Greater Sudbury Watershed Alliance

30 March 2017

David Shelsted
Director of Roads and Transportation Services
Infrastructure Services, Roads and Transportation
City of Greater Sudbury
1800 Frobisher Street, PO Box 5000, STN A,
Sudbury, ON
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By Email: David.Shelsted@GreaterSudbury.ca

Re: Notice of Completion - Sudbury Transportation Study Report
Initial Issue February 1, 2017 - Revision March 9, 2017

Dear Sir:

The Greater Sudbury Watershed Alliance (GSWA) is incorporated as a not-for profit volunteer organization of 17 lake, creek and river stewardship groups, working to protect the watersheds located within the City of Greater Sudbury.

GSWA is writing in response to the Notice of Completion (NOC) issued by the City of Greater Sudbury in accordance with Phases 1 and 2 of the Municipal Class Environmental Assessment (EA) for the 2017 Greater Sudbury Transportation Study Report (TSR). The NOC was issued on February 1, 2017, and later revised, and sets out the Projects that are eligible for a Part II Order request under the Ontario Environmental Assessment Act.

GSWA has carefully reviewed the TSR, and requested a meeting with David Brouse, City of Sudbury Water/Wastewater; however, we were referred to Melanie Venne, Conservation Sudbury, to discuss our concerns regarding the TSR. Ms. Venne was not available to meet before the NOC deadline.

Consequently, we are writing to express our concerns with respect to the following projects proposed within the Ramsey Lake Watershed:

- Ramsey Lake Road – Schedule C – Class EA
- Howey Drive Widening (Elgin Street to Bancroft Drive) – Schedule C – Class EA
- Silver Hills Drive Road Construction – Schedule C – Class EA

GSWA is primarily concerned with the additional winter road salt that would be required to service the above proposed road projects within the Ramsey Lake Watershed, and the resulting environmental effects on Ramsey Lake - a public and private drinking water source for approximately 50,000 citizens within the City of Greater Sudbury.

The David Street Water Treatment Plant is a surface water plant that draws its drinking water from Ramsey Lake, and does not remove sodium chloride. Its water quality sampling data for 2015 reports sodium levels at 52.80 mg/L.[1]

Road salt is a contaminant of concern and, based on critical assessment of relevant information, road salts that contain inorganic chloride salts with or without ferrocyanide salts are considered to be "toxic" as defined in Section 64(a) & (b) of CEPA 1999. Therefore, its application to the proposed expanded impermeable road surfaces within the Ramsey Lake Watershed is of particular concern to GSWA as it increases the risk to public health, and was not addressed in the TSR.

Road salt is a non-point source pollutant, and new Road Construction and widening of existing roads in the Ramsey Lake Watershed would more than double the amount of impervious road surface area. Consequently, with no practical substitute for road salt, it follows that road salt deposits into the watershed and Ramsey Lake would increase correspondingly. It is expected that sodium levels will therefore continue to be well above the Ontario Drinking Water Quality Standards of 20 mg/L, which requires that the Local Medical Officer of Health be notified.

The World Health Organization and most jurisdictions in the USA and Canada have determined that sodium levels over 20 mg/L can have injurious effects on 20 to 25 percent of the population, especially those on a salt restricted diet. Health problems associated with an elevated level of sodium consumption include cardiac disease, renal disease, hardening of the arteries, eye damage and stroke.
In January of this year, in response to several Part II Order requests on the Second Avenue Infrastructure Improvements Project, the Minister of Environment and Climate Change (MOECC) imposed conditions to ensure that road salt was effectively planned for and managed, and ordered a Risk Management Plan be submitted to Environmental Approvals Branch to ensure that adequate mitigation measures and best management practices were in place to reduce potential road salt impacts to vulnerable areas.[2] Considering these additional road projects are also within the Ramsey Lake Watershed, and could more than double road salt contamination, it is concerning to note that no Risk Management Plan was included in the TSR regarding these proposed roads projects.

Using the Second Avenue project EA as an example, the City reported that road surface area would increase from 7,500 m^2 to 19,500 m^2,[3] which is an approximate 160% increase, and yet it indicated that the total storm water increase into the watershed would be less than 5% (relative to all storm water entering the watershed and lake). A quick estimate of proposed road

[1] Greater Sudbury 2015 Annual Water Quality Reports, Per: Ontario Regulation 170/03, s. 11(1); Ontario Regulation 247/06, s. 10(1)
[2] MOECC decision letter to GSWA, regarding a Part II Order request on the Second Avenue Infrastructure Improvements Project, dated Jan 20, 2017.
[3] Second Avenue Infrastructure Improvements Project, Municipal Class EA, Schedule B Project. Presentation: Second Avenue Reconstruction, presented by: David Shelsted, MBA, P.Eng., Director of Roads and Transportation, August 14, 2014, Slide 10.

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widening on the north and south shores of Ramsey Lake would total approximately 100,000 m^2 of road surface area. Using the City's reasoning that would contribute approximately a 25% increase in run-off into the watershed.

A Laurentian University published article by Dr. David Pearson and Dr. John Gunn stated, "*Perhaps because pollution in Sudbury has been so dominated by easily visible point sources, little attention has been given to the effects of surface runoff, even though storm water is discharged directly into Ramsey Lake, the main drinking water supply for residents in the urban core. One of the consequences with possible implications for human health is the elevated concentration of sodium, derived from road salt, in Ramsey Lake. Normal background concentrations of sodium in lakewater range between 1 and 2 mg/L, but in Ramsey Lake in 1990 the concentration was just over 36 mg/L*. Drinking water taken from the lake and treated at the David Street Pumping Station in 1999 showed sodium levels between 40 and 46 mg/L (Regional Municipality of Sudbury 2000)."[4] As noted above, the levels have since increased to over 50 mg/L.

As reported in The Greater Sudbury Source Protection Area Assessment Report, due to a variety of geological, historical and industrial practices, "*The majority of the Ramsey Lake Watershed is covered in bedrock and therefore has little infiltration capacity to attenuate contaminant runoff. Many of the tributaries into the lake are intermittent in nature and respond quickly to storm events. Impervious surfaces are measured as an indicator of the amount of area where road salt can be applied.*"[5]

The City of Sudbury's Official Plan recognizes the need for protection of our drinking water sources when it states, "*It is increasingly understood that it is necessary to consider entire watersheds in dealing with the protection of lakes*" and "*drinking water resources must be protected from human activities and natural processes that can lead to contamination*".

Additionally, the TSR Problem Statement identifies "*growth in population, employment and commercial activity to the horizon of 2031*" as the reason for new and expanded roads. This contrasts with the Ontario Ministry of Finance predictions of no population growth to the year 2041, and a 14 percent reduction of the work force.[6]

It is our submission that the potential detrimental effects of road salt from new and expanded roads on Ramsey Lake water quality outweighs any benefits from road expansion and therefore the "do nothing" option is the only option GSWA can currently support. There are other traffic and road mitigation measures that must be considered, such as magnesium chloride, crushed granite sand, increased public transportation, staggered business hours, bike lanes, etc., that must be in place. A Risk Management Plan to address effective road salt mitigation, and consideration of the Master Transit Plan are essential.

[4] The Past, Present and Future of Sudbury's Lakes, by D.A.B. Pearson, J.M. Gunn and W. Keller.
[5] The Greater Sudbury Source Protection Area Assessment Report, (City and MOECC approved 2014).
[6] Ontario. 2014. Ministry of Finance. "Ontario Population Projections, 2013–2041." Toronto.

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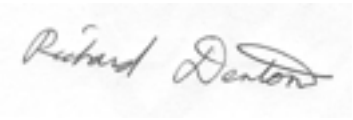
GSWA requests a meeting to discuss our concerns. If our concerns cannot be resolved we will make a formal request to the Minister of Environment and Climate Change to issue a Part II Order, to elevate the proposed projects to an Individual Environmental Assessment.

We look forward to your response.

Respectfully,



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Cc: Shannon Gauthier, Project Evaluator, Environmental Approvals Branch - Shannon.Gauthier@ontario.ca
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