



December 14, 2017

600\678 Wild Oaks Campground\678.02\01\174\ltr - Response to MBSO.docx

Ms. Barsha Sagan, P.Eng.  
Environmental Approvals Branch  
Manitoba Sustainable Development and Water Stewardship  
Box 80, 160-123 Main Street  
Winnipeg, Manitoba  
R3C 1A5

Via Email and Mail

W-678.02

Dear Ms. Sagan,

**RE: Wild Oaks Campground – Wastewater Treatment and Disposal System EAP (File No: 5904.00) – Response to Comments from Manitoba Sustainable Development - Environmental Approvals Branch**

The following comments were provided in an email from Ms. Barsha Sagan, of Manitoba Sustainable Development - Environmental Approvals Branch, dated November 17, 2017, which required responses. The comments provided are bolded and are followed by the response.

1. **Office of Drinking Water: "The ODW has no concerns with the above-noted EAP with regard to drinking water safety. However, the licence should reflect that the proposed expansion of the Wild Oaks Campground would require a permit under the Drinking Water Safety Act and must include engineered drawings. Failure to have a permit for the expansion could result in enforcement action being taken as drinking water safety could be compromised if sufficient water treatment and storage requirements are not met."**

The proponent will be made aware of the need for a permit under the Drinking Water Safety Act at the time of campground expansion.

2. **Lands Branch: "Ensure no impacts to adjacent stand of timber within SE 29-08-08 that is coded as 7a/D."**

The proposed wastewater treatment and disposal system will not occur on SE 29-08-08 and would not have impacts on the timber resources within this land parcel.

3. **Environmental Compliance and Enforcement Branch:**

1. **"Section 2.5.7 of the proposal indicates that the existing forcemain and service piping will continue to be utilized. ECE requests the proponent to confirm if an assessment of this infrastructure was conducted as part of the site investigation, and if so, if any upgrades/repairs are required."**

As part of the site investigation an assessment of the infrastructure was conducted, and found to be operating properly. The proponent regularly inspects the septic tanks and pumps in the wastewater treatment and disposal system and maintains the system operation.

2. **"Section 2.5.4.5 of the proposal discusses wastewater production from the existing Laundromat. ECE requests information on the proposed management of the wastewater from this source."**

Currently the wastewater from the existing Laundromat is sent to a grey water pit, next to the central washroom building. This grey water pit is a natural attenuation structure with a granular base that allows effluent to naturally disperse into the ground. It is proposed that this process of managing Laundromat wastewater continue after the development of the new wastewater treatment system is commissioned.

3. **"Section 1.3 of the proposal references the existence of a greywater pit but does not identify the greywater source. ECE requests clarification regarding the source and the proposed management of the greywater."**

The grey water pit on the site services the Laundromat wastewater and shower wastewater. It is a natural attenuation structure with a granular base that allows effluent to naturally disperse into the ground. It is proposed that the grey water pit will continue to be utilized for the shower and Laundromat wastewater after development and commissioning of the new wastewater treatment system.

4. **Environmental Approvals Branch:**

1. **"Section 2.5.4 – The peak daily flow has been calculated using holding tank pump out records. This is not a standard method as peak sewage flows are calculated from using (1) flow monitoring data (water or sewage) or (2) using tables in the OWMS regulation (Supplementary Information Manual), USEPA 2002 Onsite Wastewater Treatment Systems Manual, or other acceptable standards. It is unclear how accurate the holding tank pump out records are. Further, I am unclear on the other calculations provided in the report. For example, the engineers have used an "estimated" peak flow of 100 L/campsite/day as opposed to the 470 L/day recommended in the USEPA Manual and the OWMS regulation (Supplementary Information). As well, they have used 3 people/campsite to determine the peak flow when there can be up to 6 people/campsite. I believe the peak daily sewage flow of 17,470 L/day may have been underestimated and should be reviewed carefully. This may be why the peat biofiltration system has failed. Another example of improper flow calculation is for the 4 bedroom residence which, as per the OWMS regulation (supplementary information), has an estimated daily sewage flow of 2,000 L/day, not 1,200 as indicated in 2.5.4.3."**

As described in Section 2.5.3, the sizing of the new wastewater treatment system was based on review of the observed population in the campground during a peak weekend. For budget purposes, the proponent would prefer to size the system based on actual observed peak values and not oversize the system to accommodate theoretical population peaks.

As described in Section 2.5.4, the sizing of the new wastewater treatment system was based on review of hydraulic loadings recorded from the septic haulers during peak times in the operating season. These hauling records were from the holding tanks onsite, which capture all of the wastewater produced from the seasonal sites. The hydraulic loading estimates assumed 100% occupancy, which is not typical for the campground, therefore some buffer capacity was included in the values. It is understood that there may be some inaccuracies in the pumpout records, however it was estimated that this method was more accurate than the estimates from the USEPA and Ontario MOE publications, which assumes approximately four times this hydraulic loading. For budget purposes therefore, the proponent would prefer to size the system based on actual recorded peak values and not oversize the system to accommodate theoretical hydraulic loadings. The loadings from the residence/campground office was based on a typical residential loading in Manitoba and the maximum number of residents at the location.

It is more likely that the existing biofiltration system at the campground failed because of the age of the system.

2. **"Section 2.5.5.1 and 2.5.5.2 – There is insufficient soil information to support the design of this system. Soil test pits or auger boreholes need to be used to determine the soil texture classification and the depth to restrictive soil layers (bedrock, clay, cemented soils) and groundwater table. The use**

**of well driller logs and topographical surveys is unacceptable as this method is highly inaccurate. The soil test pits or boreholes need to be excavated to a depth that demonstrates there is at least 1.0 m of unsaturated permeable soil below the disposal field system. Lastly, soil samples need to be sent to a lab for particle size analysis to obtain the soil texture classification. The proponent should be required to conduct and document a proper assessment of the soil and groundwater conditions. Soil samples need to be submitted to a lab for soil texture classification as this is used to determine the soil application rate used to size the Enviro-Septic system."**

It is understood that a detailed geotechnical investigation including test pits or boreholes will be conducted at the proposed development site during the design phase to confirm soil classification and groundwater levels. The treatment system supplier will require this information to confirm disposal field sizing.

3. **"The report indicates the septic and holding tank volumes range from 1,800 L to 6,300 L but there are no calculations or information provided to know if these are adequately sized for the new system. At the very least, these tank sizes need to meet the minimum requirements in the OWMS regulation."**

The proponent is aware of the holding tank sizes in the campground and arranges tank pumpouts according to the tank sizing, without permitting overflow of tanks. The existing tanks and pumps servicing the existing peat biofiltration system have been operating adequately and have not experienced overflow conditions. Therefore, as the existing service population utilizing these tanks is not expected to increase, and through several years of past operation experience, it is not expected that the tank or pump capacities will be overwhelmed by hydraulic flows. The proponent will be made aware that should there be any future tank installations, the proponent will be required to meet the OWMS regulation for sizing of new holding tanks.

4. **"There is no information provided on how the Enviro-Septic disposal field system was sized (i.e. the soil application rate, sizing calculations)."**

The Enviro-Septic treatment system was sized based on the estimated hydraulic flows. This determines the number and length of piping required, as there is a maximum of 120 L/day permitted in each length of pipe. The estimated permeability of the soil in the disposal field beneath the piping determines the distance between the pipes, which is the disposal field area. It is understood that the sizing of the disposal field area may be altered based on the results of the geotechnical investigation during the design phase of the project.

Hopefully the above responses sufficiently address your concerns regarding this project.

Sincerely,

JR Cousin Consultants Ltd.



Oswald Wohlgemut, M.Sc.  
Environmental Scientist

Reviewed by



Jerry Cousin, P.Eng.  
President

cc Wild Oaks Campground