

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Town of Beausejour
NAME OF DEVELOPMENT: Town of Beausejour Wastewater Treatment Lagoon Expansion
CLASS OF DEVELOPMENT: Two
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 37.30

OVERVIEW:

The Proposal was received on July 17, 2013. It was dated July 15, 2013. The advertisement of the proposal was as follows:

“A Proposal has been filed by J. R. Cousin Consultants Ltd. on behalf of the Town of Beausejour for an expansion of the town’s existing wastewater treatment lagoon facility. The expansion would involve the construction of three new secondary cells adjacent to the existing cells. The new cells would be located on SW 12-13-7E, which is on the north side of PTH 12 and west of an existing cell in SE 12-13-7E. The expansion would accommodate anticipated town growth to 2032. Treated effluent would be released from the expanded facility between June 15 and October 31 to the existing discharge route. This route follows a ditch north and west to the Bachman Drain, which flows north and east into the Brokenhead River approximately 7 km northeast of Beausejour. Construction of the expansion is proposed to take place in 2014.”

The Proposal was advertised in the Beausejour Clipper on Thursday, September 19, 2013. It was placed in the Legislative Library and Millennium Public Library (Winnipeg) public registries and in the online public registry. The Proposal was distributed to TAC members on September 13, 2013. The closing date for comments from members of the public and TAC members was October 18, 2013.

COMMENTS FROM THE PUBLIC

No public comments were received.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE

Manitoba Conservation and Water Stewardship – Environmental Compliance and Enforcement Branch

Environmental Compliance and Enforcement (Eastern Region) has reviewed the above Environment Act Proposal (EAP) for the expansion of the Town of Beausejour wastewater treatment lagoon, including the construction of three secondary cells. The following comments are submitted:

- **2.5.5 Population Contributing Effluent**

The Town of Beausejour hosts several major annual sporting and community events, which result in population influxes in the community at various times throughout the year. In addition to the contributing sources referenced in the EAP, has the proponent considered the significance of these events as contributors to the wastewater production rate?

- **2.5.6.2 Hydraulic Loading**

The EAP states that “*The Town of Beausejour has significant infiltration into their gravity sewer system which results in a much higher per capita wastewater production rate than normal.*” Specifically, the EAP indicates that the average rate of infiltration between 2005 and 2011 was 3.7 times greater than the “typical” design value of 15% of the water consumption.

The EAP references a May 2011 report entitled *An Assessment of Sanitary Sewer Piping for Lift Station #4 and #6 Catchment Area*, which identifies sources of infiltration. However, it is unclear what measures have been taken to address infiltration since the release of the report.

The Town of Beausejour is strongly encouraged to implement strategies to reduce infiltration into the wastewater collection system to eliminate unnecessary hydraulic loading of the lagoon and to minimize discharges of effluent to the environment.

Disposition:

Additional information was requested to address hydraulic loading and infiltration concerns.

Manitoba Conservation and Water Stewardship – Watersheds and Protected Areas Branch and Lands Branch

No concerns.

Manitoba Conservation and Water Stewardship – Parks and Natural Areas Branch

No comments.

Manitoba Conservation and Water Stewardship – Wildlife Branch

No concerns. The proposal would not impact any species at risk as it is located on agricultural land.

Manitoba Conservation and Water Stewardship – Water Science and Management Branch, Water Quality Management Section

- Chemically precipitated phosphorus leads to increased reliance on chemicals and on a greatly reduced ability to recycle the valuable nutrients contained in biosolids and sludge. Water Quality Management Section encourages the use of effluent irrigation for fertilizer value and to mitigate the impacts of nutrient loading to receiving water ways.
 - The proponent indicates that at the time of sludge removal the best practice technology for use of nutrients, organic matter, and energy will be reviewed and evaluated. In addition, can the proponent please indicate how they will handle the nutrients, organic matter and energy contained in the biosolids and sludge based on current best practice technologies?
- The proponent proposes to chemically precipitate phosphorous. Trickle discharge could be implemented after precipitation to further minimise both nitrogen and phosphorus levels in the Brokenhead. The current proposal does not appear to indicate the length of time of discharge. It is recommended the discharge period be at least two (2) to four (4) weeks or more.
- 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.

Disposition:

Effluent irrigation has not been proposed for this location for several reasons, including the relatively small soil moisture deficit for crops in this area, which reduces the availability of dry conditions for effluent irrigation application, and the relatively large amount of land that would be required for effluent irrigation (approximately 960 acres at a 15 cm application each year.) With respect to current best practice technologies, the sludge would be excavated or dredged from the secondary cells, dewatered if possible, and land applied by injection at a rate in compliance with the Nutrient Management Regulation and compatible with agronomic practicality. Because of the greasy consistency of chemically precipitated phosphorus, it is likely that agronomic suitability would govern the application rate and method rather than nutrient content. The remaining comments can be addressed as licence conditions.

Manitoba Conservation and Water Stewardship – Fisheries Branch

Fisheries Branch has reviewed this proposal to expand the existing Beausejour wastewater treatment lagoon by constructing three new storage cells (in situ clay liner) in SW ¼ 12-13-07 E. The new cells would discharge to the existing discharge ditch which then enters Bachman Drain and travels approximately 12,450 m before entering the

Brokenhead River. To meet the new phosphorous limits the proponent is proposing to add alum or ferric in the manhole between the primary cell and storage cells. The proponent is requesting that the existing licensed discharge period change to allow discharge between June 15th and October 31st. They would also like the ability to discharge multiple cells at one time. Clean rock will be used to rip rap the discharge outlet and silt fencing implemented until vegetation has established.

As noted in the proposal Bachman drain and the Brokenhead River support small and large bodied fish species. Nutrient loading has been identified as a major concern for the Brokenhead River. The addition of three new storage cells should eliminate the need for any future “emergency” releases and as long as the effluent adheres to the Manitoba Water Quality Standard, Objectives and Guidelines this should be an improvement over the current situation. If approved, they will however be able to discharge over a longer period and be able to discharge multiple cells at one time. The strategy they have selected to reduce phosphorous usually is done using up-flow sand filters to filter out the phosphorous. The consultant has indicated that without the filters the effectiveness of the methodology is not well known.

In addition to the usual clauses for these types of proposals (limits, silt fence, use of clean material, etc.) given the discharge period and volume of discharge may change and there is some uncertainty around the effectiveness of the phosphorous reduction strategy we would be supportive of the need to monitor Bachman Drain and /or the Brokenhead River for a period of time following the operation of the new cells. Please also include the clause regarding the need to clean equipment to reduce the spread of terrestrial and aquatic invasive species.

Disposition:

With respect to downstream monitoring for phosphorus, since an effluent phosphorus limit will be imposed at the discharge point, there is little need to require proponent phosphorus monitoring in the Bachman Drain or Brokenhead River. Any monitoring for nutrient removal effectiveness downstream would be in the context of provincial policies rather than a requirement specific to the proponent of this project. Remaining comments can be addressed through licence conditions.

Manitoba Conservation and Water Stewardship – Water Use Licensing Section

No comments.

Manitoba Infrastructure and Transportation – Highway Planning and Design Branch, Environmental Services Section

MIT has reviewed the proposal noted above and while we do not have concerns with the development as proposed, we would like to offer the following reminders:

- The proposed project may require a permit from the Highway Traffic Board for any new, modified or relocated access connection onto PTH 12 or PTH 44. A permit may also be required for:
 - o any construction, above or below ground level, within 38.1 m (125 ft) from the edge of the right of way of any PTH;
 - o any plantings within 15.2 m (50 ft) from the edge of the right of way of any PTH; or
 - o discharge of water or other liquid materials into the ditch of any PTH.
- Should any of the water/sewer lines cross under or within the right of way of PTH 12 or PTH 44, an agreement with MIT will be required.
- Should any service road needs to be constructed or extended, it will be at the cost of the RM and not MIT.

Disposition:

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

**Manitoba Local Government – Community and Regional Planning Branch,
Beausejour Regional Office**

A review of the Brokenhead River Planning District Development Plan has determined that there are no policies in the Development Plan that would directly apply to the proposed lagoon expansion.

Section 3.3.8 of the Rural Municipality of Brokenhead Zoning By-law No. 1688 states that nothing in that by-law shall be so interpreted as to interfere with the construction, maintenance, and operation of the facilities of any public utility, provided that the requirements of such public utility is of a standard compatible with the adjacent area as determined by the Development Officer.

We therefore have no concerns with the proposed lagoon expansion. We do recommend that the applicant contact the Development Officer of the Brokenhead River Planning District to ensure that he has determined that the proposed development is of a standard compatible with the adjacent areas.

Disposition:

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

Office of the Fire Commissioner

No comments.

ADDITIONAL INFORMATION:

Additional information was requested on December 19, 2013 concerning hydraulic loading, particularly as it relates to per capita water consumption and infiltration into the

wastewater collection system. The requested additional information, dated February 26, 2014, was received on February 27, 2014. The information is attached to this summary, and is addressed in Clause 42 of the draft Environment Act Licence.

On March 24, 2014, additional information was provided indicating that the facility expansion had been re-configured. This was necessitated by land acquisition considerations, and resulted in the expansion consisting of two cells (Cell 7 and Cell 8), both located on the east side of SW 12-13-7E. The storage volume of the two proposed cells will be slightly larger than the volume provided in the previously proposed three cells. An updated location plan was provided which will be included in the project's Environment Act Licence.

PUBLIC HEARING:

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

CROWN-ABORIGINAL CONSULTATION:

The Government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations, Métis communities and other Aboriginal communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or Aboriginal right of that First Nation, Métis community or other Aboriginal community.

The proposal involves the expansion of an existing wastewater treatment facility on agricultural land that is currently privately owned. The expansion will eliminate existing overloading problems and facilitate phosphorus removal, which will improve water quality in the Brokenhead River and Lake Winnipeg. Adverse effects on surface water or habitat for wildlife or fisheries are not anticipated.

Since resource use is not adversely affected by the project, it is concluded that Crown-Aboriginal consultation is not required for the project.

RECOMMENDATION:

All comments received on the Proposal have been addressed through additional information, by providing information to the proponent's consultants, or can be addressed through licence requirements. 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 retained by the Environmental Approvals Branch until construction of the wastewater treatment lagoon expansion is completed. Enforcement of the licence then should be assigned to the Eastern Region of the Environmental Compliance and Enforcement Branch.

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February 28, 2014 Updated: March 31, 2014
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