

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Bloomfield Colony (Bloomfield Holding Co. Ltd.)
NAME OF DEVELOPMENT: Bloomfield Colony Wastewater Treatment Lagoon – Discharge Alteration
CLASS OF DEVELOPMENT: Two
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4896.10

OVERVIEW:

The Proposal was received on July 31, 2012. It was dated July 4, 2012. The advertisement of the proposal was as follows:

“A Proposal has been filed by GENIVAR on behalf of the Bloomfield Colony (Bloomfield Holding Co. Ltd.) for an alteration in the operation of the colony’s existing wastewater treatment lagoon in NW 30-13-9W. Treated effluent from the facility is presently irrigated on the colony’s agricultural land between May 16 and September 30 each year. Following several wet years in which effluent irrigation has been difficult, it is proposed to retain effluent irrigation when possible, and to allow the discharge of treated effluent to Squirrel Creek when saturated soil conditions do not allow effluent irrigation. The proposed effluent discharge point to Squirrel Creek is approximately 1.5 km from its confluence with the Whitemud River in NW 29-13-9W. It is proposed that effluent irrigation would continue to take place between May 16 and September 30, and that discharge to Squirrel Creek if necessary could take place between June 15 and October 31.”

The Proposal was advertised in the Portage la Prairie Daily Graphic on Friday, September 28, 2012. It was placed in the Main, Millennium Public Library (Winnipeg), Eco-Network and Portage la Prairie City Library public registries and in the office of the R. M. of Westbourne as a registry location. The Proposal was distributed to TAC members on September 25, 2012. The closing date for comments from members of the public and TAC members was October 29, 2012.

COMMENTS FROM THE PUBLIC:

R. M. of Westbourne Council reviewed the proposal by Genivar for the Bloomfield Colony Wastewater Treatment Lagoon - Discharge Alteration. Council wish to advise that they prefer to see the lagoon effluent to be irrigated onto Colony farmland as is the present practice.

Disposition:

As it is the first choice of the proponent and the Department that effluent irrigation be practised when possible, this preference will be reinforced through licence conditions.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Conservation and Water Stewardship – Environmental Compliance and Enforcement

I finished reviewing the EAL Proposal to alter the licence for the Bloomfield Colony wastewater lagoon licence. Essentially they are asking to be allowed the option of discharging treated wastewater to the Squirrel Creek as well as to irrigation. I don't have any concerns with the proposal – it seems reasonable to me.

Manitoba Conservation and Water Stewardship – Environmental Programs and Strategies , Air Quality Management

No comment – the proposal has no significant impact on air quality.

Manitoba Conservation and Water Stewardship – Lands Branch and Sustainable Resource and Policy Management Branch

The Lands Branch and the Sustainable Resource and Policy Management Branch have no concerns, conditional upon the following:

The advice of Manitoba Water Stewardship should be sought to ensure water quality is maintained on Lake Manitoba at the proposed discharge rates over the lifetime of this treatment facility. The Whitemud River discharges into Lake Manitoba next to the Big Point Public Shooting Grounds, and Crown lands with Crown Operational land coded for – Wildlife, No Agriculture Use. This area is a coastal wetland which has been targeted for protection and inclusion in the protected areas network. Protected areas are land, freshwater or marine areas, where logging, mining, hydroelectric development, oil and gas development, and other activities that significantly and adversely affect habitat are prohibited by law.

If the license which alters operation of the colony's existing wastewater lagoon is granted, it is recommended that:

- effluent discharges from the lagoon (and effluent composition) be maintained within provincial guidelines
- the license include requirements that prevent adverse impact to Lake Manitoba over the lifetime of this treatment facility (ie preventing algae blooms)
- annual studies be conducted over the lifetime of the treatment facility to ensure that water quality effects from effluent discharge remains at levels that do not adversely affect water quality on Lake Manitoba

Please also note the following:

Section 9.0 indicates that the effluent (when it has to be discharged rather than field applied due to wet conditions) will be discharged into the receiving ditch at a rate that optimizes the rate of nutrient assimilation (by whatever vegetation is in the ditch) prior to reaching Squirrel Creek drain. There is no information provided that can quantify or qualify how this is to be determined relative to the success of the nutrient uptake. It also suggests that the rate of discharge is not to challenge the normal operations of the lagoon. A suggestion would be the proponent take this opportunity to actually create a properly sized functional artificial wetland for their effluent to function as a polishing cell prior to the discharge into the Squirrel Creek drain and then to the Whitemud River. A polishing cell can be monitored and maintained to ensure discharge nutrients have been adequately assimilated by the vegetation.

Section 9.1 Discharge Procedure and 9.2 Record Keeping and Inspection routine make no mention of the nutrient uptake process indicated.

Disposition:

Most of these comments can be addressed as licence conditions. Since the facility is small and will normally not discharge to surface water, the construction of an artificial wetland or polishing cell would not be justified. The proponent has already invested in equipment for effluent irrigation that is used more frequently.

Manitoba Conservation and Water Stewardship – Parks and Natural Areas Branch

No comments.

Manitoba Conservation and Water Stewardship – Wildlife Branch

No wildlife related concerns.

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

- The following effluent standards should be in place for Bloomfield Colony Wastewater Treatment Lagoon Discharge Alteration. The Colony's wastewater lagoon as per the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* (196/2011).
 - BOD₅ 25 mg/L
 - TSS 25 mg/L
 - Fecal Coliforms 200 MPN / 100mL
 - TP 1 mg/L
- The *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* requires new or expanding wastewater treatment facilities to meet a 1 mg/L phosphorus limit or implement a nutrient reduction strategy. The proposal states that to meet the *Manitoba Water Quality Standards, Objectives and Guidelines*

Regulation trickle discharge will be implemented as a nutrient reduction strategy. The proponent must demonstrate how this strategy will reduce phosphorus loads equivalent to implementing a 1 mg/L phosphorus limit. This additional information is required before trickle discharge can be approved as a nutrient reduction strategy.

- The Water Quality Management Section recommends as a condition of the license that the Proponent be required to first obtain a letter of permission from Manitoba prior to utilizing the option of surface discharge.
- 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:

Most of these comments can be addressed in licence conditions. Rather than requiring a letter of permission for each surface discharge event, it would be preferable to specify conditions for a surface discharge, and provide incentive for effluent discharge through more stringent requirements for a surface discharge. This approach will be proposed through draft licence conditions and reviewed by TAC members prior to the finalization of a licence. This approach can also address the suggestion that additional information is needed on the equivalency of trickle discharge to a 1 mg/L phosphorus limit – the phosphorus limit can apply for surface discharged effluent.

Manitoba Conservation and Water Stewardship – Fisheries Branch

Fisheries Branch has reviewed this request from the proponent to alter their existing licence to include discharge of treated effluent from the Bloomfield Colony wastewater treatment lagoons located in NW 30-13-9 W to a field ditch in addition to the ability to irrigate onto Colony Lands. The discharge outlet was already constructed when the new lagoon was built and the effluent would discharge to a local field ditch which runs ~ 630 m prior to entering Squirrel Creek which then flows into the Whitemud River. The applicants are requesting a discharge window of June 15th to October 31st. They indicated they will implement a nutrient reduction strategy consisting of trickle discharge over a period of 2-4 weeks. They also indicate that “it is expected that ammonia levels will be reduced by ~25% by the end of the discharge ditch entering Squirrel Creek.”

They have indicated in the proposal that Squirrel Creek is type B habitat and then it becomes type A closer to the Whitemud River. The proposed discharge outlet is only ~150 m from where the Type A habitat begins. Squirrel Creek provides seasonal habitat for a number of large (northern pike, white sucker) and small (blacknose dace, iowa darters, central mudminnows, sand shiner, blackside darter, brook stickleback, fathead minnows and johnny darter) bodied fish species caught during a few sampling events. It is not unreasonable to expect, that this reach provides spawning, nursery and forage habitat for more species that live year round in the Whitemud River.

For this reason it is important that the discharge effluent meet or exceed Manitoba's Water Quality Standards, Objectives and Guidelines for aquatic life. It is not clear in the proposal that this is the level they intend to meet as they indicate "Tier II water quality objectives **typically** apply to fish bearing waters." Although they are not directly discharging into fish bearing waters, fish bearing waters are close. While we defer to the recommendations of our colleagues in Water Quality Science Management re: parameters, levels and monitoring we would be very supportive of a requirement to monitor the very downstream end of the drainage ditch just prior to its confluence with Squirrel Creek (and/or just downstream in Squirrel Creek) to ensure trickle discharge is effective in reducing phosphorous and nitrogen levels as well as verify that there is a reduction in ammonia levels.

Also while they indicated that the discharge outlet is already installed in the lagoon they didn't indicate if the ditch at the outlet was riprapped to prevent erosion.

Disposition:

These comments can be addressed as licence conditions.

Manitoba Conservation and Water Stewardship - Water Use Licensing

No concerns.

What we do with this type of request is to first check to see if they have a water rights licence and if so if their annual allocation jives with the hydraulic loading information in their EAP.

Their water rights licence is #2011-108 so it was prepared last year.

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

No concern.

Manitoba Local Government – Community and Regional Planning Branch

No concerns from the perspective of our Provincial Planning Regulation or the Planning District's Development Plan.

Canadian Environmental Assessment Agency

As you may be aware, in July 2012, the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) came into force. CEAA 2012 focuses federal reviews on those project proposals that have a greater potential for significant adverse environmental effects in areas of federal jurisdiction. The *Regulations Designating Physical Activities* identify the

physical activities which, if carried out individually or in combination, constitute a “designated project” that is subject to the requirements of CEAA 2012.

Based on the information provided by Manitoba Conservation and Water Stewardship, the project referred to above does not appear to meet the definition of a “designated project” under CEAA 2012.

Please note that the proponent is responsible for confirming its federal regulatory responsibilities in developing its project, including confirming whether its proposal is described on the *Regulations Designating Physical Activities* under CEAA 2012. Please advise the proponent to review the regulations (<http://laws-lois.justice.gc.ca/eng/regulations/SOR-2012-147/index.html>) and contact the Canadian Environmental Assessment Agency if its proposal meets the definition of a designated project.

As the Agency will only be involved in the review of designated projects, no formal federal coordination exercise has been undertaken for this file. However, the Agency has copied Environment Canada, Fisheries and Oceans Canada and Health Canada on this correspondence for information purposes. We have uploaded the project information sent to us from Manitoba Conservation on the Agency’s Collaboration Website: <https://collaboration.ceaa-acee.gc.ca/Home.aspx?locale=en-CA&c=1>. All the available information is in the Documents section, Manitoba projects: file 5387. Federal authorities having comments or questions about the project proposal should contact Bruce Webb directly (204-984-7021, bruce.webb@gov.mb.ca).

ADDITIONAL INFORMATION:

No additional information was required to address public and TAC comments.

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 Bloomfield Colony Wastewater Treatment Lagoon Discharge Alteration proposal involves an occasional change in operation for an existing facility located on agricultural land. Adverse effects on surface water or habitat for wildlife or fisheries are not anticipated.

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

RECOMMENDATION:

All comments received on the Proposal that require follow-up 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 the Environmental Compliance and Enforcement Branch, since the existing wastewater treatment lagoon will not be modified by the proposal and the existing effluent irrigation program will normally be continued.

PREPARED BY:

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