Vermilion River Stewardship

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22 November 2013

The Honourable Jim Bradley
Minister of Environment
10th Floor, 135 St. Clair Avenue West,
Toronto, Ontario
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Email: Minister.MOE@Ontario.ca

Dear Minister Bradley:

Re: City of Greater Sudbury – Notice of Completion
Municipal Class EA, Schedule 'C' - Lively/Walden Wastewater Treatment System
Part II Order Request

The Vermilion River Stewardship (VRS) has had an opportunity to review the City of Greater Sudbury's (CGS) Environmental Report for the Lively/Walden Wastewater Treatment System, and made comments to The City of Greater Sudbury and J.L. Richards & Associates Ltd., by correspondence dated 16 November 2013. VRS and Simon Lake Community Stewardship Group (SLCSG) also attempted to meet before the closing of the comment period; however, the necessary City staff were not available. There are plans to meet with both parties next week to discuss our concerns further.

I have attended two Public Information Centres, both as Chair of VRS in 2011, and as Vice-Chair of SLCSG in 2010, and corresponded and met with J.L. Richards and City staff to further discuss this matter. As such, we offer the following for your consideration. All underlined text below is to indicate our emphasis.

VRS has no concerns with the preferred choice of Option 6, to decommission the Lively Wastewater Treatment Plant (WWTP) and upgrade the Walden WWTP; however, we have great concern with the fact that tertiary treatment is slated to be put off until design flow (ADF) exceeds 6,000 m^3/day, which is not expected to occur until 2027. In fact the ER goes on to report that the "*Complete Tertiary Treatment System at the Walden WWTP (if required) 168 months (14 years).*"[1] The ER also states that a proposed "*pilot plant may determine that the treatment process upstream of the proposed tertiary treatment is adequate for the effluent requirements*."[2] From these statements, it appears as though tertiary treatment may never happen. This doubt, and/or timeline and approach is unacceptable when downstream water

[1] 7.2 Project Schedule - P-9
[2] 6.10 Summary of Preferred Alternatives P-55

quality, especially in Lower Junction Creek, and Simon and McCharles Lakes, but also the entire lower Vermilion River system, has already been severely degraded from a long history of wastewater effluent discharge from the Lively, Walden and Kelly Lake plants, and have been challenged for the last several years with extreme algae blooms.

In fact, in 2011, blue-green algae was confirmed on McCharles Lake, and has also been observed on Simon Lake near the public beach. This is of great concern to local residents because blue-green algae can be toxic to humans and animals, and places public health and safety at risk. Phosphorus is the determining factor for blue-green algae, and the historic effluent releases from the upstream waste water treatment facilities have severely saturated and polluted the receiving waters with phosphorus.

There are many residents living along the shores of the Vermilion River system that either rely on it for their drinking water and other household needs, or whose wells are fed or experience infiltration of its waters. None of these residents have the safeguards or luxury of treated water from a municipal drinking water source, and the toxic microsystins from blue-green algae cannot be removed by means of any household water filtration system. This must be a strong consideration in determining effluent discharge rates and whether tertiary treatment is required.

The ER reports that, "*In order to meet the effluent criteria, tertiary treatment will need to be in place prior to the design flow exceeding 6,000 m^3/day. This is projected to occur in the future, although tertiary treatment can be introduced earlier to achieve better effluent quality*."[3] This is what VRS is requesting, that tertiary treatment be introduced earlier in order to improve the quality of effluent entering into Junction Creek and the lower Vermilion River system.

The ER points out, that the "*MOE Provincial Water Quality Objectives (PWQO) state that, as an interim guideline for streams and rivers, Total Phosphorus (TP) should not exceed 0.03 mg/L to prevent excessive plant growth. Currently, Meatbird Creek is Policy 1 (water quality is better than the PWQO's, and shall be maintained at or above the PWQO) and Junction Creek is Policy 2 (water quality does not presently meet the PWQO's, shall not be further degraded, and all practical measures shall be undertaken to upgrade the water quality to the PWQO's) with respect to TP*."[4]

To reduce phosphorous levels, lower compliance objectives and limits were requested by the MOE, and The City of Greater Sudbury proposed the following revised limits:

- 0.38 mg/L objective and 0.55 mg/L limit for average day flows below 6,000 m3/day
- 0.20 mg/L objective and 0.30 mg/L limit for average day flows greater than 6,000 m3/day but less than 8,000 m3/day[5]

However, the historical average effluent levels for TP are currently between 0.39 mg/L and 0.42 mg/L[6] – not much different from the proposed limits. Yet the ER states that "*the recommended option ensures an effluent that results in a reduction of net loading to the system*."[7] It also states that "*all reasonable and practical measures to improve effluent quality at the Walden WWTP will be undertaken and the proposed effluent requirements will result in lower loadings to Junction Creek from the Lively/Walden wastewater system.*"[8] VRS submits that it is "reasonable and practical" to include tertiary treatment at the earliest possible juncture when plant construction begins in 2016, and that this upgraded facility must not just meet its effluent

[3] 6.4 – Technical Memorandum (TM) 5: Evaluation of Alternative Treatment Design Concepts
[4] 5.1.2 – Receiving Water Assessment and Effluent Quality P-22
[5] Table 23: Review Agency Comments
[6] Table 10: Summary of Effluent Characteristics for Walden WWTP (2005-2009)
[7] 8.4.5 – Recreation and Tourism P-84
[8] 8.1.3 Fish Habitat – P-82

requirements, but must engage all possible measures to exceed them in order to improve water quality.

The construction at the plant site should not just have a minimal impact, but should result in the maximum improvement to water quality in this residential and recreational lake area. VRS is requesting significantly reduced TP and *E-coli* limits and concentrations in the upgraded Walden Plant. VRS submits that in order to achieve improved effluent quality and therefore river water quality, that the best available technology in tertiary treatment must be incorporated into the preferred and recommended option at the initiation of construction in 2016.

VRS agrees that the recommended inflow and infiltration (I/I) repairs should be completed before tertiary treatment is introduced; however, the ER provides no timeline when these repairs will be completed. According to the I/I study, an average of 16,500 m^3 per year of raw wastewater has been bypassed into Meatbird Creek between 2005 and 2009, and is expected to increase under projected average day and peak flow conditions without the extraneous flows and implementation of required upgrades[9]. VRS submits that it is imperative that these repairs take place immediately.

In reviewing the ER, it is disturbing to note that there is no mention of any studies or consideration of climate change and its potential impacts on an already heavily polluted downstream system. There was also no mention of an assessment of the cumulative effects of the historical contamination of soils and sediments from the many years of mining and waste water effluent that have been released into this river system, or of the Kelly Lake WWTF continuing to release and bypass its treated, undertreated and untreated effluent. The Walden WWTF must not be considered as a lone contributor to reduced water quality, but all past, present and future uses of this watershed must be also considered in this ER to properly assess the timing and type of upgrades to be undertaken by the City of Sudbury.

There must be a proper assessment of the potential tipping point for this lake and river system. It is crucial to have an evaluation of how much more this river system can take before its ecosystem collapses. The best available technology for tertiary treatment, at the first available opportunity, must be the City's top priority.

Simon Lake is a recreational lake, with a park and public beach that is not accessible throughout much of the summer because of excessive algae. There are also many homes along its shores whose property values have been severely impacted.

The residents of Simon and McCharles Lakes must be a high priority with the City, as they have been struggling with the summer stench of rotting algae for several years now, and it is time to start taking steps towards improving water quality on these lakes. There must be a plan to give residents hope of a time in the future where they will be able to once again enjoy outside activities on their properties and lake throughout the summer months.

Water must be treated as a "commons". The City of Sudbury is the "public trustee" of our local water resources and has a responsibility to ensure that our water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner that protects it for our present and future generations.

[9] Table 7: Summary of Required Upgrades to the Lively/Walden Wastewater Treatment System

After having reviewed all the supporting documentation, and for all the reasons noted above, VRS is requesting that the Minister issue a Part II Order to elevate this Environmental Report to an Individual Environmental Assessment.

Thank you for this opportunity to comment.

Sincerely,

Linda Heron
Chair, Vermilion River Stewardship

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