

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Town of Virden  
**PROPOSAL NAME:** Wastewater Treatment Plant Upgrades  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Wastewater Treatment Plant  
**CLIENT FILE NO.:** 5697.00

### **OVERVIEW:**

On January 10, 2014, the Department received an Environment Act Proposal (EAP) on behalf of the Town of Virden for the replacement of the existing wastewater treatment plant that is located at Lot 13, Block 170, Plan 197 (BLTO) in the Town of Virden. The replacement is proposed to be completed in two phases. Proposed to occur in 2014, a primary component of Phase I work consists of the construction of a new headworks with fine screening prior to primary treatment and the installation of a belt filter press for temporary primary treatment. Chlorination/dechlorination will be used for Phase I disinfection. Potentially occurring in 2015, primary components of Phase II work consist of extending the headworks facility with new concrete basins and building for a new equalization tank, sequencing batch reactor tanks and UV disinfection equipment. The belt filter press from Phase I will be re-purposed for biosolids thickening while new tankage with aeration equipment will be installed for biosolids stabilization in the original facility. Additional information regarding the work associated with each phase is presented in the proposal. As with the existing wastewater treatment plant, the new wastewater treatment plant will discharge to a ditch that flows into Gopher Creek that flows into the Assiniboine River.

The Department, on February 28, 2014, placed copies of the EAP report in the Public Registries located at the Legislative Library, 200 Vaughn St., Winnipeg; the Millennium Public Library, 4<sup>th</sup> Floor, 251 Donald St., Winnipeg; and the Online Registry, <http://www.gov.mb.ca/conservation/eal/registries/index.html>, and provided copies of the EAP report to the TAC members. As well, the Department placed public notifications of the EAP in the Virden Empire Advance on Friday, February 28, 2014. The newspaper and TAC notifications invited responses until March 28, 2014.

On April 4, 2014 the Department forwarded four TAC correspondence items to the proponent's consultant for response. There were no comments or requests for additional information from the public.

In a letter dated April 21, 2014, the proponent's consultant provided responses to the TAC correspondences. The letters were forwarded to the participating TAC members on May 14, 2014. There were no additional requests for information.

Site inspections during Phase 1 construction activities occurred on July 15, 2015 and April 1, 2016.

The proponent submitted two Notices of Alteration dated September 15, 2015, one dated October 26, 2015, and one dated December 7, 2016.

Phase 2 drawings issued for construction, dated January 11, 2017 and submitted on April 26, 2019, identified minor changes to the original design, including a new hydraulic load capacity for the wastewater treatment plant.

Site inspections during Phase 2 construction activities occurred on August 23, 2018, September 19, 2018, and May 14, 2019.

In a June 14, 2019 email, the proponent submitted information identifying the final design loads for the wastewater treatment plant.

#### **COMMENTS FROM THE PUBLIC:**

There were no comments from the public.

#### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

##### **Wildlife Branch – Conservation and Water Stewardship**

- *No concerns.*

##### **Lands Branch and the Protected Areas Initiative – Conservation and Water Stewardship**

- *No concerns.*

##### **Groundwater Management Section – Water Science and Management Branch – Conservation and Water Stewardship**

- *The report (section 5.2.6.2) states,*

*During the operational phase, treated effluent will be continuously discharged to the discharge channel, and subsequently into Gopher Creek, and eventually the Assiniboine River. Some infiltration is expected based on the coarse nature of the shallow soils at the project site and surrounding project area. As noted in the discussion on surface water quality (Section 5.2.7), the treated effluent to be discharged to the environment will be improved in quality by a significant amount, and will meet draft criteria established by Manitoba Conservation that are prescriptive for the protection of the environment.*

- *The effluent design requirements for fecal coliform and E.coli (presented in Table 1-2) is  $\leq 200$  MPN/100 mL. However, this is above the Manitoba Water Quality Standards, Objectives, and Guidelines value of 0 MPN/100 mL for fecal coliform bacteria and E.coli in groundwater as a drinking water source (TIER II – Water Quality Objectives). Due to the potential for the infiltration of treated effluent into shallow soils along the discharge channel, it would be prudent to determine if any water well users are located in close proximity to the discharge channel, and if so, assess any environmental effects and mitigation.*

Proponent Responses – April 21, 2014:

- A review of the well logs finds that most of the Town wells were installed in the early to late 1980's. Since then, these Town residents are expected to have converted to the treated Town water supply. The wells located outside the limits of the Town water supply appear to be in excess of 500 m from the discharge channel, and are not expected to be influenced by the discharge to the drainage channel. In addition, these wells are already located in an existing groundwater pollution hazard area and are GUDI and likely subject to long term influence by existing industrial and livestock practices.  
Virden's current mitigation strategy is to reduce any potential loading hazard along the discharge channel by improving the discharge quality with the proposed wastewater treatment facility upgrades.

**Office of Drinking Water – Conservation and Water Stewardship**

- *I reviewed the above noted EAP. The only concern I have respecting drinking water safety is that the effluent outfall from the Virden WW plant is upstream from the raw water intake for the City of Brandon Water Treatment Plant. Under normal operating conditions the Brandon water plant can treat the river water, but if a major spill of untreated or partly treated wastewater into the river from the Virden WW plant were to occur, it would have the potential to adversely affect treatment facilities downstream. As such, ODW recommends that contact information for the Brandon water treatment plant be included in the Emergency Response Plan for the new Virden WW Plant, with instructions that, in the event of a major spill of partially treated or untreated wastewater from the Virden WW plant, the operators at the Brandon Water Plant be notified. Apart from this point, ODW has no other concerns with the EAP or the proposed development.*

Proponent Responses – April 21, 2014:

- Noted. We will provide this information to the Town of Virden to incorporate into their emergency response plan for the new wastewater treatment plant.

**Prairie Mountain Health - Health**

- *I have reviewed the proposal and it appears that the areas outline below have been addressed. If any of these areas has not been adequately addressed, please ensure that they are.*
  1. *Odour control and monitoring.*
  2. *Air emission criteria will be met, including greenhouse gas emissions.*
  3. *Any discharge of effluent is in compliance with Manitoba Environment's guidelines.*
  4. *Ongoing reporting and appropriate disposal of all hazardous wastes.*
  5. *Leachate, soil and groundwater monitoring.*
  6. *Containment design provides the best possible groundwater protection for the area.*
  7. *Prevention of pollutant or contaminated wastewaters from entering sewage disposal and municipal ditch systems.*
  8. *Fencing, gates, and warning signs included to ensure public safety, in case of unsupervised public access to the development.*
  9. *Noise level concerns addressed.*
  10. *Availability for review of an emergency response plan.*

**Proponent Responses – April 21, 2014:**

- We agree that each of the above-mentioned areas of concern have been addressed in the EAP. Although “Fencing, gates, and warning signs” are not mentioned explicitly in the EAP, erecting appropriate barricades to help protect the public is considered a standard construction practice. In addition, the wastewater treatment facility site is already partially fenced in to prevent unauthorized access.

**Disposition:**

- The draft Environment Act Licence contains clauses that require that the Licencee not cause or permit noise or odour nuisances to be created as a result of the construction, operation or alteration of the Development and take such steps as the Director may require to eliminate noise or odour nuisances.
- The draft Environment Act Licence contains a clause that requires that that the Licencee direct all spent or used water containing dissolved and suspended matter toward the wastewater treatment plant or other approved wastewater treatment facilities, not including hazardous wastes that are to be directed toward other suitable licensed facilities for treatment and disposal.
- The draft Environment Act Licence contains clauses that require the Licencee not discharge effluent where any effluent quality limits exceed limits identified in the draft Environment Act Licence.

- The draft Environment Act Licence contains clauses that require the Development to operate in such manner that wastewater and sludge not be spilled in the area around the Development and therefore soil and groundwater impacts are not likely. If a spill of a pollutant or contaminated wastewater does occur, it may be considered as a physical or mechanical breakdown would require the Licencee to respond as required in the Licence.
- The draft Environment Act Licence contains clauses that require that the Licencee immediately report events of physical or mechanical breakdown that have the potential to have significant adverse effects by calling the 24-hour environmental accident reporting line and identify repairs required, undertaking all repairs in accordance with any written instructions of the Director, and reporting the causes and measures taken within one week of the repairs being done.
- The draft Environment Act Licence contains clauses that the Licencee undertake required action(s) in response to specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, handling, treatment and disposal systems for a duration and frequency as may be specified, monitor for and determine environmental impacts of any pollutant release from the Development, conduct specific investigations relating to associated environmental monitoring programs, and provide the director with related reports within a time frame that may be specified.
- The draft Environment Act Licence contains a clause that requires that the Licencee shall install and maintain a security fence around all components of the wastewater treatment plant that are not enclosed within secured buildings.

**Office of the Fire Commissioner – Family Services and Labour**

- *No comments.*

**Environmental Services Section – Infrastructure and Transportation**

- *No concerns.*

**Lands Branch – Conservation and Water Stewardship**

- *No concerns.*

**Parks and Protected Spaces Branch – Conservation and Water Stewardship**

- *No concerns.*

**Water Use Licensing Section – Conservation and Water Stewardship**

- *No concerns.*

**Air Quality – Environmental Programs and Strategies Branch – Conservation and Water Stewardship**

- *The proposal is not expected to have a significant impact on air quality provided that the measures cited are implemented.*
- *The odour clause is suggested to be included in the Licence.*

Disposition:

- The draft Environment Act Licence contains a clause that requires that the Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.

**Water Quality Management Section – Water Science and Management Branch – Conservation and Water Stewardship**

- *The following effluent standards should be in place for the Town of Virden wastewater treatment facility as per the Manitoba Water Quality Standards, Objectives and Guidelines Regulation (196/2011).*
  - *BOD<sub>5</sub> 25 mg/L*
  - *TSS 25 mg/L*
  - *Fecal Coliforms 200 MPN / 100mL*
  - *Total phosphorus <1 mg/L*
  - *Ammonia concentrations as outlined in Table 1 of Manitoba Water Quality Standards, Objectives, and Guidelines using Equations 3 & 6 and based on effluent pH.*
- *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.*

**Proponent Responses – April 21, 2014:**

- Noted. As per section 1.2.2, tables 1-2 and 1-3 in the EAP, we anticipate the Environmental Approvals Branch will incorporate these effluent standards into the licence.
- Noted. We anticipate the Environmental Approvals Branch will incorporate this recommendation into the licence.

Disposition:

- The draft Environment Act Licence contains discharge effluent limits respecting carbonaceous biochemical oxygen demand, fecal coliform content, total suspended solids content, total phosphorus and total ammonia as identified in Manitoba Water Quality Standards, Objectives and Guidelines – Regulation 196/2011.
- The draft Environment Act Licence contains a clause that requires that the proponent actively participate in any future watershed-based management study, plan/or nutrient reduction program, approved by the Director, for the Assiniboine River and associated waterways and watersheds.

**Community and Regional Planning – Municipal Government**

- *The subject property is zoned “MH” Industrial Heavy Zone by the Town of Virden Zoning By-law No. 2415, as amended. Sewage treatment plants are a conditional use in the “MH” zone. The proposed expansions to the sewage treatment plant will require conditional use approval from the Town of Virden. We further advise that a development permit from the Town of Virden is required for the proposed structures.*

Disposition:

- The Town of Virden is aware of the need to attend to zoning and related permitting requirements.

**PUBLIC HEARING:**

A public hearing has not been requested and is not recommended.

**CROWN-INDIGENOUS CONSULTATION**

The Government of Manitoba recognizes it has a duty to consult in a meaningful way with Indigenous communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of the Indigenous rights of that community.

The proposal involves the construction and operation of a new wastewater treatment plant that will replace a previously existing wastewater treatment plant located on land owned by the Town of Virden and zoned as “Industrial”. Adverse effects on surface water or habitat for wildlife or fisheries are not anticipated.

Since the project involves a very small quantity of land that is located within the Town of Virden and resource use is not affected by the project, it is concluded that Crown-Indigenous consultation is not required for the project.

**RECOMMENDATION:**

Issue an Environment Act Licence in accordance with the attached draft. Enforcement of the Licence should be by Environmental Compliance and Enforcement Branch as construction of the wastewater treatment plant is complete.

PREPARED BY:

Robert Boswick, P. Eng.  
Environmental Engineer  
July 2, 2019

Telephone: (204) 945-6030  
Fax: (204) 945-5229  
E-mail Address: robert.boswick@gov.mb.ca