

Vermilion River Stewardship



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By email: Akli.Ben-Anteur@greatersudbury.ca
Michelle.Albert@wsp.com

Re: Class Environmental Assessment Water & Wastewater Master Plan

Dear Mr. Ben-Anteur and Ms. Albert:

The Vermilion River Stewardship (VRS) is pleased to offer our comments on the City of Greater Sudbury's Class Environmental Assessment for the Water and Wastewater Master Plan (MP).

In general, the VRS supports the recommendations set out in the MP; however, the comments that follow point out areas where there may be gaps and/or the MP could be made stronger by considering other options.

Resiliency to Climate Change:

VRS is very much in agreement with your four main study objectives, and especially that which entails safe and reliable water quality, reducing sanitary sewer backflow/overflow, by-passes, and reducing vulnerability. However, the MP indicates that several WWPs, collection systems and catch basins regularly experience flooding already, and this problem will likely only increase in a climate that is predicted to become more extreme over the coming years.

Recommendation 1:

VRS recommends that in order to meet the requirements of an increasingly volatile climate over the next 40 years, and beyond, that reducing vulnerability and increasing resiliency to climate change must be a core study objective of the MP.

Wastewater - Tertiary Treatment:

It is encouraging that tertiary treatment is planned for the Sudbury Wastewater Treatment Plant (WWTP), which will reduce the amount of phosphorus in the treated effluent; however, it appears this won't be implemented until Phase 2 is completed in 2031. It is essential that this plan meets reality sooner than 2031 if at all possible. It is also important that tertiary treatment is implemented at other key WWTPs.

Recommendation 2:

VRS recommends that the City also include tertiary treatment at the Walden and Chelmsford WWTPs.

Wastewater Infrastructure within a Flood Plain:

The Ministry of Environment and Climate Change Design Guidelines for Sewage Works 2008¹ prescribe that "*sewage pumping station structures and electrical and mechanical equipment should be protected from physical damage by the 100-year design flood event*"; however, the MP is planning to leave a raised lift station within a flood plain. Now is a prime time to relocate any vulnerable wastewater infrastructure located within a flood plain.

Recommendation 3:

VRS recommend that no lift station is located within a flood plain. Planning must take into account a 100-year flood event to look at the long-term and build resilience into the wastewater system.

Inflow and Infiltration:

VRS recognizes the important work that has already been done with respect to Inflow and Infiltration (I&I); however, since I&I is the primary reason for WWTPs bypassing undertreated and untreated effluent into our waterways, disconnecting downspouts and enforcing the by-law must be given the highest priority.

A separate Class EA study to determine the appropriate wet weather management solution for each individual system must be based not just on historical flows, but on projected flows taking into account a potential increase in extreme rain events.

Recommendation 4:

VRS recommends the highest priority be given to the Class EA studies for each individual system, as well as moving forward with disconnecting downspouts and enforcing the Sewer Use By-law for illegal connections to the sewer system.

¹ Design Guidelines for Sewage Works 2008, Protecting our Environment, Ministry of the Environment, Ontario.

Natural Infrastructure:

The importance of creating, maintaining and protecting natural infrastructure such as wetlands, swales and vegetated buffers cannot be overstated when it comes to flood management and filtering stormwater runoff. Policies supporting this concept would go a long way towards reducing some of the stormwater infiltration into the wastewater collection systems.

Recommendation 5:

VRS recommends more natural infrastructure be mandated in the planning phase of development projects to mitigate some of the effects of stormwater runoff and I&I challenges.

Road Salt Contamination in Drinking Water:

The sodium levels in Ramsey Lake are almost three times the level at which the medical officer of health must be notified to begin a process designed to alert patients on sodium restricted diets. Sodium cannot be removed at the David Street Water Plant; therefore, it is crucial to consider the long-term health effects of increasing levels of sodium in our drinking water. Additional sodium mitigation measures should be included in the preferred alternatives for drinking water.

Recommendation 6:

VRS recommends an emphasis on mitigation measures designed to prevent additional sodium from entering Ramsey Lake.

Ramsey Lake as a Drinking Water Source:

VRS questions the preferred Alternative 2, which would optimize the Valley Wells and Sudbury water systems. It is important to note that the assessment indicated

- *“Ramsey Lake is a vulnerable water supply and may not be sustainable in the future due to water quality threats, as documented in Source Water Protection documentation described in the Water Baseline Review Report (WSP,2015)”*.²
- *“The Garson Wells have detectable levels of tetrachloroethylene and must continue to be monitored. The wells may require treatment in the future to meet water quality requirements, if PCE levels continue to increase”*.³

The MP also pointed out that Alternative 2 would provide sufficient water capacity to service 2041 water demand; however,

- *“The ability to restore the 13 wells’ capacity to their rated capacity is presently uncertain, since the wells have shown signs of not being able to produce their rated capacities periodically”; and*
- *“There is a potential risk that their production may decline”*.

VRS suggests that this MP should be looking beyond 2041, taking into account the increased vulnerability of Ramsey Lake as a drinking water source over the long term, especially considering the major development that is planned within the Ramsey Lake Watershed and the numerous other uncertainties and vulnerabilities that have been identified above.

² Water and Wastewater Master Plan, Volume 2, P-21

³ Water and Wastewater Master Plan, Volume 4, P-5-6

In the long-term it may be more cost effective to move to Alternative 3 now, instead of later.

The importance of protecting water quality on Ramsey Lake cannot be overstated. Regardless of whether Ramsey Lake is used as a primary public drinking water source, there are many families living along its shores with private drinking water intakes that must be protected.

Healthy water quality is also essential to maintaining robust property values and a healthy tax base. No matter which alternative is chosen, more robust mitigation measures will need to be employed in the Ramsey Lake Watershed to prevent additional contaminants from entering the lake.

Recommendation 7:

- (a) VRS recommends moving to Alternative 3, to construct a new WTP at Wanapitei Lake.
- (b) VRS also recommends strict mitigation measures to restrict contaminants and ensure the sustainability of Ramsey Lake as a drinking water source.

VRS urges Council to provide the necessary funding to fully implement the MP and its finalized recommended alternatives. Full implementation of the MP is essential to sustainable and environmentally responsible growth in Sudbury and will help ensure our waterways are healthy and more resilient to a warming climate.

Thank you for this opportunity to comment!

Sincerely,



Linda Heron
Chair, Vermilion River Stewardship