SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT:	The Town of the Pas
PROPOSAL NAME:	The Pas- Wastewater Treatment Lagoon Upgrade and Land Application of Biosolids
CLASS OF DEVELOPMENT:	2
TYPE OF DEVELOPMENT:	Wastewater Treatment Lagoon
CLIENT FILE NO.:	144.40

OVERVIEW:

Manitoba Sustainable Development received an Environment Act Proposal on March 28, 2018 for construction of six Submerged Attached Growth Reactor (SAGR) cells, an aeration building, a baffle curtain in the existing lagoon cell, an alum dosing system, and accommodation for a UV disinfection system. The accumulated biosolids generated from the existing aerated cell and dewatering cell of the wastewater treatment lagoon system located on portions of NW 2-56-26 WPM will be land applied. The treated effluent will be continuously discharged into Grace Lake.

The Department, on April 20, 2018 placed the Proposal online at http://www.gov.mb.ca/sd/eal/registries/144.4thepas/index.html, Copies of the Proposal were also provided to the Technical Advisory Committee (TAC) members. A notice of the Environment Act proposal was also placed in Opasquia Times on Friday, April 27, 2018. The newspaper and TAC notifications invited responses until May 28, 2018.

COMMENTS FROM THE PUBLIC:

No comments were received during the public comment period.

SUMMARY OF COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

No.	Technical Advisory Committee Member	Response Provided	Date Received
1	Manitoba Sustainable Development –		
	• Compliance and Enforcement Branch	No response	
	• Climate Change and Air Quality Branch	No response	
	• Wildlife and Fisheries Branch	No concerns	May 2, 2018
	• Parks and Protected Spaces Branch	No concerns	April 23, 2018
	• Forestry and Peatlands Branch	No concerns	May 14, 2018
	• Indigenous Relations Branch	No response	
	• Lands Branch	No concerns	May 30, 2018
	• Water Quality Management Section	Yes	June 1, 2018
	• Groundwater Management Section	No response	
	• Office of Drinking Water	No concerns	April 23, 2018
	• Water Use Licensing Section	No response	
	• Water Control Works Licensing Section	No response	
	• Regional Services Branch	No response	
2	Manitoba Sport, Culture, and Heritage – Heritage Branch	No response	
3	Manitoba Growth, Enterprise and Trade –		
	• Energy Development Branch	No response	
	• Petroleum Branch	No response	
	• Office of Fire Commissioner	No response	
	• Work Place Safety & Health	No response	
4	Manitoba Infrastructure –		
	• Highway Planning and Design Branch	No concerns	May 23, 2018
5	Manitoba Indigenous and Municipal Relations	No response	
6	Manitoba Health, Seniors and Active Living – Environmental Health Unit	No response	

A copy of the responses and the additional information provided can be viewed at the following link:

http://www.gov.mb.ca/sd/eal/registries/144.4thepas/index.html

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Manitoba Sustainable Development– Water Quality Management Section

a) The following effluent standards should be in place for The Pas wastewater treatment lagoon as per the Manitoba Water Quality Standards, Objectives and Guidelines Regulation (196/2011).
   - BOD5 25 mg/L,
   - TSS 25 mg/L,
   - Total Phosphorus <1 mg/L,
   - Fecal Coliforms or *Escherichia coli* 200 organisms / 100mL
   - Total Ammonia mg/L, as outlined in Table 1 of Manitoba Water Quality Standards, Objectives, and Guidelines using Equations 3 & 6 and based on effluent pH.

b) Water Quality Management Section recommends the proponent be required to collect a bioassay sample of the effluent for testing the sample at 100 percent concentration for acute lethality to trout (EPS 1/RM/13 Second Edition – December 2000).

c) The Water Quality Management Section recommends effluent monitoring as would be required of a medium (>2,500 – 17,500 m^3/day) sized wastewater treatment plant, rather than as a wastewater treatment lagoon, as the facility will function as a wastewater treatment plant. Additionally, the Water Quality Management Section recommends weekly sampling for total ammonia.

d) Can the proponent provide information on other water uses of Grace Lake?

e) Can the proponent demonstrate that the volume of the mixing zone does not exceed 10% of volume of those portions of the receiving waters available for mixing or a 100 m in radius, whichever is less?

f) The Proposal indicates alum is the proposed method of phosphorus removal using an alum addition system into the gravity sewer system upstream. Can the proponent indicate where in the gravity sewer system ALUM will be added? Can the proponent describe how the ALUM dosage would be determined?

g) Maps from detailed soil reports indicate the proposed system located on NW 2-56-26EPM is a nutrient management zone N4. Under 14(1) of the *Nutrient Management Regulation* (62/2008) a wastewater system cannot be located in a Zone N4. The proponent should obtain services of pedologist. Attached is the most recent listing of pedologists. If the pedologist reports the site is confirmed to be a Zone N4 and the Proponent still wants to locate wastewater treatment and disposal system in this location, Proponent will need to apply in writing to the Director of the Water Science and Watershed Management Branch, Box 14, 200 Saulteaux Cres, Winnipeg, Manitoba, R3J 3W3 for authorization.

h) Sludge application rate calculations were made using an incorrect phosphorus test, as a result the application rates are too high. The Proponent has used the Olsen-P test on sludge as available phosphorus, this test is for soil and provides an index of the likelihood of crop response to phosphorus fertilizer. It is not appropriate for biosolids and even in soils it does not measure plant available P. The Proponent should estimate plant available P in the biosolids as a percentage of total phosphorus (total phosphorus is under "Metals in Soil by CRC ICPMS" in the lab analysis they provided).They reference an EPA 1995 publication which suggests 50% of total P is plant available and using this 50% estimate and an application rate of 2x crop P removal for canola of 74 kg P_2O_5/ha (2x37 kg/ha - Tabel 2.4 in the proposal), the correct primary cell rate is 7.5 dry tonnes/ha and the dewatering cell rate is 10.6 dry tonnes/ha. Please note, sludge application is not permitted on land with a soil test which is above 60 ppm Olsen-P in the top 15 cm.

i) The proponent has indicated that no soil classification of the soils was available for the land parcels proposed for land application of sludge. With a list of legal land descriptions, this office can provide Agriculture Capability for Nutrient Management Zone information for most fields around The Pas.

j) Further, the *Nutrient Management Regulation* (62/2008) requires setbacks as Nutrient Buffer Zones when applying nutrients.
    - A groundwater feature 15m;
    - a wetland, bog, marsh or swamp other than a major wetland bog, marsh or swam setback distance between the water's edge and the high water mark;
    - A lake or reservoir designated as vulnerable setback distance 30m;
    - A lake or reservoir, not designated as vulnerable setback distance 15m;
    - A river, creek or stream designated as vulnerable setback distance 15m; and
    - A river, creek or stream not designated as vulnerable, a 3rd order drain or higher, a major wetland, bog, marsh or swamp, a constructed retention pond setback distance 3m.

- The total area of the setbacks, due to the Nutrient Buffer Zones mentioned above, should be excluded from the land base calculations when determining the area of land necessary for land application. Class 6 and 7 soils are Nutrient Management Zone N4 and no nutrients should be applied to this soil as per the Nutrient Management Regulation (62/2008). The total area of Class 6 soils Zone N4 must be excluded from the land base calculations used to determine the area of land necessary.

k) Additionally, the Nutrient Management Regulation (62/2008) requires that no person shall apply nutrients to fields between November 10 of one year and April 10 of the following year.

l) 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.

Additional Information Request: A request for additional information was sent out to the project consultant and the proponent on September 7, 2018.

Response from the Project Consultant: The project consultant responded with additional information on October 16, 2018.

Disposition: It appears from the review of the information submitted by the project consultant in response to the requests for the additional information that the submitted information is satisfactory. Items a, b, c, h, j, k, and l have been addressed through the clauses in the draft Licence.

ADDITIONAL INFORMATION REQUEST

A request for additional information was sent out to the project consultant on September 7, 2018. In addition to the comments from the Water Quality Management Section, the proponent was requested to address the following items: the type of liner material present in the existing aeration cell and in the dewatering cell, the design Year 20 hydraulic loading capacity of the existing aeration cell, potential existence of an enforceable Industrial Services Use Agreement with Berscheid Meat Industries, 100 year flood plain elevation of the proposed site and the elevation of the top of the existing aeration cell and of the proposed SAGR cells dykes, discharge pipe setback distance from the cell floor, biosolids management strategy, baffle curtain installation method, and the wastewater treatment strategy during desludging of the existing aerated cell.

Response from the Project Consultant: The project consultant responded with additional information on October 16, 2018.

Disposition: Most of the comments received from the project consultant are satisfactory and were included as requirements in the draft Licence. On October 25, 2018, the Town's consultant submitted a geotechnical investigation report. During several discussion with the Town of the Pas representatives in 2019, it was learned that the Town was evaluating alternative total ammonia removal technologies. The Town representatives were informed that the Department would not issues a Licence until such a time that the Town had identified a suitable technology for the wastewater treatment facility upgrade project. By an email dated June 11, 2019 and during a meeting in August 2019 with the Town representatives, the Department was informed that the Town would like to continue with SAGR system as proposed in the Environment Act

Proposal. On November 4, 2019, the Town's consultant submitted an updated layout drawing confirming the location of the dewatering cell, effluent sampling point, SAGR cells, chlorination building, and alum lines.

PUBLIC HEARING:

A public hearing is not recommended.

CROWN-INDIGENOUS CONSULTATION:

The Government of Manitoba recognizes that 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 is for construction of six Submerged Attached Growth Reactor (SAGR) cells, an aeration building, a baffle curtain in the existing lagoon cell, an alum dosing system, and accommodation for a UV disinfection system. The accumulated biosolids generated from the existing wastewater treatment lagoon system located on portions of north half of 2-56-26 WPM will be land applied at an approved agronomic rate. The treated effluent will be continuously discharged into Grace Lake. Adverse effects on surface water or habitat for wildlife or fisheries are not anticipated. Since resource use is not affected by the project, there would be no infringement of Indigenous rights under Section 35 of the Constitution Act, 1982. Therefore, it is concluded that Crown-Indigenous consultation is not required for the project.

RECOMMENDATION:

The Proponent should be issued a Licence for the construction and operation of a wastewater treatment lagoon in accordance with the specifications, terms and conditions of the attached draft Licence. It is further recommended that administration of the Licence be assigned to the North-Western region of the Environmental Compliance and Enforcement Branch. Responsibility for liner inspection and record drawings should be retained by the Environmental Approvals Branch until construction of the Development is completed.

Prepared by:

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