Consultants Ltd to do a study assessing the feasibility of installing a centralized piped wastewater system from Richer to the Municipal Lagoon. The study found that the proposed plan was feasible. In order to undertake the centralized wastewater system, the Municipality needs to expand the lagoon to accommodate anticipated current and future growth.

The affected land is designated “Rural Area” according to the RM of Ste. Anne Development Plan and zoned “AG” according to the RM of Ste Anne Zoning By-law. Land uses within this designation are primarily agricultural in nature with a mixture of other land uses, such as residential. Part VIII B.1. of the RM of Ste. Anne Development Plan states that “Waste disposal sites shall be established and maintained for use by rate payers. These sites shall be developed in a manner that will minimize conflict with adjoining uses and will meet the requirements of provincial Environment and Health agencies.” Sewage disposal Lagoons are a conditional use according to the Zoning by-law and have a minimum site area requirement of 10 acres and a minimum site width requirement of 400 feet. There are two titles proposed for the lagoon expansion which encompass approximately 135 acres and 160 acres respectively. As such both affected parcels appear to conform to the minimum site area and site width requirements.

Existing surrounding land uses are primarily agricultural in nature. It is not clear from the information where the closest residential dwelling is located. Land use of the proposed site is currently agricultural in nature (cultivated).

The proposed lagoon expansion is generally in keeping with the intent of the RM of Ste. Anne Development Plan and Zoning By-law. A conditional use will have to be obtained from the municipality prior to the establishment of the facility on site. Our office has no concerns with respect to the proposal.

Disposition:

This information was provided to the proponent’s consultant for information.

Manitoba Agriculture, Food and Rural Initiatives

It appears site selection has mitigated odour issues as much as possible given the proposed location is approximately 1000 metres north of the closest residence and greatly exceeds Manitoba Conservation's regulatory requirement. Soil analysis from test holes indicates that insitu clay soils are more than suitable for construction of the required clay liner for the lagoon expansion.

MAFRI has no objections to the proposed expansion and forcemain.

Canadian Environmental Assessment Agency I have completed a survey of federal departments with respect to determining interest in the project noted above. I can confirm that the project information that was provided has been reviewed by all federal departments with a potential interest. Based on the responses to the survey, application of the Canadian Environmental Assessment Act (the Act) will not be required for this project.

Note that Environment Canada (EC), Fisheries and Oceans Canada (DFO), and Health Canada (HC) have indicated that they have specialist advice that may apply to the project. Further, DFO indicated that they wish to participate in the provincial review of the project. Responses from these agencies are enclosed.

ADDITIONAL INFORMATION:

Additional information was requested on March 17, 2008 to address TAC comments and design and construction issues. A response dated April 9, 2008 was received on April 16, 2008. Further information was requested on April 18, 2008 to clarify some points in the response, and a second response dated June 11, 2008 was received on June 16, 2008. This information updated population estimates and consequent organic and hydraulic loading projections for the proposed facility. This information also addressed planning issues concerning treatment and discharge alternatives considered in the planning process. The responses satisfactorily address loading information. Following an informal review by the Water Quality Management Section of Manitoba Water Stewardship of the additional information of June 11, 2008, commentary was requested from the proponent's consultant on July 29, 2008 concerning the benefits and costs of providing additional hydraulic storage capacity. A response dated July 31, 2008 was received on August 7, 2008.

PUBLIC HEARING:

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

RECOMMENDATION:

All comments received on the Proposal that require followup can be addressed as licence conditions following an evaluation of the additional information received on the project. 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. A phosphorus limit of 1 mg/L for the facility's effluent is included as a licence condition.

It is further recommended that enforcement of the Licence be assigned to Environmental Assessment and Licensing until construction of the wastewater treatment lagoon is completed. Enforcement of the licence then should be assigned to the Eastern Region.

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