

Vermilion River Stewardship



379 Ronka Rd.
Worthington, ON
P0M 3H0
(705) 866-1677

Info@VermilionRiverStewards.ca
VermilionRiverStewards.ca

21 March 2014

Mayor Marianne Matichuk and City Council
City of Greater Sudbury
PO BOX 5000, STN 'A'
200 Brady Street
Sudbury, ON
P3A 5P3

By Email: Mayor@greatersudbury.ca

Dear Mayor Matichuk and City Council:

Re: Development and Application of a Water Quality Model for Lakes in the City of Greater Sudbury – Hutchinson Report

The Vermilion River Stewardship (VRS) wish to express our concerns regarding the recent report entitled, "Development and Application of a Water Quality Model for Lakes in the City of Greater Sudbury" (Report), by Hutchinson Environmental Sciences Inc. We understand that this report was initiated in late 2011 for the development of a watershed-based water quality model for the City of Greater Sudbury using the Lakeshore Capacity Model.

We have had an opportunity to review this Report in detail, and feel that it falls far short of its purpose, which is to provide technical guidance for the development and redevelopment of unserviced shoreline lots in support of Official Plan policies that are protective of water quality, technically sound, defensible, and which meet the intent of the Provincial Water Quality Objectives (PWQO) and Provincial Policy Statement. Our areas of concern are as follows:

- 1. Classification of Lakes:** None of the three classifications of "Enhanced", "Moderate" and "Standard" are designed to determine that a lake is at capacity. All classifications are addressed by either preventing additional phosphorus; minimizing phosphorus input, or mitigating with best management practices. This model offers no clear mechanism to determine that a lake is at capacity or to recommend that no further development takes place. This is a concern when the original contract under "Scope of Work" specifically called for "*recommendations as to which lakes could and which lakes could not support additional development based on current phosphorus concentrations*".
- 2. Improper Classification of Lakes:** It is shocking that this Report places Simon, McCharles, Mud, and Kelly Lakes into the "Moderate" Management Classification, rather than "Enhanced", when year after year they have had on-going challenges with excessive algae, foul odors, and degraded water quality.

On the other hand, the "Enhanced" management classification was provided to some remote lakes with little or no development pressure, as well as Fairbank Lake which is one of the cleanest and healthiest lakes in the Sudbury District. These classifications do not seem logical or rational, let alone "technically sound and defensible". Therefore the formula used to classify the lakes is questionable.

3. **An Effective Model:** MOE's "Lake Capacity Model" did not work in this study, and there is no convincing evidence or data to support that this Model would be accurate or effective either. In fact, the integrity of this Model is questionable when for many years, water quality conditions in these lakes have been nowhere near acceptable, and in our opinion places them under an incorrect classification. Can anyone honestly say that the City should allow any expansion of development that would impact further on these lakes?

For many years there has been talk of a proposed Dalron development on McCharles Lake. This is a very good example of a bad idea that would impose additional stresses to an already struggling lake and river system. Even though lots would most likely be serviced, there would be additional inputs and stresses caused by run-off of nutrients, as well as detergent, oil, gas, salt, etc., from automobiles and other human activities.

4. **Waste Water Treatment Facilities (WWTFs):** The contribution of the City's WWTFs was mentioned with regard to the MOE Lake Capacity Model, but no indication of how or whether they would be considered in the Report's recommended model.
 - a. Future population expansion within the watershed would impact on the WWTFs, and consequently also on downstream lakes, and that must be accounted for when assessing phosphorus loading.
 - b. The 4 WWTF impacting on the lower Junction Creek arm contribute a steady stream of phosphorus, and are the primary reason for most of our ongoing water quality challenges in the lakes mentioned above. Yet there was no consideration of their continuing cumulative impacts on water quality on these lakes, nor on how increased populations or development within the watershed could increase these pressures.
 - c. There was also no mention of the WWTF bypasses that release untreated and undertreated effluent into these lakes during extreme heavy rain events.
5. **Climate Change:** The Report includes no planning or consideration for climate change and how it could compound water quality challenges with increased incidences of extreme rain and drought events. The City of Sudbury must plan ahead for climate change when approving development, upgrading WWTF, or approving policy. We must also provide a significant buffer to protect water quality and ecosystems from future intensification of climate change and its impacts.
6. **Blue-green Algae:** Blue-green algae is considered a trigger for lake classification in this Model. Of the lakes mentioned here, only McCharles Lake was noted in this Report for having a blue-green algae bloom, when in fact in 2011 the entire lower arm of the Vermilion River/Junction Creek experienced the bloom, including Simon, McCharles, Kusk, Grassy, Ella and Wabagishik Lakes, all the way out to the Spanish River. The bloom was actually sampled and confirmed on McCharles and Grassy Lake, but SDHU only recorded it as "Vermilion" and "McCharles" in its report. Consequently, the bloom experienced by the other lakes on the Vermilion was not reflected in this Report at all.

There was also a bloom on Ella Lake, on the lower Vermilion River that persisted

throughout the winter months of November 2012 through to ice break-up in the spring of 2013. McCharles Lake had another bloom in September of 2013. If the lower Vermilion River system has increasing development pressures it could create a domino effect that would impact on several lakes along the Vermilion system, and make these toxic blooms a regular occurrence. Many families living along the Vermilion River and its connecting lakes rely on its freshwater for their drinking water and daily household needs.

VRS only refers to the lakes we are familiar with in this letter; however, if this new model does not work for these lakes, then there is a high probability that it will not protect the other lakes within the Sudbury District as well. The MOE model that was originally to be applied to Sudbury area lakes is a "Lake Capacity Model", and even though this model wasn't a fit for our area lakes, it would be appropriate that whatever model is adopted will, at the very least, assist the City in accurately determining when a lake has reached its capacity.

We would have expected that Simon, McCharles, Mud and Kelly Lakes would have been given the highest level of caution, and that shoreline development would be frozen, but that option is not even available in this Report, even though it was clearly one of the deliverables specified in the "Scope of Work" for this project.

The best hope for these lakes, according to this Model, is to have them elevated to "Enhanced", but the method of increasing a "moderate" classification to "enhanced" is to show phosphorus concentration is over 20 ug/L and to do a "causation study". However, there is no explanation of what that is, what it would entail, or what it would cost taxpayers. And then, this would only mean no additional phosphorus loading or limit the creation of new un-serviced lots. Limit does not mean stop. Does that mean there could still be additional serviced lots, or some unserviced lots under certain circumstances? This Report lacks clarity in several areas.

This Report would be incorporated into the Official Plan as policy to provide direction and guidance on future lot development decisions. If increased development along shorelines will be gauged according to the model set out in this Report, then our area lakes could be seriously compromised. It is much less costly and easier to prevent degraded water quality than it is to restore a lake/river ecosystem after it has gone beyond its tipping point.

VRS requests that the City reject this Report as it is flawed, and does not fully meet the objectives and Scope of Work as set out in Contract GDD11-29. If this Model were implemented into policy, VRS feels it would not effectively protect water quality, and therefore could place Sudbury area lakes at unnecessary risk.

It would be prudent for the City to provide an opportunity for comments and input on this Report from the Lake Advisory Panel, Greater Sudbury Watershed Alliance, and local stakeholders and stewardships. The original objective and scope of work must be reflected in the final Model and policy in order to effectively protect water quality in Sudbury area lakes.

Sincerely,



Linda Heron
Chair, Vermilion River Stewardship

Cc: Jacques Barbeau, Councillor – Jacques.Barbeau@greatersudbury.ca

Joe Cimino, Councillor joe.cimino@greatersudbury.ca
Andre Rivest, Councillor - andre.rivest@greatersudbury.ca
Claude Berthiaume, Councillor - claudio.berthiaume@greatersudbury.ca
Dave Kilgour, Councillor - dave.kilgour@greatersudbury.ca
Doug Craig, Councillor - doug.craig@greatersudbury.ca
Evelyn Dutrisac, Councillor - evelyn.dutrisac@greatersudbury.ca
Fabio Belli, Councillor - fabio.belli@greatersudbury.ca
Frances Caldarelli, Councillor - frances.caldarelli@greatersudbury.ca
Joscelyne Landry-Altmann, Councillor - joscelyne.landry-altmann@greatersudbury.ca
Ron Dupuis, Councillor - ron.dupuis@greatersudbury.ca
Terry Kett, Councillor - terry.kett@greatersudbury.ca
Stephen Monet, Environmental Planning Initiatives - Stephen.Monet@greatersudbury.ca
Mark Simeoni, Planning Services Division - Mark.Simeoni@greatersudbury.ca
Lesley Flowers, Chair, GSWA - LesleyF@xplornet.com
Paul Sajatovic, General Man., Conservation Sudbury - Paul.Sajatovic@greatersudbury.ca
David Furino, Simon Lake Community Stewardship Group - David.Furino@sympatico.ca
Clerk@greatersudbury.ca
OfficialPlan@greatersudbury.ca