Small Drinking Water Systems: Who Does What in Ontario?

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1.0 Source Water Protection

1.1 Who has a stewardship role related to water source protection (lead agency)?

The Ministry of the Environment is responsible for protecting water. This is the oversight agency for the protection of source water to municipal systems, not small drinking water systems. The operational agency for source water protection committees is local conservation authorities.

Drinking Water Ontario (DWO) has a lead role as an information and resource hub dedicated to Ontario’s drinking water. DWO is a section within the Ministry of the Environment.

1.2 Who oversees liquid and solid waste management?

The Ministry of the Environment is the oversight for liquid and solid waste management.

Residential waste management and recycling services are mandated by the provincial government but are carried out by local municipalities. Each municipality develops its own waste management program which could include: curbside collection, depot drop-off, pay-as-you-throw, or any combination of these elements, as long as the program is in compliance with the requirements of the Environmental Protection Act.

Industrial, commercial, and institutional sectors are individually responsible for complying with waste-related regulations, and their compliance is determined by their size.

Municipal and/or local governments can also regulate waste management and recycling activities through their by-laws. An example is the City of Toronto Act. This Act actually gives the city some special powers to self-govern so is not really related to waste management. All municipalities can develop by-laws with regard to community activity and municipal services, such as garbage collection, etc.

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1 http://www.ene.gov.on.ca/environment/en/about/index.htm
3 https://www.rco.on.ca/how_waste_is_regulated
4 https://www.rco.on.ca/how_waste_is_regulated
The Water Resources Act\(^5\) regulates sewage disposal and "sewage works" and prohibits the discharge of polluting materials that may impair water quality. The Act was also designed in part to protect the province's water resources from industrial and commercial users who might draw more water out of provincial aquifers that can be reasonably sustained. Permits to take more than 50,000 litres of water per day from ground or surface water sources are regulated under the Water Resources Act. This Act also regulates well construction, well operation and abandonment, and the approval, construction, and operation of all waterworks.

1.3 Who is responsible for land use planning activities (from livestock to farming practices, including activities addressing drinking water concerns)?

The Ministry of Municipal Affairs and Housing (MMAH) is the lead provincial ministry for municipal planning. Municipal planning in Ontario is governed primarily by the Planning Act, which is administered by MMAH. Ontario’s land use planning system gives municipalities the major role in planning decisions.\(^6\)

The Ministry of Agriculture and Food has responsibility for regulating potential impacts of farm activities on drinking water sources.\(^7\) Runoff from agricultural facilities must be managed to prevent it from flowing over the ground and contaminating surface water as defined in Section 2 of the Nutrient Management Regulation, O. Reg. 267/03.\(^8\) Farmers who are subject to the Regulation are required to manage their runoff so it does not harm surface water or groundwater. Water quality is also protected under the Ontario Water Resources Act and the Environmental Protection Act.

The Ministry of Natural Resources provides for the use and sustainable development of Ontario’s Crown land, including information on land management policies and procedures.\(^9\)

1.4 Who is responsible for ensuring that activities, such as construction of highway infrastructure, logging, or mining neither degrade source waters nor introduce contaminants into the water supply?

There is joint responsibility of the ministries, but mostly, through the Environment Protection Act overseen by the Ministry of the Environment, there is a requirement to go to public consultation. Within the public consultation, the proponent would have to involve the ministries with significant interest; thus all ministries, where there are comments related to their jurisdiction, would be included.

The Ministry of Natural Resources has the lead responsibility for protecting life, public health, property, and natural resources. However, specific to natural resource activities, this includes activities such as former mineral aggregate operations or petroleum resource operations by directing development away from areas where an unacceptable risk exists.\(^10\) This ministry carries out environmental planning under the direction of the Environmental Assessment Act (EA Act), which is administered by the Ministry of the Environment.\(^11\)

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\(^5\) The Ontario Water Resources Act is designed to conserve, protect, and manage Ontario’s water resources for efficient and sustainable use. The Act focuses on both groundwater and surface water throughout the province.

\(^6\) http://www.mah.gov.on.ca/Page186.aspx

\(^7\) http://www.mah.gov.on.ca/Page4755.aspx

\(^8\) http://omafra.gov.on.ca/english/engineer/facts/10-005.htm

\(^9\) http://www.mnr.gov.on.ca/en/STEL02_168319.html?CSB_ic-name=browseByTopic&CSB_ic-info=land_Eng


The *Ministry of the Environment* is responsible for managing environmental assessments for large-scale, complex projects that have the potential for significant environmental effects and require a ministry approval.\(^{12}\)

### 1.5 Who delivers permits to draw water?

The *Ministry of the Environment* requires permits to be drawn by anyone who takes more than 50,000 litres of water a day from a lake, river, stream, or groundwater source (with a few exceptions). A permit will not be issued if the ministry determines that the proposed water taking will adversely impact existing users or the environment.\(^{13}\)

### 1.6 Who has control over the watershed and delineates the watershed/aquifer area?

There has been an undertaking between *Conservation Ontario* (representing Ontario’s 36 Conservation Authorities), the *Ministries of Natural Resources and Environment*, and the *Department of Fisheries and Oceans Canada* to explore jointly the Integrated Watershed Management Framework in Ontario.\(^{14}\)

### 1.7 Who is responsible for the watershed/aquifer management plan? (The plan establishes measures to reduce risks. The watershed management plan may also include an incident and emergency response plan, plan for water conservation, and contingency plans for dealing with water scarcity emergencies.)

The *Ministries of Natural Resources and Environment* works with a number of other authorities and agencies in watershed management planning.

### 1.8 Any source vulnerability assessment and ranking?

Ontario’s Water Protection Program has some of the country’s strongest treatment, testing, operator training, and public reporting standards, according to the Ecojustice report (2012), which awarded Ontario an “A” grade.\(^{15}\)

### 2.0 Water Treatment and Distribution

### 2.1 Any lead funding organization for water system planning and infrastructure improvements?

The *Ministry of Infrastructure* has funded the Ontario Small Waterworks Assistance Program (OSWAP), first announced in August 2007, to help families in small rural and Northern communities receive clean, safe, and affordable water and wastewater services. OSWAP-3 will provide up to $50 million in capital funding over the next four years to help small communities.\(^{16}\)

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The Clean Water Act introduced the Ontario Drinking Water Stewardship Program, which offers financial assistance to farmers, landowners, and small or medium businesses for activities that reduce threats to local drinking water sources.\(^\text{17}\)

Ontario's water and wastewater systems are detailed in its long-term infrastructure plan, *Building Together*.\(^\text{18}\)

### 2.2 Any construction permits?


### 2.3 Any fee collected for water distribution?

The *Charges for Industrial and Commercial Water Users Regulation (O. Reg. 450/07)* establishes a charge of $3.71 for every million litres of water taken by highly consumptive industrial and commercial users. This charge is assessed against the total amount of water taken annually.\(^\text{19}\)

### 2.4 Any operator permit? Any training? How are new policies disseminated?

*Municipal residential systems* must be licensed under the municipal drinking water licensing program.\(^\text{20}\) Municipal drinking water licenses are valid for five years as long as one:

- maintains one's status as an accredited operating authority;
- prepares a financial plan and has it approved by Council;
- has a valid permit to take water.\(^\text{21}\)

Wastewater operator certificates are generally valid for a three-year period.

To renew, drinking water operators need to:

- complete the mandatory certificate renewal course;\(^\text{22}\)
- complete the required Director Approved continuing education and on-the-job training requirements;
- verify three months of water or wastewater experience in the previous three years;
- pay the applicable fee.

To renew, wastewater operators need to:

- verify water or wastewater experience in the previous five years;
- pay the applicable fee;
- complete 40 hours of annual training.

Only *licensed well contractors* can legally engage in the business of well construction. Licensed well contractors must employ licensed well technicians, of the correct class, to construct, repair, or abandon wells. An unlicensed person may work on a well if a licensed well technician, of the correct class, is supervising on site.

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\(^\text{20}\) Municipal Drinking Water Licence/Drinking Water Works Permit


In Ontario, laboratories that want to perform testing of Ontario drinking water must be licensed, accredited, and inspected.

Small drinking water system operators need to have sufficient knowledge to properly operate the system they are overseeing or hire someone with suitable qualifications. Issues are mostly of water system complexity. For example, whether a person is training for a drilled well, tested safe water, and a tap compared with a 1,000 unit seasonal trailer park, the local board of health will be asking for the same training as for someone operating a small municipal system (see O. Reg. 319/08).

2.5 Any assessment of treatment system? Any licence of treatment system? By whom?

Municipal residential systems must be licensed under the municipal drinking water licensing program through the Ministry of Environment.23

The Safe Drinking Water Act, 2002, requires an accredited operating authority to be in charge of a municipal residential drinking water system at all times. In order to become accredited, an operating authority must establish and maintain a quality management system that meets the requirements of Ontario’s Drinking Water Quality Management Standard.

Accreditation is granted following verification by a third-party accreditation body that an operating authority has a quality management system in place for a specific drinking water system that meets the requirements of the Standard.24

2.6 Who is responsible for the maintenance and upgrade of the water treatment system?

A municipal drinking water system is owned by and/or supplies water to a municipality and is regulated by the Ministry of the Environment. The maintenance and upgrade of these water treatment systems are the responsibility of the municipality. There are approximately 665 municipal residential drinking water systems registered with the ministry that supply drinking water to more than 80% of the homes in Ontario.

In Ontario, there are approximately 450 non-municipal systems that provide water to people’s homes, such as privately owned systems that serve apartment buildings, private subdivisions and mobile home parks, called non-municipal year-round residential systems. There are also approximately 1,500 systems that provide water to people who may be more vulnerable to drinking water contamination, such as those using day nurseries, schools and health care centres, called designated facilities. These owners of the non-municipal systems are responsible for maintenance and upgrade.25

See O. Reg. 319/08 and Section 10 of the Safe Drinking Water Act.26 Associated with O. Reg. 319, there are approximately 10,000 small drinking water systems that are required to maintain their water treatment systems in accordance with the regulation or any additional requirements from the local board of health. Section 10 of the Safe Drinking Water Act causes the inclusion of such places as individual water sources using food establishments and workplaces, since regulation on those establishments requires them to use potable water.

2.7 Any requirements for the water supply system?

Owners and operators of municipal systems must ensure that their systems—and the water their systems provide—meet the requirements of the Safe Drinking Water Act.27

The Act requires every owner and operator to ensure:
- their system’s water satisfies Ontario’s Drinking Water Quality Standards28;
- anyone who operates, or works on, their system is properly trained and licensed;
- drinking water tests are performed by licensed, accredited laboratories;
- adverse test results are reported to the ministry and the local medical officer of health;
- and more.29

Some non-municipal systems are regulated by the Ministry of the Environment. Owners and operators of these systems must ensure their systems—and the water their systems provide—also meet the requirements of the Safe Drinking Water Act.30

Small drinking water systems—those that do not serve year round residential or designated facilities (health care) and serve a public facility—fall under the oversight of O. Reg. 318/08 and 319/08 which are created under the Health Protection and Promotion Act. This oversight is with the Ministry of Health and Long-Term Care and the regulation administered by local boards of health.

3.0 Drinking Water Quality and Monitoring

3.1 Who is the lead agency for drinking water quality?

The Ministry of the Environment is the lead agency. Ontario has developed a multi-faceted approach for drinking water protection that includes multiple barriers31:
- source protection to keep the raw water as clean as possible in order to lower the risk that hazards are present;
- treatment to remove and/or neutralize hazards;
- maintenance of the integrity of the distribution system to prevent recontamination after treatment;
- monitoring programs to detect and act on system problems that could impair drinking water safety and to verify the performance of the system components and finished drinking water quality; and
- management systems including automatic control systems, responses, and operating practices for protecting the safety of drinking water systems.

3.2 Who defines water quality standards?

The Safe Drinking Water Act, 2002, defines Ontario drinking water quality standards.32 The drinking water standards in Ontario are based on the Guidelines for Canadian Drinking Water Quality.33 Under the Safe Drinking Water Act there is an Ontario Drinking Water

27 http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_02s32_e.htm
33 http://www.cielap.org/pdf/drinkingwaterstandards.pdf
Quality Advisory Committee, which leads the province in the setting of drinking water quality standards. The Guidelines for Canadian Drinking Water Quality are published by Health Canada and are used nationally as a guide for provinces to legislate water quality standards.

3.3 Who is responsible for administering drinking water regulations, if any?

Ontario’s chief drinking water inspector is appointed under the Safe Drinking Water Act. The chief drinking water inspector leads activities to ensure that regulated drinking water systems across the province meet Ontario’s standards for drinking water protection.

There are numerous regulated drinking water systems and a couple of specific drinking water system regulations. Regulation 170 under the SDWA pertains to municipal, year round residential and designated facilities. Regulation 318 and 319 under the Health Protection and Promotion Act pertains to municipal non-residential, seasonal residential, and specified public facilities. Locations such as restaurants, day nurseries, campgrounds, and permanent work sites do not actually have regulated drinking water systems except to say regulations do require that the water coming from them must be potable.

3.4 Who enforces regulations, if any?

The Ministry of the Environment employs Environmental Officers who are Ministry Specialized Laboratory Inspectors with the legal authority to enter a laboratory facility to conduct an inspection under environmental legislation in Ontario. Inspectors inform operators/individuals of any non-compliance and explain the next steps.

When there is a serious non-compliance, the inspector may refer the matter to the ministry’s Investigations and Enforcement Branch (IEB). The IEB will then conduct an investigation and recommend charges, if appropriate. If the IEB lays charges, then operators/individuals will receive a Part III summons under the Provincial Offences Act.

O. Reg. 318/319 systems are inspected by a public health inspector employed at local boards of health. Full powers of the Health Protection and Promotion Act apply; tickets can be issued for on-the-spot closure.

3.5 Who ensures the accountability of government and water suppliers?

The Ministry of the Environment through its Annual Report ensures accountability of water suppliers. The Ontario Ombudsman’s Office oversees and investigates the provincial government.

The chief medical officer of health and the chief drinking water inspector must also make an annual report. Usually the chief medical officer of health will provide information on small drinking water systems and any public health actions with regard to an unsafe drinking water situation.

3.6 Who is responsible for the assessment of public water supply systems? (Identify critical points within the treatment process for effective monitoring, control, and management including determining treatment efficiency in the removal or inactivation of harmful agents found in the source water.)

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The **Safe Drinking Water Act**, 2002, includes a statutory standard of care for individuals who have oversight responsibilities for municipal drinking water systems that can extend to municipal councillors as of January 1, 2013. Accordingly, a *municipal councillor* may have oversight responsibilities for municipal drinking water systems.

The chief drinking water inspector of the **Ministry of the Environment** prepares an annual report that includes drinking water system reports and inspections, information on how to follow-up on significant findings, etc.37

Generally, the municipal sectors deal with water supply and treatment and zoning affecting activities and development in watersheds and floodplains, the province deals with proprietary rights to water resources, authorization and use of water, and the implementation and enforcement of health regulations of drinking water; and the federal government has responsibility for First Nation’s community water supply systems, water acts in the territories, navigation and fisheries on freshwater and oceans, transboundary water agreement inter-provincially and internationally, and habitat protection in national parks.

### 3.7 Any approval process for newly built water treatment systems?

The **Ministry of Environment** manages the approval process and regulates most small and large municipal drinking water systems, as described in the Drinking Water Systems regulation (Ontario Regulation 170/03).38,39

For drinking water systems other than municipal residential drinking water systems, formal approval from the ministry is not required to establish or alter your system, but owners need to meet the requirements of the Drinking Water Systems Regulation.40 There are two instances where a formal approval from the ministry may be required:

(i) applying for regulatory relief and system fragmentation, or

(ii) in some instances, an environmental compliance approval may be required from the ministry if the drinking water system, e.g., releases contaminants (pollutants) into the air, onto land, or into water or stores, or transports or disposes waste.41

Recent amendments to the **Environmental Protection Act** and the **Ontario Water Resources Act** came into effect resulting in a two-path environmental approval process: the Environmental Compliance Approval (ECA) process and the Environmental Activity and Sector Registry (EASR) process. The ECA is a new instrument of environmental approval that replaces the Certificate of Approval.42

### 3.8 Who is responsible for monitoring the water system? Any source water monitoring?

Owners and operators of municipal and non-municipal drinking water treatment systems are responsible for monitoring the system as per Drinking-Water Systems Regulation (O. Reg. 170/03) and the **Safe Drinking Water Act, 2002**.43

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The Provincial Water Quality Monitoring Network (PWQMN) collects information about the quality of stream-water from over 400 locations across Ontario.\(^{44}\)

The Provincial Groundwater Monitoring Information System (PGMIS) is a web-driven application that assists the Ministry of the Environment and its partners to monitor the state of the province's groundwater resources.\(^{45}\)

Ontario requires that local communities—through local Source Protection Committees—assess existing and potential threats to their water, and that they set out and implement the actions needed to reduce or eliminate these threats.\(^{46}\)

3.9 In case of adverse quality standards, who notifies whom (government, public, water supplier)?

A person who has an obligation to ensure that water meets a standard set out in the Safe Drinking Water Act and any amended Regulations is required to, in circumstances where the water does not meet the standard, contact the medical officer of health and take such other steps as are directed by the medical officer of health.\(^{47}\)

4.0 Waste Management (part of source water protection as well)

5.0 Surveillance

5.1 Any process in place to respond to health complaints?

For adverse drinking water issues, all drinking water systems regulated by 170 and 318/319, are required to notify the users when the water is or may not be fit for normal use and at the same time notify the local board of health. The local board of health would check to see that steps being taken to protect the users are adequate, or they would request more activity for the protection of the users.

In addition, if a water supply or a source for a water supply is or is suspected of being contaminated and the local public health office is made aware, they would act to protect both the water system and the users of the water system.

Local public health units\(^{48}\) investigate enteric outbreaks as a requirement of the Mandatory Health Programs and Services Guidelines for the control of infectious diseases. Enteric outbreak data are reported in the outbreak module of the Reportable Disease Information System (RDIS) by public health units for the purpose of monitoring communicable diseases.\(^{49}\)

The Health Protection and Promotion Act requires reporting to:

- Board of Health – confirmed and suspected cases shall be reported to the medical officer of health;

\(^{48}\) A “health unit” in Ontario is defined as the area of jurisdiction.
• Public Health Division (PHD) – report only case classifications specified in the case definition to PHD using the integrated Public Health Information System (iPHIS) or any other method specified by the ministry within five business days of receipt of initial notification as per iPHIS.

Under the Health Protection and Promotion Act all complaints received by a local public health unit are to be either investigated by them or referred to the ministry of primary responsibility. For water that would be themselves, the Ministry of the Environment, for municipal, year round residential, designated facilities, and a federal agency if, for example, it is a First Nation or Department of Defence oversight.

5.2 Any outbreak surveillance system in place?

The Ministry of the Environment has established management systems including automatic control, systems, responses to incidents, and standard operating practices. It has a drinking water inspection testing program (Laboratory and Waterworks Inspection System database).

Infectious Diseases of Public Health Ontario leads surveillance, epidemiology, prevention, and control of infectious diseases activities.

5.3 Any system in place to link outbreaks to source or system characteristics?

The Ministry of Health and Long-Term Care has a system in place for outbreak management that includes the following general steps:

• confirm diagnosis and verify the outbreak;
• establish an outbreak team;
• develop an outbreak case definition;
• implement prevention and control measures;
• implement and tailor communication and notification plans depending on the scope of the outbreak;
• conduct epidemiological analysis on data collected;
• conduct environmental inspections of implicated premise where applicable;
• coordinate and collect appropriate clinical specimens where applicable, and
• prepare a written report.

5.4 Who is responsible for managing outbreaks?

Responsibility lies with local boards of health/public health units. The Ministry of Health and Long-term Care assists public health units with Public Health Ontario, including the Public Health Ontario Laboratories, Infectious Disease Prevention and Control, Surveillance and Epidemiology, and Environmental and Occupational Health manage outbreaks.

6.0 What is the Role of the Community in the Provision of Safe Drinking Water?
Ontario requires public participation on every local source protection plan and the planning process for source protection is open to anyone in the community.\footnote{http://www.ene.gov.on.ca/environment/en/subject/protection/index.htm}

\textit{Drinking Water Ontario} has information for the public to facilitate activities related to the provision of safe drinking water. For example, for the public in general, there is a fact sheet entitled, “How you can help protect our water.”\footnote{http://www.ene.gov.on.ca/environment/dwo/en/story/STDPROD_095732.html}

Additionally, \textit{Drinking Water Ontario} provides specific outlines for drinking water operators, drinking water system owners, business owners, property owners, etc., to help them “know their responsibilities.”\footnote{http://www.ene.gov.on.ca/environment/dwo/en/responsibilities/index.htm}

Note that while the National Collaborating Centre for Environmental Health has used its best efforts to ensure the accuracy and reliability of this information, it is provided as a general reference only. Please contact federal, provincial, municipal, and other agencies noted to verify information provided.

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