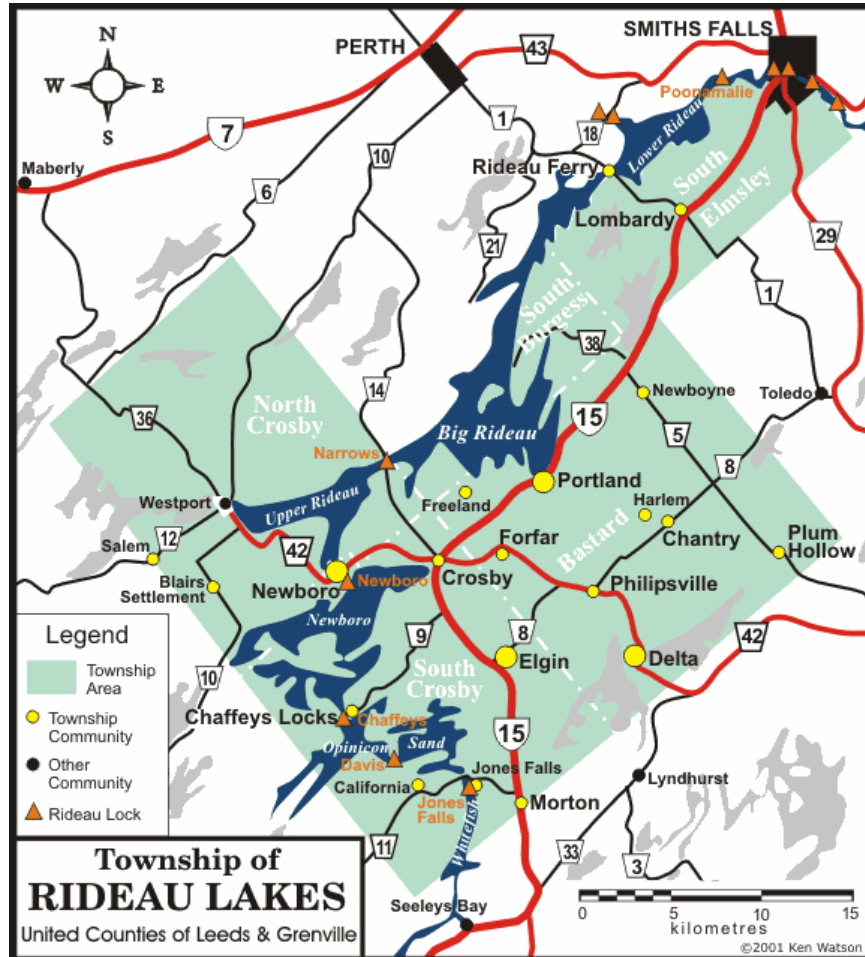


2009

Township of Rideau Lakes On-site Wastewater Disposal System Re-Inspection Program



Prepared For: Township of Rideau Lakes

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Septic Inspector

Winter 2009

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1.0 Introduction

A working sewage system is an integral part of any functioning home or cottage not serviced by a municipal sewer. As such, proper maintenance of the sewage system is integral to the continued life of the system. An on-site wastewater disposal system re-inspection program ensures that community members are aware of how to maintain their systems, and holds people accountable for ensuring that their systems are not health or environmental risks to the community.

The improper operation of on-site sewage systems can have both health and environmental impacts beyond the property on which it is located. Nutrient and bacteria rich effluent can travel through soil and rock fractures to surface water bodies and ground water sources. High nutrient levels can cause excess plant growth, eutrophication and alteration of the natural habitat of fish. This places a responsibility on the homeowner to ensure that their sewage system is working properly, not only for their own health, but also that of the community members.

The current re-inspection program combines homeowner education about septic system operation and maintenance with an inspection component. An effective follow-up procedure is essential to insure that the program effectively manages identified sewage system problems.

The *Building Code Act* (BCA)(1992), and Part 8 of the Ontario Building Code (OBC) regulates the design, construction, operation and maintenance of sewage systems. The OBC, however, has powers which only extend to those systems with a design flow of less than 10,000 Litres/day, serving no more than one lot. Systems which do not fall within these parameters are regulated by the Ministry of the Environment, under the *Ontario Water Resources Act*.

The authority for the Mississippi Valley Conservation, Rideau Valley Conservation Authority and other enforcement agencies to conduct inspections of potentially unsafe sewage systems is provided by BCA s.15.9(1). This act provides inspectors with the right of entry onto land “to determine whether a building is unsafe”. Under Part 1 of the OBC an on-site sewage system is treated as a building and BCA s.15.9(3) deems a sewage system to be “unsafe” if it is not maintained or operated in accordance with the BCA and the OBC. BCA s.18 outlines the powers that an inspector may exercise for the purposes of carrying out an inspection. If the inspector finds the system to be “unsafe”, he or she may make an order under BCA s.15.9(4) setting out the steps necessary to render the building safe, and may require that the steps be taken within a certain period of time. This enforcement for the Township of Rideau Lakes will be carried out by their Chief Building Official (CBO) or his/her appointed representative.

Further authority will be given with amendments proposed to the BCA under the *Clean Water Act, 2005*. This act was passed on October 18, 2006 and will help protect drinking water sources for all Ontarians.

A visual inspection of the sewage system can determine if the system is “unsafe” (defined in OBC 8.9.1.2 as a breakout of effluent onto the surface, contamination of a well or of a surface water source). Clearance distances to the well and surface water from the sewage system can also be verified by a visual inspection. To determine if the system is being maintained and operated in accordance with the OBC and the BCA, a thorough inspection of the tank is necessary.

In 2009, 309 homeowners were contacted in the spring with a request to participate in a septic system re-inspection program for 100 volunteers. A site visit was made and a tank inspection and visual inspection of the leaching bed were completed if the property owner returned correspondence to the MRSSO. If the homeowner was insistent that their septic tank should not be excavated only a visual inspection of the property was completed and the septic tank not disturbed. In situations requiring further attention the CBO will be mailed a copy of the notification to the homeowner and will provide enforcement accordingly. The results for the 101 inspections completed in 2009 were compiled and this report is the culmination of those efforts.

2.0 Program Initiation

2.1 *Criteria for Selection of Properties*

In spring 2007, Township of Rideau Lakes approached the Rideau Valley Conservation Authority and requested a proposal for conducting a 100 re-inspection pilot program for the township. The proposal was accepted by the Township of Rideau Lakes and the initial voluntary re-inspection program was started.

Areas selected for re-inspection were based on Rideau Valley Conservation Authority data, township identified areas of heavy development pressure and consultation with lake/cottage associations. Township of Rideau Lakes staff ultimately decided on the properties which would receive a re-inspection program questionnaire.

Adopting a systematic approach to identifying areas for re-inspection within Township of Rideau Lakes, combined with putting less focus on the voluntary nature of the program helped to decrease the number of mail-outs required and increase the return percentage. This helped to reduce staff time and mailing costs required for the program.

2.2 *Re-Inspection Protocol*

Once selected, a letter was mailed out to each property owner informing them of the re-inspection program, what their participation would entail, and a description of the inspection to take place. Sent together with the information letter was a two sided questionnaire to be completed by the homeowner and returned to our office.

When the questionnaire was returned to our office, the property was flagged for a full inspection. A full inspection consists of a visual inspection of the bed and property and an inspection of the contents of the septic tank. This was assuming that the sewage system was a Class 4 system with a septic tank and bed. No properties were entered or inspected which had not first granted the MRSSO permission by way of returning the questionnaire. It was very important for the township of Rideau Lakes that no properties be entered without prior consent from the property owner.

A change for 2009 was the increased focus by the MRSSO office on scheduling appointments with homeowners. This was a very important aspect of the re-inspection program this year and will be detailed later in this report.

The tank inspection was deemed to be a highly invasive component of the re-inspection program, one which could potentially result in controversy if conducted without the permission of the homeowner. Permission was considered granted by receipt of a completed questionnaire. If explicit permission had not been granted then no inspection of the property was conducted. A detailed description of what a visual inspection and a tank inspection was comprised of can be found in Appendix C. If any doubt remained about the location of the sewage system then more information was requested of the homeowner. If the homeowner indicated that they did not want to be involved in the program then the Mississippi-Rideau Septic Office made note of this fact and proceeded to the next property which had returned the questionnaire.

The inspections in Rideau lakes were conducted from June 17, 2009 to October 8, 2009. Seventy five percent of the re-inspections were completed between June 17, 2009 and August 26, 2009.

3.0 Results and Discussion

3.1 *Distribution of Sewage System Re-Inspections*

The septic re-inspection program completed 100 site visits in 2009. The areas of Big Rideau, Lower Beverly, Mill Pond, Whitefish and Wolfe Lake were involved in the program.

At each site visit, GPS readings were taken for on-site services such as well, septic system (distribution field and/or septic tank), privy, and greywater pits. These GPS co-ordinates were entered into a database and will be accessible through the MRSSO if system components need to be located in the future.

From information collected through site visitations, records of mailing addresses, and observations at the time of the inspection, the 101 properties were designated to be either seasonal, residential, farm or residential/commercial. While residential properties generate more wastewater, and have the potential to contribute more nutrients to surface water bodies, seasonal properties often have older sewage systems more likely to be contributing nutrients. Therefore a mix of both seasonal and residential properties is desirable. The 2009 program generated responses from primarily cottage properties. **72%** of the properties inspected were designated cottage (seasonal), **25%** were designated residential and **3%** were vacant. A property was deemed cottage (seasonal) if the mailing address for the owner was different from the property address.

During the four months of field work we encountered 66 homeowners in 101 inspections. This is an integral part of the program and a major on-site improvement from 2007. Appointments were arranged with homeowners at their request. During an appointment there was a great deal of time to promote awareness and education of on-site wastewater treatment issues and alternatives. A large percentage of property owners would prefer to be present during the septic re-inspection. The system of making appointments worked quite effectively in 2008. This year minor changes were made to reduce the increased administrative strain on the MRSSO staff. We received a very positive response from the majority of property owners we encountered. This is a very encouraging sign and highlights that an increasing number of cottagers and shoreline property owners are learning more about water quality and are interested in the wastewater systems on their properties.

3.2 Age & Class of Sewage System

There are 5 primary classes of wastewater treatment systems identified in Part 8 of the OBC as outlined below.

Class 1 - Earth Pit, Vault, Pail and Portable Privies

Class 2 - Greywater Systems

Class 3 - Cesspools

Class 4 - Trench Beds, Filter Media Beds and Shallow Buried Trenches

Class 5 – Holding tanks

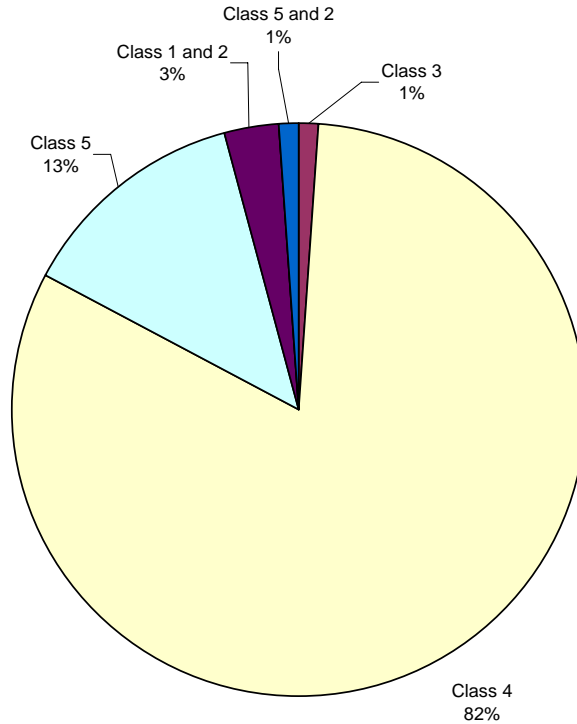
A Class 4 sewage system was most prevalent; found in 80 of the properties inspected. Due to the difficulty in determining the type of Class 4 sewage system in use, and the lack of homeowner certainty, we did not distinguish between the different types of Class 4 systems in this year's analysis. It is hoped that with assistance from the Development Services Department at the Township of Rideau Lakes, in future years, statistics on the number of filter beds versus trench/conventional beds will become available.

There are very stringent requirements in the OBC for allowing the installation of a Class 5 system (holding tank). One of those requirements is that it can be installed only when no other type of Class 4 system, meeting the OBC requirements, can be placed on the property. **Thirteen holding tanks were identified by the re-inspection program in 2009.** It is promising that in the first years of the program very few holding tanks were identified, however given the number of systems inspected it is likely not representative of the Township as a whole.

In 2009, 3 dwellings were serviced by a privy and/or a greywater pit (Class 1 and 2 systems) as their primary means of sewage disposal. These situations can be a risk to the health of the lake. Typically these systems are older and in worse repair and are coupled with greywater sources discharging to the surface or to a greywater pit of undetermined size.

Figure 1 displays the primary type of on-site wastewater system for each property where it was known, either from the visual inspection, or from information provided by the homeowner. The graph only includes 98 systems since three properties were vacant.

Figure 1: Primary Sewage System Class



3.3 Class 1 & Class 2 Systems

After inspecting 101 properties, only 3 utilized a privy and grey water pit for their on-site treatment requirements.

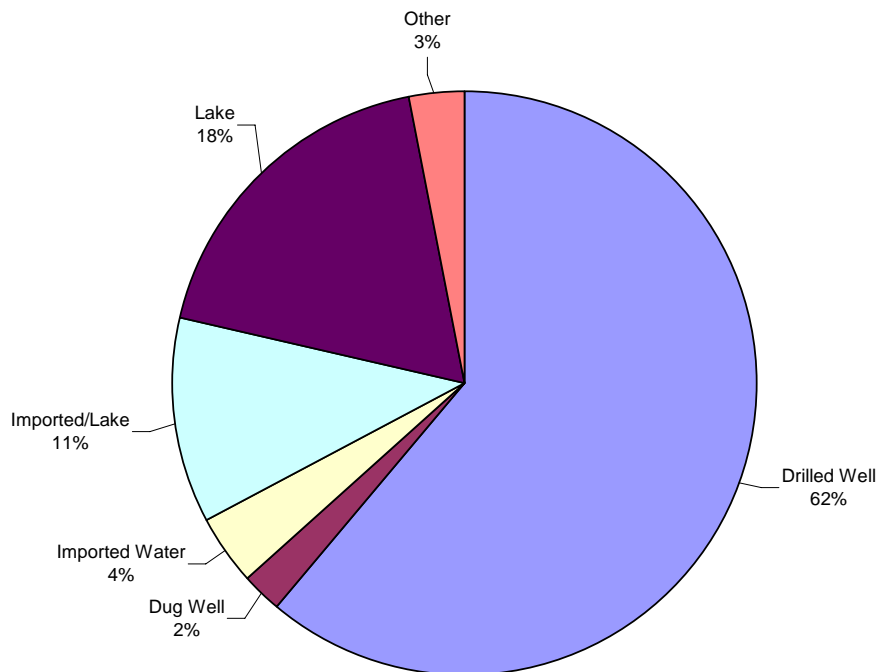
Class 1 and 2 systems are not the best options for protecting lake water quality. Typically these classes of system do very little to treat wastewater. They primarily provide a storage location until the wastewater trickles away. If these systems are located too close to a water body they can have a significant impact on water quality during seasons of peak use.

3.4 Wells and Drinking Water

Information was also collected during the field inspection on the water source, and water testing practices of the homeowners. During the visual inspection, if a pipe pumping water from the water body was visible, and no well was located then the water source was assumed to be the lake (or river) and recorded as such. If no pipe was visible and a well was located, then the water source was recorded as a drilled well. A water source indicated as “other” means it could not be determined the source of water. Information provided by the homeowner would be more accurate than that found during the visual inspection, and was preferable to identifying the water source on-site.

Figure 2 shows the number of systems for each category of water source. Information was asked for regarding the level of treatment of the water before consumption (water softener, UV filter, reverse osmosis, iron filter, etc.) if the property owner was present on site.

Figure 2: Water Source



The Leeds, Grenville and Lanark Health Unit has free water testing available for residential properties, and water bottles are available for pick up at the office in Smiths Falls. However, even with all of these resources available, many people continue not to test their drinking water regularly.

The Health Unit recommends that a residential property test their water three times a year, each time submitting three separate samples one week apart. For a seasonal property, only two tests are recommended, each time submitting three separate samples. In practice it was found that many people do not test their water even annually, and some have not had it tested since they had their well installed.

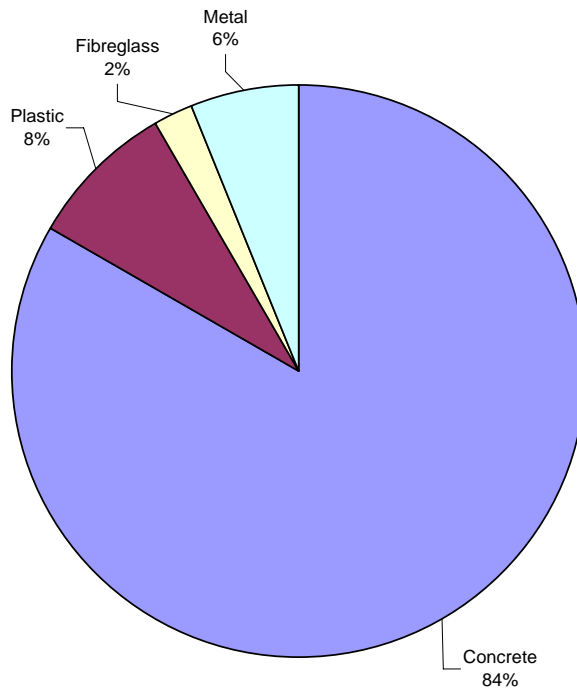
3.5 Tank Inspection

One of the most frequent questions a homeowner asks is “How often should I pump my tank?” Most government documents and extension publications suggest that a septic tank should be pumped out every 3-5 years.¹ Appendix B has a table which provides the theoretical pumping interval for permanent residential properties, assuming the number of people in the home, and the tank size. For a home with three people and a standard 3600 L (952 US gal) tank, the author recommends a pump out every 3.7 years. This table, however, does not provide direction for seasonal owners, who might only be using their cottage for three months of the year. Another resource is the OBC, which requires that a septic tank be pumped out when the sludge and scum occupy 1/3 of the working capacity of the tank (8.9.3.4.(1)). This will prevent the sewage from traveling too quickly through the septic tank, not allowing the solids and fats to properly separate from the effluent. To give the homeowner, on an individual basis, an estimation of the frequency for pumping out their septic tank, the depth of sludge and scum was measured during the tank inspection.

Of the 80 Class 4 systems inspected, **38%** required a tank pump-out. One of the unforeseen problems with inspecting the tanks was that some people waited to respond with their questionnaire until they had their tank pumped. This made it essentially impossible for us to provide the homeowner with any information regarding how frequently they should pump. A side benefit though was that it created an incentive for people to have their tanks maintained, knowing that someone was coming to inspect it.

The material of the tank was determined by using a soil probe to locate the tank and judge the material by the contact with the probe and the sound/feel it created, if the tank was not excavated. Tank information was available for all class 4 or 5 systems inspected in the township. Figure 3 shows the breakdown for the common tank materials found: concrete, plastic, fiberglass, and steel.

Figure 3: Construction Material of Septic Tank



Information was also collected on the condition of the inlet and outlet baffles in the septic tanks. Roots around the baffle can block the sewage or effluent from entering or exiting the tank. This can cause a sewage back-up in the home, or can lead to a bed failure if the roots find their way to the distribution bed. Missing baffles are also noted as they serve an important function in the septic tank, and are required by the OBC. Baffles prevent the re-suspension of solids in the tank, which can lead to premature bed failure. A poor baffle typically resulted in a recommendation to the homeowner to watch the condition of the baffle at subsequent pump-outs for failure. Generally, the baffles that were inspected were in good condition, with a few exceptions. Typical exceptions included corroded concrete and root intrusion.

Effluent filters are a plastic screen which allows the effluent to pass through large slots that reduce the turbulence as the sewage exits the tank. The reduction in turbulence allows additional solids to settle, reducing the amount of solids entering the bed, and therefore increasing the life of the septic bed. The Ontario Building Code requires an effluent filter in every new system installed and many septic installers will retrofit one into an old tank upon request. These relatively inexpensive additions (~\$150) to a septic tank can prolong the life of a septic bed, which is an expensive component of a septic system to replace (~\$6,000 - \$15,000).

3.6 Visual Problems and Separation Distances

The inspection of a property also involves a visual component identifying any problems such as pipes discharging to the surface or trees growing on the septic bed. Horizontal separation distances are also measured from the well and shoreline to the sewage system components. There is very little that can be done to remedy existing non-compliant separation distances. It is important that the OBC separation distances are respected on all new installations.

A visual inspection cannot accurately assess the functionality or remaining lifespan of an existing septic system. It can only serve to provide a rough approximation of the infiltrative effectiveness of the wastewater distribution system (drain field).

It is also very difficult to assess the separation distance from the distribution pipes to the water level, bedrock or other confining layer without excavating a hole in the distribution field. Rough approximations can be made using a soil probe but this technique has limitations. The current Ontario Building Code (OBC) requires a minimum of 0.9 meters of fill material (typically sand) between the distribution pipes and the water level, bedrock or other confining layer. Any less material than this can result in inadequate wastewater treatment and contribute to degradation of environmental water quality.

Another crucial element contributing to septic system function is the amount of cover material over top of the distribution pipes. The OBC requires between 0.30 meters and 0.6 meters of cover over the pipes. The purpose of this material is to provide a barrier between the wastewater and the surface. This layer also facilitates the transfer of oxygen down into the distribution pipes. Oxygen is a key component of the treatment of wastewater from septic systems. Too little cover material can result in the premature escape of wastewater to the ground surface while too much cover can lead to premature clogging of the distribution pipes due to the inefficient transfer of oxygen to facilitate wastewater treatment.

Table 1 is an overview of the overall program findings.

Table 2 identifies the system deficiencies found in 2009.

Appendix A shows some pictures typical of septic system deficiencies identified in septic re-inspection programs.

Table 1 – Re-inspection Results

No concerns	52
System Replacement Required	3
Remedial Work Required	42
More Information Required	4
Total	101

Table 2 - System Deficiencies*

Pump out required	37
Non-compliant septic tank	1
Non-compliant GW disposal	2
Baffles require maintenance (broken/roots)	15
Unattached/Exposed/Leaking Distribution pipes	1
Final Grading (erosion/too much/not enough cover)	2
Total	54

*note, some systems have more than one maintenance issue.

3.7 Follow-up and Enforcement

For 2009 carbon copies of the re-inspection form were either left with the property owner on-site or in a protected location on-site, i.e. between doors.

Properties that the Mississippi Rideau Septic Office feels are of significant threat to the environment and public health have been forwarded to the Rideau Lakes Building Department for enforcement.

Enforcement of violations on the properties identified by the re-inspection report will be at the discretion of the Rideau Lakes Building Department.

3.8 Education Seminars

We were available to attend any meetings for lake management plan development to help in a technical advisory role. The purpose of these events was to educate the general public on septic systems and the purpose of the septic re-inspection program in Rideau Lakes.

Presenting septic system information to lake association meetings is a much more effective method of getting information across to shoreline property owners than presenting educational seminars. In 2009 the MRSSO presented information to the Big Rideau Lake Association.

The importance of an education component is significant. Continual education combined with a consistent re-inspection program will result in improvements to the management of septic systems within the Township of Rideau Lakes. Homeowner education went very well in 2009. The increased provision for making appointments is very helpful in improving homeowner education. The current system appears to be working quite effectively.

3.9 Program Implementation

The third year of the re-inspection program in Rideau Lakes was very successful. A total of 35% of all questionnaires mailed to property owners were returned. This resulted in 93 complete tank inspections (visual and invasive).

The biggest change to the re-inspection program in 2009 was an increased effort by the MRSSO to facilitate on-site meetings with homeowners. It was felt that by meeting more homeowners on-site a greater educational component would be present in the re-inspection program. This provision resulted in a significant increase in the administrative workload faced by the MRSSO staff. The volume of telephone calls and email correspondence was significantly increased resulting in a large amount of time being dedicated to answering public inquiries and scheduling appointments. In 2009, organization and scheduling of appointments was a limitation to the efficiency of the re-inspection program. Several changes will be suggested to this process for 2009.

A second change that was very beneficial for the 2009 re-inspection program was the requirement for property owners to have their septic tanks exposed prior to a site visit by the MRSSO. Failure to have the tank lids exposed for septic re-inspection, resulting in the requirement of MRSSO staff to excavate the lids, would result in a fee of \$20 per lid. This requirement worked out very well with the majority of homeowners exposing the tank lids prior to re-inspection. There were no properties identified as needing excavation required by MRSSO.

During the 2009 re-inspection program approximately 51 percent of the properties inspected had no on-site wastewater concerns. The rest of the properties had concerns of some manner. These concerns were detailed earlier on in the report. The majority of these concerns are with the operation and maintenance of existing septic systems. Concerns of this nature are not necessarily of immediate threat to environmental and public health. Failure to address them can result in premature failure of existing septic systems. Premature failure of these systems can result in significant environmental damage & costly system repair or replacement. The OBC does not provide an easy way of following up/enforcing compliance with these maintenance concerns but it should be suggested that some sort of follow-up on the homeowner's behalf should be reported to the Rideau Lakes Township. Continual education is a big help in making property owners aware of the importance of septic system operation and maintenance. Care should be taken to ensure that any further development on shoreline properties respects OBC and Township setback requirements from the high water mark and that any renovations to cottages are required to undergo a review under OBC Parts 10 and 11 to determine whether system performance will be negatively impacted by the proposed renovations.

It is very important that follow-up inspection becomes an integral part of the re-inspection program for the small percentage of properties that require immediate

attention. Of the 101 properties inspected in 2009 only 3 systems require immediate attention. These properties have been forwarded to the Township of Rideau Lakes Building Department for enforcement. The real benefit of this program is as a public relations and education exercise. If implemented properly the re-inspection program can be a valuable tool for real changes to shoreline development and freshwater protection. Follow-up enforcement should be performed during the late spring/early summer season and results of the inspections should be forwarded to the Rideau Lakes Township.

The MRSSO also would like to suggest an early summer kick-off meeting and wastewater workshop offered to homeowners and cottagers in the Township. This would provide an excellent opportunity to explain the program before it begins and increase awareness of water and wastewater issues in the area.

It is hoped that with some changes, the program can become more effective in locating the systems most in need of being found; those causing harm to our water and the environment.

4.0 Recommendations

The MRSSO encountered several hurdles with the septic re-inspection program this season. The first was the introductory letter broadly stating the MRSSO was interested in re-inspecting “septic systems”. The second hurdle was the number of property owners that understood the MRSSO was going to inspect their property, regardless of response. The last hurdle was the slow response of property owners. The following will be an explanation of these issues and possible recommendations to improve the MRSSO service to the property owners.

The issue with broadly stating a “septic system” re-inspection will be completed is that most property owners would associate “septic system” with a tank and distribution field. To ensure property owners with privies, greywater pits, cesspools, and holding tanks understand that their participation is just as important, the MRSSO will endeavor to communicate the different classes of septic systems as outlined in the OBC and the potential hazards to the environment and human health if they are not maintained properly.

If every septic tank that was exposed for the re-inspection program was inspected this season we could have completed more properties. There was some confusion when property owners read that an appointment was not required. Many owners understood this to mean it was not required to return the questionnaire or contact the MRSSO. As per our policy, we do not inspect properties without questionnaires. To prevent this from happening in the upcoming season it will be made clear that if they do not contact the MRSSO in some manner a re-inspection will not be completed.

It is the intention of the MRSSO to conduct two mail outs for the upcoming season. The first would continue to be in May and second mailing would take place the first week of July. In this manner property owners will not be forced to make appointments three months in the future, when plans or vacations may not be known.

With the implementation of these recommendations we will be able to uphold our commitment to the property owners of Rideau Lakes Township in providing fair, accurate and timely service.

5.0 Conclusions

The 2009 on-site wastewater disposal system inspection program was a success. All aspects of the program have so far proceeded according to plans.

The 2009 program completed a full inspection on the majority of the systems selected. Approximately 51% of these systems had no septic system concerns. It should be noted that age was not a significant factor in the system deficiencies identified. Of larger impact was the diligence on behalf of the property owner with regards to operation and maintenance of the septic system.

Three properties were identified with major concerns and these properties are currently undergoing enforcement proceedings or will be in the immediate future.

Interaction with property owners during the re-inspection program this year was very positive. Almost 70% of all property owners were able to be present during the re-inspection. Most of the homeowners encountered were very supportive of the re-inspection program. Some effort needs to be made to bring local residents, particularly campgrounds and cottage rental locations, on board with the re-inspection program. Further education will hopefully remedy this.

Having homeowners excavate their tanks will be continued in the 2010 re-inspection season. This enabled a much more efficient re-inspection process.

Continued emphasis will be placed on attending Lake Association functions as opposed to offering dedicated seminars within the Township. By attending the AGMs of these groups the MRSSO is more likely to reach a larger percentage of our target audience.

We would like to take this opportunity to thank those who helped make this years program a success. Sheldon Laidman and Carolyn Mulville at the Township of Rideau Lakes have provided municipal support and were very supportive when dealing with the challenges encountered during this years re-inspection program.

We look forward to being involved in the program in 2010. If we can continue to perform septic inspections every year, we will begin to have a more complete idea of the status of on-site wastewater treatment in Rideau Lakes Township. It is anticipated that by implementing the recommendations made, and taking the lessons learned in 2007-2009, that the program will only become more effective in the future. We hope that the momentum of the on-site wastewater disposal system inspection program continues in the coming years, as we believe it is a valuable asset to the health of the environment for our community.

6.0 References

- 1 Bounds, T.R. Management of Decentralized and Onsite Wastewater Systems *In* ADAE Proceedings of the 9th National Symposium on Individual and Small Community Sewage Systems. March 11-14, Fort Worth, Texas. Pp.435-450, 2001.

- 2 R.J. Burnside & Associates, City of Ottawa Rural Wastewater Management Study (Document 1) Final Report

Appendix A: Mail-out Letters



1439 County Road 8, Chantry, Ontario K0E 1G0

PLEASE BE ADVISED THAT THE TOWNSHIP OF RIDEAU LAKES WILL BE CONDUCTING INSPECTIONS OF EXISTING SEWAGE SYSTEMS IN YOUR AREA THIS SUMMER.

It is the responsibility of the Township of Rideau Lakes to regulate on-site sewage systems with a total daily design flow of less than 10,000 litres per day. Part 8 of the Ontario Building Code is a direct transfer of responsibilities from the Environmental Protection Act, this section of the Building Code is meant to ensure proper installation, operation and maintenance of on-site sewage (septic) systems. The Building Code Act defines a sewage system equivalent to a "building", and as such, a sewage system that is discharging effluent onto the surface of the ground, or has not been maintained or operated in accordance with the Ontario Building Code, is determined to be an unsafe "building".

The Mississippi/Rideau Septic Office (MRSSO), on behalf of the Township of Rideau Lakes, will be conducting inspections of existing septic systems in your area beginning the summer of 2009. The MRSSO is a co-operation between the Rideau Valley and the Mississippi Valley Conservation Authorities, contracted to conduct the re-inspection program. These inspections are being conducted to help ensure proper operation and maintenance of the septic systems in your area. A properly functioning septic system is an integral part of a healthy shoreline environment. Improperly maintained systems can be a significant contributor of nutrient and bacteriological pollution into an adjacent water body.

Several subtle changes have been made to the septic re-inspection program for 2009. Re-inspections will be more rigorously scheduled to accommodate more property owners on-site and it is requested that you have your septic tank located and the lids excavated prior to the arrival of MRSSO staff. If you wish to be present during the re-inspection of your property, appointments will be made on a first come, first served basis during the weeks outlined in the accompanying program description. If MRSSO staff is required to locate/excavate the tank then a moderate fee will be charged for this service.

Please read the provided program description and fill in the accompanying questionnaire to the best of your ability. After the re-inspection is completed, a letter stating the status of the system and any deficiencies present will be sent to you and the local OBC Part 8 regulations office.

Any questions or comments can be directed to me, Jamie Saunders at the above numbers, or to Terry Davidson at 1-800-459-5975 x1107. We would like to thank you in advance for your co-operation.

Summer 2009

(PROPERTY OWNER/ADDRESS)

Dear (ENTER FIELD HERE):

Welcome to the Township of Rideau Lakes Sewage System Re-inspection Program. Your property, (ENTER FIELD HERE), has been selected for participation.

Property selection begins with the selection of lakes to be re-inspected for the season. **The Lakes involved in the 2009 program are: ENTER LAKES HERE.** Roads and properties are selected based on several factors including; lot density/size, water quality results obtained from the Conservation Authority and age of development. The selection process, as in past years, has been conducted by the Township of Rideau Lakes employees.

A property should be re-inspected approximately every 8-10 yrs. If we have re-inspected your property within the last year or if a new system has been installed within that time please inform the Mississippi-Rideau Septic System Office (MRSSO) providing no outstanding issues are present we will remove your property from the list.

The following is a list of the steps involved to ensure an efficient, accurate and unobtrusive septic system re-inspection for your property.

1. Included in this package is a Sewage System Questionnaire. While the Township may have some information about your septic system, this information requires updating. The first step in your participation is completing and returning the questionnaire. Please fax, email or mail the form, as soon as possible, to the number or addresses above. Do not feel as though the form must be fully completed to return it to us, every bit of information is useful.
2. Arrange a mutually beneficial time for re-inspection. The following weeks are available for re-inspection in the Township of Rideau Lakes. Appointments are not required but can be made between 8 am – 5 pm on a first come, first served basis by contacting the MRSSO.
July 21-25, 28-Aug.1
August 11-15
3. Before a re-inspection can occur the MRSSO requests that you expose both septic tank lids on your property (most tanks have 2). There will be a \$20 charge per lid which requires locating/excavation. This fee will be invoiced upon completion of the re-inspection program and included with the report for your property IF YOUR SEPTIC TANK LIDS ARE NOT

EXPOSED. No cost will be incurred if excavation is not required. The MRSSO will cover the tank and re-seed the disturbed earth before leaving the site.

4. The septic tank system inspection will include the following items:
 - visual inspection of tank structure
 - measurement of tank contents/requirement for pumping
 - visual inspection of bed
 - measurement of separation distances to key lot features
 - determining location of privies/greywater pits
 - briefing the homeowner on proper system maintenance and operation

5. The final step in the re-inspection program will be a report to you on our findings and invoice for tank excavation (if required).

Historically, a majority of the systems inspected were deemed to be fine, with only minor remedial work required. Should a system be found to be unsafe, the property owner must take the necessary steps to render the sewage system safe. The Building Code Act defines a sewage system as a “building”, and as such, a sewage system that is discharging effluent onto the surface of the ground, or has not been maintained or operated in accordance with the Ontario Building Code, is determined to be an unsafe “building”.

The primary role of the MRSSO, as the administrators of the re-inspection program, is to educate property owners of their onsite waste water treatment system and any deficiencies with it. Our secondary role is to enforce Part 8 of the Ontario Building Code when required. You, as the property owner, can expect the re-inspection, communication of results, and all inquiries to be dealt with in a timely manner.

If you have any questions about the Sewage System Re-inspection Program, do not hesitate to contact me, Jamie Saunders using the information provided below.

Thank you in advance for your co-operation. We know you share the Township’s desire to protect our water resources and ultimately the value of waterfront property around the lakes within the watersheds. Your co-operation in this program will assist in providing continued enjoyment of a clean, healthy waterfront environment for generations to come.

Yours Truly,
Jamie Saunders BSc.(Eng)
Re-inspection Program Co-ordinator
613-259-2421 ext. 254
jsaunders@mvc.on.ca

Appendix B: Septic Tank Pump-out Frequency Table

Estimated Septic Tank Pumping Interval in Years

Tank Size (L)	Household Size (Number of People)									
	1	2	3	4	5	6	7	8	9	10
1,890	5.8	2.6	1.5	1.0	0.7	0.4	0.3	0.2	0.1	
2,840 (≈2,700)	9.1	4.2	2.6	1.8	1.3	1.0	0.7	0.6	0.4	0.3
3,790 (≈3,600)	12.4	5.9	3.7	2.6	2.0	1.5	1.2	1.0	0.8	0.7
4,730	15.6	7.5	4.8	3.4	2.6	2.0	1.7	1.4	1.2	1.0
5,670	18.9	9.1	5.9	4.2	3.3	2.6	2.1	1.8	1.5	1.3
6,620	22.1	10.7	6.9	5.0	3.9	3.1	2.6	2.2	1.9	1.6
7,570	25.4	12.4	8.0	5.9	4.5	3.7	3.1	2.6	2.2	2.0
8,520	28.6	14.0	9.1	6.7	5.2	4.2	3.5	3.0	2.6	2.3
9,460	31.9	15.6	10.2	7.5	5.9	4.8	4.0	4.0	3.0	2.6

Appendix C: Ontario Building Code References

OBC 8.1.2.1. Classification of Systems

- Class 1 – all privies (portable, earth pit, vault, chemical, incinerating and composting).
 Class 2 – a greywater system
 Class 3 – a cesspool
 Class 4 – a leaching bed system
 Class 5 – a holding tank

OBC Table 8.2.1.5. Clearance Distances for Sewage Systems

8.2.1.5(1)	Horizontal distance (m) from a well with watertight casing to a depth of at least 6m	Horizontal distance (m) from a spring used as a source of portable water or well other than a well with watertight casing to a depth less than 6m	Horizontal distance (m) from lake, river, pond, stream, reservoir or spring not used as a source of portable water	Minimum horizontal distance to property line
<i>Earth Pit Privy</i>	15	30	15	3
<i>Privy Vault</i> <i>Pail Privy</i>	10	15	10	3
<i>Greywater System</i>	10	15	15	3
<i>Cesspool</i>	30	60	15	3

OBC 8.2.1.6. Minimum Clearances for Classes 4 and 5

Minimum Clearances for Treatment Units (m)

Structure	1.5
Well	15
Lake	15
Pond	15
Reservoir	15
River	15
Spring	15
Stream	15
Property Line	3

Minimum Clearances for Distributing Piping (m)

Structure	5
Well with a watertight casing to a depth of 6m	15
Any other well	30
Lake	15
Pond	15
Reservoir	15

River	15
A spring not used as a source of potable water	15
Stream	15
Property Line	3

Minimum Clearances for Holding Tanks (m)

Structure	1.5
Well with a watertight casing to a depth of 6m	15
Any other well	15
Spring	15
Property Line	3