

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Manitoba Conservation
Parks and Natural Resources
PROPOSAL NAME: New Three-Cell Wastewater Treatment
Lagoon Near Dorothy Lake in the Whiteshell
Provincial Park
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Waste/Scrap Wastewater Treatment Lagoons
CLIENT FILE NO.: 5487.00

OVERVIEW:

On September 27, 2010, the Department received a Proposal from Stantec Consulting, Ltd. on behalf of Manitoba Conservation, Parks and Natural Resources, for a New Three-Cell Facultative Wastewater Treatment Lagoon System on the south of Trout Pond Road, south of Dorothy Lake, in the Whiteshell Provincial Park. The proposed development consists of one primary cell and two secondary cells, and treated effluent will be discharged between September 15th and October 15th of any year into a 700-hectare inland natural wetland, 1.5 km southeast of the lagoon site and four kilometers southwest of Nutimuk Lake.

The Department, on October 8, 2010 placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station) Main Floor, Winnipeg, the Millennium Public Library, 4th Floor, 251 Donald St., Winnipeg; The Manitoba Eco-Network, 3rd Floor, 3030 Portage Ave., Winnipeg; and the Brokenhead River Regional Library, 427 Park Ave., Beausejour. Copies of the Proposal were also provided to the Canadian Environmental Assessment Agency and to the Technical Advisory Committee (TAC) members. The Department placed a public notification of the Proposal in the Beausejour Clipper on October 11, 2010. The newspaper and TAC notifications invited responses until November 10, 2010.

COMMENTS FROM THE PUBLIC:

- No comments from the public

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Conservation – Wildlife

- *No concerns.*

Infrastructure and Transportation – Environmental Services

- *No concerns.*

Water Stewardship

- *Manitoba Water Stewardship recommends an Environment Act Licence to include the following requirements:*

- *A Licencee shall actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director, Water Science and Management Branch, Manitoba Water Stewardship.*
 - *Note: Manitoba Water Stewardship is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses of the water.*
- *A Licencee shall achieve the following limits for wastewater effluent:*
 - *< 25 BOD mg/L;*
 - *< 25 TSS mg/L;*
 - *< 1 TP mg/L;*
 - *< 200 per 100 ml, Fecal Coliforms; and,*
 - *< 1500 per 100 ml, Total Coliforms.*
- *The Licencee's discharge period shall be, at minimum, two (2) weeks to maximize nutrient uptake in the drainage path.*
- *Manitoba Water Stewardship submits the following comments:*
 - *Manitoba Water Stewardship does not object to this proposal, at this time.*
 - *The proponent needs to be informed that any structure proposed for implementation in the vicinity of a Water Power licensed area or a water Power reserve area will need to be permitted, pursuant to The Crown Lands Act.*
 - *The Lake Winnipeg Stewardship Board has recommended that all small wastewater treatment facilities, should meet a phosphorus limit of 1.0 mg/L. the proposed phosphorus limit of 1.0 mg/L is consistent with efforts underway across Manitoba and in upstream jurisdiction to reduce nutrient loads to Lake Winnipeg and its watershed. In the Lake Winnipeg Stewardship Board's December 2006 report to the Minister of Water Stewardship, the Board provides several strategies on how nutrient reduction could be achieved for small wastewater treatment facilities (see recommendations 14-20) including trickle discharges.*
 - *Manitoba Water Stewardship does not have any information on Picket Lake in the Fisheries Inventory and Habitat Classification system. Nutimuk Lake supports a diverse population of large and small bodies fish species; many of them recreationally important.*
 - *The Manitoba Department of Water Stewardship is mandated to ensure the sustainable development of Manitoba's water resources. Manitoba Water Stewardship is committed to the goals of: protecting aquatic ecosystem*

health; managing water-related risks for human security; and stewarding the societal and economic values of our waterways, lakes and wetland; for the best water for all life and lasting prosperity. Manitoba Water Stewardship achieves these goals, in part., through administering legislation, including The Water Protection Act, The Water Rights Act, and The Water Power Act.

- *The proponent needs to be informed of the following for information purposes:*
 - *The Water rights Act requires a person to obtain a valid licence to control water or construct, establish or maintain any “water control works.” “Water control works” are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage. If a proposal advocates any of the aforementioned activities, a person is required to submit an application for a Water Rights Licence to Construct Water Control Works. A person may contact the following Water Resource Officer to obtain an application and/or obtain information.*
 - *A contact person is Mr. Geoff reamer, CET, Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, Box 4558, Stonenwall, Maniotba ROC 2Z0, telephone: (204) 467-4450, email geoff.reimer@gov.mb.ca.*
- *The proponent needs to be informed that erosion and sediment control measure should be implemented until all of the sites have stabilized.*

Proponent Response (November 25, 2010)

- The Licencee will achieve the wastewater treatment parameters noted.
- The Licencee agrees to participate in any future studies as noted.
- The Licencee will abide by Water Power licensed area requirements.
- The Licencee will abide by the Provincial phosphorus requirements.
- The Licencee will operate the proposed facility with appropriately licensed personnel.

- The Licencee will implement erosion and settlement control measures during construction and after, until sites have been stabilized.

Disposition:

- The draft Licence includes a clause that requires the proponent to actively participate in any current or future watershed-based management study, plan and/or nutrient reduction program, approved by the Director, for the Winnipeg River, Nutimuk Lake, Picket Lake, and associated waterways and watersheds.
- The draft Licence includes effluent quality discharge criteria in accordance with the draft Manitoba Water Quality Standards, Objectives and Guidelines.
- The Licencee will abide by Water Power licensed area requirements.
- The draft Licence requires the Licencee to discharge the wastewater treatment lagoon at a rate that optimizes the opportunity for nutrients in the effluent to be assimilated in the discharge route while not challenging the normal operation of the wastewater treatment lagoon.
- The draft Licence includes a clause that requires the proponent not to discharge effluent from the wastewater treatment lagoon where the phosphorus content is in excess of 1.0 mg/L.
- The draft Licence includes a clause requiring the proponent to comply with the provisions of the Department of Fisheries and Oceans Canada/Manitoba Natural Resources publication, “*Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat*” (May, 1996).
- The draft Licence contains a clause that requires that the Licencee to implement effective erosion and sediment control measures during construction and until vegetation is established.

Conservation – Air Quality Section

- *No concerns.*

Conservation – Parks and Natural Areas

- *No comments.*

Conservation – Environmental Operations

- *The proposal does not provide information regarding depth to the normal high water table at the proposed site of the elevation of the base of the proposed lagoon. We cannot determine by the information provided whether there will be groundwater pressure against the HDPE liner.*

- *A sub-liner water drainage may be required to relieve hydraulic pressure that might result from a high water table.*

Proponent Response (November 25, 2010)

- The proposed lagoon site is situated on the higher ground of the area and no significant pressure on the synthetic liner is expected. There are few small higher rock outcrops in the area which are not considered significant with respect to creating hydraulic pressure. The eleven (11) test holes, drilled at the site showed homogenous sand throughout. One hole showed moisture at 0.9 m while three others were dry to 2.7 m. A water well 300 m northwest of the site, and at an elevation approximately 0.5 m lower than the lagoon site, showed a static water level 3.05 m below ground. So it is likely the normal groundwater table is 3 m or more below ground, depending upon the moisture accumulation in a particular year.
- It is highly unlikely the lagoon would be affected by hydraulic pressure from surrounding land as it is on high ground. Therefore a sub-liner drainage system would not be required. As with all synthetic liners, a sub-liner gas relief perforated pipe system would be provided.
- It is also unlikely the lagoon construction would be affected by water as the excavation would be an anticipated maximum cut of 1.3 m below existing ground.

Disposition:

- After receiving additional information from the consultant, the concerns are satisfied and the Department has no further concerns.

Conservation – Sustainable Resource and Policy Management Branch & Land Program Branch

- *Recommend that wastewater stored in the lagoons be maintained within provincial guidelines to ensure ecological health of surrounding wetlands in the event wastewater is discharged from the proposed lagoon.*

Disposition:

- Limits, terms and conditions of the draft Environment Act Licence provide construction requirements and operating criteria regarding organic load, odours, containment and quality of treated wastewater that are conventional for wastewater treatment lagoons in Manitoba. As well, the draft Licence includes effluent quality discharge criteria in accordance with the draft Manitoba Water Quality Standards, Objectives and Guidelines.

Canadian Environmental Assessment Agency

- *I have completed a survey of federal departments with respect to determining interest in the project (noted above). I can confirm that the project information that was provided has been shared with all federal departments with a potential interest. (Responses from the departments surveyed are enclosed.)Based on the responses to*

the survey the application of the Canadian environmental Assessment Act (the Act) by a federal authority may be required for this project.

- *Please note that the Canadian Environment Assessment Agency (the Agency) has not received as federal survey response for this project from Fisheries and Oceans Canada (DFO). I will notify (you of) DFO's interest in this project once the federal authority survey responses is provided to the Agency.*
- *Please also note that the Health Canada maybe in possess of expertise relevant to the project, if specifically requested.*

Health Canada

- *Health Canada has determined it can provide expert advice related to human health if a written request is submitted to HC.*

PUBLIC HEARING:

A public hearing is not recommended.

RECOMMENDATION:

All comments received on the Proposal that required follow-up have been addressed through additional information or as licence conditions. Therefore, it is recommended that the Development be licensed under The Environment Act subject to the limits, terms and conditions as described in the attached Draft Environment Act Licence. It is further recommended that the enforcement of the Licence be assigned to Environmental Assessment and Licensing Branch until construction is completed. Once the facility is commissioned, enforcement should be assigned to the Eastern Region.

PREPARED BY:

Edwin Yazon, EIT, M. Sc.
Environmental Engineer
Municipal, Industrial and Hazardous Waste Approvals

December 9, 2010
Telephone: (204) 945-7012
Fax: (204) 945-5229
E-mail Address: edwin.yazon@gov.mb.ca