
September 26, 2018

Sustainable Development
Government of Manitoba
Box 80, 160-123 Main Street
Winnipeg, MB R3C 1A5

Attention: Asit Dey, P.Eng.

Reference: Meadowbrook Village Wastewater

Subject: Proposed Wastewater Treatment Plant

Dear Mr. Dey,

BMCE has previously submitted an Environmental Act Proposal (EAP) to MB Sustainable Development on March 28, 2017. Following submission of the EAP for lagoon expansion, BMCE has continued to investigate alternative treatment options as requested by Meadowbrook Village. An alternative solution which would eliminate the need for a lagoon facility at this location would be beneficial for Meadowbrook by opening the remaining lands for future development and prevent future conflicts with the area residents.

During our investigations of alternatives BMCE has reviewed options with the Municipality as well as the City of Brandon for joint use facilities. Both of these options were reviewed with each party and determined to be undesirable due to long timelines or lack of cooperation between the parties.

The final option BMCE reviewed was the construction of a mechanical WWTP at Meadowbrook which could treat and discharge the current wastewater while allowing for the future expansions. BMCE has generated a conceptual sketch of this option which is included with this letter. This option is anticipated to consist of the following infrastructure:

- Construction of new forcemain to connect the expansion lift station to the existing forcemain to the lagoon.
- Construction of a new lift station and forcemain to supply wastewater from the lagoon outlet back to the WWTP.
- Construction of a new WWTP in the existing building on site.
- Construction of a new lift station and forcemain to dispose of treated wastewater into the large reservoir at Glen Lea Golf Course.

The proposed system would utilize the existing lagoon as a flow equalization basin as well as assist in solids removal prior to the WWTP. A new lift station would be installed that would pump the outflow from the lagoon to the WWTP for treatment. Following treatment, a final lift station would pump the treated wastewater to the larger reservoir located at the Glen Lea Golf Course where it will be utilized for irrigation on the golf course. BMCE has had preliminary

discussions with Glen Lea where they have advised us that they want all of the water that can be provided due to shortages for irrigation during the summer months.

BMCE has been in preliminary discussions with packaged treatment plant suppliers for the proposed treatment train. Currently we are proposing to utilize a Moving Bed Biofilm Reactor (MBBR) produced by Sapphire Water. Based on preliminary sizing, a single treatment unit would be sufficient to meet the needs of Meadowbrook Village both now and into the future.

BMCE would request a conference call with your department to further discuss the proposed WWTP with MB Sustainable Development and discuss the level of support for the proposed concept. Additionally, BMCE would like to discuss anticipated discharge requirements to ensure all guidelines are established prior to the project proceeding further into design. We are basically seeking any feedback that Sustainable Development has regarding concerns or potential challenges prior to proceeding with design and an EAP application.

Yours truly,
BURNS MAENDEL CONSULTING ENGINEERS LTD.


A handwritten signature in black ink that reads "Daniel Burns". The signature is stylized, with the first letter of each name being large and prominent.


Daniel Burns, P.Eng.
Civil Engineer


Meadowbrook Village WWTP


Concept Drawing


Legend

 Existing FM to Lagoon

 Expansion LS to Existing FM

 FM from Lagoon to WWTP

 Forcemain to Golf Course

 Lift Station

Existing Lagoon proposed to remain in place to act as an flow equalization reservoir and solids removal prior to the WWTP. Long term the lagoon would be removed and a storage tank with appropriate solids removal would be installed adjacent the WWTP building.

Lift Station from Lagoon to WWTP

Lift Station WWTP to Golf Course Storage

Expansion Lift Station

Existing building to house the proposed WWTP.

Existing Meadowbrook Lift Station

Discharge into the existing approximately 70,500 m3 dugout reservoir for Glen Lea Golf Course.

