

Exploring Lessons Learned with Municipal Re-inspection Programs for Residential On-site Wastewater Systems in Ontario: Spotlight on the Mandatory Maintenance Inspection Program Conducted in the Municipality of Callander

Background

The Municipality of Callander (i.e. the Municipality) is located in Northeastern Ontario directly adjacent to the City of North Bay and 332 kilometers north of Toronto [1; 3]. The Municipality is a small town with a population of 3,863 [2]. The Municipality is situated on the south-eastern shore of Lake Nipissing, which provides a venue for four-season activities including swimming, boating, birding, fishing, ice fishing, cross country skiing, snowmobiling, and skating [3]. Within the village of Callander itself households are on municipally operated water and waste water services. Everything outside of the village is privately serviced. In total, 235 properties within the Municipality of Callander are affected by the mandatory maintenance inspection program conducted by the North Bay-Mattawa Conservation Authority (NBMCA) [4].



Figure 1. Location of the Municipality of Callander [3]

This case study provides an overview of the mandatory maintenance inspection program in the Municipality, which is conducted by the NBMCA. In preparation for this profile, the NBMCA was interviewed and further consulted

in order to fully understand the details of the program, benefits, challenges, and lessons learned.

History of the Mandatory Maintenance Inspection Program

During the source protection planning process under the *Clean Water Act (2006)* the Municipality of Callander was recognized as within the source protection area for the North Bay-Mattawa Source Protection Area. The assessment report for this source protection plan identified phosphorus as a contributing factor to the growth of blue green algae in Callander Bay (where the Municipality derives its drinking water from for their municipally operated system). Blue green algae produces a toxin called microcystin that can pose a significant threat to the health and safety of drinking water in the Municipality. Through the source protection planning process, all septic systems within 120 meters of a watercourse that flows into Callander Bay (i.e. the Issue Contributing Area (ICA)) were defined as a “significant threat” to drinking water. As per the Ontario Building Code (OBC) all septic systems labelled as a significant threat to drinking water must be inspected every five years (see Figure 2 for a map of the ICA for Callander) [5].

In addition to this mandatory maintenance inspection program, the Municipality of Callander has a by-law that regulates septic tank pump-outs. This by-law has been in effect since 2011 and requires all residents operating a septic system to verify septic tank pump-outs with the Municipality on a regular basis [7; 8].

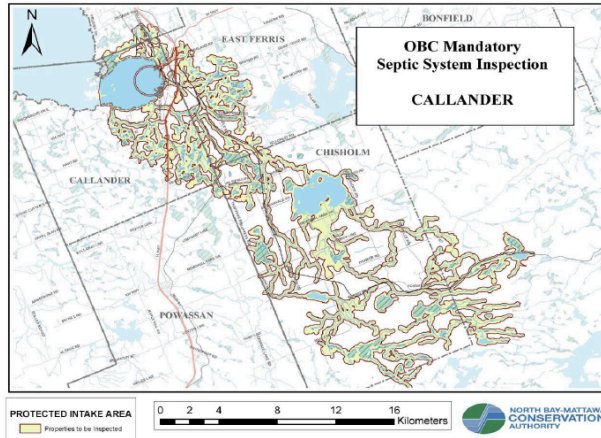


Figure 2. Callander Bay- Issue Contributing Area (ICA) [6]

Inspection Program Details

Under the OBC, NBMCA was appointed as the agency to conduct the septic inspections in the Municipality [5]. Staff from NBMCA who conduct inspections are all fully qualified septic inspectors, as per required for the inspection of sewage systems defined as a significant drinking water threat under the *OBC/Clean Water Act, 2006*. As mentioned, only the properties that are mandatory under the OBC (i.e. those within 120 meters of a watercourse that flows into Callander Bay) are subject to the mandatory maintenance inspection program.

Impacted residents receive a letter (usually in the spring) via the mail informing them that their property will be inspected. The resident has the choice to make an appointment with the inspector, however, if they do not, an inspection time is set for them. The NBMCA Board has the power to set a fee for conducting inspections [5]. Inspections in the Municipality cost the resident \$140. The inspection is a visual, non-invasive inspection and follows Provincial guidelines from the Ministry of Municipal Affairs and Housing.

After the completion of the inspection the inspector takes the inspection form back to the NBMCA office, where the inspection is tracked in an internal GIS database. After the inspection

is logged in the database, the invoice for the inspection is completed and sent out to the resident. All septic permits for the Municipality (even those outside the inspection program area) are stored electronically in a database at the NBMCA office in North Bay. These permits include permits from prior to 1972 when the Health Unit issued and stored septic permits.

Inspections have to be completed every five years according to the OBC. As every septic system within the Callander ICA has to be inspected under the OBC, inspections were completed by sections, ensuring all properties were inspected. The NBMCA has completed the first five-year cycle and now has a schedule for when each system needs to be inspected.

If a resident refuses an inspection, inspectors have the power to enter their property to perform the inspection without a warrant. In the rare case that someone does refuse an inspection or threaten to charge the inspector with trespassing, the inspector has the option of bringing an Ontario Provincial Police escort. If a resident refuses to pay the invoice for their inspection, the fee is added to their municipal property tax bill.

During the first cycle of inspections in the Municipality of Callander there were approximately 1.7% of systems found to have malfunctions requiring further action [4] (see Figure 3 for an example of a system that failed inspection). Most failed inspections are due to overuse, improper maintenance, driving vehicles over the distribution bed, hooking up a water softener to the septic system, and age and/or improper installation. If remediation is required on a system or an entirely new system is needed this cost is the responsibility of the system owner. System owners are notified within 1-2 weeks of the results of their inspection. Depending on the severity of the failure, different timelines for repairs/replacements are given.



Figure 3. Example of a system that received a failed inspection [Photo credit: NBMCA]

It was explained that residents have been given extensions to fix/replace their systems if they had financial constraints, as long as stop gap measures were undertaken to ensure the health and safety of the watershed (e.g. keeping the system pumped out on a frequent basis).

If a system owner refuses to remediate a malfunctioning system or replace a failed system, an Order to Comply is issued. If compliance is not achieved with the Order to Comply, then a summons is ordered, and the system owner can be taken to court in order to comply.

Public meetings have been an important tool for raising awareness and facilitating willful compliance with the inspection program. These efforts increase awareness and understanding of the reasons behind the inspection program and what the program entails.

Lessons Learned

There are many lessons learned from the first cycle of mandatory maintenance inspections in the ICA in the Municipality of Callander. Primarily, the importance of an education program for residents on the inspection program was emphasized. The mandatory maintenance inspection program provides a

vehicle for education and awareness. It was explained,

“We’re going out in the field and we’re teaching people about the operation and maintenance of septic systems. Our inspection may only take 15 minutes because we’ve prepared in advance the background information on the property. At times we may be there for an hour talking to them about septic systems. So that part of it is valuable. I think it’s valuable to the residents of the watershed and it’s important to do”
(NBMCA Representative).

Giving the resident the option to make an appointment with the inspector, so that they can be home for the inspection, was noted as beneficial. Furthermore, flexibility to accommodate residents who would like inspections performed before a sale of a property was seen as increasing the public’s buy-in of the program. It was explained,

“We have people who prefer to have the inspection done before they sell the property because they see the certificate as a selling feature” (NBMCA Representative).

Invoicing promptly after the inspection while it was still fresh in the property owner’s mind has had a positive impact on compliance and understanding. Initially, residents objected to the \$240 fee for the inspection. After the first five-year cycle, once baseline information was gathered and the program was in place, the cost of inspection was reduced to \$140. It was noted this reduction made it,

“A lot easier for people to swallow in the second five-year cycle, but there are still some people who object to any fee at all” (NBMCA Representative).

The cost of repairing or replacing a septic system at times exceeds the financial abilities of some property owners. A lack of funding is an on-going concern. It was explained,

“NBMCA frequently receives public inquiries looking for grants or low interest loan programs to replace systems. There are people in our watershed on fixed incomes who need financial assistance in order to repair or replace their system” (NBMCA Representative).

It was suggested that education programs on septic system maintenance are important. Education programs should focus on providing information and tools for residents on detecting the signs of failure and how to properly maintain their system.

The blue green algae issue in the Callander Bay subwatershed is complex and continues to re-occur. Septic systems are only one of the potential sources of phosphorus that is contributing to the growth of blue green algae in Callander Bay. In addition to phosphorus, there are other factors which contribute to the algae growth. There are some residents who pay for the septic system inspection and see the growth of algae continuing and resent having to take part in the inspection program. Inspectors, while educating the public about proper maintenance of their system, also find themselves explaining the issue of blue green algae. While septic inspections do not solve the algae issue, the inspection program is beneficial for environmental and human health reasons, and as a precautionary measure for the protection of property. It was explained,

“Some of the property owners who find out that their system is failing are grateful. They want to do the right thing environmentally and with upgrading their system, they discover that their property is worth more with a properly functioning system. So, there’s the financial benefit for them, even though in the short term it’s costing them some money” (NBMCA Representative).

In the end, this mandatory maintenance inspection program will continue through the powers of the *Clean Water Act, 2006* and the OBC, as it is an important component for

delivering safe and clean municipal drinking water to the region.

Further Resources

- North Bay-Mattawa Conservation Authority Mandatory Maintenance Inspection Program: Procedural Document: <http://rplc-capr.ca/wp-content/uploads/2019/02/Mandatory-Inspection-2010-2015-report-21.pdf>
- Municipality of Callander’s Septic Tank Pump-out By-law: <http://www.mycallander.ca/wp-content/uploads/2016/07/By-law-2015-1479-Regulate-the-Use-of-Septic-Tanks-adjacent-to-Lake-Nipissing-and-Callander-Bay.pdf>
- North Bay-Mattawa Conservation Authority Mandatory Septic Inspections Handout: <http://rplc-capr.ca/wp-content/uploads/2019/01/NBMCA-Mandatory-Septic-Inspection-2016-2020.pdf>
- SepticSmart!: http://www.omafra.gov.on.ca/english/environment/facts/sep_smart.htm
- Septic Maintenance Project website: <http://rplc-capr.ca/septic-maintenance-project/>

Prepared by: Sarah Minnes, 2019

Acknowledgements: Thank you to the North-Bay-Mattawa Conservation Authority for their assistance with this case study. Thank you also to the Rural Policy Learning Commons for their funding for this research.

More about the Project: More case studies like this and other additional research on municipal inspection/re-inspection programs for residential on-site wastewater systems can be found on the project’s webpage: <http://rplc-capr.ca/septic-maintenance-project/>

References

1. Municipality of Callander. (2016). *Location*. Retrieved January 5, 2018 from <http://www.mycallander.ca/location/>
2. Statistics Canada. (2017). Statistics Canada. 2017. *Callander, MU [Census subdivision], Ontario and Ontario [Province] (table). Census Profile. 2016 Census*. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E> (accessed January 7, 2019).
3. Municipality of Callander. (2016). *Welcome to Callander*. Retrieved January 5, 2018 from <http://www.mycallander.ca/welcome-to-callander/>
4. North Bay-Mattawa Conservation Authority. (2019). Personal communication, February 25, 2019.
5. North Bay-Mattawa Conservation Authority. (n.d.). *Mandatory Septic Inspections 2016-2020*. North Bay-Mattawa Conservation Authority, North Bay, ON.
6. North Bay-Mattawa Conservation Authority. (2014). *Mandatory Maintenance Inspection Program: Procedural Document*. North Bay-Mattawa Conservation Authority, North Bay, ON.
7. Municipality of Callander. (2016). *Septic Systems*. Retrieved January 5, 2018 from <http://www.mycallander.ca/2-septic-systems/>
8. Municipality of Callander. (2015). By-law No. 2015-1479. Retrieved February 26, 2019 from <http://www.mycallander.ca/wp-content/uploads/2016/07/By-law-2015-1479-Regulate-the-Use-of-Septic-Tanks-adjacent-to-Lake-Nipissing-and-Callander-Bay.pdf>



IMPROVE LIFE.

