



DATE: September 3, 2013

Memorandum

TO: Rafiqul Chowdhury
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

TELEPHONE: 945-7908

FACSIMILE: 948-2357

EMAIL: joy.kennedy@gov.mb.ca

SUBJECT: ***ENVIRONMENT ACT PROPOSAL FILE: 5661.00 FAILHOLME COLONY
DOMESTIC WASTEWATER STABILIZATION POND***

- Where the proposed discharge route is selected, erosion control structures would be required. Maps indicate that approximately the final 300 m of the 940 m discharge route flows over a slope of 30 – 45 % before reaching the Assiniboine River.
- Trickle discharge is proposed as a nutrient reduction strategy. It is recommended the Colony increase the length of the beginning 600 m discharge route through a serpentine route to increase nutrient uptake.
- Can the colony create an alternate discharge route to increase the length of the discharge route and avoid the slope?
- 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

From: Frost, Laurie (CWS)
Sent: September-11-13 9:12 AM
To: Chowdhury, Rafiqul (CWS)
Cc: Phipps, Graham (CWS)
Subject: RE: Review and comment request due Sept. 13, 2013 - Fairholm Colony Lagoon - File: 5661.00

In response to your request for comments on the EA Proposal Fairholme Colony Domestic Wastewater Stabilization Pond, the Groundwater Management Section is pleased to provide the following:

The existing earthen manure storage and proposed domestic wastewater stabilization pond are located on a shallow, unconfined sand aquifer. The unconfined nature of the sandy soils and high water table (about 1 metre below ground surface) make it highly vulnerable to groundwater contamination from sources such as manure storage and wastewater.

The proposed lagoon construction (based on drawings provided in the proposal) show the clay core a minimum two metres wide and keyed a minimum of 0.3 metres into the underlying clay. It is essential that the clay core is properly connected to the underlying clay to ensure there is no direct pathway of leakage of wastewater from the lagoon into the surrounding unconfined aquifer.

Regards,

Laurie Frost, M.Sc., P. Eng.
Hydrogeologist
Water Science and Management Branch
Groundwater Management Section
Box 18, 200 Saulteaux Cresc.
Winnipeg, Manitoba R3J 3W3
phone (204) 945-3737
fax (204) 945-7419

From: Roberts, Dan (CWS)
Sent: September-05-13 3:49 PM
To: Chowdhury, Rafiqul (CWS)
Subject: Review and comment request due Sept. 13, 2013 - Fairholm Colony Lagoon - File: 5661.00

The *Water Control Works and Drainage Licensing Section* requests that erosion control measures be in place during and after construction of the outlet drains, to prevent damage to the river bank and minimize erosion/sedimentation.

Please remind the proponent that all water control works require licensing under the *Water Rights Act*. Any inquiries in this regard may be directed to the local *Water Resource Officer*. Their contact information may be found at:

http://www.gov.mb.ca/conservation/waterstewardship/licensing/pdf/areas_of_focus_jan_23_12.pdf

Licensing of yard and field approaches (access points) are the responsibility of either the municipality, or *Manitoba Infrastructure and Transportation*, which ever is applicable.

The drainage and/or alteration of permanent and semi-permanent wetlands is not permissible under the *Water Rights Act*.

Thank You.

Dan Roberts

Water Resource Officer
Water Control Works and Drainage Licensing Section
Conservation and Water Stewardship
Box 640, 201 Fourth Ave. S., Swan River, MB R0L 1Z0
Cell: (204) 281-2122, Fax: 734-3733

From: Matthews, Rob (CWS)
Sent: August-28-13 10:40 PM
To: Chowdhury, Rafiqul (CWS)
Cc: McCombe, Christopher (CWS)
Subject: RE: Review and comment request due Sept. 13, 2013 - Fairholm Colony Lagoon - File: 5661.00

Rafiqul,

My comments are as follows:

“Based on the hydraulic loading calculations outlined in the Environment Act Proposal the Colony will need to apply to the Water Use Licensing Section for a water rights licence for municipal purposes. The contact person for obtaining an application for a water rights use licence is Mr. Chris McCombe at 204-945-3983.”

Rob Matthews

From: Stibbard, James (CWS)
Sent: September-10-13 9:33 AM
To: Chowdhury, Rafiqul (CWS)
Subject: Re: 5661.00 Fairholme Colony WW Lagoon EAP

Mr. Chowdhury,

I reviewed the above noted EAP for concerns respecting drinking water quality. The only point to be noted is that the proposed effluent discharge point of this lagoon is the Assiniboine River some miles upstream (the EAP does not specify) of the raw water supply for the City of Portage la Prairie public water system. Under normal operation, the Portage la Prairie water plant should be able to treat the river water including any effluent from the lagoon. However, should a major spill from the lagoon occur, it could affect the Portage Plant. As such, Office of Drinking Water recommends that a clause be inserted in the Licence of the lagoon requiring that contact information for the Portage la Prairie Water Plant be kept on file at the Colony and the Colony be required to inform the City of Portage la Prairie if a major spill of untreated wastewater occur from the lagoon system.

If you have any questions on this, 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

Confidentiality Notice: This message, including any attachments, is confidential and may also be privileged and all rights to privilege are expressly claimed and not waived. Any use, dissemination, distribution, copying or disclosure of this message, or any attachments, in whole or in part, by anyone other than the intended recipient, is strictly prohibited.

From: Janusz, Laureen R (CWS)
Sent: September-13-13 11:01 AM
To: Chowdhury, Rafiqul (CWS)
Cc: Klein, Geoff (CWS); Long, Jeff (CWS)
Subject: EAP 5661.00 Fairholm Colony Lagoon due Sept 13, 2013

Hi Rafiqul,

Fisheries Branch has reviewed this proposal for a new domestic wastewater treatment lagoon located in the SW quarter of 35-9-8 W to serve the Fairholme Colony. The new primary and secondary cells will be clay lined. The effluent will be discharged to an existing natural creek that flows into the Assiniboine River (~940 meters). Effluent will be discharged between June 15th and November 1st. They are proposing trickle discharging the effluent over a two to four week period to meet phosphorus limits. Given the high water table there is a recommendation in the Geotechnical Report to construct a system of temporary perimeter trenches (3 to 3.5 m minimum) to drain the site and lower the groundwater table.

As noted in the report while the creek is considered Type E habitat (indirect fish habitat) it does flow into the Assiniboine River which is Type A habitat and this river supports year round all life stages of small and large bodied fish species. Generally as long as the effluent meets or exceeds Manitoba Water Quality's Standards, Objectives and Guidelines and standard clauses with respect to implementing erosion and sediment control measures (for lagoon and trenching), etc are included fisheries concerns should be addressed. Given the route the effluent flows through prior to entering the Assiniboine River is short we feel it would be beneficial to include a licence condition that requires monitoring at the downstream end of the creek to confirm that nutrient uptake does occur. We do however defer to the recommendations of our colleagues in Water Science Management on this matter.

Thank you.

Laureen Janusz
Fisheries Science and Fish Culture Section
Fisheries Branch
Conservation and Water Stewardship
Phone: 204 945-7789
Cell: 204 793-1154
Email: Laureen.Janusz@gov.mb.ca

From: Kaita, Adara (CWS) on behalf of +WPG1212 - Conservation_Circulars (CWS)
Sent: September-13-13 11:04 AM
To: Chowdhury, Rafiqul (CWS)
Subject: EA Proposal - Fariholme Holding Co. Ltd. - Wastewater Treatment Lagoon - File: 5661.00

Hi Rafiqul,

The Watersheds and Protected Areas Branch has no concerns. The Lands Branch has no concerns and notes the following: (detailed responses on these topics are deferred to Water Stewardship's Water Quality Section)

- Nutrient uptake for the trickle releases into the discharge route will only work during the active growing season for the vegetation in the ditch.
- There is no information provided to confirm that the ditch does as it is intended in regards to nutrient up take. Sampling of the effluent at the discharge site entering the Assiniboine would confirm if the plant nutrient uptake has been successful.
- The schedule for trickle discharge is not provided. Since they cannot release until after June 15, part of the growing season is already complete and as the season progresses to fall, nutrient uptake by plants is reduced.

Thank you for the opportunity to review.

Adara Kaita
Crown Land Programs and Policy Manager
Conservation and Water Stewardship
Box 25, 200 Saulteaux Crescent
Winnipeg, MB R3J 3W3
Cell: (204) 945-6301
F: (204) 948-2197