SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT:	**Manitoba Conservation and Water Stewardship, Parks and Natural Areas**
PROPOSAL NAME:	**Grass River Provincial Park Wastewater Treatment Lagoon**
CLASS OF DEVELOPMENT:	**2**
TYPE OF DEVELOPMENT:	**Wastewater Treatment Lagoon – Waste/Scrap**
CLIENT FILE NO.:	**5547.00**

OVERVIEW:

On October 24, 2011, the Department received a Proposal from J.R. Cousin Consultants Ltd. on behalf of Manitoba Conservation and Water Stewardship, Parks and Natural Areas, for the construction and operation of a wastewater treatment lagoon located in the northeast quarter of Section 36-64-24 WPM in Grass River Provincial Park, to serve three seasonal campgrounds. The proposed development will consist of the construction of a new primary cell, a new secondary cell, and a truck turnaround and spillway. Treated wastewater from the wastewater treatment lagoon will be discharged between June 15th and November 1st of any year into a perimeter ditch via a discharge pipe that drains into a small lake located approximately 700 metres to the west of the lagoon site.

On December 6, 2011, Manitoba Conservation and Water Stewardship placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Winnipeg Millennium Public Library, the Manitoba Eco-Network, and The Pas Public Library. Copies of the Proposal were also provided to the Technical Advisory Committee (TAC) members. The Department placed public notification of the Proposal in the The Pas Opasquia Times on Friday, December 9, 2011.

On January 20, 2012, Manitoba Conservation and Water Stewardship forwarded requests for additional information from the TAC to the proponent's consultant. On March 5, 2012, the consultant submitted responses to the comments and requests from the TAC.

On March 8, 2012, the consultant's responses were distributed to the participating TAC for review and comment. On March 27, 2012, Manitoba Conservation and Water Stewardship received comments on consultant's responses from the TAC.

On April 3, 2012, Manitoba Conservation and Water Stewardship forwarded comments on consultant's responses from the TAC to the consultant. On April 5, 2012, Manitoba Conservation and Water Stewardship received responses from the consultant. On April 10, 2012, Manitoba Conservation and Water Stewardship forwarded consultant's responses to the participating TAC.

On April 11, 2012, Manitoba Conservation and Water stewardship received comments on Consultant's April 5, 2012 responses from the TAC. On April 16, 2012, Manitoba Conservation and Water Stewardship forwarded TAC responses to Consultant. On April 24, 2012, Manitoba Conservation and Water Stewardship received responses from the

consultant. On April 25, 2012, Manitoba Conservation and Water Stewardship forwarded Consultant's responses to TAC.

All additional information necessary for the review was placed in the Public Registries.

COMMENTS FROM THE PUBLIC:

No comments were received from the public.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE (TAC):

Manitoba Infrastructure and Transportation (December 28, 2011)

- *No concerns*

Manitoba Science, Technology, Energy and Mines (December 16, 2011)

- *No concerns*

Manitoba Conservation and Water Stewardship– Parks and Natural Areas Branch (January 3, 2012)

- *No concerns*

Manitoba Conservation and Water Stewardship – Wildlife & Ecosystem Protection Branch (December 12, 2011)

- *No concerns*

Manitoba Conservation and Water Stewardship - Sustainable Resource & Policy Management Branch (January 9, 2012)

- *No concerns*

Manitoba Conservation and Water Stewardship – Pollution Prevention Branch- Air Quality Section (January 9, 2012)

- *No concerns*

Manitoba Local Government - Community and Regional Planning (January 9, 2012)

- *No concerns*

Manitoba Conservation and Water Stewardship – Planning and Coordination Branch (January 6, 2012

- *Manitoba Water Stewardship requires an Environment Act Licence to include the following:*
    - *Discharged effluent must meet a 1 mg/L Total Phosphorus standard, as required by the Manitoba Water Quality Standards, Objectives and Guidelines Regulation under The Water Protection Act.*

- *The Licencee shall implement erosion and sediment control measures during and after construction of the lagoon and the drainage ditch, until all of the sites have stabilized.*

- *The Licencee shall develop and implement an Emergency Response Plan that includes the following:*

  - *In the event of a spill or emergency release of untreated or partially treated wastewater, the downstream surface water users must be immediately notified.*

    - *Note: The Proposal notes that treated effluent from the lagoon will be discharged to a wetland, which drains into Iskwasum Lake, part of the Grass River waterway. Manitoba Water Stewardship's records indicate the presence of several lodges located on Reed Lake, downstream from Iskwasum Lake and that these lodges use surface water from Reed Lake as their drinking water sources.*

- *The Licencee shall actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director.*
  - *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.*

- *Manitoba Water Stewardship requests clarification from the proponent for the following:*
  - *How does the proponent plan to achieve the 1 mg/L Total Phosphorus standard?*
- *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 of the following for information purposes:*
    - *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 jurisdictions 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).*

    - *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 Reimer C.E.T., Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, Box 4558, Stonewall, Manitoba R0C 2Z0, telephone: (204) 467-4450, email: geoff.reimer@gov.mb.ca.*

Proponent Response (March 5, 2012)

- Based on the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation,* new wastewater treatment facilities serving a population of less than 2,000 people are required to achieve a total phosphorus limit of I mg/L or have a demonstrated nutrient reduction strategy. As described in the Environment Act Proposal (EAP) (Section 2.6.9.2), the lagoon design will incorporate a nutrient management plan, such as a slower discharge rate and encouraging phosphorus reduction in the contributing population. If required, the phosphorus levels can be reduced through the spreading of alum in the secondary cell. The primary cell will also have the hydraulic capacity for a longer storage period, if required, which allows for additional treatment and nutrient reduction. As the three campgrounds utilizing the lagoon site will be the main contributors, phosphorus levels will naturally be low, due to the nature of the wastewater which will not contain kitchen or shower effluent.
- Erosion and sediment control measures will be implemented as necessary during and after construction. As indicated in Section 4.3 of the Environment Act Proposal (EAP), the specifications would state that the contractor is responsible for erosion control measures. At the time of preparing the specification, more detailed description of the procedures to be followed by the contractor would be provided.
- Manitoba Parks and Natural Areas Branch will be encouraged to develop and implement an Emergency Response Plan, which would address measures to be taken in the event of an emergency discharge of untreated or partially treated wastewater. Immediately contacting downstream surface water users such as Grass River Lodge would be included in the Emergency Response Plan, to ensure public health and safety.

- The proponent would be willing to participate in any future watershed-based management study, plan/or nutrient reduction program, approved by the Director, Water Science and Management Branch, and Manitoba Water Stewardship for the protection of the aquatic environment and water resources for present and future use.
- As described in question 1 above, the Grass River wastewater treatment lagoon will serve a population of less than 2,000 people, therefore is required to achieve a minimum total phosphorus limit of 1 mg/L or have a demonstrated nutrient reduction strategy. To expand on the strategy mentioned in question 1 above, the lagoon could utilize a slower discharge rate, such as over a two week period, which will provide plant species in and along the discharge route to absorb nutrients, such as phosphorus. Given that the discharge ditch is approximately 700 m in length, there will be adequate time for plant species to absorb nutrients from a slow effluent discharge. Also, due to the size requirements of the primary cell, the storage capacity of the lagoon can be extended beyond 230 days if required, which would allow for additional treatment and nutrient reduction. If phosphorus levels in the effluent require additional treatment prior to discharge, alum could be broadcast in the secondary cell to capture and reduce phosphorus levels in the effluent discharge.

<u>Water Stewardship's Further Comments (March 27, 2012</u>

- *The Water Stewardship Division submits the following requirements:*

    - *This wastewater treatment facility must meet a 1 mg/L phosphorus limit by January 1, 2016, as required by the Manitoba Water Quality Standards, Objectives and Guidelines Regulation under The Water Protection Act.*

    - *New or expanding wastewater treatment facilities must use the best practical technology for beneficial use of valuable resources such as nutrients, organic matter and energy contained within municipal biosolids and sludge, as required by the Manitoba Water Quality Standards, Objectives and Guidelines Regulation under The Water Protection Act.*

- *The Water Stewardship Division submits the following recommendation:*

    - *To achieve maximum nutrient uptake along the discharge route, at least a two (2) week discharge rate is recommended.*

- *The Water Stewardship Division submits the following comments:*

    - *The Water Stewardship Division requests clarification on how the proponent plans to manage sludge generated at this facility.*

Proponent Response (April 5, 2012)

- As discussed in the previous correspondence, the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* state that new wastewater treatment facilities serving a population of less than 2,000 people are required to achieve a total phosphorus limit of 1 mg/L or have a demonstrated nutrient reduction strategy. As described in the Environment Act Proposal (EAP) (Section 2.6.9.2), the lagoon design will incorporate a nutrient management plan, such as a slower discharge rate to encourage phosphorus reduction. If it is required prior to discharge, the phosphorus levels in the effluent will be reduced through the spreading of alum in the secondary cell. Due to the required sizing of the primary cell, the lagoon will have the potential for extended storage periods (up to 3 years), thus permitting additional treatment and nutrient reduction.
- The proponent will be made aware of the various options available in dealing with biosolids and sludge in the wastewater treatment lagoon, at the time an Environmental Licence is obtained for sludge removal.
- As previously discussed in the EAP (Section 2.6.9.2), the lagoon secondary cell can be completely discharged over a two week period to maximize nutrient uptake along the discharge route. By way of this correspondence the proponent will be made aware of the recommendation for a two week discharge period.
- From previous experience, typical municipal facultative lagoons in Manitoba will require the sludge removed from the primary cell after approximately 15 to 20 years of operation. At the time the sludge in the primary cell of the Grass River Lagoon accumulates to the point of requiring removal, the proponent will need to review various practical options for disposal, specific to this northern location, such as treatment and land applying, landfilling or composting. However other options may be available at the time of sludge removal and will be further evaluated upon obtaining an Environmental Licence for sludge removal.

Disposition:

- The draft licence requires the Licencee to meet a phosphorus limit of 1mg/L.
- After receiving the additional information from the proponent, no further comments were received from Manitoba Water Stewardship.

COMMENTS FROM FEDERAL REPRESENTATION:

Canadian Environmental Assessment Agency (CEEA) (January 6, 2012)

- *Project information provided was distributed to all federal departments with a potential interest. Based on the responses to the survey the application of the Canadian Environmental Assessment Act (the Act) by a federal authority will not be required for this project.*
- *Health Canada (HC) has indicated it possesses expert knowledge related to its mandate, which could be provided to a Responsible Authority (RA) if requested. EC is preparing a letter of advice for the proponent, it will be forwarded when it becomes*

available.

- *No other federal interest was identified for this project.*

Environment Canada (January 9, 2012)

(1) Project Specific

i) Site Description:

- *Section 2.3, Land Description, page 2, outlines that the proposed lagoon site is surrounded by forested land with logging trails to the east, an existing wet pit 20 meters to the southeast, and the existing landfill 150 meters to the south. The attached figures do not demonstrate how the proposed lagoon will be situated relative to the described context.* ***Please provide a detailed illustration of the proposed lagoon (and effluent discharge path) relative to the wet pit, logging trails, and landfill.***
- *Section 2.4, Land Use Designation/Zoning Designation, page 2, states that the lagoon construction site has a land designation which permits commercial resource opportunities including mining and wild rice harvesting. Will wild rice harvesting remain a designated land use after the lagoon is constructed? If so are there any known risks or health hazards associated with food grade crop production within close proximity of the wastewater lagoon?* ***EC recommends that the proponent consult the provincial health authority for guidance regarding this matter. Please provide additional details, once they are available.***
- *Section 2.5, Description of Previous Studies, page 2, outlines that no previous studies were available for the proposed development area.* ***Will these studies take place as part of the scope of this project? If so, EC would like to request that the results of these studies be shared when available.***
- *Section 2.6.1, Description of Development: Background, page 2, outlines that existing sludge (from the three seasonal campsites) is dewatered, then hauled to two local landfill sites within the Park for disposal.* ***Prior to disposal, is the sludge treated (with lime, for example) for the purposes of stabilization?*** *Even though this may seem outside the scope of this project, it is important to ensure that sludge is properly treated prior to disposal and that the proposed lagoon effluent does not come into contact with this sludge. The combination of untreated sludge with lagoon effluent may cause significant ground water contamination.* ***Please provide details regarding this matter.***
- ***Furthermore, is there currently a leachate monitoring program in place at the nearby landfill?*** *Because of the close proximity of the proposed lagoon, it is imperative that there is a leachate monitoring program in place at the landfill to mitigate against the accumulation of leachate due to lagoon effluent soil infiltration.* ***Please provide details regarding this matter.***

ii) Monitoring and Sampling

- *Section 2.6.8.2, Secondary Cell, page 10, mentions that the effluent in the proposed secondary cell will be tested and if acceptable, discharge will take place between June 15th and November 1st.* ***Has a sampling and monitoring regime been established for this proposed system? Which sampling criteria will be used to determine the lagoon's performance? In addition, is there a contingency plan in place in case sample results indicate that the effluent is not meeting the design criteria? EC requests that the proponent provide follow-up to the above questions.***

Effluent Discharge Path:

EC requests that the proponent provide information regarding the following:

- *The location and direction of the effluent discharge path relative to other infrastructure as outlined above. If applicable EC recommends that the Proponent notifies potentially affected parties and involve them in the public consultation process of the proposed wastewater lagoon;*
- *A description of the receiving environment (directly into surface water, drainage ditch, wetland, etc);*

Negative Impact on Surrounding Wells

Has a study or inquiry of Manitoba's Water Well Information Database been conducted to ensure that there are no private and individual ground water users in close proximity to the site? ***EC recommends that the Proponent conduct a formal inquiry with Manitoba Water Stewardship to verify that there are no groundwater wells in the area; finds should be shared with EC.***

(2) ***Best Practices***
The Fisheries Act would apply to scheduled effluent discharges or potential leaks/spills reaching fish bearing waters. Therefore, the Proponent must ensure due diligence surrounding any potentially deleterious discharges. Some aspects of ensuring due diligence under the Fisheries Act are to have proper design, operation, maintenance, monitoring, operator training, and decommissioning of their wastewater treatment system discharging to fish bearing waters. The following provides some additional details on the above recommendation:

i) Design
- *As a minimum, provincial design standards must be met;*
- *Federal facilities should be also striving to meet current federal guidelines such as the 1976 Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishment as well as the proposed Wastewater System Effluent Regulations;*
- *Alternatives to disposal to fish bearing water should be investigated (i.e. overland flow);*
- *Further upgrades such as polishing ponds after conventional treatment could be reviewed;*

- *Allowing room for expansion during site selection should be considered (for future requirements);*
- *Pollution Prevention prior to discharge to the wastewater treatment facility could be reviewed. Examples of this include if the Proponent has some type of commercial (i.e. dry cleaner) or industrial (i.e. slaughter house or paper mill) process on its land directing effluent to the wastewater treatment facility, pre-treatment at the commercial or industrial facility should be considered;*
- *Proponent could investigate options to avoid dumping of hazardous material into the municipal system;*

EC would like to remind the Proponent that these design considerations should be well documented to have record of due diligence activities.

ii) Operation
Proper operation means the discharge is only occurring at designed times and the facility is operated in such a manner to ensure the integrity of the system. It must be recognized that federal design guidelines require 365 day retention of the effluent prior to discharge for lagoons. Total retention time should be confirmed if federal guidelines are to be met.

iii) Maintenance
Proper maintenance of lagoons includes, but is not limited to, the following:

- *Perform weekly inspections of the lagoon and its structures including berms, valves, control structures and fencing;*
- *Make repairs as soon as possible and record them in a log book;*
- *Maintain records of lagoon activities such as inspections, liquid transfers, and discharges (records should include the date, time, weather conditions and the depth of liquid in each cell);*
- *Ensure berm integrity is maintained (this includes but is not limited to clearing of burrowing animals and plants, and providing truck chutes if required);*
- *Ensure liner integrity is maintained (to ensure cracking of the liner does not occur);*
- *Ensure all piping, overflow and other hardware is kept clean, clear and operational*

iv) Sampling and Monitoring

Samples must be taken with care, avoiding disturbance of the lagoon bottom and collection of surface scum. An accredited laboratory of your choice should be contacted for analysis of the samples. Laboratories will provide sampling instructions. Some may provide sampling bottles; others may suggest a place where one could purchase sampling materials.

One possible indicator of a deleterious effluent is failure of the 96-hour LC50 rainbow trout bioassay at 100% concentration (note: The bioassay test is not the sole indicator of a deleterious effluent. Any effluent with a potentially harmful chemical, physical or biological effect on fish or fish habitat is deleterious.). The LC50 test should be considered for addition to the existing monitoring parameters. If design criteria are not met or the effluent is found to be deleterious then immediate action should be taken to try and alleviate problem areas.

The test is outlined in "Reference Method for Determining Acute Lethality to Rainbow Trout, Department of Environment Report, ESP 1/RM/13, July 1990."

Other parameters to test for include but are not limited to:

- *Carbonaceous Biological Oxygen Demand (cBOD5)*
- *Total Suspended Solids (TSS)*
- *pH*
- *Ammonia Nitrogen*
- *Total Kjeldahl Nitrogen (TKN)*
- *Total and E. coli Bacteria*
- *Temperature in the field*
- *Dissolved Oxygen*
- *Others: total phosphorus, mercury, cyanide, oil and grease, phenol, and chlorine residual.*

Discharge procedures of lagoons include, but are not limited to, the following:

- *Discharge should occur either three or four weeks after ice break-up, or in the fall prior to freeze-up;*
- *If the lab test results indicate the treated lagoon effluent is suitable for discharge, then discharge procedures may take place,* ***making sure to follow all regulatory requirements****;*
- *If lab results do not satisfy the guidelines for any of the parameters, wastewater should not be discharged until action has been taken to correct the parameter and* ***all other regulatory requirements are satisfied****.*

EC recommends designing, monitoring and sampling to the standards set out in the proposed Wastewater System Effluent Regulations. For more details on theses proposed regulation, please see the section titled Regulatory Guidance below.

v) Training
Training of the wastewater facilities operators is the key to proper operation, maintenance and monitoring.

It is important that the consultant provide a detailed Operation and Maintenance instruction manual (including diagrams) that point out the bench mark liquid operational levels from the first year of operation throughout the design life of the facility. This manual must explain cell transfer and discharge events. Specifically how the transfer from cell to cell is controlled using appropriate bench mark liquid levels, at what level should they transfer or discharge, to what level should they transfer or discharge and the valve sequencing; for each stage in the life of the lagoon. In addition an operation and maintenance checklist, complete with record keeping forms, should be developed by the design engineer.

vi) Decommissioning
Lagoons: If the existing lagoon will need to be decommissioned, the following steps should followed:

- *Direct lagoon liquid influent/effluent to the new lagoon or drain the liquid if it has been adequately treated;*
- *Remove all piping and hardware;*
- *Remove sludge and landfarm it in an environmentally acceptable area if the land is available;*
- *Level all berms and earth structures to the topography similar to the pre-construction era;*
- *Seed the area with native grasses and plants;*
- *If the sludge will not be land-farmed but left in situ during the levelling process then the lagoon fencing should remain in place for 1-2 years after closure to ensure people/children do not come in contact with potential pathogens remaining in the sludge (experts suggest that some pathogens take long periods of time to die off particularly in climates where they could be dormant during cold periods and snow covered times spans).*
- *Sludge removed from the anaerobic lagoon should be disposed of properly. Methods for removing and disposing of the sludge should be addressed in the Operation and Maintenance Manual.*

(C) Regulatory Guidance

i) General Prohibition under the Fisheries Act

Subsection 36(3) of the Fisheries Act states that no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish. In addition, subsection 78(6) states that no person shall be convicted of an offense under this Act if the person establishes that they exercised all due diligence to prevent the commission of the offence.
Therefore, the Proponent should ensure that all reasonable measures to prevent the deposit of deleterious substances are being exercised. As such, EC recommends that the Proponent document the application of best practicable technology, mitigation technology, and best management practices for this project.

Lastly, it should be noted that any deposit of a deleterious substance into water frequented by fish may constitute a violation of the Fisheries Act and warrant enforcement action. Please note that the Fisheries Act also applies to scheduled effluent discharges and potential leaks/spills reaching fish bearing waters.

ii) Deposit Out of the Normal Course of Events Notification Regulations The Deposit Out of the Normal Course of Events Notification Regulations under the Fisheries Act prescribe the persons, in the relevant province or territory, for receiving notification of the deposit of a deleterious substance out of the normal course of events as required under subsection 38(4)

of the Fisheries Act. Deposits out of the normal course of events could include overflows, spills, leaks, by-passes and regulatory exceedances or other deposits in contravention of subsection 36(3) of the Fisheries Act. Paragraphs 38(4)(a) and (4)(b) of the Fisheries Act require any person who owns, has the charge of, manages or controls the deleterious substance or causes or contributes to causing the abnormal deposit or a serious and imminent danger of such a deposit to report such occurrence to a fishery inspector or the person or authority prescribed by the regulations. Subsection 38(5) of the Act requires any person referred to in paragraphs 38(4)(a) or (b) to take all reasonable measures to prevent a deposit referred to in subsection 38(4) or a serious and imminent danger of such a deposit, or to counteract, mitigate or remedy any adverse effects that result or may reasonably be expected to result from the abnormal deposit.

iii) Environmental Occurrences Notification Regulations
EC advises the Proponent that the Release and Environmental Emergency Notification Regulations and the Deposit Out of the Normal Course of Events Notification Regulations (collectively referred to as the "Notification Regulations"), apply to verbal notification requirements under Canadian Environmental Protection Act, 1999 (CEPA, 1999) and the Fisheries Act, respectively.

The Notification Regulations provide the regulated community and the public with the name and telephone number of the 24-hour authorities operating for the respective province or territory to which notifications are to be made, enabling them to receive notifications on behalf of EC.

The regulations establish a streamlined notification system for persons required to notify federal and provincial/territorial governments of an environmental emergency or environmental occurrence (spill, release, etc.). An environmental occurrence includes the release, or the likelihood of a release, of a substance into the environment in contravention of regulations referred to in section 95, 169, 179 or 212 of CEPA, 1999, an environmental emergency under section 201 of CEPA, 1999, or a deposit of a deleterious substance, in water frequented by fish, out of the normal course of events or a serious and imminent danger thereof under subsection 38(4) of the Fisheries Act.

The Notification Regulations and related information are available at EC's website:
http://www.ec.gc.ca/ee-ue/default.asp?lang=En&n=24B3E0D7-1

iv) Proposed Wastewater Systems Effluent Regulations
On March 20, 2010, the Government of Canada published, in Canada Gazette, Part I, proposed Wastewater Systems Effluent Regulations under the Fisheries Act. The proposed Regulations and Regulatory Impact Analysis Statement (RIAS) can be viewed at: http://www.gazette.gc.ca/rp-pr/p1/2010/2010-03-20/html/reg1-eng.html. An overview of the proposed regulatory requirements can be found in the RIAS. Until the proposed Regulations are finalized, it may be prudent to take into consideration the proposed Regulations in the design and operation of wastewater systems. It is important to note that the Regulations are subject to change until their final publication in Canada Gazette, Part II.

The proposed Regulations establish national effluent quality standards for effluent deposited from wastewater systems. More specifically, the proposed Regulations prescribe carbonaceous biochemical oxygen demanding (cBOD) matter, suspended solids, total residual chlorine and un-ionized ammonia as deleterious and set out conditions under which the deposit of effluent containing these substances would be authorized, including the requirement to deposit a non-acutely lethal effluent, effluent monitoring, and reporting. The effluent standards for cBOD matter and suspended solids represent a requirement for secondary wastewater treatment or equivalent.

There are also several existing risk management instruments and regulatory requirements applicable to wastewater systems in Canada. Persons responsible for wastewater systems (including combined sewers) in Canada must comply with all applicable federal legislation including the Fisheries Act and the Canadian Environmental Protection Act, 1999 (CEPA 1999) as well as any other legislation applicable, depending on the geographical location of the system.

Proponent Response (March 5, 2012)

- Plan 3 included in the EAP has been revised to include the logging trails and clearly outline the existing wet pit and landfill areas, in relation to the proposed lagoon and discharge route.
- The land use designation will not be altered after the lagoon has been constructed. From discussions with the Regional Health Authority in Flin Flon and Manitoba Conservation, there are no known health risks associated with food grade crop production within close proximity of the wastewater treatment lagoon. Wild rice harvesting was not observed within close proximity to the proposed lagoon site, nor was it identified in the area by Manitoba Conservation.
- As part of the Environment Act Proposal submission a geotechnical investigation and survey of the site was conducted. This information was included in the EAP (Section 2.6.5). No other site studies will take place as part of this project, unless specifically requested by Manitoba Conservation.
- Prior to disposal at the landfill sites, the sludge is allowed to dry. There is no additional treatment to the sludge. The existing sludge pits will be decommissioned after the new wastewater treatment lagoon is commissioned and operating.
- Currently there is no leachate monitoring system at the landfill sites. The Reed Lake landfill site will be decommissioned in 2012.
- A sampling and monitoring plan will be established according to the Manitoba Conservation licence requirements. The lagoon will be operated under Manitoba Conservation guidelines and the treated effluent will be tested to ensure all of the current Manitoba Water Quality Standards, Objectives and Guidelines are met before discharge of the lagoon. Manitoba Conservation has operation and maintenance guidelines for lagoon operation, which will be followed by the licensee. It describes the procedures to follow in case the effluent levels do not meet provincial requirements prior to discharge. This would include preventing discharge and re-testing the effluent until it meets the requirements. The Manitoba

Conservation regional environment supervisor could also be contacted in this event to determine the best course of action.

- Details on the discharge route and receiving environment are provided in Section 2.6.3 of the EAP and are shown on Plan 2 and 3 of Appendix A in the EAP.
- Through the EAP preparation, Manitoba Water Stewardship groundwater well database was reviewed to determine the existence of any water wells in the area. From this database search there were no water wells identified in the project area. From discussions with the Park Director, there are water wells in the campgrounds, however the nearest campground to the lagoon would be approximately 9.5 km away (Iskwasum Campground).
- The information provided by Environment Canada for Design, Operation, Maintenance, Sampling and Monitoring, Training, Decommissioning and Regulatory Guidance will be reviewed for guidance during the detailed design phase of the project and passed on to the licensee for additional information on operation and maintenance of the lagoon.

Environment Canada's Further Comments (April 11, 2012)

- *Environment Canada (EC) has reviewed the responses provided by the consultant to our letter of comment dated January 9, 2011. EC has the following comment regarding response #4.*
- *EC highly recommends that all wastewater sludge be treated in such a manner so as to minimize the odour potential, reduce the number of pathogenic organisms and other potentially harmful constituents to an acceptable level before spreading it onto agricultural lands. If sludge stabilization will not take place, does the Proponent plan on sampling and analysing the sludge prior to disposal? If so, which sampling parameters will be used to determine whether or not the sludge is suitable for disposal?*
- *As a minimum, EC recommends that the proponent samples sludge for leachable metals, fecal coli forms, and nitrogen & phosphorus if applied and agricultural land.*
- *Currently, there are no Federal regulations or guidelines regarding sludge disposal, however, EC strongly recommends that the Proponent refer to the following attached documents for guidance on appropriate measures and sampling criteria for sludge disposal.*

Proponent's Response (April 25, 2012)

- The proponent does not anticipate the need for sampling and analyzing the sludge from the existing sludge pit after de-watering is complete and prior to landfilling. Provincial requirements for disposal of de-watered sludge in the landfill as outlined in Waste Disposal Grounds Regulation (Reg. 150/91) under the Environment Act and the Waste Disposal Ground Operating Permit (5-063) for the landfill will be met by the proponent prior to disposal. This includes de-watering sludge, landfilling and covering immediately. As the de-watered sludge will not be applied on agricultural land, sampling for these parameters is not deemed necessary.

- By way of this correspondence the Proponent will be made aware of the attached documents for guidance on appropriate measures and sampling criteria for sludge disposal.

Environment Canada's Comments on draft licence (May 11, 2012)

At this time Environment Canada would like to make the following correction on page 9.

iv) Sampling and Monitoring

One possible indicator of a deleterious effluent is failure of the 96-hour Acute Lethality tests on rainbow trout at 100% concentration (note: The bioassay test is not the sole indicator of a deleterious effluent. Any effluent with a potentially harmful chemical, physical or biological effect on fish or fish habitat is deleterious.). The Acute Lethality test should be considered for addition to the existing monitoring parameters. If design criteria are not met or the effluent is found to be deleterious then immediate action should be taken to try and alleviate problem areas. The test is outlined in "Reference Method for Determining Acute Lethality to Rainbow Trout, Department of Environment Report, ESP 1/RM/13, July 1990."

Disposition:

- After receiving the additional information from the proponent, no further comments were received from Environment Canada.

PUBLIC HEARING:

- A public hearing is not recommended because no comments were received from the public.

CROWN-ABORIGINAL CONSULTATION:

The Government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations, Métis communities and other Aboriginal communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or Aboriginal right of that First Nation, Métis community or other Aboriginal community.

There is no aboriginal community nearby the lagoon and would be no infringement of aboriginal or treaty rights under Section 35 of the Constitution Act, 1982. Therefore, it is concluded that Crown-Aboriginal consultation is not required for the project.

RECOMMENDATION:

The Proponent should be issued a Licence for the construction and operation of the wastewater treatment lagoon in accordance with the specifications, limits, terms and conditions of the attached draft Licence. Enforcement of the Licence should be assigned to the Environmental Approvals Branch until the liner testing has been completed and the Development is commissioned.

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