



STAFF REPORT

DEPARTMENT: Planning and Building Services

CHAIR: Councillor J. Attwood

DATE: January 15, 2014

SUBJECT: Mandatory Septic Re-Inspection Program

RECOMMENDATION:

1. That staff report BD-2014-01 dated January 15, 2014 be received.
2. That staff be directed to establish and undertake the work necessary to support the establishment of a Town mandatory Septic Re-Inspection Program commencing in 2014.
3. That staff be directed to prepare the required amendment to Building By-law 2005-51 to establish a re-inspection of septic systems as a mandatory inspection.
4. That staff be directed to prepare an amendment to Building By-law 2005-51 to establish a re-inspection fee of \$100.00 + HST and a fee of \$350.00 in respect on any orders issued regarding the septic re-inspection.
5. That the Town of Midland, pursuant to Article 1.10.1.3 of the Ontario Building Code (OBC), shall accept a certificate in lieu of a re-inspection, subject to the certificate being provided in accordance with the requirements of the OBC.

BACKGROUND:

A recent amendment to the Ontario Building Code (O. Reg. 315/10) established regulations for establishing and governing Sewage System Maintenance Inspection Programs (SSMIP). The regulations provide guidance respecting the establishment of both mandatory SSMIPs and discretionary SSMIPs.

Mandatory SSMIPs relate to areas described in the regulations under the *Lake Simcoe Protection Act* and areas described in Source Water Protection Plans under the *Clean Water Act*. In areas of a mandatory program, the initial inspections must occur no later than January 1, 2016 for a sewage system constructed before January 1, 2011 and five (5) years after construction for a sewage system constructed after January 1, 2011.

Each sewage system within the defined areas must then be inspected every five (5) years thereafter.

In the case of Midland, the Town is not covered by the *Lake Simcoe Protection Act* and according to the Severn Sound Environmental Association, there are currently no private sewage systems that constitute a threat to the Town's Municipal drinking water system. However, changes to the *Act* and Code will require the establishment of a SSMIP by 2016.

In 2009 the Town of Midland, along with its eight (8) other municipal partners, endorsed the Severn Sound Sustainability Plan. The Plan is structured around three (3) Pillars of Sustainability with 15 goals, 84 strategic directions and multiple actions.

Under the Environmental Integrity and Protection Pillar is included the goal of reducing consumption of natural resources. One strategic direction under that goal is EN.S.18 to ensure "sufficient sustainable sewage treatment plant capacity and treatment to accommodate the growing population". Included in the 13 actions for this strategic direction is to "establish a monitoring program for private sewage systems". Tiny and Tay and most of the other watershed partners have already established SSMIPs.

The purpose of this report is to provide information and highlight certain issues respecting establishing a Town of Midland SSMIP, including matters that require direction for Committee and Council.

The Town presently has 865 properties serviced by private sewage systems, of which 152 are within 100 m of the shorelines of Georgian Bay or Little Lake.

The Town is an active participant of the South Georgian Bay Lake Simcoe Source Water Protection Region. The Authority has produced a Source Protection Plan (SPP) that has been submitted to MOE for approval. The approval will trigger the start of mandatory septic re-inspection program as required under the Ontario Building Code.

The Source Water Protection Plan identifies potential significant threats to municipal drinking water systems.

Septic systems are only one of the numerous possible threats identified to source water, but should be addressed in a comprehensive manner consistent with the SPP.

Private septic systems that have been identified as a potential significant threat to Municipal drinking water systems by the Source Water Protection Plan are required to be inspected as part of a mandatory on-site sewage system maintenance re-inspection program.

In September 2013, all participating municipalities of the South Georgian Bay Lake Simcoe Source Water Protection Region were provided a letter confirming the submission of the Source Water Protection Plan and provided with vulnerable area

mapping and a listing of any septic threats that have been identified in the Assessment Report. It should be noted that the septic threats identified were based on a desktop study and that the Town will be required to complete field verification.

Septic systems that have been identified by the Source Water Protection Plan as significant threats are required to be inspected within five (5) years of the Plans approval, and then re-inspected every five (5) years thereafter.

As part of the mandatory on-site sewage system maintenance re-inspection program, there will be a requirement for reporting back to the source protection authority. While this reporting requirement has not yet been established, municipal programs need to be tracked with this future requirement in mind.

ANALYSIS:

A. On-site Sewage System Maintenance Re-inspection Program

A list of first steps has been prepared by the Simcoe County Chief Building Officials working committee on mandatory on-site sewage system maintenance re-inspection programs. These steps are outlined below:

1. Authority for Inspections and Inspector Qualifications. (*By-law 2005-51*)
2. Identification of sewage systems maintenance inspection program areas.
3. Sewage system inventory within program areas, identify existing systems.
4. Inspection notification; may prioritize based on problem areas, septic's based on age or type or lack of records.
5. Identify existing record systems available; Municipal, Health Unit records, N.V.C.A., MOE, other.
6. Establish program protocols.
7. Establish inspection protocol – will 3rd party certificates be considered.
8. Maintenance inspections – Phase 1, Phase 2, etc.
9. Establish fee, change building by-law and fee collection system.
10. Establish notice of inspection – establish timing of notice.
11. Establish inspection report.
12. Tracking system type of information to be collected.
13. Public awareness.
14. Available Resources – Ministry of Municipal Affairs and Housing, Ontario Onsite Wastewater Association (OOWA), Ontario Rural Wastewater Centre, Ontario Building Officials Association.

The following describes each step in detail:

1. Authority for Inspections and Inspector Qualifications

Sewage system maintenance inspections are generally intended to determine whether a sewage system is in substantial compliance with the operation and

maintenance requirements outlined in Section 8.9. of Division B of the OBC. These inspections are undertaken by inspectors appointed by the Town in respect of maintenance inspection programs:

- Required under Article 1.10.2.3. of Division C of the Building Code (“Mandatory Programs”);

The Midland Building Department has two (2) inspectors meeting the full qualification requirements of the OBC. An amendment to Midland Building By-law 2005-51 is required to add the re-inspection of septic systems as required re-inspection.

B. Identification of Sewage System Maintenance Inspection Program Areas and Sewage System Inventory

As a first step, Midland Building Department will need to identify areas that would be subject to Mandatory Programs (these areas are set out in Article 1.10.2.3. of Division C of the Building Code).

As a next step, the Midland Building Department will need to identify existing sewage systems located within areas subject to Mandatory Programs. These sewage systems may be identified by reviewing:

- a) Assessment reports, in consultation with the local source protection authority, to identify septic systems identified as part of the Assessment Report threat enumeration.
- b) Permit applications submitted under the *Building Code Act, 1992*.
- c) Certificates of approval or use permits issued under the Environmental Protection Act.
- d) Orders issued under the *Building Code Act, 1992*.
- e) Records of problems and complaints.
- f) Water use records.
- g) Maintenance inspection reports (for systems that require the existence of a service agreement as a condition of use, or for systems previously inspected by the Principal Authority).
- h) Lists of properties with residential or other uses not serviced by sewage works administered by the Ministry of the Environment [or municipal services] and/or
- i) Field surveys

C. Inspection Notification

Mandatory inspection programs require that all systems be inspected every five years. In doing so, the Town may choose to prioritize areas for inspection based on:

- Proximity to a municipal residential drinking water well or surface water intake as identified in the local assessment report;
- Known groundwater or surface water contamination related to sewage;
- Previous drinking water issues at a well or intake that may be related to sewage, as identified in the local assessment report;
- Age of on-site sewage system;
- Systems without records. The Town may find it helpful to notify property owners of the intention to inspect their property.

Such notifications may include notice of:

- a) Any applicable fees to be charged;
- b) Procedural information;
- c) Whether the Town accepts third-party certificates as an alternative to conducting an inspection and, if so, requesting owners to notify the Town if they have retained a third party for this purpose;
- d) A contact name within the Town, and
- e) The legislative authority for the inspection program. It may be helpful to send such notifications well in advance of the inspection to give the opportunity for the property owner (or representative) to be on site on the day of the inspection and to gather information and records which may assist in the inspection, and also to give the property owner the opportunity to undertake remedial work prior to the inspection.

Where the Town has determined that it will accept third-party certificates as an alternative to conducting an inspection, the Town should provide sufficient time:

- a) For the property owner to consider retaining a person qualified to sign such a certificate;
- b) If a person is retained, for the person to inspect the sewage system; and
- c) For any necessary remedial work to be carried out where this will be necessary before the person may sign the certificate.

D. Inspections

Maintenance Inspections - Overview

The Ministry of Municipal Affairs and Housing has produced guidelines that set out a progressive audit approach to maintenance inspections for sewage systems, as with most inspections under the *Building Code Act, 1992*. Under this approach, initial inspections are designed to be non-intrusive tests and will generally avoid significant disturbance to the system and to the surrounding soil area. Where concerns are identified, more intensive tests may follow.

A Phase I maintenance inspection typically would be sufficient to establish compliance with Section 8.9. of the Ontario Building Code. A follow-up Phase II

inspection (described below) would be required where the Phase I inspection indicates a defect or potential failure of the system.

E. Phase I – Maintenance Inspections

Inspections generally begin with a review of available records, including material collected in the identification phase, and reports from previous inspections.

The purpose of Phase I maintenance inspections is to:

- a) Obtain the most recent information on the system, as well as the size of the building and the number of fixtures and bedrooms that it is servicing;
- b) Locate the sewage system's components;
- c) Identify any obvious or outward signs of malfunction or failure; and
- d) Identify systems that are at risk of malfunction or failure.

Phase I maintenance inspections generally avoid significant disturbance to the system and the surrounding soil area. During the course of a Phase I maintenance inspection, the inspector would normally identify:

- a) The type of occupancy to determine the source and type of the sanitary sewage;
- b) The source of water supply (municipal, well, lake, etc.);
- c) The approximate volume of sewage generated;
- d) The use of special devices such as garbage grinders or water softeners;
- e) The general nature of the system (class, components, type, layout, etc.);
- f) The location of the system's components with respect to wells, surface water, and other environmental features;
- g) The approximate level of ground water. This may be achieved by:
 - i. reviewing local maps and records of ground water elevation observed on site or; nearby properties, including the local assessment report, if available;
 - ii. Observing the conditions of the septic tank and the distribution box for indications of ground water infiltration during the site inspection;
 - iii. Observing the elevation of nearby water body, or evidence of ground water infiltration in other subsurface structures during the site inspection; or
 - iv. The use of hand auguring;
- h) The size, material and the condition of the septic tank, or the holding tank;
- i) The frequency of tank pump-out and the last time the tank was cleaned;
- j) Any indication of sewage system failure, including:
 - i. Evidence of backup of effluent;
 - ii. Signs of hydraulic failure (breakout of sewage, wetting conditions in the leaching bed area);
 - iii. Condition of surface vegetation; and
 - iv. Odour problems;
- k) Documentation of previous effluent sampling test results where required (i.e., under Article 8.9.2.4. of the Building Code)

F. Phase II – Follow-Up Maintenance Inspections

It may be appropriate to undertake more intensive follow-up maintenance inspections where:

- a) The Phase I maintenance inspection has identified that the septic system is at risk of future malfunction or failure, or
- b) The Phase I inspection detected a malfunction or failure, but did not reveal the reason (e.g., location or nature) of malfunction or failure.

Phase II inspections will be familiar to Town in terms of usual Building Code enforcement activities (i.e., investigation of potentially failing sewage systems, inspections due to neighbour complaints).

The Phase II inspections may typically include examinations of the following elements:

- a) The depth of the sludge layer and the distance from the top of the sludge layer and the outlet tee;
- b) The thickness of the scum layers;
- c) The distance between the bottom of the scum/grease layer and the bottom of the outlet tee;
- d) The distance between the top of the scum layer and the top of the outlet tee;
- e) The physical condition of the inlet and outlet; and
- f) The condition of the effluent filter, if utilized.

For sewage systems utilizing treatment units, Phase II inspections may also include a review of:

- a) The existence of a maintenance agreement and the date of latest servicing;
- b) The test results of a new round of effluent sampling (if otherwise required by the Building Code, or by an authorization issued by the Building Materials Evaluation Commission); and
- c) Operational problems or system malfunction before or, at the time of inspection.
- d) Where used in sewage systems, distribution boxes, dosing tanks and pumps will be inspected to determine their condition and functionality.

Phase II inspections of leaching beds will also consider:

- a) Clearance distances to environmental features, wells and surface water intakes;
- b) Soil type and its permeability;
- c) Additional sources of hydraulic loading (e.g. surface discharge, roof drains);
- d) Evidence of ponding;
- e) Encroachments into the leaching bed area (e.g. building additions, patios, driveways, pools); and
- f) Trees and deep rooting shrubs in the vicinity of the bed.

Blockages in the leaching bed and pollution sources may be identified by measures including:

- a) Evaluation of in-home plumbing and estimates of water usage;
- b) Conducting a leak diagnostics;
- c) Conducting a flow trial;
- d) Conducting a dye tracing test; or
- e) Excavating a cross section of the leaching bed.

G. Inspection Reports

The Building Department will need to maintain documentation with respect to maintenance inspections, which will include the following information:

- a) Identification of the property attended;
- b) Identification of any information collected as part of the inspection;
- c) Status of deficiencies noted in previous inspections;
- d) Deficiencies identified during the current visit;
- e) The legislative authority for the inspection program; and
- f) Enforcement action taken, if any.

This information will later be utilized for meeting the required reporting to the Source Water Protection authority.

H. Funding Strategies

The Town of Midland must also consider how a re-inspection program fit into their strategic priorities, in terms of staffing and financial resources. Several approaches for funding such a program might be considered, including general revenues, user fees and youth employment programs to hire students as seasonal inspectors.

The On-site Sewage System Maintenance Re-inspection Program may be funded by the following:

1. Property taxes and general revenue. Council could approve and endorse the allocation of funds from property taxes or general revenue. (Paid by all property owners).
2. Users pay approach. Owners of properties identified with a septic system requiring re-inspection would pay a fee once every 5 years when their system is being re-inspected. (Paid by septic owners).
3. Water System user rates. Councils could approve and endorse the allocation of funds from water user rates or water service general revenue. (Paid users of municipal water).

The cost of the re-inspection program should be to provide a 100% user cost recovery system.

The *Building Code Act* requires that notice of the proposed changes in or establishment of fees be given to such persons as prescribed and that a public meeting be held concerning the proposed changes within the period specified by regulation before the regulation, by-law or resolution to implement the proposed changes is made.

I. Public Awareness

Compliance can be high in a large part due to successful education and appreciation by property owners of the proper operation and maintenance of a healthy on-site sewage system. The education of property owners about their responsibilities and legal obligations is in a large measure, the role of the Town or the Principal Authority. However, Home Owners Associations and other community groups can provide valuable support in public education initiatives to their membership and others.

In order to achieve this public awareness a letter to property owners regarding the mandatory re-inspection program will be necessary. The details of such a letter have yet to be determined but the intention of such a letter will be to inform and outline the scope of the mandatory re-inspection program. This letter will also describe the follow-up options that will be available to property owners whose system exhibit deficiencies found during the re-inspection.

Other means of communications may include information posted on the Town web site and helpful links to other available resources along with the possible development of a brochure developed in co-operation with the Simcoe County Chief Building Officials that would provide a unified communication across the County of Simcoe.

J. Available Resources

The Ministry of Municipal Affairs and Housing, Ontario Onsite Wastewater Association (OOWA), Ontario Rural Wastewater Centre, Ontario Building Officials Association, are great resources for information on the care and maintenance for septic systems.

- OOWA - Getting to Know Your Septic System Brochure
- OOWA - About Your House
 - Buying a House with a Well and Septic System
 - Your Septic System
- OOWA - A Guide to Operating & Maintaining Your Septic System
- OOWA - Septic Dos and Don'ts
- OOWA - Septic SmartORWC - Your Septic System: Protecting your Investment and the Environment
- OMAFRA - Septic Smart booklets & DVD's
- CMHC - Buying a House with a Well and Septic System
- ORWC - Pharmaceuticals & Personal Care Products and On-Site Systems
- ORWC - How a Bell Siphon Works
- ORWC - Water Softeners and On-Site Systems

NOWRA and WQA - Water Softeners and On-Site Systems
 CMHC - Homeowner Septic System Booklet
 CMHC - Homeowner Septic System Booklet - French
 Care & Feeding of Your Septic System

SUSTAINABILITY CONSIDERATIONS:

1. Is the item currently identified in the Severn Sound Sustainability Plan?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
List Goals and Strategic Directions:		
2. Does it fulfill the sustainability vision of the Town of Midland?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. Are there negative impacts on any of the three (3) sustainability pillars (environment, community, economy)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
4. Does it advance other initiatives?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Comments		
The proposed re-inspection program directly implements one of the strategic direction actions of the Sustainability Plan and also advances the implementation of the Source Water Protection Plan.		

CONCLUSIONS:

This report serves to provide information and highlight for Council certain issues respecting inspections undertaken in connection with a mandatory on-site sewage system maintenance inspection program.

FINANCIAL IMPACT:

Presently, Tiny Township has successfully run a septic re-inspection program at a cost to residents of \$81.55 per inspection. Tay Township offers a similar re-inspection program at a cost of \$127.69 per inspection.

The Building Department is confident that services can be provided for a fee of \$100 plus HST per inspection. Further fees of \$350 would be required for issuance of order.

Based on the minimum fee of \$100, additional revenue would be approximately \$20,000 per year.

Prepared by: T. Paquette, Chief Building Official
 Approved by: W. Crown, Director of Planning and Building Services
 Reviewed by: C. Tripp, CAO