SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: **City of Winkler**

PROPOSAL NAME: **City of Winkler – Wastewater Treatment Facility**

CLASS OF DEVELOPMENT: **Two**
TYPE OF DEVELOPMENT: **Wastewater treatment plant**
CLIENT FILE NO.: **2708.20**

OVERVIEW

The Proposal was received on April 17, 2014. It was dated April 4, 2014. The advertisement of the Proposal was as follows:

"A proposal was filed by the City of Winkler for the construction and operation of a new wastewater treatment facility located at SE 22-3-4WPM in the Rural Municipality of Stanley. The new facility will be comprised of a new headworks and storage building, one primary clarifier, one bio-reactor, one secondary clarifier, a primary sludge pump station, a RAS/WAS pumping system, a final effluent pumping station, chemical dosing, ultraviolet disinfection, a workshop, offices, laboratorium, pipelines, and peripheral and site works. The cells of the existing aerated wastewater treatment lagoon located in SE 22-3-4WPM and SW 23-3-4WPM will be incorporated to the facility's operation. Treated wastewater will be stored as necessary in the cells and discharged to Deadhorse Creek continuously during the periods when no frozen conditions exist on the downstream creeks and rivers."

The Proposal was advertised in the Winkler Times on Thursday, June 5, 2014. It was placed in the following public registries:

- Legislative Library (Winnipeg)
- Millennium Public Library (Winnipeg)
- Online: http://www.gov.mb.ca/sd/eal/registries/2708.2winkler/index.html

The Proposal was distributed to Technical Advisory Committee (TAC) members on June 3, 2014.

The closing date for comments from members of the public and TAC members was July 7, 2014.

COMMENTS FROM THE PUBLIC

No public comments were received on the Proposal.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE

Technical Advisory Committee (TAC) responses are summarized in Table 1 below. Substantive comments and their dispositions follow the table. TAC comments are provided in full in the public registries.

Table 1 City of Winkler – Wastewater Treatment Facility
Technical Advisory Committee Comments

No	Technical Advisory Committee Member	Response Provided
1	Manitoba Agriculture	No response
2	Manitoba Sustainable Development –	
	Environmental Compliance and Enforcement Branch	No response
	Climate Change and Air Quality Branch	June 27, 2014
	Wildlife and Fisheries Branch	No concerns
	Parks and Protected Spaces Branch	No comments/concerns
	Forestry and Peatlands Branch	No response
	Indigenous Relations Branch	No response
	Lands Branch	No concerns
	Water Science and Watershed Management Branch:	
	Water Quality Management Section	July 7, 2014
	Groundwater Management Section	No response
	Office of Drinking Water	July 4, 2014
	Water Use Licensing Section	No concerns
	Water Control Works and Drainage Licensing Section	No concerns
	Central Region Integrated Resource Management Team	No response
3	Manitoba Sport, Culture, and Heritage – Historic Resources Branch	No response
4	Manitoba Growth, Enterprise and Trade –	
	Office of the Fire Commissioner	June 19, 2014
5	Manitoba Infrastructure – Highway Planning and Design Branch	No concerns
6	Manitoba Municipal Relations – Community and Regional Planning Branch	No response
7	Manitoba Health, Seniors and Active Living – Environmental Health Unit	No response

Manitoba Sustainable Development – Climate Change and Air Quality Branch, Air Quality Section

Air Quality Section has reviewed the above proposal and provides the following comments:

- While the proposal did not mention about dust and particulate emissions, it is expected that appropriate control measures will be undertaken to minimize dust and particulate matter emissions during construction works.
- Air Quality Section suggests that the EA Clause regarding odour nuisance be included in the licence.

Disposition:

Additional information was requested to address these comments. The odour nuisance clause can be included as a licence condition.

Manitoba Sustainable Development – Water Science and Watershed Management Branch, Water Quality Management Section

- The *Manitoba Water Quality Standards, Objectives and Guidelines* includes a Water Quality Standard that requires the Proponent to use the best practical technology for the beneficial reuse of valuable resources such as nutrients, organic matter and energy contained within municipal biosolids and sludge.
    - How will the Proponent use the Biological Nutrient Removal (BNR) process for the beneficial reuse of valuable resources such as nutrients, organic matter and energy contained within municipal biosolids and sludge?

  One of the benefits of Biological Nutrient Removal (BNR) processes is that they can effectively reduce both nitrogen and phosphorus while producing sludge that can be stabilized for reuse. The phosphorous in sludge is a more accessible resource when it is not bound to alum or ferric.
    - Can the Proponent handle the sludge in a way that does not require adding alum or ferric to the sludge at the Primary Sludge Pump Station?
    - Can the Proponent operate the BNR facility such that adding alum or Ferric to the mixing box or Primary Sedimentation Tank prior to the BNR process is not necessary?

- The Proponent describes that chemical dosing of the Biological Nutrient Removal (BNR) plant effluent will be used to polish the product water. The Proponent describes that chemical dosing will be automatic based on flow rate, that the ferric chloride dosage can be calibrated by studying phosphorous trends, and an on-line analyser will signal controls for ferric or alum dosing rate (page 44). The Proposal also describes that the dosage of ferric or alum will be manually adjusted by monitoring the phosphorus concentration over time (page 51). Can the Proponent please clarify if chemical dosing will be automated or manually adjusted based on total phosphorous?

- The following effluent standards should be in place for the City of Winkler wastewater treatment facility as per the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* (196/2011).

    - CBOD 25 mg/L,
    - BOD 25 mg/L,
    - TSS 25 mg/L,
    - Fecal Coliforms or *Escherichia coli* 200 MPN / 100mL,
    - Total phosphorus <1 mg/L,
    - Total nitrogen < 15 mg/L,
    - Ammonia concentrations as outlined in Table 1 of Manitoba Water Quality Standards, Objectives, and Guidelines using Equations 1 & 4 and based on effluent pH and temperature.
        - Please note, equations 1 through 6 would need to be met depending on the averaging period.

- The Water Quality Management Section recommends the Proponent be required to monitor effluent at the discharge point into Deadhorse Creek.
    - The Proponent should continuously measure and record the daily volume of the wastewater discharge from the wastewater lagoons to Deadhorse Creek.
    - The Proponent should collect and analyse daily 24 hour flow proportional composite samples for cBOD, total suspended solids (TSS), total dissolved solids (TDS), total nitrogen, total phosphorous, ortho phosphorus, pH, and total ammonia nitrogen.
    - Fecal Coliforms or *Escherichia coli* grab samples should be collected at the discharge point to Deadhorse Creek.

- The Water Quality Management Section recommends the Proponent be required to monitor upstream and downstream of the discharge point to Deadhorse Creek for a period of three (3) years during the ice free season. Samples should be collected and analysed for total nitrogen, total phosphorous, total ammonia, pH, temperature, TKN, TSS and TDS.

- 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:

Additional information was requested to address these comments. Effluent quality limits can be addressed through licence conditions, as can a requirement to participate in future watershed based management studies.

Manitoba Sustainable Development – Office of Drinking Water

The following points are noted respecting the above EAP:

- Section 8.4 of the EAP notes the treated effluent return to the environment will be to Dead Horse Creek, which flows into the Plum River. The Plum River flows into the Red River upstream of the raw water intake for the Morris Regional Water Treatment Plant. Office of Drinking Water recommends that a requirement be included in the EA Licence that contact information for the Morris Regional Water Treatment Plant be included in the emergency response plans for the new Winkler WWTP with an instruction that, in the event of a major spill of partially treated or untreated wastewater or sludge from the WWTP into Dead Horse Creek, the Morris Regional Water Treatment Plant operators be notified.
  This Section also notes that at some future point, treated water from the WWTP might be injected into the ground for aquifer recharge. Office of Drinking Water recommends the implications of such recharge on domestic water uses of the aquifer be carefully studied before any such recharge be licenced.

- Section 11 of the EAP notes that potable water will be piped into the new WWTP. Requirements of *The Manitoba Plumbing Code* respecting protection of potable water supplies from cross-connection and backflow/backsyphonage should be adhered to in the building plumbing systems.

Apart from these points, Office of Drinking Water has no other concerns with this EAP or the proposed development.

Disposition:

Additional information was requested to address these comments. An emergency response plan can be required as a licence condition.

Manitoba Growth, Enterprise and Trade - Office of the Fire Commissioner

At this time, the Office of the Fire Commissioner (OFC) will require the proponent to obtain a valid building permit from the Building Code authority, the MSTW Planning District at 180-5th Street in Morden. Prior to any occupancy of this new facility, the proponent shall also obtain a valid Occupancy Permit from the MSTW Planning District. The proponent shall also submit a fire safety plan, with respect to Section 2.8 of the Manitoba Fire Code, to the Winkler Fire Department.

Disposition:

This comment was provided to the proponent for information.

ADDITIONAL INFORMATION

Additional information was requested on July 3, 2015 to address Technical Advisory Committee comments.

A Notice of Alteration dated November 22, 2016 which included responses to Technical Advisory Committee comments was received on November 23, 2016. The Notice of Alteration updated the design of the facility, and was placed in public registries for the project.

Technical Advisory Committee members with comments on the original proposal were requested to review the Notice of Alteration and the responses to the original Technical Advisory Committee comments.

Further comments were received from TAC members as follows:

Environmental Compliance and Enforcement Branch

- Total P was consistently omitted from the list of effluent criteria to be met (as prescribed under Manitoba Water Quality Standards, Objectives and Guidelines).
- The required concentration of ammonia as N at 24 °C and pH 7.5 should be 2.37 mg/L, not 3.39 mg/L as stated in the NoA.
- The NoA states that the primary concern with biosolids application to ground is the leaching and/or surface runoff of nitrogen and phosphorus. It should be noted that heavy metal build-up in the soil from continuous application could be a concern to be monitored in agricultural lands receiving biosolids application.
- It is not clear in the NoA how much of the projected Average Annual Flow (AAF) will originate from industrial/commercial developments in the City of Winkler and from the RM of Stanley. Table 5 presented no value for wastewater flows from commercial/industrial lots. City of Winkler currently has wet industries and businesses that are contributing to wastewater flow to the lagoon. There are also existing businesses in the RM of Stanley that are generating wastewater.

Water Science and Watershed Management Branch – Water Quality Management Section

- The following effluent standards should be in place for the City of Winkler wastewater treatment facility as per the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* (196/2011).

    - CBOD 25 mg/L,
    - BOD 25 mg/L,
    - TSS 25 mg/L,
    - Fecal Coliforms or *Escherichia coli* 200 MPN / 100mL,
    - Total phosphorus < 1 mg/L,
    - Total nitrogen < 15 mg/L,

- Water Quality Management Section recommends the use of Equation 1 as a license requirement to calculate the effluent limits based on effluent pH and temperature. The equation can be found in Manitoba Water Stewardship Report 2011-01, Manitoba Water Quality Standards, Objectives, and Guidelines November 28, 2011. An excel spreadsheet containing the calculator for this equation can be found at: https://www.gov.mb.ca/waterstewardship/water_quality/quality/website_notice_mwqsog_2011.html

Disposition:

Additional information was requested to address these comments on April 5, 2017. A response was provided on June 14, 2017. All material was placed in the public registries for the project.

PUBLIC HEARING

As no requests were received for a public hearing, a public hearing 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 expansion and operation of a wastewater treatment system for municipal purposes on adjacent municipal-owned land. Since resource use is not affected by the project, it is concluded that Crown-Indigenous consultation is not required for the project.

RECOMMENDATION

All comments received have been addressed through the provision of additional information and through licence conditions. 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.

Administration of the Licence should be assigned to the Central Region of the Environmental Compliance and Enforcement Branch. Responsibility for any future liner inspections, as well as record drawings should be retained by the Environmental Approvals Branch.

Environment Act Licence No. 2525 for the existing wastewater treatment facility can be rescinded by the new licence, which includes transition requirements.

PREPARED BY:

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Bruce Webb, P. Eng.
Environmental Approvals Branch – Land Use and Energy Section
for Municipal and Industrial Section
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Telephone: (204) 945-7021 Fax: (204) 945-5229
E-mail: bruce.webb@gov.mb.ca