

Vermilion River Stewardship



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

Info@VermilionRiverStewards.ca
VermilionRiverStewards.ca

3 January 2019

Mayor Brian Bigger and City Council
City of Greater Sudbury
P.O. Box 5000, Station A
200 Brady Street
Sudbury, ON
P3A 5P3

By Email: Mayor@GreaterSudbury.ca
Mark.Signoretti@GreaterSudbury.ca
Michael.Vagnini@GreaterSudbury.ca
Gerry.Montpellier@GreaterSudbury.ca
Geoff.McCausland@GreaterSudbury.ca
Robert.Kirwan@GreaterSudbury.ca
Rene.Lapierre@GreaterSudbury.ca
Mike.Jakubo@GreaterSudbury.ca
Al.Sizer@GreaterSudbury.ca
Deb.McIntosh@GreaterSudbury.ca
Fern.Cormier@GreaterSudbury.ca
Bill.Leduc@GreaterSudbury.ca
Joscelyne.Landry-Altman@GreaterSudbury.ca

Re: Greater Sudbury Water/Wastewater Master Plan

Dear Mayor Bigger and City Council Members:

The Vermilion River Stewardship (VRS) is writing to offer our support and recognition for the great work that is being done by our City Water and Wastewater Services staff, to emphasize the importance of prioritizing sufficient municipal funding, and to draw your attention to the recent comprehensive report entitled “[Back to Basics](#)”, by Dianne Saxe, the Environmental Commissioner of Ontario (ECO).

The ECO’s report listed 44 municipalities across Ontario that continue to use Combined Sewer Systems (CSSs); however, the City of Sudbury was not included in that list in spite of the fact that we have several wastewater treatment plants (WWTP) with CSSs within the Vermilion River Watershed.

CSSs carry household sewage and stormwater from eavestroughs and weeping tiles illegally connected into the sewer system, and inflow and infiltration (I&I) of stormwater from leaking sewer pipes and manholes also enters into the sewers and adds to the burden on our WWTPs. CSSs were the norm up until 1985 when an Ontario law was enacted to prohibit municipalities from constructing combined sewers; however, many municipalities, including Sudbury, are still operating

with these combined sewers and are struggling with massive sewage bypass issues in the wake of the effects of climate change.

CSSs can become a major problem during rapid snow and ice melt and/or extreme rain events when the sheer intensity and volume of stormwater can overwhelm sewage treatment plants. In order to protect the wastewater plant and homeowners' basements, it is sometimes necessary to bypass the sewage treatment process and release large volumes of undertreated and untreated sewage into the receiving waters.

For instance, at the end of March 2009, one of the largest bypass events in recent history lasted more than 10 days, when 733,032 m³ (733,032,000 litres) of raw and undertreated sewage bypassed treatment at the Sudbury Wastewater Treatment Plant (WWTP) and was released into Junction Creek. In that same week, the Valley East, Azilda, Chelmsford, Copper Cliff, Lively and Walden WWTPs were also bypassing treatment and releasing sewage into the receiving waters. That year 1,154,305 m³ (115,430,500 litres) of raw and undertreated sewage was released into the Vermilion River Watershed. The charts below reflect the total annual bypass events in relationship to the total annual precipitation over the last 10 years. Of course, the time of year, intensity and volume of each event varies and has a direct bearing on whether a bypass occurs; however, the charts below provide a good general overview of the trends.

Chart 1:

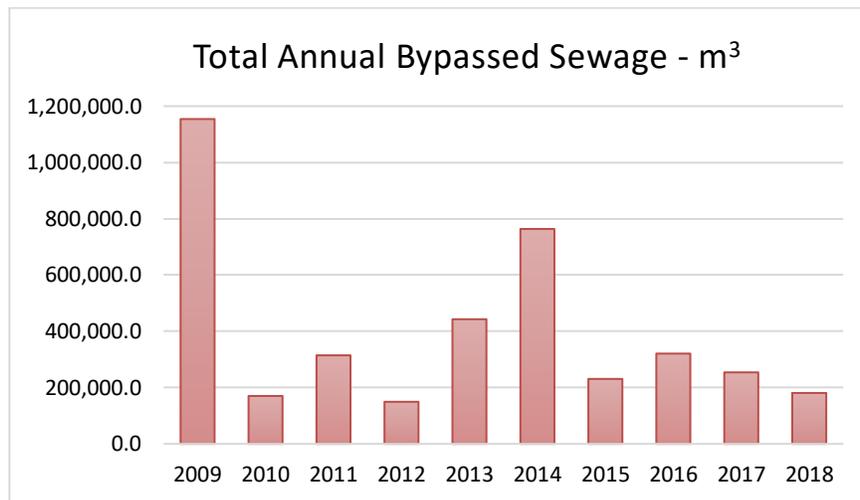
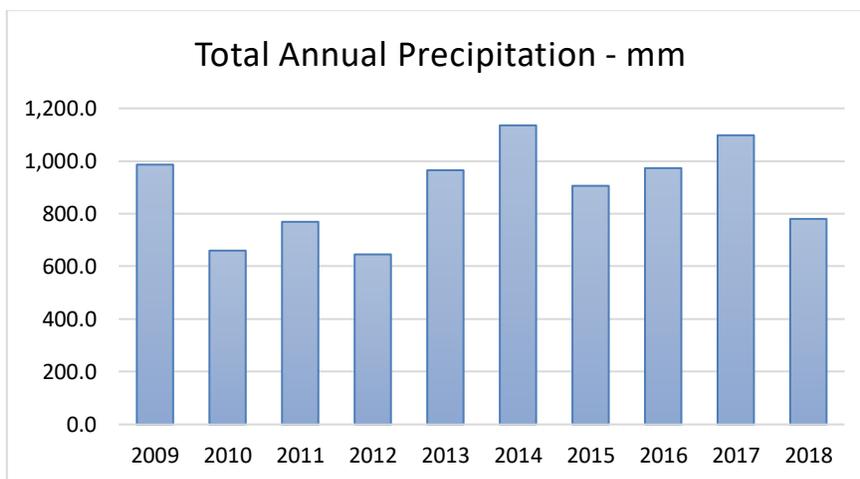


Chart 2:



Raw and undertreated sewage released into a creek, river or lake will have significant and lasting impacts on water quality and the entire riverine ecosystem. The good news is that over the last several years the City has used several means to reduce stormwater entering into the sewer system. For instance, a bylaw was passed to make eavestroughs and weeping tiles connected into the sewer system illegal, bylaw enforcement officers were hired, incentives were offered to homeowners to disconnect, and focused City projects were undertaken to stem the I&I of stormwater into the sewer system.

As a result of the above measures, we are beginning to see incremental positive changes in the volumes of bypass events. This is demonstrated in Chart 2 above which shows the years 2014 and 2017 experienced the highest total precipitation over the last 10 years, and yet Chart 1 reports the total volume bypassed in 2014 was 763,694 m³, and in 2017 254,061 m³ was released. In 2018 the total bypassed effluent from all 10 WWTPs amounted to only 180,826 m³. This is still a lot of sewage entering our waterways, but there seems to be a noticeable year-by-year improvement in the total volume of bypasses. The continuing work of the Water and Wastewater Services management and staff seem to be reaping real and positive results.

However, climate change is predicted to continue to increase the frequency and intensity of extreme weather events and could result in increases in the duration and volume of combined sewer bypasses and overflows.

For instance, in 2012 Toronto commissioned a Future Weather and Climate Driver Study to help inform present and future infrastructure and service decisions. By improving the level of certainty regarding the magnitude and frequency of expected climate change effects, and particularly extreme weather events, the City wanted to reduce the risk of unsustainable investment and loss associated with infrastructure construction, maintenance and operations. The Study revealed that on average in 2040-2049, warmer annual average temperatures of 4.4°C are expected. Less snow and more rain in the winters with fewer rainstorm events per year, but more extreme rainstorms and marked rainfall increases in July (80%+) and in August (50%+).¹

It is important to mitigate and adapt to the extremes of climate change as Paul Beckwith, who works on climatology in the Department of Geography at the University of Ottawa said, *"We're getting a lot more extreme weather events around the planet, whether that be torrential rains leading to flooding, or really hot and dry temperatures leading to drought. These extreme weather events are much more severe, much more intense, they last longer, they're happening more frequently, and they're happening in areas where they didn't happen before."*²

These are compelling reasons to consider climate change and cumulative effects in planning and decision-making regarding all infrastructure, but especially for already underperforming wastewater treatment plants. It is crucial that we build resilience into our wastewater treatment systems and incorporate green infrastructure at every available opportunity. The health and vitality of the river, creek and lake ecosystems within the District of Greater Sudbury must be a priority as they are major economic drivers in the region and will be under increasing pressures in the coming years.

The City of Greater Sudbury prides itself on being the City of Lakes; however, with that blessing comes a great responsibility to ensure we are effective caretakers of the water flowing from our City and throughout our watersheds into the Great Lakes.

In closing, VRS is pleased to point out that in late 2014, through a unanimous decision by Council, the City of Sudbury was the second City in Ontario to implement a real-time [Sewer Bypass Alert](#) system that allows the public to [register to receive an Alert](#) in real-time when a sewage overflow or wastewater bypass occurs. This ensures that those families relying on the receiving lakes and rivers

¹ *Toronto's Future Weather & Climate Driver Study: Outcomes Report.*

² *National Observer, 8 May 2017, [Here are the climate science benchmarks of the Quebec floods.](#)*

for their household water supply and/or recreational activities will be notified as soon as a bypass occurs and can take appropriate action. This Alert system is also being utilized as a model in other municipalities in the province.

VRS encourages Mayor Bigger and City Council to continue supporting the important recommendations in the Water/Wastewater Master Plan by ensuring sufficient funds are in place to facilitate its full, efficient and timely implementation. Thank you for your consideration.

Sincerely,



Linda Heron
Chair, Vermilion River Stewardship

Cc: Dianne Saxe, Environmental Commissioner of Ontario – Commissioner@ECO.on.ca
Akli Ben-Anteur, Water/Wastewater Engineer – Akli.Ben-Anteur@greatersudbury.ca
City Clerk - Clerk@greatersudbury.ca