

Webb, Bruce (CWS)

Subject: Eagle Creek Colony Wastewater Treatment Lagoon File: 5703.00

The attached material can be sent to the public registries for the above project:

Request for additional information: April 28, 2014-04-28

Public Comments: No public comments received.

Technical Advisory Committee Comments: (8 pages)

Manitoba Conservation and Water Stewardship – Environmental Compliance and Enforcement Branch, April 4, 2014
Manitoba Conservation and Water Stewardship – Parks and Protected Spaces Branch, April 14, 2014
Manitoba Conservation and Water Stewardship – Wildlife Branch, April 24, 2014
Manitoba Conservation and Water Stewardship – Water Science and Management Branch, Water Quality Management Section, April 1, 2014
Manitoba Conservation and Water Stewardship – Office of Drinking Water, April 24, 2014
Manitoba Conservation and Water Stewardship – Water Use Licensing Section, March 21, 2014
Manitoba Infrastructure and Transportation – Highway Planning and Design Branch, Environmental Services Section, March 21, 2014

Bruce.

Webb, Bruce (CWS)

From: Webb, Bruce (CWS)
Sent: April-28-14 9:47 AM
To: 'Peter Grieger'
Subject: Eagle Creek Colony Wastewater Treatment Lagoon File: 5703.00

Hello! The preliminary review of the Eagle Creek Colony proposal has been completed. No public comments were received on the proposal, and no comments were received from the Technical Advisory Committee that require additional information. However, I have a question concerning available storage and trickle discharge.

The proposal indicates that the facility will be discharged once annually, and it is proposed that the discharge period would be approximately 27 days. Isolating and testing the secondary cell would require perhaps another 28 days. Therefore, all incoming wastewater would be stored in the primary cell for about 55 days. I calculated the level expected in both cells 55 days before the end of the one year storage period, and the available storage in the primary cell at this point. It appears that the primary cell would be full to the 1.5 m level about 32 days after the secondary cell was isolated. Therefore, only about four days of storage would be available in the primary cell after the secondary cell began to discharge. This would reduce the available discharge time for the secondary cell to four days. If this is the case, trickle discharge is not going to be a practical method of reducing the nutrient content in the effluent. As well, the discharge route to Tobacco Creek is relatively short, and reportedly relatively steep, suggesting that the effluent travel time between the lagoon and Tobacco Creek will not be long. Any comments on these observations?

Bruce.

DATE: April 4, 2014

TO: Bruce Webb *BW*
Water Development and Control
Assessment Officer
Environmental Approvals
Manitoba Conservation and Water
Stewardship,
123 Main Street, Suite 160
Winnipeg MB R3C 1A5
T (204) 945-7021 F (204) 945-5229

FROM: Dupe Ige
Environmental Compliance and
Enforcement
Conservation and Water Stewardship
309-25 Tupper Street N,
Portage La Prairie, MB, R1N 3K1
T 204 239 3984 F 204 239 3215

Re: Eagle Creek Colony Ltd- Wastewater Treatment Lagoon

The proponent is proposing that mechanical aeration can be provided to speed up the treatment process if the need arises. The proponent should specify how this will be achieved.

The proponent proposed that dry chlorine may be spread over the surface of the secondary cell... If facility is chlorinated, the treated effluent must be de-chlorinated and residual chlorine determined in the effluent before discharge. Residual chlorine must be included in Table 1. At least one of the plant species identified in the project area is sensitive to chlorine. The proponent should describe the de-chlorination plan.

The proponent acknowledged that the discharge of wastewater from water softening process into the wastewater facility could result in moderate level of SAR in treated wastewater. Although the proponent envisaged that the proportion of wastewater effluent that would flow through the Tobacco creek during the peak flow period is small, the relatively low flow rate of the Tobacco Creek means that most of the effluent would be absorbed en-route and within the Tobacco Creek. High effluent SAR has the potential to induce soil salinity along the discharge route and around the Tobacco creek. To proactively prevent the development of saline soil condition along the discharge route, the effluent SAR must be monitored.

The proponent should suggest alternative water softening method to be explored, evaluate the possible impact on effluent quality and how to mitigate the impact.

Webb, Bruce (CWS)

Subject: FW: EAP for review/comments - Eagle Creek Colony - File: 5703.00 due April 25, 2014.

From: Kelly, Jason (CWS)

Sent: April-14-14 8:54 AM

To: Webb, Bruce (CWS) BW

Cc: Harms, Jenny (CWS)

Subject: RE: EAP for review/comments - Eagle Creek Colony - File: 5703.00 due April 25, 2014

Parks and Protected Spaces Branch has reviewed the proposal filed pursuant to the *Environment Act* for EAP for review/comments - Eagle Creek Colony - File: 5703.00 due April 25, 2014. The Branch has no comments or concerns to offer as it does not affect any provincial parks, park reserves, ecological reserves, areas of special interest or proposed protected areas.

Jason Kelly, M.N.R.M.
Ecological Reserves and Protected Areas Specialist
Parks and Protected Spaces Branch
Conservation and Water Stewardship
Box 53, 200 Saulteaux Cres
Winnipeg, MB R3J 3W3

Phone: 204-945-4148

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Email: Jason.Kelly@gov.mb.ca

Webb, Bruce (CWS)

From: Boissonneault, Caroline (CWS)
Sent: April-24-14 8:31 AM BW
To: Webb, Bruce (CWS)
Subject: Emailing: EAP for reviewcomments - Eagle Creek Colony - File 5703.00 due April 25 2014
Attachments: EAP for review/comments - Eagle Creek Colony - File: 5703.00 due April 25, 2014

Hello Bruce,

Wildlife Branch has reviewed the proposed domestic wastewater treatment facility for Eagle Creek Colony at NE25-05-08W and has the following concerns/ comments to add:

1. The proposed development is located immediately adjacent to Deerwood Wildlife Management Area and the discharge route will direct wastewater effluent into Tobacco Creek within this WMA. To protect wildlife that uses this specially designated area, it is recommended that the Environment Act Licence ensure that facilities and treatment processes have the highest likelihood of avoiding contamination of Tobacco Creek and potentially harming both aquatic and terrestrial wildlife that uses this stream.
2. The Central Region Wildlife Section contends that the length of the discharge route, consisting of a grassed swale, is only 400 meters, not the 500 meters identified in the proposal. The total distance between the lagoon outflow and Tobacco Creek is approximately 550 meters. Of this distance approximately 250 meters is located on a significant slope. The Central Region Wildlife Section is concerned that the shortened grass swale and highly sloped portion of the discharge route will be insufficient to ensure adequate polishing of effluent before it reaches Tobacco Creek. The Central Region Wildlife Section recommends that the proponent be required to construct additional polishing infrastructure if the length and condition of the discharge route is insufficient to ensure adequate polishing of effluent before it reaches Tobacco Creek.
3. The proponent proposes to discharge effluent during the middle of summer when the flow of Tobacco Creek is at its lowest. The Central Region Wildlife Section is concerned that the shorter and highly sloped condition of the discharge route will result in more effluent reaching Tobacco Creek than specified in the proposal. This less polished effluent could become highly concentrated in remaining pools of water in Tobacco Creek if discharge occurs during the height of summer. This highly concentrated water may adversely impact aquatic wildlife that occupies these pools of water, as well as create unhealthy sources of water for wildlife species that drink from these pools. The Central Region Wildlife Section recommends that discharge occur during the spring when a significantly higher flow on Tobacco Creek will disperse effluent adequately to eliminate potential for harm to aquatic and terrestrial wildlife.
4. The Central Region Wildlife Section recommends that the Regional Wildlife Manager (ph 204-642-6077) be added to the list of contacts in the event of an accidental discharge or planned discharge that is outside of the normal operating plan for this facility.

Your message is ready to be sent with the following file or link attachments:

EAP for reviewcomments - Eagle Creek Colony - File 5703.00 due April 25 2014

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DATE: April 1, 2014

Memorandum

TO: Bruce Webb ^{BW}
Environmental Approvals Branch
160-123 Main Street, Winnipeg,
MB
R3C 1A5

FROM: Joy Kennedy
Water Quality Management Section
Water Science and Management Branch
160-123 Main Street, Winnipeg, MB
R3C 1A5

Cc Elaine Page
Nicole Armstrong

TELEPHONE: 945-7908
FACSIMILE: 948-2357
EMAIL: joy.kennedy@gov.mb.ca

SUBJECT: **ENVIRONMENT ACT PROPOSAL FILE: 5703.00 EAGLE CREEK
COLONY WASTEWATER LAGOON**

- The following effluent standards should be in place for Eagle Creek Colony new 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
- 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. Trickle discharge over 27 days is proposed as a nutrient reduction strategy. The proponent must demonstrate this nutrient reduction strategy will reduce phosphorus loads equivalent to implementing a <1 mg/L phosphorus limit.
- To demonstrate the proposed nutrient reduction strategy, Proponent should install a gated or stop-log control structure at the end of the 500 m discharge path on colony land. For the first three (3) years of operation, as a condition of the license the proponent should collect weekly water quality samples for total phosphorous from the exit of the discharge control structure during the 27 day release. The proponent should also be required to report the dates of effluent release, volume of effluent discharged on a daily basis, total volume of effluent discharged, and daily precipitation measurements. A nutrient demonstration report should be sent to the Director of Environmental Approvals Branch in each year for review.
- It is recommended the proponent practice vegetation harvesting in order to promote

nutrient uptake in the 500 m discharge ditch. The vegetation should be removed from the drainage ditch to prevent a re-release of nutrients into the ditch. Can the proponent please propose a vegetation harvesting plan including comments on timing, frequency, method, and disposal of vegetation?

- High SAR levels limit the opportunities to reuse the valuable nutrients in wastewater and yet when discharged to a water body, high SAR can also have a negative impact on aquatic life. The Water Quality Management Section recommends that the colony take steps to reduce the SAR in their wastewater. The colony should explore alternative water softening options and report back to the Director of Environmental Approvals in one year.
- 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.

Joy Kennedy

Webb, Bruce (CWS)

From: Stibbard, James (CWS)
Sent: April-24-14 9:55 AM BW
To: Webb, Bruce (CWS)
Subject: Re: 5703.00 Eagle Creek colony WW Lagoon EAP

Bruce,

I reviewed the above noted EAP. It appears the treated effluent discharge route is to intermittent water ways that no one uses as drinking water sources and it is noted the discharged effluent will meet applicable Manitoba quality standards. As such, Office of Drinking Water has no concerns with the EAP or proposed development respecting drinking water sources or safety.

If you have any questions, please call.

Regards,

James Stibbard P. Eng.
Approvals Engineer
Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4
phone: (204) 945-5949
fax: (204) 945-1365
email: James.Stibbard@gov.mb.ca
website: www.manitoba.ca/drinkingwater

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Webb, Bruce (CWS)

Subject: FW: EAP for review/comments - Eagle Creek Colony - File: 5703.00 due April 25, 2014

From: Matthews, Rob (CWS)

Sent: March-21-14 9:15 AM *BW*

To: Webb, Bruce (CWS)

Cc: Anderson, Kristina (CWS); Thibert, Lorraine (CWS)

Subject: RE: EAP for review/comments - Eagle Creek Colony - File: 5703.00 due April 25, 2014

Bruce,

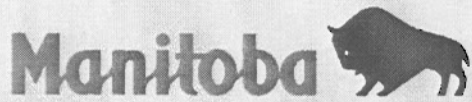
You can record "No Concerns" from WULS on this WWTP project.

However, Evergreen Colony was to extend their own water supply system eastward by a new pipeline to supply the new Eagle Creek Colony.

I believe that the length of the pipeline might trigger another EAP.

Have you received such an application?

Rob



Infrastructure and Transportation
Highway Planning and Design Branch
Environmental Services Section
1420 - 215 Garry St., Winnipeg, MB R3C 3P3
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March 21, 2014

BW
Tracey Braun, M. Sc.
Director, Environmental Approvals Branch
Manitoba Conservation and Water Stewardship
123 Main St., Suite 160
Winnipeg, MB R3C 1A5

RE: Eagle Creek Colony Ltd. - Domestic Wastewater Lagoon
Client File No. 5703.00

Dear Ms. Braun:

MIT has reviewed the proposal under the Environment Act noted above and we do not have any concern.

Thank you very much for providing us the opportunity to review the proposal.

Sincerely,

Ryan Coulter, M. Sc., P. Eng.
Manager of Environmental Services