



July 28, 2014

City of Greater Sudbury
Mayor Matichuk
Councillors

Dear Mayor Matichuk and City of Greater Sudbury Councillors,

The Greater Sudbury Watershed Alliance (GSWA) has now been an organized association for almost three years. During that time we have worked quite well with the City and of course hope to continue to work collaboratively to protect and improve our waterways. GSWA operates an ad hoc committee structure and we have formed our committees to further our stated goals. We believe that private drinking water source protection is a crucial goal and one that has the potential for preventing serious consequences for rural and suburban residents who get their water from wells and surface water.

Unmaintained or failing systems can degrade water quality and contaminate drinking water sources. To that end GSWA is recommending that the City of Greater Sudbury look carefully at protecting private source drinking water by providing the necessary funding to support:

- A mandatory Septic Inspection Program to require regular maintenance and inspection of all holding tanks, septic tanks, leaching beds (including outhouses and pit privies) in order to preserve fresh water resources, and protect the environment and public health and safety. Following the institution of the program, re-inspections would be repeated every 5 years.

It is to be noted that the Official Plan currently says:

12.2.3 Individual Systems

Individual systems are privately owned water and wastewater systems, usually taking the form of a well and septic system. Many households also draw water from area lakes. While new development is primarily directed by this Plan to fully serviced areas of the City, developments in the Agricultural Reserve, Rural Areas and certain parts of Living Areas that are either partially serviced or unserviced are permitted to use individual systems subject to the policies of this Plan.

Policies

1. Where development is proposed outside fully serviced areas, the proponent must prove that the soil conditions of the proposed site are suitable for a waste sewage disposal system and that there is a proven source of potable water available. A hydrogeological assessment is required where the minimum lot size is less than 0.8 hectare (2 acres).

2. The City will ensure that a regular system of inspection of individually-operated water and wastewater systems is carried out throughout the City and that faulty systems are repaired, maintained and upgraded to meet health and environmental standards.

(City of Greater Sudbury Official Plan- modified copy of Final Version Revised to OP47, p.132)

GSWA further recommends that our above recommendation be included within the Official Plan.

We understand that this program will be costly and that the Sudbury and District Health Unit (SDHU) is the chosen lead on this issue and is partially funded by the city but have responsibilities beyond the city limits. Therefore, we suggest that the City of Greater Sudbury take back responsibility for private septic system inspections within the City of Greater Sudbury boundaries.

Our rationale for requesting these inspections is the prevalence of blue-green algae blooms in Sudbury lakes and rivers, and the knowledge that a properly working septic system can limit some phosphorus loading in a water way. The Hutchinson Report states:

“While shoreline septic systems can be a significant source of phosphorus to lakes, recent scientific studies have shown that much of the septic phosphorus load is attenuated by acidic and mineral-rich soils found in the Precambrian Shield. Mechanistic evidence (Stumm and Morgan, 1970; Jenkins et al., 1971; Isenbeck-Schroter et al., 1993) and direct observations made in septic systems (Willman et al., 1981; Zanini et al., 1997; Robertson et al., 1998; Robertson, 2003, Robertson, 2008) all show strong adsorption of phosphate on charged soil surfaces and mineralization of phosphate with iron (Fe) and aluminum (Al) in soil. The mineralization reactions, in particular, appear to be favoured in acidic and mineral rich groundwater in Precambrian Shield settings (Robertson et al., 1998; Robertson, 2003), such that over 90% of septic phosphorus may be immobilized. The mineralization reactions appear to be permanent (Isenbeck-Schroter et al., 1993). Recent studies conclude that most septic phosphorus may be stable within 0.5 m of the tile drains in a septic field (Robertson et al., 1998, Robertson, 2003). Trophic status modelling also supports the mechanistic and geochemical evidence of phosphorus attenuation by soils. Dillon et al. (1994), for example, reported that only 26% of the potential loading of phosphorus from septic systems around Harp Lake, Muskoka, could be accounted for in the measured phosphorus budget of the lake. The authors attributed the variance between measured and modelled estimates of phosphorus to retention of septic phosphorus in thick tills in the catchment of Harp Lake.”...
(Development and Application of a Water Quality Model for Lakes in the City of Greater Sudbury by Hutchinson Environmental Sciences Ltd. p.12)

Further rationale for mandatory septic system inspections is contained in the amended Ontario Building Code (OBC) Ontario Regulation 315/10. The OBC has established mandatory on-site maintenance programs administered by the Principal Authorities in vulnerable areas. These programs target source protection and could include sites located within 100m of watersheds, lakes, rivers and wells.

The review and updating of the Official Plan give us the opportunity to refocus our priorities. GSWA has noted that Official Plan review has incorporated very sound reasoning to support plans for water protection. We note strong language regarding shoreline buffers and enhanced plans for better storm water management. The program GSWA is recommending will enhance these measures and better protect water quality in Sudbury lakes and rivers.

We hope to move forward with the City to make this important program a reality.

Sincerely

A handwritten signature in cursive script that reads "Lesley Flowers".

Lesley Flowers
Chair Greater Sudbury Watershed Alliance.
403 Flowers Rd., Whitefish ON P0M 3E0
lesleyf@xplornet.com

cc. Mark Simeoni, Manager of Community and Strategic Planning