

SAFE DRINKING WATER FOR ALL:

a status update on
Walkerton's legacy,
20 years after release of
Inquiry Reports



**Canadian
Environmental Law
Association**
EQUITY. JUSTICE. HEALTH.

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Table of Contents

Executive Summary	1
Introduction	4
1. Overview	4
2. The Canadian Environmental Law Association (CELA)	5
3. A Note on Terminology	5
Chapter 1: Background	6
1. The Walkerton Tragedy	6
2. The Walkerton Inquiry	6
a. CELA's Involvement	6
b. Part 1	7
c. Part 2	8
3. The Multi-Barrier Approach	8
a. Source Water Protection	8
b. Water Treatment	9
c. Distribution System	10
d. Testing	10
e. Response to Adverse Water Test Results	10
Chapter 2: Current Legal Regime	11
1. Division of Power	11
a. Federal Jurisdiction	11
b. Provincial Jurisdiction	11
c. Municipal Jurisdiction	12
2. Key Provincial Legislation	13
a. <i>Clean Water Act, 2006 (CWA)</i>	13
b. <i>Safe Drinking Water Act, 2002 (SDWA)</i>	13
c. <i>Nutrient Management Act, 2002 (NMA)</i>	13
d. <i>Environmental Bill of Rights, 1993 (EBR)</i>	14
e. <i>Health Protection and Promotion Act (HPPA)</i>	14
f. <i>Environmental Protection Act (EPA)</i>	14
g. <i>Conservation Authorities Act</i>	15
h. <i>Ontario Water Resources Act (OWRA)</i>	15
Chapter 3: Implementation of the Multi-Barrier Approach	17
1. Source Water Protection	17
a. SPP Development	18
b. SPP Implementation	20
c. Public Reports	23
d. SPP Updating	23

e.	Funding	24
f.	Outstanding Issues	26
2.	Water Treatment	29
a.	Operator Training	31
b.	Operator Certification	33
c.	MECP Training	35
3.	Distribution System	35
4.	Testing	37
a.	Water Providers	37
b.	Laboratories	39
c.	Setting Standards	40
d.	Specific Standard Recommendations	42
e.	Achieving Standards	42
f.	Delays in Amending Standards	43
5.	Response to Adverse Water Test Results	45
a.	Roles	45
b.	Drinking Water Advisories	48
6.	The Role of Municipal Governments	50
a.	Standard of Care	50
b.	Public-Private	50
c.	Management	51
7.	The Role of the MECP	53
a.	Approvals	54
b.	Information Management	56
c.	Annual Reports	57
8.	Enforcement	57
a.	Inspections	57
b.	Abatement	61
Chapter 4: Coverage of Various Populations		64
1.	Municipal Water Systems	64
2.	Small Drinking Water Systems	65
3.	Remote Communities and Non-Municipal Water Sources	67
a.	Muskrat Lake Case Study	69
b.	Private Wells	69
c.	Expanding Drinking Water Protections	73
4.	Indigenous Communities	75
a.	Federal Efforts	75
b.	Applying the Provincial Framework	77
c.	Provincial Support	78

d. Case Studies	80
e. Expanding Drinking Water Protections	82
Abbreviations	83
Recommendations Index	84
1. Part 1	84
2. Part 2	88

“The Walkerton experience warns us that we may have become victims of our own success, taking for granted our drinking water’s safety. The keynote in the future should be vigilance. We should never be complacent about drinking water safety.”

~ The Honourable Dennis R O’Connor (*Report of the Walkerton Inquiry, Part 2*)

Executive Summary

In 2000, seven people died and over 2300 people became ill after the water supply in Walkerton, Ontario became contaminated with *E. coli*. The tragedy in Walkerton was followed by a provincial inquiry by Justice O’Connor to investigate the cause of the contamination in Walkerton and the state of drinking water protection in Ontario. In the reports that resulted from this Inquiry, Justice O’Connor made 121 recommendations to strengthen drinking water protection in Ontario.

Twenty years after the release of the two Reports of the Walkerton Inquiry, Canadian Environmental Law Association (CELA) assessed the status of the 121 recommendations made by Justice O’Connor. *Safe Drinking Water for All: a status update on Walkerton’s legacy, 20 years after release of Inquiry Reports* evaluates whether the 121 recommendations continue to be implemented effectively or if there have been any failures to meet the original objectives. Access to clean drinking water is fundamental to individuals’ well-being, making it imperative that implementation is regularly assessed and closely monitored.

In Chapter 1, *Safe Drinking Water for All* provides detailed background on the Walkerton Inquiry and associated Reports in Chapter 1. Justice O’Connor recommended a multi-barrier approach to drinking water protection that could deliver water to consumers with a level of risk that is so negligible that a reasonable and informed person would feel safe drinking it. Having multiple barriers ensures that a failure in any given barrier will not cause a failure of the entire system. The barriers in this approach are source water protection, water treatment, distribution system, monitoring, and response to adverse monitoring results.

After the Reports were issued in early 2002, the Ontario government took significant steps to implement the multi-barrier approach and made important improvements to drinking water protection in the province. In Chapter 2, *Safe Drinking Water for All* provides an overview of how drinking water protection is currently regulated in Ontario.

Chapter 3 evaluates the status of the implementation of the recommendations for each of the barriers of the multi-barrier approach and Chapter 4 explores how the current drinking water

protection framework applies differently to various segments of Ontario’s population. Throughout Chapters 3 and 4 of *Safe Drinking Water for All*, implementation of the 121 recommendations is assigned one of the following scores:

✓ Complete	Indicates the recommendation has been implemented and is functioning as envisioned by Justice O’Connor.
! Needs Improvement	Indicates that, although efforts have been made, they fall short of fulfilling the recommendation or are not sufficient in practice.
X Incomplete	Indicates that the recommendation has yet to be implemented.
- Not Applicable	Indicates that the recommendation is no longer relevant. For example, because its goal was achieved through a different means.
? Unavailable	Indicates that the scope of the recommendation is unclear or information on its implementation is not available or publicly accessible.
* Further Investigation	Indicates more follow-up is necessary.

Overall, the picture in Ontario is one of continued success in drinking water protection. Sixty-five (65) of Justice O’Connor’s 121 recommendations have been considered complete and continue to be effectively implemented. There are 3 recommendations that are no longer applicable because they were rendered moot or their goal was addressed through a means different than that described in the recommendation. There are 10 recommendations for which the status could not be confirmed due to lack of publicly accessible information and 9 that will require further investigation before determining status. There are 29 recommendations that need improvement and 5 for which no work has been done (marked incomplete). Alarming, 6 of the 25 recommendations from Part 2 that are scored “need improvement” relate to small systems and Indigenous communities, leaving these populations vulnerable to risks posed by unsafe drinking water. Further, 2 of the 5 recommendations from Part 2 that are scored “incomplete” are related to Indigenous communities, which Justice O’Connor recognized are provided “some of the poorest quality water in the province.” (*Report of the Walkerton Inquiry, Part 2*, p 486)

While about 80 percent of the provincial population receives their drinking water from municipal water systems, which are closely regulated, other parts of the population—mainly small and remote communities, Indigenous communities, and those who obtain their water from private wells—do not receive these protections. This bifurcated approach is inequitable, unacceptable, and endangers the health of excluded populations.

The findings in *Safe Drinking Water for All* reiterate the concern expressed by CELA and others, including the Auditor General of Ontario and the former Environmental Commission of Ontario, in the years since the Inquiry, that not all residents of Ontario are protected by the existing legal framework. The gaps in drinking water protection found in *Safe Drinking Water for All* once again underscore the importance of maintaining constant vigilance with regards to drinking water safety—as Justice O’Connor emphasized twenty years ago.

Introduction




In 2000, seven people died and over 2300 people became ill after the water supply in Walkerton, Ontario became contaminated with *E. coli*. The tragedy in Walkerton was followed by a provincial inquiry to investigate the cause of the contamination in Walkerton and the state of drinking water protection in Ontario. This year marks the 20th anniversary of the Reports of the Walkerton Inquiry, which were published in 2002 following the Inquiry. The Reports included numerous recommendations which sought to prevent another tragedy by strengthening drinking water protection in Ontario.

Safe Drinking Water for All: a status update on Walkerton's legacy, 20 years after release of Inquiry Reports evaluates whether these recommendations continue to be implemented effectively or if there have been any failures to meet their original objectives. Access to clean drinking water is fundamental to individuals' well-being, making it imperative that implementation is regularly assessed and closely monitored. *Safe Drinking Water for All* aims to identify any gaps in the provincial drinking water protection framework and draw attention to areas where stronger protection is necessary.

1. Overview

Safe Drinking Water for All is divided into 4 chapters. **Chapter 1** provides background on the Walkerton Inquiry, the Reports of the Inquiry, and introduces the barriers in the “multi-barrier approach” recommended by Justice O’Connor. **Chapter 2** gives an overview of how drinking water is currently governed in Ontario, including how jurisdiction is divided among the levels of government and the key statutes passed at the provincial level. **Chapter 3** examines the status of the recommendations pertaining to each of the barriers in the multi-barrier approach. **Chapter 4** explores how the drinking water protection framework applies differently to various segments of the Ontario population.

As the 121 recommendations are discussed throughout Chapters 3 and 4, their implementation is assigned one of the following scores.

 Complete	Indicates the recommendation has been implemented and is functioning as envisioned by Justice O’Connor.
 Needs Improvement	Indicates that, although efforts have been made, they fall short of fulfilling the recommendation or are not sufficient in practice.
 Incomplete	Indicates that the recommendation has yet to be implemented.

- Not Applicable	Indicates that the recommendation is no longer relevant. For example, because its goal was achieved through a different means.
? Unavailable	Indicates that the scope of the recommendation is unclear or information on its implementation is not available or publicly accessible.
* Further Investigation	Indicates more follow-up is necessary.

The Recommendations Index provides a list of all 121 recommendations in the order they appear in the Reports of the Walkerton Inquiry, along with their implementation status score and the page they appear on within *Safe Drinking Water for All*.

2. The Canadian Environmental Law Association (CELA)

CELA is a specialty legal aid clinic dedicated to ensuring access to environmental justice and ensuring safe, healthy, and livable communities. Since 1970, CELA has sought to protect human health and the environment by seeking justice for those harmed by pollution and changing policies to prevent such harm. CELA carries out these goals through environmental legal services, summary advice, law reform, and public legal education.

3. A Note on Terminology

This report uses the term “Indigenous” to refer to all peoples who acknowledge racial, ethnic, and cultural origins from Turtle Island (an Indigenous term for what settler society calls North America) prior to European contact and colonization.¹ This term is used globally to refer to the original inhabitants of any region and has become associated more with activism than government policy and so has emerged, for many, as the preferred term.² However, individuals and collectives may prefer different or more specific terms. As Thomas King highlights, “the fact of the matter is that there has never been a good collective noun because there never was a collective to begin with.”³ Some sources quoted in this report may employ the term “First Nations,” which is often used to describe those who have Indian status under Canadian law as part of a recognized community but does not include Inuit, Métis, or individuals without status.

¹ “A Note on Indigenous Terminology” (18 August 2016), online: *CanLitGuides* <<https://canlitguides.ca/canlit-guides-editorial-team/an-introduction-to-indigenous-literatures-in-canada/a-note-on-indigenous-terminology/>>.

² “Terminology Guide” (2019), online: *Queens University* <<https://www.queensu.ca/indigenous/ways-knowing/terminology-guide>>.

³ Thomas King, *The Inconvenient Indian: A Curious Account of Native People in North America* (Toronto: Anchor Canada, 2013) at 4.

Chapter 1: Background

Chapter 1 provides background on the events in Walkerton and the results of the Inquiry prompted by the tragedy, which was foundational to the evolution of drinking water protection in Ontario.

1. The Walkerton Tragedy

In May 2000, the Town of Walkerton’s drinking water system became contaminated with *E. Coli*.⁴ Seven people died and more than 2300 became severely ill, devastating the community.⁵ This prompted widespread feelings of frustration, anger, and insecurity and left people wondering what went wrong and the reasons why. The tragedy triggered alarm across the province, making the public profoundly question the adequacy of the laws, policies, resources, practices, and institutional mechanisms in place to protect drinking water. These questions represented the core of the mandate of the Walkerton Inquiry, which was established to investigate the cause of the contamination in Walkerton and the state of drinking water protection in Ontario.

2. The Walkerton Inquiry

The Inquiry commenced in the fall of 2000 and was completed in the summer of 2001.⁶ The Inquiry was conducted by Justice O’Connor in two parts: the first examined the events in Walkerton and the causes of the tragedy and the second was dedicated to ensuring the safety of drinking water across the province. At the conclusion of each, he made a set of recommendations to improve the drinking water system in Ontario.

a. CELA’s Involvement

CELA was involved throughout this process, working with community members, government, and experts to determine how Walkerton’s water was contaminated and to develop a system to prevent another community from having the same experience. CELA counsel, researchers, and support staff were extensively involved in representing Concerned Walkerton Citizens (CWC), a community group of Walkerton residents.

CELA and CWC strenuously argued for the establishment of the Inquiry immediately following the tragedy and submitted recommendations for the terms of reference.⁷ CWC was granted full party status throughout the Inquiry and was central to outlining the concerns and needs of the

⁴ *Report of the Walkerton Inquiry: The Events of May 2000 and Related Issues: A Summary* (Toronto: Queen’s Printer for Ontario, 2002) (The Honourable Dennis R O’Connor) at 2 [*Report of the Walkerton Inquiry: Part 1 Summary*].

⁵ *Report of the Walkerton Inquiry: Part 1 Summary*, at 2.

⁶ “Media Release: Walkerton Citizens Hoping for Answers from Walkerton Inquiry Report” (17 January 2002), online: *Canadian Environmental Law Association* <<https://cela.ca/walkerton-citizens-hoping-for-answers-from-walkerton-inquiry-report/>>.

⁷ “Media Release: Citizen’s Group in Walkerton Seeks to Intervene in Public Inquiry” (9 June 2000), online: *Canadian Environmental Law Association* <<https://cela.ca/citizens-group-in-walkerton-seeks-to-intervene-in-public-inquiry/>> [“Citizen’s Group in Walkerton Seeks to Intervene in Public Inquiry”].

local community.⁸ After the Inquiry, CELA was actively involved in the development of legislation and regulations to implement the recommendations arising out of the Inquiry. CELA has since continued to push for law reform to ensure that all of the recommendations are fully implemented and all Ontario residents are provided with safe, clean drinking water.

b. Part 1

In Part 1 of the Walkerton Inquiry, Justice O'Connor found fault in many parts of the system. He concluded that the source of the contamination was manure that had been spread on a farm near one of the town's groundwater sources.⁹ Following several days of heavy rain, this manure washed into a vulnerable groundwater well and contaminated Walkerton's water supply.

The operators of the Walkerton system failed to detect or adequately address this contamination. They lacked sufficient training and expertise and had engaged in improper operating practices for years, including failing to use adequate doses of chlorine, failing to monitor chlorine residuals daily, making false entries about residuals in daily operating records, and misstating the locations at which samples were taken.¹⁰ When the contamination entered the system, there was insufficient chlorine to kill the bacteria. Had the required amount of chlorine been maintained in Walkerton, over 99 percent of the bacteria would have been killed and the outbreak avoided.¹¹ Instead, the contamination entered the system undetected. When the operators did discover the contamination, they concealed it from the local health unit, even after residents began falling ill.¹² Had the adverse test results been disclosed, a boil water advisory would likely have been issued earlier and the scope of the outbreak would likely have been greatly reduced.

Justice O'Connor also found that the Ontario Ministry of Environment (MOE) contributed to the scope of the outbreak. The MOE is the provincial government ministry responsible for regulating and overseeing the construction and operation of municipal water systems. Justice O'Connor noted that the MOE should have recognized the need to install continuous chlorine residual and turbidity monitors at the vulnerable Walkerton water source.¹³ Additionally, the MOE's inspections program should have detected the improper treatment and monitoring practices in Walkerton and ensured that those practices were corrected.¹⁴ However, these failings are attributable to the provincial government's budget reductions, which reduced the Ministry's capacity to take a more active role.¹⁵ Additionally, when laboratory testing was privatized in

⁸ "Citizen's Group in Walkerton Seeks to Intervene in Public Inquiry."

⁹ *Report of the Walkerton Inquiry: Part 1 Summary*, at 3.

¹⁰ *Report of the Walkerton Inquiry: Part 1 Summary*, at 4.

¹¹ *Report of the Walkerton Inquiry: Part 1 Summary*, at 14.

¹² *Report of the Walkerton Inquiry: Part 1 Summary*, at 4.

¹³ *Report of the Walkerton Inquiry: Part 1 Summary*, at 4.

¹⁴ *Report of the Walkerton Inquiry: Part 1 Summary*, at 4.

¹⁵ *Report of the Walkerton Inquiry: Part 1 Summary*, at 5.

1996, a notification regulation was not enacted, which could likely have prevented hundreds of illnesses.¹⁶

Based on his findings in Part 1, Justice O’Conner made 28 recommendations, which he then built upon in Part 2.

c. Part 2

In the Report from Part 2, Justice O’Connor examined the existing drinking water protection framework in Ontario and made 93 recommendations on how to strengthen it. He approached the development of these recommendations with the goal of ensuring that drinking water systems deliver water with a level of risk that is so negligible that a reasonable and informed person would feel safe drinking it.¹⁷ While removing all risk is not possible, only the most imperceptible level of risk is acceptable.¹⁸

To achieve this level of protection and public confidence, Justice O’Connor recommended a multi-barrier approach to drinking water protection. Having multiple barriers ensures that a failure in any given barrier will not cause a failure of the entire system. Although each barrier offers protection, no single barrier is perfect. In his report, Justice O’Connor identified the following barriers as priorities: source water protection, water treatment, distribution system, monitoring, and response to adverse monitoring results—each of which are outlined in the following section.

3. The Multi-Barrier Approach

a. Source Water Protection

The first component of a multi-barrier approach to ensuring safe drinking water is protecting the sources of drinking water. Drinking water comes mainly from two types of sources: groundwater (such as wells and springs) and surface water (such as lakes, rivers, and reservoirs).¹⁹ Groundwater is often the source of drinking water in smaller communities and larger communities are typically supplied with surface water.²⁰ In Part 2, Justice O’Connor noted that “groundwater under the direct influence of surface water” is not a useful concept for regulatory purposes and should be dropped,” making the following Part 1 recommendation from irrelevant.²¹

¹⁶ *Report of the Walkerton Inquiry: Part 1 Summary*, at 4.

¹⁷ *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water* (Toronto: Queen’s Printer for Ontario, 2002) (The Honourable Dennis R O’Connor) at 74 [*Report of the Walkerton Inquiry: Part 2*].

¹⁸ *Report of the Walkerton Inquiry: Part 2*, at 74.

¹⁹ *Report of the Walkerton Inquiry: The Events of May 2000 and Related Issues* (Toronto: Queen’s Printer for Ontario, 2002) (The Honourable Dennis R O’Connor) at 108 [*Report of the Walkerton Inquiry: Part 1*].

²⁰ *Report of the Walkerton Inquiry: Part 1*, at 108.

²¹ *Report of the Walkerton Inquiry: Part 2*, at 186.

-	Part 1 Recommendation 9: The MOE should develop criteria for identifying “groundwater under the direct influence of surface water.”
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The goal of source protection is to provide an additional safeguard for human health by ensuring that current and future sources of drinking water are protected from potential contamination and depletion.²² Strong source protection offers a wide variety of benefits. It lowers risk cost-effectively because keeping contaminants out of drinking water sources is an efficient way of keeping them out of drinking water—especially since some contaminants cannot be effectively removed with standard treatment methods.²³ These pollution reduction measures also benefit the plants and animals that live in or rely on lakes or rivers for survival. Additionally, strong source protection can improve water-based recreational activities by creating cleaner water for fishing and swimming.

Justice O’Connor recommended protecting source water at the watershed level. A watershed encompasses the lands that drain into a particular body of water.²⁴ Watersheds are considered to be the most ecologically practical unit for managing water since water flows across political boundaries. The watershed approach requires decision-makers take a whole-system view and consider “the impacts that upstream activities have on downstream water sources,” rather than limiting themselves to their local jurisdiction.²⁵

b. Water Treatment

Once it enters the water system, raw source water is disinfected to inactivate harmful or disease-causing organisms. Chlorination is the most common method of disinfection in Canada.²⁶ When added to water, chlorine reacts with substances and can inactivate disease-causing microorganisms.²⁷ The amount of chlorine added to disinfect water is known as the “chlorine dose.”²⁸ Reactions consume some of the chlorine dose, leaving an amount of chlorine referred to as the “chlorine residual.”²⁹ When the amount of contamination entering the system suddenly increases, more chlorine is needed. If the dose is not increased, the chlorine residual will decrease. Measuring the chlorine residual is important because it indicates if there was sufficient chlorine available to react with any substances of concern.

²² Technical Experts Committee, *Science-based Decision-making for Protecting Ontario’s Drinking Water Resources: Threats Assessment Framework*, (Toronto: Queen’s Printer for Ontario, 2004) (Jim Smith and Gayle Wood) at vii.

²³ *Report of the Walkerton Inquiry: Part 2*, at 89.

²⁴ *Report of the Walkerton Inquiry: Part 2*, at 94.

²⁵ *Report of the Walkerton Inquiry: Part 2*, at 94.

²⁶ *Report of the Walkerton Inquiry: Part 1*, at 109.

²⁷ *Report of the Walkerton Inquiry: Part 1*, at 109.

²⁸ *Report of the Walkerton Inquiry: Part 1*, at 109.

²⁹ *Report of the Walkerton Inquiry: Part 1*, at 109.

c. Distribution System

The distribution system is the network of pipes between the water source and treatment system and the consumer's plumbing system, as well as water towers and reservoirs where treated water is stored.³⁰ Even if the water leaving the treatment plant is high quality, its quality can seriously deteriorate while in the distribution system if adequate precautions are not in place.³¹

d. Testing

Testing involves collecting samples and taking measurements to ensure that the system is working properly and that the water is safe. These tests focus on health-related parameters, such as the presence of bacteria, and aesthetic parameters, which relate to taste, odour, and colour.³² Justice O'Connor highlighted that aesthetic standards are not unrelated to health: "if their tap water is unappealing, people may turn to other, less secure, sources, with consequent increases in public health risk."³³ Further, aesthetic problems may be indicative of other water quality problems.

Monitoring involves two components: monitoring treatment process performance and monitoring treated water. Monitoring the treatment process performance involves measuring the chlorine residual or turbidity. The treated water is then checked for certain microbes, chemicals, and physical properties to ensure they do not exceed predetermined levels.³⁴ Drinking water quality standards are expressed as maximum acceptable concentrations (MAC) of substances that are known or suspected of having adverse health effects.³⁵ In Canada, the federal government publishes guidelines which are developed by the Federal-Provincial-Territorial Committee on Drinking Water.³⁶ These standards are not legally binding, provinces and territories are responsible for their setting their own standards so they can be more or less stringent than recommended or set standards for contaminants not addressed by the federal government. However, provinces and territories pay attention to and participate in the development of federal guidance, which may prompt them to create a new standard in their jurisdiction or amend an existing one.

e. Response to Adverse Water Test Results

Finally, in situations of failing process measures or adverse water quality, appropriate responses provide a further barrier. Responses can include additional sampling to confirm an adverse result, increasing the disinfectant dose, and issuing a drinking water advisory.

³⁰ *Report of the Walkerton Inquiry: Part 1*, at 110.

³¹ *Report of the Walkerton Inquiry: Part 2*, at 234.

³² *Report of the Walkerton Inquiry: Part 2*, at 172.

³³ *Report of the Walkerton Inquiry: Part 2*, at 172.

³⁴ *Report of the Walkerton Inquiry: Part 1*, at 111.

³⁵ Anne Wordsworth, "Tragedy on Tap: Why Ontario Needs a Safe Drinking Water Act," vol 1 (2001) at 4, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2020/05/Tragedy-on-Tap-Vol-One.pdf>>.

³⁶ *Report of the Walkerton Inquiry: Part 2*, at 149.

Chapter 2: Current Legal Regime

Chapter 2 details the framework that currently governs drinking water in Canada and Ontario, beginning with how the Constitution assigns responsibility for drinking water protection and the roles played by each of the levels of Canadian government. The provincial statutes that are relevant to the implementation of Justice O'Connor's recommendations are then outlined.

1. Division of Power

Canada's Constitution does not expressly assign responsibility for "drinking water," "environment," or "public health" to a specific level of government.³⁷ Consequently, the federal and provincial (the latter of which delegates authority to municipalities) governments share jurisdiction over drinking water quality and quantity. This concurrent jurisdiction has given rise to a drinking water protection framework that "can fairly be described as complex, fragmented and evolving."³⁸ The subsequent subsections elaborate on the roles each level of government plays in practice.

a. Federal Jurisdiction

The federal government is responsible for sea coasts, fisheries, navigation, criminal law, and peace, order, and good governance—which are used to legislate in relation to water.³⁹ The federal power has supported statutes which are of significant importance to water quality and quantity in various respects. These statutes include the *Fisheries Act*, *Canadian Environmental Protection Act, 1999*, *Canada Water Act*, and *Safe Drinking Water for First Nations Act*. One of the federal government's noteworthy contributions to drinking water protection is the collaborative establishment of guidelines for MACs in drinking water through the Federal-Provincial-Territorial Committee on Drinking Water described earlier, which provinces and territories may decide to adopt or not. The federal government also has constitutional responsibility for "Indians and lands reserved for Indians," giving it an important role in working with Indigenous communities to ensure safe drinking water.⁴⁰

b. Provincial Jurisdiction

Provincial governments play a significant role in water resource management and drinking water protection. The provinces have exclusive power to legislate over public lands and forests, non-renewable resources, property and civil rights, and matters of local nature.⁴¹ Using these powers,

³⁷ *Constitution Act, 1982*, being Schedule B to the Canada Act 1982 (UK), 1982, c 11.

³⁸ Richard Lindgren, "Tap Water on Trial: Overview of Ontario's Drinking Water Regime" (Paper prepared for the Third Annual Conference on Water and Wastewater in Ontario, 2005), at 2 [Lindgren, "Tap Water on Trial"].

³⁹ *Constitution Act, 1982*, s 91.

⁴⁰ *Constitution Act, 1982*, s 91(24).

⁴¹ *Constitution Act, 1982*, s 92.

the provincial government of Ontario has passed numerous laws and regulations pertaining to drinking water systems, which are outlined in Section 2: “Key Provincial Legislation.”

In Ontario, the provincial ministry which is primarily responsible for water-related legislation and regulation is the Ontario Ministry of the Environment, Conservation and Parks (MECP).⁴²

c. Municipal Jurisdiction

Ontario has enacted several laws to establish, empower, and regulate certain local institutions which play key roles in water resource management and drinking water safety. The legislative framework governing municipalities is particularly important since over 80 percent of Ontario’s population receives their drinking water from municipally owned systems.⁴³

The *Municipal Act, 2001* empowers municipalities to enact and enforce by-laws to protect the health, safety, and well-being of the inhabitants of the municipality.⁴⁴ This Act gives municipalities great influence over source water protection and the day-to-day operation of water treatment plants. For example, they may operate public utilities or contract their operation to others (such as sewage and water).⁴⁵ Regardless of the local utility approach, Ontario municipal counsellors have important personal responsibility for safe drinking water under the *Safe Drinking Water Act, 2002* as a result of one of the Walkerton recommendations.⁴⁶

The *Planning Act* gives municipalities broad authority to regulate land use and development at the local or regional level, so long as it is consistent with the Provincial Policy Statement (PPS).⁴⁷ The 2020 PPS contains policy direction which consistently emphasizes the importance of a clean and healthy environment. Key provisions recognize the need for:

- planning authorities to protect, improve or restore the quality and quantity of water using the watershed as the ecologically meaningful scale for integrated planning;
- coordinated and integrated approach should be used for matters that cross municipal boundaries such as managing water resources; and
- planning for sewage, water, and stormwater.⁴⁸

At the time of the Walkerton tragedy, the *Public Utilities Act (PUA)* gave municipalities powers in respect of waterworks and other utilities and their governance. The *PUA* empowered

⁴² The Ministry responsible at the time of the Walkerton Inquiry was called the Ministry of the Environment (MOE), the ministry’s name was changed in 2014 to the Ministry of the Environment and Climate Change (MOECC) and then to the Ministry of the Environment, Conservation and Parks (MECP) in 2018. As such, MOE, MOECC and MECP are used interchangeably.

⁴³ *Report of the Walkerton Inquiry: Part 2*, at 278.

⁴⁴ *Municipal Act, 2001*, SO 2001, c 25, s 10(2).

⁴⁵ *Municipal Act, 2001*.

⁴⁶ *Safe Drinking Water Act, 2002*, SO 2002, c 32, s 19 [SDWA].

⁴⁷ Lindgren, “Tap Water on Trial,” at 12.

⁴⁸ “Provincial Policy Statement, 2020,” online (pdf): Ontario <<https://files.ontario.ca/mmah-provincial-policy-statement-2020-accessible-final-en-2020-02-14.pdf>>.


municipalities to establish public utilities commissions that were entrusted to control and manage its waterworks.⁴⁹ The relevant sections of the *PUA* have since been repealed.⁵⁰

2. Key Provincial Legislation

a. *Clean Water Act, 2006 (CWA)*

In response to Justice O'Connor's recommendations regarding source water protection, the *CWA* was enacted in 2006 to protect existing and future sources of drinking water.⁵¹ The statute plays a significant role in forming the first barrier in the multi-barrier approach, which is elaborated on in Chapter 3: Section 1: "Source Water Protection." An important provision in the *CWA* states that, in the case of conflict between the *CWA* and another statute, the provision that provides the greatest protection prevails.⁵²

b. *Safe Drinking Water Act, 2002 (SDWA)*

 Complete	Part 2 Recommendation 67: The provincial government should enact a <i>SDWA</i> to deal with matters related to the treatment and distribution of drinking water.
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The *SDWA* was enacted in 2002 in response to the Walkerton tragedy, specifically Part 2 Recommendation 67. Its stated purposes are to "recognize that the people of Ontario are entitled to expect their drinking water to be safe" and "provide for the protection of human health and the prevention of drinking water health hazards through the control and regulation of drinking water systems and drinking water testing."⁵³ The *SDWA* created stringent requirements to ensure that municipal water treatment plants are better equipped to detect and treat contaminants before the water is piped to homes.⁵⁴ The *SDWA* also fulfills many of Justice O'Connor's recommendations relating to the multi-barrier approach, which are discussed in more detail in Chapter 3: "Implementation of the Multi-Barrier Approach."

c. *Nutrient Management Act, 2002 (NMA)*

Also enacted in response to the Walkerton tragedy, the *NMA* is meant to "provide for the management of materials containing nutrients in ways that will enhance protection of the natural environment and provide a sustainable future for agricultural operations and rural development."⁵⁵ The *NMA* includes an extensive regulatory scheme that requires nutrient plans and strategies by a variety of actors such as large animal farms and municipalities with biosolids.⁵⁶ To protect water sources, it provides specific rules regarding land application, nutrient storage,

⁴⁹ *Report of the Walkerton Inquiry: Part 1*, at 453.

⁵⁰ *Public Utilities Act*, RSO 1990, c P.52.

⁵¹ *Clean Water Act, 2006*, SO 2006, c 22, s 1 [*CWA*].

⁵² *CWA*, s 105(1).

⁵³ *SDWA*, s 1.

⁵⁴ Environmental Commissioner of Ontario, *2018 Environmental Protection Report*, vol 2 (Toronto, ECO, 2018) at 9 [ECO, *2018 Report*].

⁵⁵ *Nutrient Management Act, 2002*, SO 2002, c 4, s 1 [*NMA*].

⁵⁶ *NMA*, s 6.

nutrient composting and digesting, and other related issues⁵⁷ (see “Agriculture Regulation” in Chapter 3: Section 1(f): “Outstanding Issues”).

d. *Environmental Bill of Rights, 1993 (EBR)*

The *EBR* was passed to ensure public participation in environmental decisions and to improve government accountability. The *EBR* creates broad public rights to participate in environmentally significant decisions by provincial ministries, request investigations of suspected environmental offences, and request reviews of laws, regulations, policies, and instruments that are inadequate to protect the environment.⁵⁸ It also increases access to the courts to protect public resources or to address public nuisances causing environmental harm.⁵⁹ Most of Ontario’s environmental laws (including those described herein) are subject to the *EBR*.⁶⁰

e. *Health Protection and Promotion Act (HPPA)*

The *HPPA* is intended to provide for the organization and delivery of public health programs and services, the prevention of the spread of disease, and the promotion and protection of the health of the people of Ontario.⁶¹ It contains various provisions related to the investigation, reporting, and reduction of waterborne disease within local health units across the province.⁶² The *HPPA* also regulates the standards and tests that apply to Ontario’s small drinking water systems.⁶³ See Chapter 4, Section 2: “Small Drinking Water Systems”.

f. *Environmental Protection Act (EPA)*

The *EPA* is Ontario’s main anti-pollution statute. Its purpose is broadly stated as “to provide for the protection and conservation of the natural environment.”⁶⁴ It is used concurrently with the *OWRA* to address sources of water pollution.⁶⁵ The *EPA* generally prohibits contaminant discharges into the natural environment that cause, or are likely to cause, an adverse effect.⁶⁶ While the *EPA* does not address drinking water quality, similar to the *OWRA*, it prohibits contaminants from being discharged into water in excess of prescribed regulatory amounts so its enforcement provisions may be used for water protection. The *EPA* also empowers the MECP to issue a wide variety of legally binding orders and approvals to remediate or prevent environmental harm.⁶⁷

⁵⁷ *General*, O Reg 267/03.

⁵⁸ *Environmental Bill of Rights, 1993*, SO 1993, c 28 [EBR].

⁵⁹ *EBR*, s 103.

⁶⁰ *General*, O Reg 73/94, s 3.

⁶¹ *Health Protection and Promotion Act*, RSO 1990, c H.7, s 2 [HPPA].

⁶² Lindgren, “Tap Water on Trial,” at 11.

⁶³ *Small Drinking Water Systems*, O Reg 319/08.

⁶⁴ *Environmental Protection Act*, RSO 1990, c E.19, s 3(1)

⁶⁵ “Fact Sheet: What is the provincial legal structure around water in Ontario?” at 2, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2019/07/FactSheet-DrinkingWaterLegislation2012.pdf>> [“Fact Sheet”].

⁶⁶ *Environmental Protection Act*, s 14(1).

⁶⁷ *Environmental Protection Act*, s 157, s 157.1.

g. Conservation Authorities Act

The *Conservation Authorities Act* establishes 36 conservation authorities (CAs) in Ontario (see Figure 1).⁶⁸ CAs establish and undertake programs to further conservation, restoration, development and manage natural resources other than gas, oil, coal, and minerals, such as drinking water.

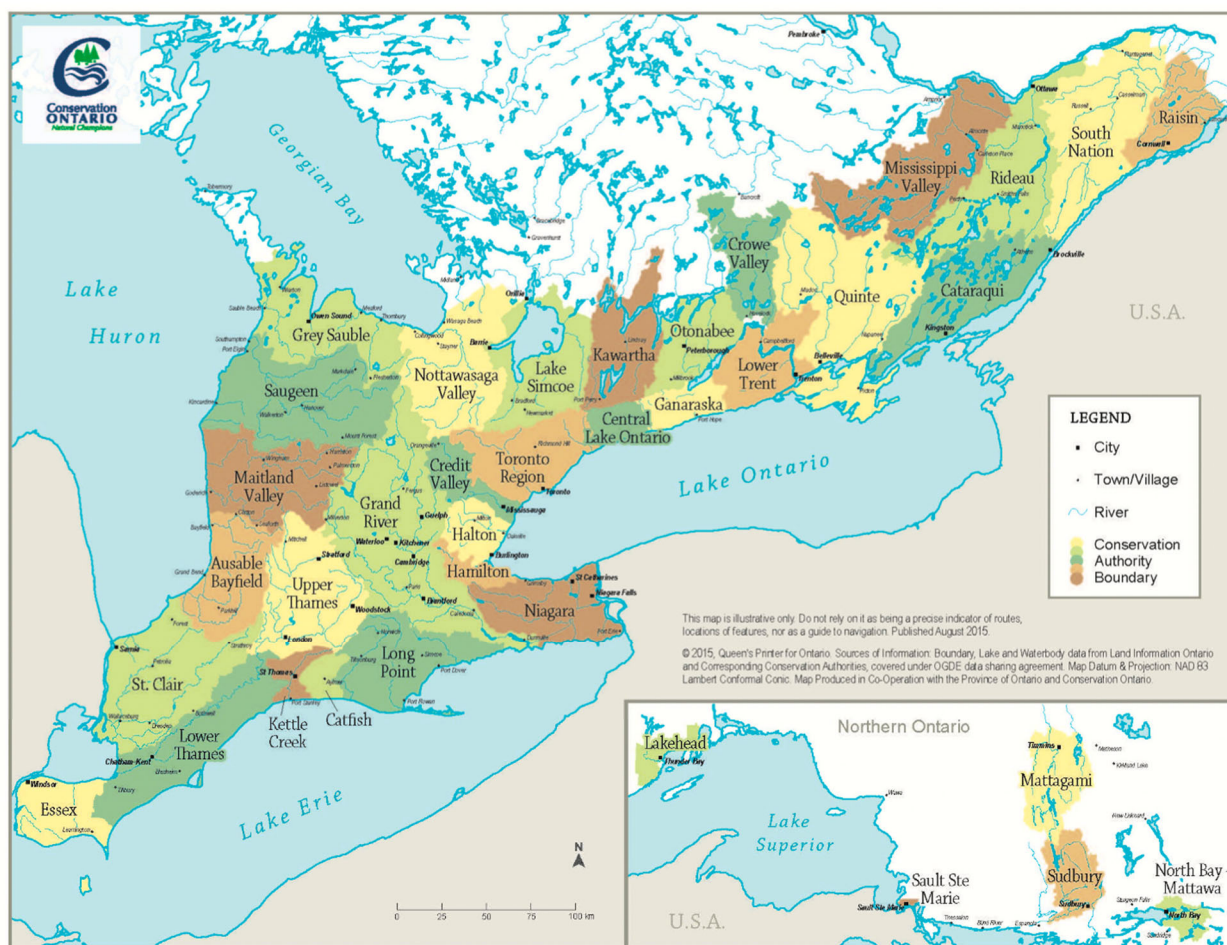


Figure 1: Map of Ontario's CAs (Source: Conservation Ontario 2015).

h. Ontario Water Resources Act (OWRA)

The *OWRA* is a general water management statute whose origins date back to the 1950s. Its stated purpose is to “provide for the conservation, protection and management of Ontario’s waters and for their efficient and sustainable use.”⁶⁹ The *OWRA* generally prohibits the discharge

⁶⁸ *Conservation Authorities Act*, RSO 1990, c C.27, Part II.

⁶⁹ *Ontario Water Resources Act*, RSO 1990, c O.40, s 0.1 [OWRA].

of substances that may impair water quality and is used to regulate water takings, well construction, water works, and sewage works.⁷⁰

The *OWRA* prohibitions cannot be violated except in accordance with specified orders or approvals, such as an Environmental Compliance Approval for sewage works.⁷¹ Conditions of Environmental Compliance Approvals may include provisions of control systems, contaminant removal and/or treatment, monitoring, notification of exceedances, and contingency responses.⁷² Provincial decision-makers use a range of policies to formulate these conditions. For example, the Ontario Drinking Water Quality Standards are referenced to determine permissible limits of parameters discharged under the permit.⁷³

The *OWRA* makes it an offence to contravene the Act or its regulations.⁷⁴ Persons convicted of offences under the *OWRA* may face fines, imprisonment, profit-stripping, restoration orders, or preventative orders.⁷⁵ *Baker v Director, Ministry of the Environment* decision held that directors and officers can be liable even where the director or officer had no knowledge or control of the site of the contravention.⁷⁶

⁷⁰ Lindgren, "Tap Water on Trial," at 9.

⁷¹ *OWRA*, s 31, s 106.1(2).

⁷² Julie Abouchar and Theresa McClenaghan, *Ontario Water Law* (Toronto: Thomson Reuters Canada, 2021) at 2-5.

⁷³ Abouchar and McClenaghan, at 2-5.

⁷⁴ *OWRA*, s 107.

⁷⁵ *OWRA*, s 108-112.

⁷⁶ *Baker v Director, Ministry of the Environment*, 2013 CarswellOnt 6508, (Ont Environmental Review Tribunal).

Chapter 3: Implementation of the Multi-Barrier Approach

Chapter 3 evaluates the implementation of Justice O'Connor's recommendations for each barrier of the multi-barrier approach: source water protection, water treatment, distribution system, monitoring, and response to adverse monitoring results. It also assesses the status of recommendations relating to municipal governments and the MECP, who both play significant roles in overseeing the various barriers. Lastly, the chapter discusses recommendations relating to enforcement, which is necessary to ensure each of the barriers is being effectively implemented.

Each of the recommendations discussed throughout this chapter contributes toward the fulfillment of Part 2 Recommendations 65 and 66, which broadly recommended that the MECP facilitate the adoption of a multi-barrier approach.

✓ Complete	Part 2 Recommendation 65: The provincial government should develop a comprehensive “source to tap” drinking water policy covering all elements of the provision of drinking water, from source protection to standards development, treatment, distribution, and emergency response.
✓ Complete	Part 2 Recommendation 66: The Ministry of the Environment should be the lead ministry responsible for developing and implementing the “source to tap” Drinking Water Policy.

While Part 2 Recommendations 65 and 66 are marked as complete, not all of the province's population is currently protected by the “source to tap” policy (see Chapter 4: “Coverage of Various Populations”).

1. Source Water Protection

To form the first barrier, watershed-based source protection plans (SPPs) were developed in accordance with Justice O'Connor's first Part 2 recommendation. This process was initiated through the CWA, rather than through the EPA as Justice O'Connor mentioned in Part 2 Recommendation 68.

✓ Complete	Part 2 Recommendation 1: Drinking water sources should be protected by developing watershed- based source protection plans. Source protection plans should be required for all watersheds in Ontario.
- Not Applicable	Part 2 Recommendation 68: The provincial government should amend the <i>Environmental Protection Act</i> to implement the recommendations regarding source protection.

a. SPP Development

To develop watershed-based SPPs, the CWA effectively facilitated the local consultation process outlined in Part 2 Recommendation 2.

<p>✓ Complete</p>	<p>Part 2 Recommendation 2: The Ministry of the Environment should ensure that draft source protection plans are prepared through an inclusive process of local consultation. Where appropriate, this process should be managed by conservation authorities.</p>
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Pursuant to the CWA, the province was divided into 19 Source Protection Regions (SPRs) with 38 smaller sub-areas called Source Protection Areas (SPAs)⁷⁷ (See Figure 2). The borders of SPRs mirrored those for existing CAs, which correspond to natural watershed boundaries and already managed water at this scale.⁷⁸

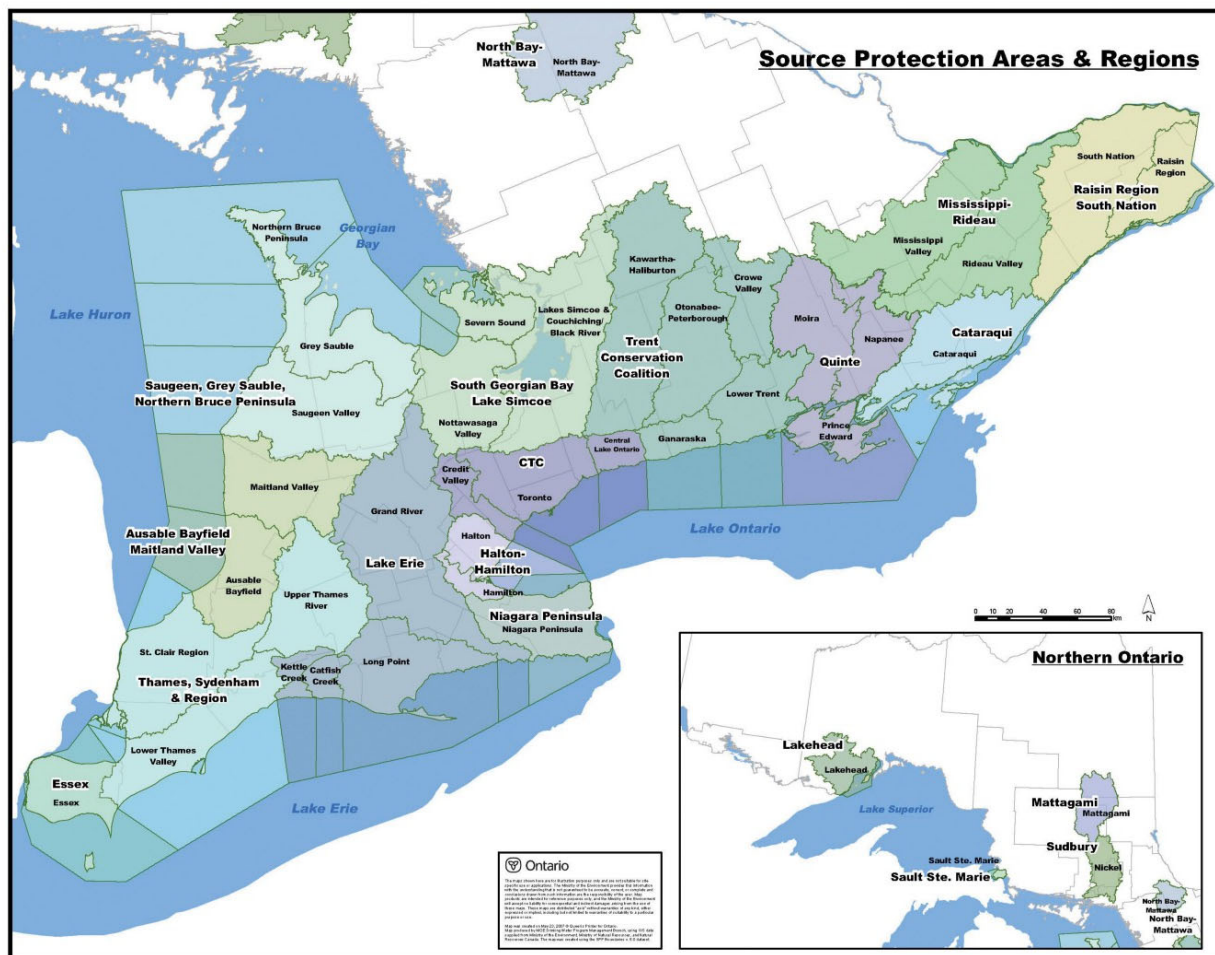


Figure 2: Map of SPAs and SPRs in Ontario (Source: MECP 2007).

⁷⁷ *Source Protection Areas and Regions*, O Reg 284/07.

⁷⁸ Leslie Collins et al, "Source Water Protection Planning for Ontario First Nations Communities: Case Studies Identifying Challenges and Outcomes" (2017) 9 Water 7 at 2.

Next, two governing bodies were established for each SPR: a supervisory Source Protection Authority, represented by the board of the relevant CA, and a multi-stakeholder Source Protection Committee (SPC) to perform the protection planning work.⁷⁹ SPCs are composed of representatives from municipalities, the agricultural, industrial, and commercial sectors, Indigenous representatives, academics, non-government organizations, and other members of the public.⁸⁰

As a first step, local SPCs were tasked with preparing science-based assessment reports for their watershed. The assessment reports had to describe the water resources in the SPA, identify vulnerable areas, identify potential drinking water threats, and classify the significance of each threat as significant, moderate, or low.⁸¹ Regulation 287/07 lists activities that SPCs may deem to be threats to drinking water sources, such as bacterial contamination from human or animal waste, industrial pollution, urban runoff, and water depletion from overuse.⁸²

Once the assessment reports were completed, the SPCs developed SPPs that contain policies to address the threats identified in the reports.⁸³ These locally developed plans contain policies to protect sources of drinking water from risks such as handling or storing fuel and chemicals, pesticides, or manure.⁸⁴ Each action in the final plan must specify who will be responsible, the timing and method for completion, and the means for monitoring and evaluating its effectiveness.⁸⁵

In her 2018 report, the former Environmental Commissioner of Ontario (ECO) praised the effective implementation of Part 2 Recommendation 2. She reviewed selected SPPs, which had just begun being implemented across the province and found that, as intended, the local-led source protection process resulted in individually tailored SPPs that respond to the unique geography and circumstances of each watershed.⁸⁶ She described the SPCs as “committed and capable arbiters” who created policies that carefully weighed the financial consequences of imposing various requirements, without sacrificing drinking water safety.⁸⁷ The former ECO also found that the localized approach allowed SPCs to “think outside the box” and create individualized policies that went further than a province-wide standard may have been able to.⁸⁸

⁷⁹ CWA, s 4-6.

⁸⁰ Juli Abouchar and Joanna Vince, “Ten years after Walkerton - Ontario’s drinking water protection framework update” at 3, online (pdf): *Canadian Bar Association* <http://www.cba.org/cba/cle/pdf/env11_abouchar_paper.pdf>.

⁸¹ Abouchar and Vince, at 3.

⁸² *General*, O Reg 287/07, s 1.1.

⁸³ Abouchar and Vince, at 3.

⁸⁴ “Minister’s Annual Report on Drinking Water” (2021), online: *Ontario* <<https://www.ontario.ca/page/ministers-annual-report-drinking-water-2021>> [“Minister’s Annual Report”].

⁸⁵ Technical Experts Committee, at vii.


⁸⁶ ECO, *2018 Report*, at 5.

⁸⁷ ECO, *2018 Report*, at 5.

⁸⁸ ECO, *2018 Report*, at 18.


In many cases, SPCs opted to go beyond the minimum requirement of addressing only “significant” threats to include policies to address lesser threats as well.⁸⁹

MECP Watershed Management Branch

 Complete	Part 2 Recommendation 70: The provincial government should create a Watershed Management Branch within the Ministry of the Environment to be responsible for oversight of watershed-based source protection plans and, if implemented, watershed management plans.
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Justice O’Connor recommended that the MECP devote a specific branch to source protection oversight. Organization charts indicate a source protection branch of the MECP has existed since at least 2014 (though under slightly different names).⁹⁰ In areas where there is no existing CA, Justice O’Connor intended this branch to fill the role of source protection authority and, as Chapter 4: “Coverage of Various Populations” will show, communities who do not live in the jurisdiction of an existing CA are not currently benefitting from source protection efforts.

SPP Approval



 Complete	Part 2 Recommendation 3: Draft source protection plans should be reviewed by the Ministry of the Environment and subject to ministry approval.
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Once the last of the 38 SPPs was approved by the MECP in 2015 (fulfilling Part 2 Recommendation 3), the implementation phase began.⁹¹ Once approved, SPPs resulted in thousands of on-the-ground actions by municipalities and provincial agencies to implement policies.

b. SPP Implementation

Impact on Provincial Ministries and Municipalities



Justice O’Connor made the following recommendations to inform how source protection policies interact with other legislation and government decision-making processes.

 Complete	Part 2 Recommendation 4: Provincial government decisions that affect the quality of drinking water sources must be consistent with approved source protection plans.
 Complete	Part 2 Recommendation 5: Where the potential exists for a significant direct threat to drinking water sources, municipal official plans and decisions must be consistent with the applicable source protection plan. Otherwise, municipal official plans and decisions should have regard to the source protection plan. The plans should designate areas where consistency is required.

⁸⁹ ECO, 2018 Report, at 18.

⁹⁰ "All Published Plans and Annual Reports," online: Ontario <<https://www.ontario.ca/page/all-published-plans-and-annual-reports>>.

⁹¹ "Source Water Protection: Follow-Up Report" at 159, online (pdf): Office of the Auditor General of Ontario <https://www.auditor.on.ca/en/content/annualreports/arreports/en16/v2_112en16.pdf>.

 Complete	Part 2 Recommendation 10: The Ministry of the Environment should not issue Certificates of Approval for the spreading of waste materials unless they are compatible with the applicable source protection plan.
 Complete	Part 2 Recommendation 17: The regulation of other industries by the provincial government and by municipalities must be consistent with provincially approved source protection plans.

Source protection policies can address threats in the watershed by using softer policy tools, such as education and outreach, and stronger regulatory tools such as prohibitions and restrictions.

Most SPPs required provincial ministries to ensure that certain prescribed instruments include source protection provisions. For example, many required the MECP to review its approvals for waste disposal sites that are or may become significant threats, and to amend the terms of approvals to ensure that these sites cease to be or never become significant threats.⁹² In 2015, the MECP published new Standard Operating Policies which set out how the ministry would fulfill its duties to implement SPPs.⁹³ The Policies established procedures for new applications for prescribed instruments and guidance on reviewing existing instruments to ensure they conform with source protection policies.⁹⁴ The MECP was required to review and amend all relevant prescribed instruments within three years of SPPs becoming effective.⁹⁵

Several SPCs directed the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to review instruments under its jurisdiction to protect drinking water sources. In April 2018, the OMAFRA reported to the then ECO that it had completed a detailed review of all existing nutrient management strategies and non-agricultural source material plans identified by SPCs and found that very few needed revision.⁹⁶ In 2015, OMAFRA initiated a process for ensuring that any new nutrient management strategies conform to the requirements of the applicable SPP.⁹⁷

As of April 2018, 528 regulatory permits had been reviewed by provincial ministries with 600 more outstanding. Of those 528, 149 were deemed to pose significant threats that had to be modified to eliminate risk—meaning there were 149 instances of regulated activities that could have led to serious water contamination incidents had their threat not been identified and eliminated.⁹⁸

⁹² ECO, *2018 Report*, at 29.

⁹³ ECO, *2018 Report*, at 29.

⁹⁴ ECO, *2018 Report*, at 29.

⁹⁵ ECO, *2018 Report*, at 29.

⁹⁶ ECO, *2018 Report*, at 29.


⁹⁷ ECO, *2018 Report*, at 29.

⁹⁸ David Hillier, "The Crucial Legacy of the Walkerton Water Tragedy in Ontario 20 Years Later" (25 May 2020), online: *Medium* <<https://medium.com/@hillierdl/the-crucial-legacy-of-the-walkerton-water-tragedy-in-ontario-20-years-later-15857224b7d4>>.

Plans can also require municipalities to amend official plans and by-laws or control certain activities in specific areas. Municipalities have responded quickly to the requirement that they align their official plans and zoning by-laws with SPPs. As of 2018, 70 percent had either completed the required amendments or begun the amendment process.⁹⁹


New planning decisions made by municipalities (such as decisions relating to official plans and zoning by-laws) and other branches of government (including boards, agencies, and commissions) have to conform to the significant threat policies.¹⁰⁰ Stronger, legally binding tools can only address threats that SPCs deem “significant” and decision-makers must only “have regard to” the other policies set out in SPPs.

Appeals

 Complete	Part 2 Recommendation 6: The provincial government should provide for limited rights of appeal to challenge source protection plans, and provincial and municipal decisions that are inconsistent with the plans.
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The public and stakeholders are able to provide feedback during the source protection planning process, but once an SPP is submitted to the MECP for the review and approval process, it cannot be appealed.¹⁰¹ However, the implementation of SPP policies through regulatory tools and prescribed instruments can be appealed through their respective appeal mechanisms.¹⁰² The decisions of these appeal bodies must be consistent with the SPP.¹⁰³

Local Initiatives

 Complete	Part 2 Recommendation 8: Conservation authorities (or, in their absence, the Ministry of the Environment) should be responsible for implementing local initiatives to educate landowners, industry, and the public about the requirements and importance of drinking water source protection.
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Most CAs have undertaken education initiatives and have resource libraries on their website, although it varies by area. For example, the Trent Conservation Coalition SPR has a database of documents for the public, municipalities, and landowners covering topics such as threats to water sources, source protection policies, and roles and responsibilities.¹⁰⁴ Similarly, the Credit Valley Source Protection Authority has an “education and outreach library” with documents on drinking water threats and source protection.¹⁰⁵ Conservation Ontario has a comprehensive catalogue of source water protection education and outreach resources to guide and support local CAs.¹⁰⁶ In its 2015 to 2020 Progress Report, the Cataraqui Source Protection Authority noted an enhanced

⁹⁹ Hillier.

¹⁰⁰ Abouchar and Vince, at 3.

¹⁰¹ Abouchar and Vince, at 2.

¹⁰² Abouchar and Vince, at 2.

¹⁰³ Abouchar and Vince, at 2.

¹⁰⁴ “Educational Resources,” online: Trent Source Protection Region <<https://trentsourceprotection.on.ca/resources/educational-resources/>>.

¹⁰⁵ “Education and Outreach,” online: CTC Source Protection Region <<https://ctcswp.ca/resources/education-and-outreach/>>.

¹⁰⁶ “Resources,” online: Conservation Ontario <<https://conservationontario.ca/resources/>>.

recognition of the importance to protect source waters, especially within the rural community.¹⁰⁷ The authority produced and shared a video on source protection in the region, guidance documents for municipalities, risk management flyers and fact sheets for landowners, and more.

Septic System Inspections

<p>?</p> <p>Unavailable</p>	<p>Part 2 Recommendation 9: Septic systems should be inspected as a condition for the transfer of a deed.</p>
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Septic system inspections are not legally required upon the transfer of a deed, but Justice O'Connor did not indicate if he intended for this recommendation to be made mandatory. In rural Ontario, many agreements do provide for this and most require proof of potability of the drinking water in a rural property, which would reveal problems with a septic system.

c. Public Reports

Justice O'Connor noted that fostering confidence in the drinking water system requires that members of the public be fully informed of decisions relating to the safety of their drinking water and can hold those who make these decisions accountable.¹⁰⁸ As a result, the CWA requires each source protection authority to produce an annual progress report that describes the measures taken by the various bodies to implement the SPPs, the results of monitoring programs, the extent to which the objectives set out in the SPPs are being achieved, and an explanation of any failures to implement actions by the deadline.¹⁰⁹ These public reports not only provide public accountability but also help assess whether SPPs are achieving their goals.

d. SPP Updating

Justice O'Connor highlighted that some aspects of the SPPs will require constant updating to reflect changing circumstances. He recommended that the original affected groups and new participants should be convened periodically to review and revise plans, in a process similar to the one used to develop the plan.¹¹⁰ Similarly, the Technical Experts Committee, which was mandated to advise the MOE during the development of the CWA, emphasized that SPPs should be "living documents."¹¹¹

The CWA requires that all assessment reports and SPPs be periodically reviewed and updated. The MECP required each SPC to begin its first review within approximately three years of its plan coming into effect.¹¹² These reviews help ensure that SPCs identify and address any problems or gaps in the current plans quickly.

¹⁰⁷ "Catawaqui Source Protection Area: Policy Implementation Report 2015-2020" (1 May 2021) at 10, online (pdf): *Clean Water Catawaqui* <<https://cleanwatercatawaqui.ca/wp-content/uploads/2020-Catawaqui-AnnualProgressReport.pdf>>.

¹⁰⁸ *Report of the Walkerton Inquiry: Part 2*, at 75.

¹⁰⁹ ECO, *2018 Report*, at 33.


¹¹⁰ *Report of the Walkerton Inquiry: Part 2*, at 115.

¹¹¹ Technical Experts Committee, at viii.

¹¹² ECO, *2018 Report*, at 34.

In 2020, local source protection authorities reported that together:


- Over 260 municipalities are updating their official plans to implement source protection policies;
- Over 1,300 property-specific risk management plans have been established;
- Over 6,700 septic systems are undergoing regular inspections; and
- Nearly 1,800 road signs have been installed to help increase awareness of drinking water protection zones.¹¹³

 Complete	Part 2 Recommendation 46: The provincial government should provide guidance and technical advice to support municipal reviews of water systems.
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Per Part 2 Recommendation 46, the MECP prepared a set of technical rules which establish the approach to be used by source protection authorities when developing and updating the assessment reports required by section 15(1) of the CWA.¹¹⁴ These rules were most recently updated in 2021 and lay out the process for assessing threats to water quality and quantity.¹¹⁵

e. Funding

While the institutional framework is in place to require SPP development and review, this process requires adequate and secure funding if it is to be meaningful. The legal framework set out by the CWA will not function properly if the agencies responsible for implementing and overseeing it lack the capacity to do so. In 2018, the then ECO recommended that the provincial government commit steady-state, multi-year funding to source protection to ensure that the MECP, CAs, municipalities, and SPCs have sufficient capacity to effectively implement, monitor, review and amend SPPs.¹¹⁶ This parallels Justice O'Connor's broad Part 2 Recommendation 78.

 Unavailable	Part 2 Recommendation 78: The provincial government should ensure that programs relating to the safety of drinking water are adequately funded.
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Part 2 Recommendation 78 is marked as unavailable because the need for funding for drinking water programs requires constant vigilance and there are outstanding issues, which are discussed in the following subsection, that will require additional funding to address.


The province funded the development and initial implementation of SPPs; however, on-going and consistent funding is necessary to ensure the water sources continue to be protected.

¹¹³ "Minister's Annual Report."

¹¹⁴ "Technical Rules Under the Clean Water Act" (2021), online (pdf): Ontario <<https://www.ontario.ca/page/2021-technical-rules-under-clean-water-act>>.

¹¹⁵ "Technical Rules Proposed to Be Made under the Clean Water Act, 2006 to Establish Requirements Related to the Preparation of an Assessment Report" (13 August 2008), online: Ontario's Regulatory Registry <<https://www.ontariocanada.com/registry/view.do?postingId=1423>>

¹¹⁶ ECO, 2018 Report, at 49.

 Complete	Part 2 Recommendation 7: The provincial government should ensure that sufficient funds are available to complete the planning and adoption of source protection plans.
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Between 2004 and 2018, the provincial government provided over \$275 million for the source protection program—most of which went towards the initial work of SPCs and conducting studies for the assessment reports.¹¹⁷ The upfront work for the source protection program is now complete, so its cost will decrease, but it will not dissolve completely. The various bodies responsible for implementing source protection policies need secure ongoing funding and resources to maintain the capacity to continue this work. For example, updating the underlying scientific and technical studies is critical to the success of source protection because threats are not static. The former ECO highlighted that the province funded earlier technical studies, but did not commit to funding additional studies in the future.¹¹⁸ Resources are also required to do monitoring work so that water quality problems can be detected and the effectiveness of SPPs evaluated. The province previously funded some CAs to sample source water, but this work is now limited to the few municipalities with the resources to do so.¹¹⁹ Further, funding is still needed for areas not yet covered by source protection policies (see Chapter 4: “Coverage of Various Populations”) to complete technical work, assessments, and SPP development or amendment.

The MECP requires ongoing capacity to carry out its many responsibilities under the source protection program, such as reviewing and updating prescribed instruments, reviewing source protection authorities’ annual progress reports, and reviewing and approving SPP amendments.

In 2018, the MECP advised the then ECO that the province has committed another \$7.2 million to support local source protection activities in the following year but uncertainty about funding beyond this leaves the success of the source protection program up in the air.¹²⁰ The 2021 Minister’s Annual Report on Drinking Water states that “Ontario continues to provide ongoing funding to the source protection authorities to carry out their legislated duties and support municipalities in meeting their obligations” but does not explain what that entails.¹²¹ The only references to water in Ontario’s budget for 2022 relate to specific infrastructure projects, such as \$2 billion being invested over five years to help 424 small, rural and Northern communities construct and rehabilitate water infrastructure and \$24 million being invested for the planning and construction of the Holland Marsh Phosphorus Recycling Facility in York Region to treat phosphorus runoff.¹²²

¹¹⁷ ECO, 2018 Report, at 47.

¹¹⁸ ECO, 2018 Report, at 47.

¹¹⁹ ECO, 2018 Report, at 47.

¹²⁰ ECO, 2018 Report, at 47.

¹²¹ “Minister’s Annual Report.”

¹²² “2022 Ontario Budget: Ontario’s Plan to Build” (online): <<https://budget.ontario.ca/2022/contents.html>>.

f. Outstanding Issues

The source protection framework put in place by the *CWA* made significant strides in protecting drinking water sources in Ontario. However, gaps in protection remain, namely certain populations are not covered, the policies have limited application, there are no tools to address historical conditions, and farms are not closely regulated.

Excluded Populations

As will be discussed in Chapter 4: “Coverage of Various Populations,” not all Ontario residents are receiving the benefits of source protection policies because they mainly apply to municipal water systems.

Limited Application of Policies

Even within municipal water systems, the application of source protection policies is narrow. Policies only apply to the areas designated as “vulnerable” to threats such as zones around municipal intake pipes, wellheads, and highly vulnerable aquifers.¹²³ Therefore, while much of southern Ontario is covered by SPAs, the actual area that receives legal protection from pollutants under the *CWA* is relatively small. Further, only policies that relate to significant threats can be legally binding, meaning SPCs have limited tools to combat threats designated as moderate or low.¹²⁴

Addressing Historical Conditions

The 2018 ECO Report cautioned that *CWA* provides no effective means for SPCs to address drinking water threats posed by historical contamination. The *CWA* defines “drinking water threats” as “an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water.”¹²⁵ This definition includes not only existing or future activities, but also historical conditions that present current or future risks to drinking water sources. It can be challenging for SPCs to identify conditions as significant threats there is little information available on many properties known or suspected to be contaminated.¹²⁶ Even in cases where there are records, a lack of comprehensive information about the status of the contamination could make it difficult to confirm whether a condition met the thresholds to be listed as a significant threat.¹²⁷ For example, the requirement for evidence of offsite contamination with the potential to deteriorate the source water may present too high a threshold.¹²⁸ Even if a SPC wished to develop policies to address conditions, the *CWA* provides few tools for them to do so. SPCs cannot use prohibitions, risk management plans to compel remedial or other action, or land use restrictions to manage threats from

¹²³ ECO, 2018 Report, at 11.

¹²⁴ *CWA*, s 32.

¹²⁵ *CWA*, s 2(1).

¹²⁶ ECO, 2018 Report, at 45.

¹²⁷ ECO, 2018 Report, at 45.

¹²⁸ ECO, 2018 Report, at 45.

conditions.¹²⁹ They can require certain bodies to monitor the conditions or make non-binding policies, but they are essentially reliant on the MECP to use their discretionary powers under the *EPA* to issue an order to address the condition.¹³⁰

Agriculture Regulation

If not properly managed, the nutrient-rich materials farmers apply to their fields can run into and degrade nearby drinking water sources, prompting Justice O'Connor to make several recommendations relating to agriculture.¹³¹ The regulations implemented pursuant to these recommendations lack oversight and apply to very few farms, leaving drinking water sources vulnerable to nutrients and bacteria.

! Needs Improvement	Part 2 Recommendation 11: The Ministry of the Environment should take the lead role in regulating the potential impacts of farm activities on drinking water sources. The Ministry of Agriculture, Food and Rural Affairs should provide technical support to the Ministry of the Environment and should continue to advise farmers about the protection of drinking water sources.
! Needs Improvement	Part 2 Recommendation 12: Where necessary, the Ministry of the Environment should establish minimum regulatory requirements for agricultural activities that generate impacts on drinking water sources.
! Needs Improvement	Part 2 Recommendation 13: All large or intensive farms, and all farms in areas designated as sensitive or high-risk by the applicable source protection plan, should be required to develop binding individual water protection plans consistent with the source protection plan.
✓ Complete	Part 2 Recommendation 14: Once a farm has in place an individual water protection plan that is consistent with the applicable source protection plan, municipalities should not have the authority to require that farm to meet a higher standard of protection of drinking water sources than that which is laid out in the farm's water protection plan.
X Incomplete	Part 2 Recommendation 15: The Ministry of the Environment should work with the Ministry of Agriculture, Food and Rural Affairs, agricultural groups, conservation authorities, municipalities, and other interested groups to create a provincial framework for developing individual farm water protection plans.
! Needs Improvement	Part 2 Recommendation 16: The provincial government, through the Ministry of Agriculture, Food and Rural Affairs in collaboration with the Ministry of the Environment, should establish a system of cost-share incentives for water protection projects on farms.

¹²⁹ ECO, 2018 Report, at 45.

¹³⁰ ECO, 2018 Report, at 45.

¹³¹ ECO, 2018 Report, at 45.

The *NMA* requires large or expanding livestock farms to develop a nutrient management strategy for storing and transferring manure to other farms and requires the larger livestock farms to also develop a nutrient management plan to manage the spreading of manure on land.¹³² Both strategies and plans must be developed by a certified nutrient management planner but only the strategies must be submitted to the OMAFRA.¹³³

There is no source protection oversight of these plans unless the SPC chooses to outright prohibit manure spreading in the vulnerable area, which they are directed to do only as a very last resort.¹³⁴ SPCs are essentially forced to rely on farmers to change their own nutrient management plans to reduce the threat. Further, SPCs are unable to check whether the plans or farms' activities comply with SPPs. The MECP is solely responsible for inspecting and enforcing compliance with nutrient management plans, but it rarely does so.¹³⁵ When it does, it only looks at whether farms are complying with the plans as written, not whether the plans protect drinking water sources.¹³⁶ From 2016-2017, the MECP conducted 174 nutrient management inspections and found only 38 percent of inspected farms were fully compliant with their strategies and plans.¹³⁷

Another significant pitfall in this regulatory framework is its limited application (see Figure 3). The *NMA* only applies to larger farms meaning it does protect water from most of Ontario's

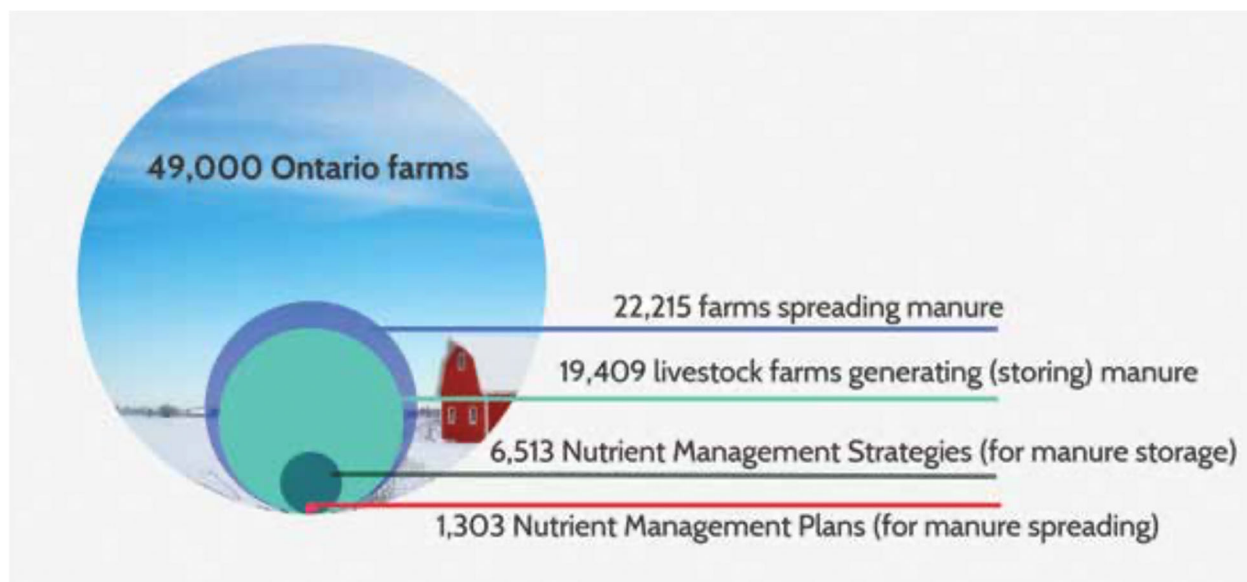


Figure 3: Illustration of the proportion of farms that NMA requirements apply to (Source: ECO 2018).

¹³² ECO, 2018 Report, at 20.

¹³³ ECO, 2018 Report, at 20.

¹³⁴ ECO, 2018 Report, at 43.

¹³⁵ ECO, 2018 Report, at 44.

¹³⁶ ECO, 2018 Report, at 44.

¹³⁷ ECO, 2018 Report, at 22.

manure. The former ECO reported that only 6,513 farms out of 19,409 livestock operations in Ontario are required to prepare and follow a nutrient management strategy.¹³⁸ Of those 6,513 farms, 1,303 large operations must also prepare and follow a nutrient management plan.¹³⁹ The rules only capture about 34 percent of Ontario's livestock operations, 6 percent of the farms that spread manure, and 44 percent of Ontario's total manure by volume.¹⁴⁰ Smaller farms, such as the farm that was the source of contamination in Walkerton, are not required to follow these *NMA* rules.

It is not clear if the provincial government provides funding incentives for those farms required to develop strategies and plans. OMAFRA's website says that "cost-share programs are available to assist in implementing projects" and directs to the Ontario Soil and Crop Improvement Association website for more information, but the funding programs page no longer exists.¹⁴¹ Additionally, the OMAFRA website only mentions funding for implementing projects and not assessing risks or developing plans. Some CAs (including Lake Simcoe and Kawartha) have funding programs for farmers undertaking projects to improve water quality, but this is limited to their watersheds.¹⁴² It does not appear there are any province-wide initiatives to fund nutrient management.

SPCs worked to expand nutrient management requirements to more farms. For those in vulnerable areas that are already required to have a nutrient management strategy and/or plan, many SPCs directed the OMAFRA to review these strategies and add conditions as necessary to address the drinking water threats.¹⁴³ For farms in vulnerable areas that are not required to have a strategy or plan, they directed those farms to prepare and implement a similar-functioning risk management plan.¹⁴⁴

2. Water Treatment

Water treatment is important to ensure that water is safe to drink, aesthetically pleasing, and has a good taste and no odour. Regulation 170/03, the Drinking Water Systems Regulation under the *SDWA*, establishes specific requirements for sampling, monitoring, and the minimum levels of treatment. It identifies the types of treatment processes and equipment that can be used to achieve the results that are necessary when drinking water is being provided to the public.¹⁴⁵

¹³⁸ ECO, 2018 Report, at 20.

¹³⁹ ECO, 2018 Report, at 20.

¹⁴⁰ ECO, 2018 Report, at 20.

¹⁴¹ "Canada-Ontario Environmental Farm Plan Incentives," online: Ontario Soil and Crop Improvement Association <<https://www.ontariosoilcrop.org/cms/en/Programs/ProgramsAboutEFP.aspx?menuid=24>>.


¹⁴² "On the Farm," online: Lake Simcoe Region Conservation Authority <<https://www.lsrca.on.ca/funding/on-the-farm>>; "Farm Management," online: Kawartha Conservation <<https://www.kawarthaconservation.com/en/landowner-services/farm-management.aspx#Manage-manure-nutrients-and-runoff>>.

¹⁴³ ECO, 2018 Report, at 21.

¹⁴⁴ ECO, 2018 Report, at 21.


¹⁴⁵ *Drinking Water Systems*, O Reg 170/03, sched 1-3.

Treatment System Design

 Complete	<p>Part 2 Recommendation 30: All raw water intended for drinking water should be subject to a characterization of each parameter that could indicate a public health risk. The results, regardless of the type of source, should be taken into account in designing and approving any treatment system.</p>
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Ontario's "Design Guidelines for Drinking-Water Systems" note that designers and proponents of drinking water systems are responsible for complying with Regulation 170/03, which sets out requirements for issues which may affect the design of drinking water systems.¹⁴⁶


MECP Drinking Water Branch

 Needs Improvement	<p>Part 2 Recommendation 69: The provincial government should create a Drinking Water Branch within the Ministry of the Environment to be responsible for overseeing the drinking water treatment and distribution system.</p>
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As recommended by Justice O'Connor, the MECP created a "Drinking Water Management Division" to oversee the drinking water system.¹⁴⁷ In addition to this branch, the MECP has a "Technical Assessments and Standard Development" branch which deals with drinking water standards. In 2019, the "Drinking Water Management Division" became the "Drinking Water & Environmental Compliance Division."¹⁴⁸ Merging these branches contradicts Justice O'Connor's recommendation that the new Drinking Water Branch perform almost all the drinking water treatment and distribution functions performed by the MECP except enforcement, which he envisioned remaining in a separate branch.¹⁴⁹

Wastewater Treatment

Although wastewater treatment was beyond the scope of the Walkerton Inquiry, Justice O'Connor made the following Part 2 recommendation, which has yet to be implemented.

 Needs Improvement	<p>Part 2 Recommendation 32: The provincial government should support major wastewater plant operators in collaborative studies aimed at identifying practical methods of reducing or removing heavy metals and priority organics (such as endocrine disruptors) that are not removed by conventional treatment.</p>
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A national expert panel on contaminants in wastewater funded by the federal government in 2017-2018 indicated that there is still little clarity on best practices for removing these substances of concern. It noted that treatment is only one element of wastewater management, and the

¹⁴⁶ Ministry of the Environment Drinking Water Technical Working Group, "Design Guidelines for Drinking-Water Systems" (15 May 2019), online: Ontario <<https://www.ontario.ca/document/design-guidelines-drinking-water-systems-0>>.

¹⁴⁷ "All Published Plans and Annual Reports."

¹⁴⁸ "All Published Plans and Annual Reports."

¹⁴⁹ *Report of the Walkerton Inquiry: Part 2*, at 414.

effectiveness of other options like source control, sewer separation and the use of non-technology options should also be given strong consideration.¹⁵⁰ In its recommendations, the panel echoed Justice O'Connor, emphasizing the "need to support research that advances our knowledge of how various management options, including treatment, can help reduce risks."¹⁵¹

The Ontario Rural Wastewater Centre "has been promoting the use of environmentally sustainable wastewater treatment approaches for rural and unsewered areas" through training, applied research and testing.¹⁵² However, there are no reports public records of the types of collaborative studies suggested by Justice O'Connor.

a. Operator Training

For the treatment barrier to function, water system operators must know how to effectively treat water. The Walkerton tragedy demonstrated the importance of water system operators being properly trained. If the operators in Walkerton had sufficient expertise to detect and address the contamination, the outbreak could have been avoided or substantially reduced. To prevent this issue from recurring, Justice O'Connor made several recommendations to fortify the operator training regime in the province.

Training Requirements

<p>!</p> <p>Needs Improvement</p>	<p>Part 1 Recommendation 21: The materials for water operator course examinations and continuing education courses should emphasize, in addition to the technical requirements necessary for performing the functions of each class of operator, the gravity of the public health risks associated with a failure to treat and/or monitor drinking water properly, the need to seek appropriate assistance when such risks are identified, and the rationale for and importance of regulatory measures designed to prevent or identify those public health risks.</p>
<p>!</p> <p>Needs Improvement</p>	<p>Part 1 Recommendation 22: The government should amend Ontario Regulation 435/93 to define "training" clearly, for the purposes of the 40 hours of annual mandatory training, with an emphasis on the subject matter described in Recommendation 21.</p>

¹⁵⁰ "Canada's Challenges and Opportunities to Address Contaminants in Wastewater" (March 2018) at 52, online (pdf): *Canadian Water Network* <<https://cwn-rce.ca/project/canadas-challenges-and-opportunities-to-address-contaminants-in-wastewater/>>.

¹⁵¹ "Canada's Challenges and Opportunities to Address Contaminants in Wastewater," at 51.

¹⁵² "Ontario Rural Wastewater Centre," online: *Ontario Rural Wastewater Centre* <<https://ontarioruralwastewatercentre.ca/>>.

<p>!</p> <p>Needs Improvement</p>	<p>Part 1 Recommendation 23: The government should proceed with the proposed requirement that operators undertake 36 hours of MOE-approved training every three years as a condition of certification or renewal. Such courses should include training in emerging issues in water treatment and pathogen risks, emergency and contingency planning, the gravity of the public health risks associated with a failure to treat and/or monitor drinking water properly, the need to seek appropriate assistance when such risks are identified, and the rationale for and importance of regulatory measures designed to prevent or identify those public health risks.</p>
<p>✓</p> <p>Complete</p>	<p>Part 2 Recommendation 62: The Ministry of the Environment should develop a comprehensive training curriculum for operators and should consolidate the current annual training requirement in Ontario Regulation 435/93 and the proposed requirement of ministry-approved training into a single, integrated program approved by the Ministry of the Environment.</p>

Operator training is currently regulated by Regulation 128/04 under the *SDWA*, which replaced Regulation 435/93. It prescribes the number of hours of training required annually for different levels of water system operators, which range from 20 to 40.¹⁵³ The only requirements for continuing education in Regulation 124/04 are that it must have documented learning objectives, be provided by a qualified provider, include a means to verify that the participants learned the material, and cover relevant subject matter.¹⁵⁴

The requirements for training in Regulation 124/04 lack the explicit public health emphasis envisioned by Justice O'Connor, who recommended the program “focus on the protection of public health and the safety of drinking water systems” and that the regulation “prescribe the number of hours to be devoted to such issues as the risk of pathogens in water, the treatment and monitoring of drinking water, and measures designed to lessen risks to public health.”¹⁵⁵ Although individual instructors or educational institutions may incorporate these topics, doing so is not required.

Small and Remote Communities

<p>✓</p> <p>Complete</p>	<p>Part 2 Recommendation 63: The Ministry of the Environment should take measures to ensure that training courses are accessible to operators in small and remote communities and that the courses are tailored to meet the needs of the operators of these water systems.</p>
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To ensure training is accessible to operators in small and remote communities, the Walkerton Clean Water Centre (WCWC) was established by Regulation 304/04 under the *Development*

¹⁵³ *Certification of Drinking Water System Operators and Water Quality Analysts*, O Reg 128/04, s 29.

¹⁵⁴ O Reg 128/04, s 29(4).

¹⁵⁵ *Report of the Walkerton Inquiry: Part 2*, at 388.

Corporations Act. Since 2005, the WCWC has offered training for operators and owners of drinking water systems province-wide, with a focus on small and remote communities including Indigenous communities.¹⁵⁶ The WCWC offers “circuit training,” where educators visit communities to train operators who are unable to travel because no one is available to run the water system while they are away at training. The WCWC also now offers numerous virtual training options, improving accessibility to training for those with computers and internet access.¹⁵⁷

MECP Contribution

* Further Investigation	Part 2 Recommendation 64: The Ministry of the Environment should meet with stakeholders to evaluate existing training courses and to determine the long-term training requirements of the waterworks industry. The ministry should play an active role in ensuring the availability of an array of courses on the subjects required to train operators.
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Although the MECP undertakes some evaluation of course content, they primarily relies on those delivering courses to ensure adequate content. As the specifics are not public, it is not clear what exactly is included.

b. Operator Certification

Certification is the way the province institutionalizes the aforementioned training requirements and ensures that only qualified individuals are operating water systems. In accordance with Part 2 Recommendation 59, the *SDWA* provides the MECP with the authority to require prescribed qualifications for persons supervising personnel in a water system.¹⁵⁸ Regulation 128/04 requires that all persons who operate within a system hold a valid licence for the class of facility in which they work.¹⁵⁹ Operators must renew their licences every three years.¹⁶⁰

✓ Complete	Part 2 Recommendation 59: The Ministry of the Environment should continue to require the mandatory certification of persons who perform operational work in water treatment and distribution facilities. Education, examination, and experience are essential components of ensuring competence.
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Compliance

It is difficult to measure how well compliance is being implemented as data will only be available if individuals operating without the appropriate certification were discovered in an inspection. It is promising that the majority of violations which have been prosecuted in the past five years were detected by inspectors within less than a year. For example, the water system did not have

¹⁵⁶ "Minister's Annual Report."

¹⁵⁷ "WCWC Training," online: *Walkerton Clean Water Centre* <<https://wcwc.ca/training/courses/>>.

¹⁵⁸ *SDWA*, s 11.

¹⁵⁹ O Reg 128/04, s 6.



¹⁶⁰ O Reg 128/04, s 7.

a licenced operator from September 2017 to March 2018 in *R v. Allan Anthony Pizzio*¹⁶¹, April to August 2017 in *R v Leclerc*¹⁶², January to December 2017 in *R v Shari D. Renton-Getz*¹⁶³, July 2015 to July 2016 in *R v Ontario Clean Water Agency (OCWA)*¹⁶⁴, and March 2015 and January 2016 in *R v ESSE Associates Inc & Fern Brook Resort Inc.*¹⁶⁵

However, the violation in *R v Oxford Ski Ltd and Paul Koning* went unnoticed for six years. This case involved a water operator whose licence expired in 2010 and was then issued a temporary certificate that expired in 2012.¹⁶⁶ After the temporary certificate expired, he continued to act as the operator without further training until an MECP inspection in 2019.¹⁶⁷

There have been startling incidents of falsifying licences, which may make detecting such violations more difficult. In *R v Anvil Welding & Pressure Tapping Inc., Randy S. Doane and James Christopher Doane*, a permit was photoshopped for a specific project and submitted to the MECP, who identified it as counterfeit.¹⁶⁸ In *R v Woods*, provincial officers determined that the operator's certificate on display was a counterfeit during an inspection in 2005. The acting operator's licence had expired in 1997, meaning the system did not have a certified operator for six years.¹⁶⁹

Grandparenting

 Complete	Part 1 Recommendation 20: The government should require all water system operators, including those who now hold certificates voluntarily obtained through the grandparenting process, to become certified through examination within two years, and to be periodically recertified.
 Complete	Part 2 Recommendation 60: The Ministry of the Environment should require water system operators who currently hold certificates obtained through the grandparenting process to become certified through examination within two years, and it should require operators to be recertified periodically.

The grandparenting process has been phased out and all operators must now comply with the requirements under Regulation 128/04 discussed earlier.

¹⁶¹ *R v Allan Anthony Pizzio*, 2020 CarswellOnt 15998 (ONCJ) [*Pizzio*].

¹⁶² *R v Leclerc*, 2021 CarswellOnt 15232 (ONCJ).

¹⁶³ *R v Shari D Renton-Getz*, 2019 CarswellOnt 10705 (ONCJ).

¹⁶⁴ *R v Ontario Clean Water Agency*, 2018 CarswellOnt 22780 (ONCJ).

¹⁶⁵ *R v ESSE Associates Inc & Fern Brook Resort Inc*, 2018 CarswellOnt 14703 (Ont Prov Offences Ct).


¹⁶⁶ *R v Oxford Ski Ltd and Paul Koning*, 2021 CarswellOnt 15234 (ONCJ) [*Oxford Ski*].

¹⁶⁷ *Oxford Ski*.

¹⁶⁸ *R v Anvil Welding & Pressure Tapping Inc, Randy S. Doane and James Christopher Doane*, 2019 CarswellOnt 3243 (ONCJ).

¹⁶⁹ *R v Woods*, 2006 CarswellOnt 10284 (Ont Prov Offences Ct).

Entry-Level Operators

 Complete	Part 2 Recommendation 61: The Ministry of the Environment should require all applicants for an operator’s licence at the entry level to complete a training course that has a specific curriculum to ensure a basic minimum knowledge of principles in relevant subject areas.
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New operators must take an entry-level course that provides them with “a basic understanding of water characteristics and pathogens, treatment and distribution processes, and the regulations that govern water quality. It is intended to complement the on-the-job training that OIT’s [Operators-in-Training] receive from their employers.”¹⁷⁰

c. MECP Training

MECP officers play a vital role in overseeing the drinking water system as well, making it important that they are also adequately trained.

* Further Investigation	Part 1 Recommendation 26: A full needs assessment for training should be undertaken for MOE technical staff, and a component of that assessment should focus on communal drinking water.
* Further Investigation	Part 1 Recommendation 27: The MOE, on the basis of the needs assessment, should develop and maintain both introductory and advanced mandatory courses for environmental officers pertaining to communal drinking water systems. These courses should emphasize science and technology, including all matters that could present a risk to public health and safety; emerging pathogen risks; existing, new, and emerging treatment technologies; the limits of particular technologies; and the proper interpretation and application of government regulations, guidelines, and policies.
* Further Investigation	Part 1 Recommendation 28: The MOE should devote sufficient resources to technical training to allow the ministry to meet the challenges outlined in its “Human Resources Business Plan and Learning Plan for Fiscal Year 2000-2001.”


Although there are courses in place for MECP staff and inspectors to receive additional training, the specifics are not public so it is not clear what exactly is included.

3. Distribution System

The distribution system is the final barrier before delivery to the consumer’s tap, making well-maintained distribution systems critical to drinking water safety. Justice O’Connor made two recommendations to ensure the integrity of Ontario’s water distribution systems.


¹⁷⁰ "Entry-Level Course for Drinking Water Operators (for Operators-in-Training)," online: *Walkerton Clean Water Centre* <<https://wcwc.ca/training/entry-level-course-for-drinking-water-operators-for-operators-in-training/>>.

Standards for Materials

 Complete	<p>Part 2 Recommendation 34: The provincial government should encourage the federal government, working with the Standards Council of Canada and with advice from municipalities, the water industry, and other stakeholders, to develop standards for materials, including piping, valves, storage tanks, and bulk chemicals, that come into contact with drinking water.</p>
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The National Sanitation Foundation has developed standards for drinking water distribution system materials which are written into drinking water system licences.¹⁷¹

Lead Service Lines (LSLs)

 Needs Improvement	<p>Part 2 Recommendation 35: As part of an asset management program, lead service lines should be located and replaced over time with safer materials.</p>
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The most significant source of lead in drinking water is LSLs, which the province has taken a slow and piecemeal approach to removing. Lead in Ontario’s drinking water is an ongoing and serious public health threat and a “drinking water health hazard” pursuant to the *SDWA*—making it imperative that LSLs are addressed.

The current approach must be replaced with mandatory measures to ensure safe drinking water. Currently, municipalities pay for replacing a service line on their side of the property line and property owners pay for the portion on their side.¹⁷² Municipalities typically inform property owners when they are scheduling service line replacements so that the owners can opt to replace theirs at the same time.¹⁷³ Mixed service lines can worsen the threat of lead contamination in water, making it imperative that lines are removed in their entirety.¹⁷⁴ This approach can be contrasted with that of the City of Montréal, which adopted a mandatory removal by-law which requires owners to remove their portion of the line when the City does with generous loan repayment options.¹⁷⁵

As part an ongoing focus on removal of lead contamination from drinking water, CELA has recommended mapping all LSLs by 2025, removal of 75 percent of all LSLs by 2030, and removal of 100 percent of all LSLs by 2035.¹⁷⁶ A mandatory LSL removal program must be accompanied

¹⁷¹ NSF/ANSI 61: Drinking Water System Components – Health Effects has been made publicly available online:

<<https://www.nsf.org/knowledge-library/nsf-ansi-standard-61-drinking-water-system-components-health-effects>>.

¹⁷² “Information for Property Owners about Lead Water Service Line Replacement” (31 August 2021), online: *Ontario*

<<https://www.ontario.ca/page/information-property-owners-about-lead-water-service-line-replacement>>.

¹⁷³ “Information for Property Owners about Lead Water Service Line Replacement.”

¹⁷⁴ Jacqueline Wilson, “Blog: Get the Lead Out! CELA’s Submission Addressing Removing Lead from Our Drinking Water” (25 November 2021), online: *Canadian Environmental Law Association* <<https://cela.ca/blog-get-the-lead-out-celas-submission-addressing-removing-lead-from-our-drinking-water/>> [Wilson, “Get the Lead Out”].

¹⁷⁵ Wilson, “Get the Lead Out.”

¹⁷⁶ Wilson, “Get the Lead Out.”

by provincial funding to provide grants and generous loans to low-income residents who need LSLs removed.¹⁷⁷



4. Testing

This barrier is vital to check that the preceding barriers are functioning effectively and to identify any threats to drinking water safety so that they may be resolved promptly. To ensure a strong water testing regime, Justice O'Connor made recommendations for practices to be followed by water providers and analysts, as well as recommendations for developing the standards that samples must meet.

a. Water Providers

Regulation 170/03 under the *SDWA* specifies the requirements for frequency of sampling and testing that water providers must abide by. The frequency of testing and parameters tested vary according to the category of the drinking water system, the size of the population served, and the source.

Chlorine and Turbidity Monitoring



 Complete	<p>Part 1 Recommendation 11: The MOE should require continuous chlorine and turbidity monitors for all groundwater sources that are under the direct influence of surface water or that serve municipal populations greater than a size prescribed by the MOE.</p>
 Complete	<p>Part 2 Recommendation 36: All municipal water providers in Ontario should have, as a minimum, continuous inline monitoring of turbidity, disinfectant residual, and pressure at the treatment plant, together with alarms that signal immediately when any regulatory parameters are exceeded. The disinfectant residual should be continuously or frequently measured in the distribution system. Where needed, alarms should be accompanied by automatic shut-off mechanisms.</p>

For municipal residential drinking water systems, continuous monitoring equipment at the drinking water system is required for turbidity and chlorine residual.¹⁷⁸ As will be discussed in Section 8: “Enforcement,” only two individuals have been convicted for improper sampling practices during the period from April 1, 2020 to March 31, 2021.

¹⁷⁷ Wilson, “Get the Lead Out.”


¹⁷⁸ “Ontario *Safe Drinking Water Act, 2002* & Its Regulations: FAQs” (25 November 2011) at 4, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2019/07/Water-FAQs-Eng.pdf>> [“Ontario *Safe Drinking Water Act, 2002* & Its Regulations”].

Sampling Plans


 Complete	Part 2 Recommendation 37: Every municipal water provider should be responsible for developing an adequate sampling and continuous measurement plan as part of its operational plan, as recommended in Chapter 11 of this report.
 Incomplete	Part 2 Recommendation 38: Sampling plans should provide for sampling under the conditions most challenging to the system, such as after heavy rainfalls or spring floods.

The Director's directions on minimum requirements for operational plans, authorized under subsection 15 (1) of the *SDWA*, require that operational plans cover "sampling, testing, and monitoring" and "measurement and recording equipment calibration and maintenance."¹⁷⁹ Plans do not currently provide for sampling under the conditions most challenging to the system, this recommendation still needs to be addressed.

Protocols for Samples

 Needs Improvement	Part 2 Recommendation 39: Ontario Regulation 459/00 should be modified to require standard protocols for the collection, transport, custody, labelling, testing, and reporting of drinking water samples, and for testing all scheduled contaminants, that meet or better the protocols in <i>Standard Methods</i> .
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Sampling protocols vary depending on the laboratory that is conducting the testing and are not standardized. Regulation 170/03, which replaced Regulation 459/00, only specifies that the "owner of the drinking water system and the operating authority for the system shall ensure that, subject to the other provisions of this Regulation, the sample is taken and handled per the directions of the laboratory to which the sample will be delivered for testing."¹⁸⁰ Although there may be industry standards for these practices, such standards are not prescribed by a formal regulation.

 Needs Improvement	Part 2 Recommendation 40: Where remoteness dictates that samples for bacteriological analysis cannot be delivered to a lab either within regulated times or under guaranteed conditions, the Ministry of the Environment should determine the feasibility of alternative means of providing microbiological testing that meet the requirements of <i>Standard Methods</i> .
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While research and technology are underway to develop methodologies for situations where remoteness impacts sample analysis, this type of approach has yet to be adopted by the MECP.¹⁸¹

¹⁷⁹ "Director's Directions: Minimum Requirements for Operational Plans" (May 2021), online: Ontario <<https://www.ontario.ca/page/directors-directions-minimum-requirements-operational-plans>>.


¹⁸⁰ O Reg 170/03, sched 6-8.

¹⁸¹ For example, see "First Nation communities in Canada remotely monitor the quality of their drinking water", online: <<https://www.s-can.at/en/first-nation-communities-in-canada-remotely-monitor-the-quality-of-their-drinking-water/>>.

b. Laboratories


Laboratory testing was privatized in 1996, to ensure consistency and safe drinking water across the province, it is important that analysis of drinking water is closely regulated.

Mandatory Accreditation


 Complete	Part 2 Recommendation 41: The provincial government should phase in the mandatory accreditation of laboratories for all testing parameters, and all drinking water testing should be performed only by accredited facilities.
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The *SDWA* makes it mandatory for owners of regulated drinking water systems to use accredited laboratories for drinking water testing.¹⁸² The requirements for training and certification of water quality analysts are set out in Regulation 128/04. Since this regulation has been implemented, no laboratories have been prosecuted for failing to comply.

Inspection

 Complete	Part 2 Recommendation 42: The Ministry of the Environment should licence and periodically inspect, as required, environmental laboratories that offer drinking water testing; as with water treatment operations, continuing accreditation should be a condition of licence.
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Regulation 128/04 contains the requirements set out in Part 2 Recommendation 42. It provides that water quality analysts' certificates expire three years after they are issued and can be renewed if the applicant meets the qualifications for renewal, which includes 7 hours of continuing education and 13 hours of on-the-job practical training each year.¹⁸³ Regulation 242/05 requires that all licenced laboratories are inspected at least twice a year.¹⁸⁴ The 2020-2021 Chief Drinking Water Inspector annual report mentions that all of the 53 licenced laboratories inspected received a compliance rating above 80 percent.¹⁸⁵ However, information on which laboratories received a lower rating and why is unavailable.

 Complete	Part 2 Recommendation 43: The results of laboratory accreditation audits should be provided to the Ministry of the Environment and should be publicly available.
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SDWA section 65 provides that copies of the results of drinking water testing audits are given to the Director and, upon request, members of the public.¹⁸⁶

¹⁸² *SDWA*, s 63 (1).

¹⁸³ O Reg 128/04, s 16.

¹⁸⁴ *Compliance and Enforcement*, O Reg 242/05, s 4.

¹⁸⁵ "2020-2021 Chief Drinking Water Inspector Annual Report" (31 March 2022), online: Ontario <<https://www.ontario.ca/page/2020-2021-chief-drinking-water-inspector-annual-report>>.

¹⁸⁶ *SDWA*, s 65(3).

c. Setting Standards

Justice O'Connor made the following recommendations for the development of the legally binding standards that must be met by drinking water samples.

Provincial Role

✓ Complete	Part 2 Recommendation 24: The provincial government should continue to be the government responsible for setting legally binding drinking water quality standards.
✓ Complete	Part 2 Recommendation 25: In setting drinking water quality standards for Ontario, the Minister of the Environment should be advised by an Advisory Council on Standards.
✓ Complete	Part 2 Recommendation 26: The Advisory Council on Standards should have the authority to recommend that the provincial government adopt standards for contaminants that are not on the current federal-provincial agenda.
✓ Complete	Part 2 Recommendation 33: The Ministry of the Environment should be adequately resourced to support a water sciences and standards function in relation to drinking water.

The provinces and territories have the authority to set legally binding drinking standards, consistent with Justice O'Connor's recommendation, and can opt to be more or less stringent than the federal government recommends. Following Justice O'Connor's recommendations, the Ontario government established the Ontario Drinking Water Advisory Council (ODWAC), known formally as the "Advisory Council on Drinking-Water Quality and Testing Standards."¹⁸⁷ Enabled by the *SDWA*, the broad mandate of the ODWAC is to provide advice and make recommendations to the MECP on drinking water quality and testing standards, as well as other drinking water matters deemed appropriate to merit the attention of the Minister.¹⁸⁸ The membership of the ODWAC includes up to 15 individuals with expertise in engineering, medicine and public health, toxicology, microbiology, chemistry, hydrogeology, risk assessment, and utility operations¹⁸⁹ They are practitioners in academia, stakeholder associations, municipalities, laboratory testing and analysis, First Nations technical support, and government.¹⁹⁰ However, there is a current concern in that the full ODWAC web-site has been removed to a bare landing page, where its publications are not easily available.¹⁹¹

¹⁸⁷ Jim Smith, "An interview with Jim Smith, ODWAC" (25 April 2017), online: *Ontario Municipal Water Association* <omwa.org/an-interview-with-jim-smith-odwac/>.



¹⁸⁸ Smith.

¹⁸⁹ Nick Benkovich, "Ontario Drinking Water Advisory Committee and Ministry of Environment and Climate Change Updates" (18 May 2017) at 17, online (pdf): <https://www.neowwc.com/uploads/4/7/7/1/4771493/odwac_moecc_updates_-_nick_benkovich_odwac_member.pdf>.


¹⁹⁰ Benkovich, at 17.

¹⁹¹ Advisory Council on Drinking Water Quality and Testing Standards (online): <<http://www.odwac.gov.on.ca/>>.

Federal Role

 Complete	Part 2 Recommendation 22: I suggest that the Federal-Provincial Subcommittee on Drinking Water focus on drinking water quality guidelines. I encourage Health Canada to commit the required scientific support to the federal-provincial process for proposing drinking water quality guidelines.
 Complete	Part 2 Recommendation 21: I suggest that the federal-provincial process for proposing drinking water quality guidelines be refined to provide for greater transparency and public participation.

As described earlier, Health Canada publishes recommendations for drinking water standards which are developed by the Federal-Provincial-Territorial Committee on Drinking Water. For each contaminant being considered, Health Canada prepares a document outlining the latest research into the health effects, Canadian exposure levels, and treatment and analytical considerations.¹⁹² The Health Canada document is reviewed by external experts, reviewed by the Federal-Provincial-Territorial Committee on Drinking Water, and undergoes a public consultation. The public can view current consultation opportunities on the federal government's website and submit comments.¹⁹³ The Federal-Provincial-Territorial Committee on Drinking Water considers this feedback and may amend the guideline before its approval.¹⁹⁴

 Complete	Part 2 Recommendation 20: Regarding drinking water quality research, I encourage Health Canada and other agencies to adopt as a priority the development of sufficiently detailed definitions of the susceptibility of vulnerable population groups to drinking water contaminant exposures to allow appropriate adjustments in drinking water quality guidelines.
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Reports for particular contaminants generally identify particularly susceptible groups of the populations. For example, Health Canada's "Final Human Health State of the Science Report on Lead" highlights that infants and children are a susceptible subpopulation to lead exposure because they have greater gastrointestinal absorption and less effective renal excretion than adults.¹⁹⁵ Conversely, Health Canada's Guideline Technical Document on arsenic states that subpopulations (such as children and pregnant women) are not at a greater risk of developing health effects from exposure to arsenic than the general population.¹⁹⁶ The ODWAC Report on

¹⁹² "Federal-Provincial-Territorial Committee on Drinking Water (CDW) - Health Canada" (19 September 2006) online: *Government of Canada* <<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/federal-provincial-territorial-committee-drinking-water-health-canada.html>>.

¹⁹³ "Federal-Provincial-Territorial Committee on Drinking Water (CDW) - Health Canada" (19 September 2006) online: *Government of Canada* <<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/federal-provincial-territorial-committee-drinking-water-health-canada.html>>.

¹⁹⁴ "Federal-Provincial-Territorial Committee on Drinking Water (CDW) - Health Canada" (19 September 2006) online: *Government of Canada* <<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/federal-provincial-territorial-committee-drinking-water-health-canada.html>>.

¹⁹⁵ Health Canada, "Final Human Health State of the Science Report on Lead" (February 2013) at 57, online (pdf): *Government of Canada* <https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-sem/alt_formats/pdf/pubs/contaminants/dhssrl-rpecscepsh/dhssrl-rpecscepsh-eng.pdf>.

¹⁹⁶ Federal-Provincial-Territorial Committee on Drinking Water, "Guidelines for Canadian Drinking Water Quality: Guideline Technical Document: Arsenic" (May 2006) at 3, online (pdf): *Government of Canada* <<https://healthy Canadians.gc.ca/publications/healthy-living-vie-saine/water-arsenic-eau/alt/water-arsenic-eau-eng.pdf>>.

tritium also notes that certain groups are especially vulnerable to environmental carcinogens, such as women (especially when pregnant).¹⁹⁷

d. Specific Standard Recommendations

Justice O'Connor made the following three recommendations for standards for specific parameters.

<p>! Needs Improvement</p>	<p>Part 2 Recommendation 27: The Advisory Council on Standards should consider whether to replace the total coliform test with an <i>E. coli</i> test.</p>
<p>! Needs Improvement</p>	<p>Part 2 Recommendation 28: No formal maximum contaminant level for protozoa should be established until real-time tests are available. The objective, as with bacterial and viral pathogens, should be zero, and the regulations should so state; but the standard should be a treatment standard, specified in terms of log removal dependent on source water quality.</p>

The ODWAC has made recommendations on these standards and on disinfection procedure, but the MECP has yet to finalize the implementation of the recommendations.

<p>* Further Investigation</p>	<p>Part 2 Recommendation 29: The provincial government should seek the advice of the Advisory Council on Standards regarding the desirability of a turbidity limit that is lower than the limit specified in the federal-provincial <i>Guidelines</i>.</p>
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The turbidity limit under the *SDWA* is 1.0 Nephelometric Turbidity Units (NTU), which matches the federal recommendation.¹⁹⁸ However, Health Canada notes that “filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU.”¹⁹⁹

e. Achieving Standards

Inspection results show that municipal water systems are effectively achieving the standards prescribed by the *SDWA*. The most recent annual report from Ontario’s Chief Drinking Water Inspector indicates that over 99 percent of municipal drinking water samples continue to meet the water quality standards prescribed under Regulation 169/03.²⁰⁰ However, as the following subsection discusses, the current legal standards may not be strict enough to protect human health.

¹⁹⁷ Ontario Drinking Water Advisory Council, “Report and Advice on the Ontario Drinking Water Quality Standard for Tritium” (21 May 2009) at 3, online (pdf): *Canadian Coalition for Nuclear Responsibility* <http://ccnr.org/ODWAC_tritium_2009.pdf> [Ontario Drinking Water Advisory Council, “Tritium”].

¹⁹⁸ O Reg 170/03, s 6.5; Health Canada, “Guidelines for Canadian Drinking Water Quality - Summary Tables” (18 July 2022), online: *Government of Canada* <<https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html>> [Health Canada, “Guidelines for Canadian Drinking Water Quality”].

¹⁹⁹ Health Canada, “Guidelines for Canadian Drinking Water Quality.”

²⁰⁰ “2020-2021 Chief Drinking Water Inspector Annual Report.”

f. Delays in Amending Standards

The provincial government has delayed adopting recommendations for some important drinking water standards, which poses a significant threat to public health and is contrary to the following two recommendations made by Justice O'Connor.

! Needs Improvement	Part 2 Recommendation 18: In setting drinking water quality standards, the objective should be such that, if the standards are met, a reasonable and informed person would feel safe drinking the water.
! Needs Improvement	Part 2 Recommendation 19: Standards setting should be based on a precautionary approach, particularly with respect to contaminants whose effects on human health are unknown.

For example, Ontario took (or continues to take) considerable time to amend drinking water standards in the cases of arsenic, lead, tritium, and disinfection by-products. Each of these substances poses a proven health risk, yet the province has delayed (or is delaying) adjusting the drinking water quality standards accordingly.

Arsenic

Drinking water contaminated with arsenic has been associated with developmental effects, cancer, cardiovascular disease, neurotoxicity, diabetes, and death.²⁰¹ In 2006, Health Canada set a guideline for the MAC of arsenic in drinking water at 0.010 mg/L.²⁰² Ontario's standard was not amended to meet this until 2018, until which point it had been 0.025 mg/L, nearly double the federal recommendation.²⁰³

Lead

In 2007, the MOE ordered 36 municipalities across the province to test for lead.²⁰⁴ The results of this testing showed that over 46 percent of those communities had at least one plumbing sample that exceeded the standard for lead in drinking water of 10 µg/L.²⁰⁵ In 2019, the federal government lowered the lead in drinking water guideline to 5 µg/L, with the recognition that efforts should be made to maintain lead levels in drinking water as low as reasonable achievable.²⁰⁶ One of Health Canada's justifications for the amendment was that it would have a

²⁰¹ Usman Javed, "Blog: Arsenic in Drinking Water: Ontario's Failure to Endorse Health Canada's Guideline" (20 May 2014) online: *Canadian Environmental Law Association* <<https://cela.ca/arsenic-in-drinking-water-ontarios-failure-to-endorse-health-canadas-guideline/>>.

²⁰² Javed.

²⁰³ "Arsenic Limits in Drinking Well Water" (29 January 2019), online: *Hamilton* <<https://www.hamilton.ca/home-property-and-development/water-sewer/arsenic-limits-in-drinking-well-water>>.

²⁰⁴ Carol MacLellan and Jacqueline Wilson, "Blog: Get the Lead Out ... It's 2022 Already" (30 May 2022), online: *Canadian Environmental Law Association* <<https://cela.ca/blog-get-the-lead-out-its-2022-already/>>.

²⁰⁵ MacLellan and Wilson.

²⁰⁶ Health Canada, "Guidelines for Canadian Drinking Water Quality: Guideline Technical Document: Lead" (March 2019) at 70, online (pdf): *Government of Canada* <<https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-lead/guidance-document/guidance-document.pdf>>.

significant impact on the blood lead levels of children, the most vulnerable population.²⁰⁷ The provincial government has yet to act on this advice.

Tritium

The current standard for tritium in Regulation 169/03 under the *SDWA* is 7,000 becquerels/litre.²⁰⁸ In 1994, Ontario's former Advisory Committee on Environmental Standards recommended that the tritium standard should be lowered to 20 becquerels/litre within five years.²⁰⁹ This advice was not acted upon and the ODWAC made the same recommendation in 2009.²¹⁰ Representatives of the nuclear industry have repeatedly assured Ontario residents that nuclear-generating stations can meet the 20 becquerels/litre standard without incurring additional costs.²¹¹ There is no compelling reason for the Ontario government's inordinate delay in acting upon the ODWAC's recommendation.

Disinfection By-Products

The *SDWA* regulates the two most common types of disinfection by-products, Trihalomethanes and Haloacetic acids (HAAs). While, per Part 2 Recommendation 31, the ODWAC reviewed these standards, these recommendations have not been adopted.

<p>! Needs Improvement</p>	<p>Part 2 Recommendation 31: The Advisory Council on Standards should review Ontario's standards for disinfection by-products to take account of the risks that may be posed by the by-products of all chemical and radiation-based disinfectants.</p>
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The standard for Trihalomethanes is 0.100 mg/L, which matches the federal recommendation.²¹² The ODWAC recommended a lower standard of 0.08 mg/L, which Health Canada had rejected because such a level had significant financial implications for treatment plants with little additional health benefit.²¹³ The ODWAC found additional routes of exposure and noted that most Ontario drinking water systems could meet this proposed lower standard and doing so would result in promoting and encouraging the optimization of treatment processes and best management practices.²¹⁴

²⁰⁷ Jacqueline Wilson, "CELA Submission on Eliminating Lead from Ontario's Drinking Water" (20 October 2021) at 2, online (pdf) <<https://cela.ca/wp-content/uploads/2021/10/CELA-submission-on-lead-in-drinking-water-in-ON-Oct-20-2021-FINAL-1.pdf>>.

²⁰⁸ *Ontario Drinking Water Quality Standards*, O Reg 169/03, sched 3.

²⁰⁹ Theresa McClenaghan and Richard Lindgren, "RE: Protection of Drinking Water Quality in Ontario" (20 November 2012) at 7, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2019/07/875CWA.pdf>>

²¹⁰ Ontario Drinking Water Advisory Council, "Tritium," at 6.

²¹¹ McClenaghan and Lindgren, "RE: Protection of Drinking Water Quality in Ontario," at 8.

²¹² O Reg 169/03, sched 2.

²¹³ Ministry of the Environment, "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards" (2014) at 13, online (pdf): *Ontario* <http://www.downloads.ene.gov.on.ca/envision/env_reg/er/documents/2014/012-1594.pdf> [MOE, "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards"].

²¹⁴ MOE, "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards," at 13.


A standard of 0.08 mg/L for HAAs was implemented on January 1, 2020.²¹⁵ Until 2020, Haloacetic acids were unregulated despite Health Canada recommending a standard of 0.080 mg/L in 2008.²¹⁶ The ODWAC reviewed the Health Canada standard and recommended that Ontario adopt a more stringent drinking water standard of 0.060 mg/L for HAAs.²¹⁷ Their letter of advice noted that their evaluation of drinking water data in Ontario indicated that most drinking water systems could meet the lower HAAs limit which would promote and encourage the optimization of treatment processes and best management practices.²¹⁸

5. Response to Adverse Water Test Results


Justice O'Connor found that the scope of the outbreak in Walkerton was widened by the lack of legal requirements for responding to adverse water test results. To prevent this from recurring, he made the following seven recommendations to clarify actors' responsibilities and streamline the process for responding to a drinking water threat.

a. Roles

Medical Officers of Health

 Complete	<p>Part 1 Recommendation 1: The <i>Health Protection and Promotion Act</i> should be amended to require boards of health and the Minister of Health, acting in concert, to expeditiously fill any vacant Medical Officer of Health position with a full-time Medical Officer of Health.</p>
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The *HPPA* states, "If the position of medical officer of health of a board of health becomes vacant, the board of health and the Minister, acting in concert, shall work expeditiously towards filling the position with a full-time medical officer of health."²¹⁹

 Complete	<p>Part 1 Recommendation 3: The role of the local Medical Officers of Health and health units in relation to public health issues concerning treated and untreated municipal water systems, should be clarified and strengthened. In particular, clarification is required as to whether local Medical Officers of Health are required to implement a proactive approach to responding to adverse drinking water sample test results upon receiving notification of those results.</p>
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The *SDWA* imposes a duty on laboratories to report adverse test results within 24 hours to the operating authority for the drinking water system (or the owner of the system if there is no operating authority), the Medical Officer of Health, and the Ministry's Spills Action Centre.²²⁰ The owner must also report the results to the Medical Officer of Health. Regulation 170/03 requires

²¹⁵ O Reg 169/03, sched 2.

²¹⁶ MOE, "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards," at 16.

²¹⁷ MOE, "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards," at 16.


²¹⁸ MOE, "Technical Discussion Paper on Proposed Ontario Drinking Water Quality Standards," at 16.

²¹⁹ *HPPA*, s62(2).

²²⁰ O Reg 170/03, sched 15.1-9.

that owners and operating authorities “take such steps as are directed by the Medical Officer of Health,” such as notifying those served by the plumbing from which the sample was taken.²²¹

Written Guidance

 Complete	<p>Part 1 Recommendation 4: Written guidance - developed in cooperation with Medical Officers of Health and the MOE - should be provided to Medical Officers of Health by the Public Health Branch. It should include steps to be taken by Medical Officers of Health upon receipt of MOE inspection reports and adverse drinking water sample test results.</p>
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In 2009, the Environmental Health Branch of the Public Health Division of the Ministry of Health and Long-Term Care (MOHLTC) produced a guidance document titled “Response to Adverse Drinking Water Quality Incidents.” This guidance document is intended to support boards of health in responding to adverse drinking water quality incidents.²²²

While owners and operators of drinking water systems are responsible for the provision of safe drinking water, Medical Officers of Health have statutory powers to inspect and manage health hazards under the *HPPA*.²²³ Using these powers, they may institute measures that provide the necessary assurances that consumers have been notified of adverse water quality or instructions to users, owners, or operators of a drinking water system on how to mitigate the risk of harm.²²⁴

When Medical Officers of Health are notified by owners and operators, per their statutory obligation, the guidance document prompts Officers to perform a risk analysis to assess the potential health impacts and “take appropriate action to protect public health.”²²⁵ The guidance document includes recommended actions upon receipt of a report of an adverse drinking water quality incident and then suggests actions to be taken in varying scenarios (such as if the situation indicates the possibility of adverse health outcomes or not, and if the action taken by the owner/operator are sufficient or insufficient to prevent adverse health outcomes).²²⁶

²²¹ O Reg 170/03, sched 15.1-10.

²²² Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Response to Adverse Drinking Water Quality Incidents” (April 2009), online (pdf): *Walkerton Clean Water Centre* <<https://wccw.ca/wp-content/uploads/2021/01/Response-to-adverse-drinking-water-quality-incident.pdf>> [Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Response to Adverse Drinking Water Quality Incidents”].

²²³ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Response to Adverse Drinking Water Quality Incidents,” at 3.

²²⁴ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Response to Adverse Drinking Water Quality Incidents,” at 6.

²²⁵ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Response to Adverse Drinking Water Quality Incidents,” at 3.

²²⁶ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Response to Adverse Drinking Water Quality Incidents,” at 3.

Collaboration

<p>* Further Investigation</p>	<p>Part 1 Recommendation 5: Regular meetings should be scheduled between the local MOE office and local health unit personnel to discuss public health issues, including issues related to waterworks facilities as documented in MOE inspection reports. Any affected operator or laboratory should be invited to attend the meeting.</p>
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MOHLTC's guidance document encourages local boards of health to maintain "strong working relationships" with:

- owners or operators of all regulated drinking water systems;
- local MECP officials;
- testing laboratories;
- local media;
- local government officials; and
- neighbouring local boards of health.²²⁷

It is difficult to ascertain how such "strong working relationships" are realized at the local level. The guidance document only "encourages" regular discussion, so whether (or not) and how frequently any meetings occur likely varies widely by locality.

<p>! Needs Improvement</p>	<p>Part 2 Recommendation 77: A steering group should be established within each public health unit area in the province, comprised of representatives of affected local hospitals, municipalities, local Ministry of the Environment offices and local boards of health, for the purpose of developing in a coordinated fashion emergency response plans for the control of, or the response to, infectious diseases and public health hazard outbreaks.</p>
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MOHLTC's guidance document recommends that owners or operators form a local water quality advisory group with the kinds of representatives suggested by Justice O'Connor. The purpose of these advisory groups would be to develop "local emergency plans as a means of ensuring proactive planning and communication."²²⁸ The document states that the plans should:

- define roles and responsibilities of all agencies involved;
- establish terms of reference for the advisory group;
- maintain a current list of municipal emergency contacts; and
- outline specific response procedures for adverse water quality incidents including a communications plan.²²⁹

²²⁷ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, "Response to Adverse Drinking Water Quality Incidents," at 5.

²²⁸ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, "Response to Adverse Drinking Water Quality Incidents," at 5.

²²⁹ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, "Response to Adverse Drinking Water Quality Incidents," at 5-6.

However, forming these steering groups is not required and the document does not set out a process for these plans to be reviewed or updated.

The *Emergency Management and Civil Protection Act* requires ministries and municipalities to develop and implement an emergency management programs, which include emergency response plans which must address diseases and other health risks.²³⁰ The Act only provides for municipal and ministry plans and does not require coordination with other stakeholders. However, the MOHLTC's guide to emergency management does suggest that planning be "conducted in a whole-of-community, whole-of-government approach that coordinates efforts across sectors and levels of response."²³¹

Emergency Response Plans

<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 58: The Ministry of the Environment should work with Emergency Measures Ontario and water industry associations to develop a generic emergency response plan for municipal water providers. A viable and current emergency response plan, and procedures for training and periodic testing of the plan, should be an essential element of mandatory accreditation and operational planning.</p>
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Municipal water providers have emergency response plans that are checked during the course of inspections. The extent to which these plans are evaluated by inspectors is not clear; inspectors may just be confirming that the plan exists. Thorough evaluation of emergency response plans is important to ensure that they will be effective in practice.

b. Drinking Water Advisories

Drinking water advisory notices are tools used by local medical officers of health to protect consumers when the safety of the drinking water may be in question. A "boil water" advisory warns that water is unsafe for consumption unless boiled because it has viruses, bacteria or parasites. A "do not consume" advisory is issued when contaminants, such as lead, are in the water and cannot be removed through boiling.


The importance of effectively communicating drinking water advisories was underscored by the events in Walkerton. Justice O'Connor highlighted that many residents of Walkerton did not become aware of the boil water advisory on the day it was issued and stated that it should have been more broadly disseminated to combat the outbreak.²³²

²³⁰ *Emergency Management and Civil Protection Act*, RSO 1990, c E.9.

²³¹ "Emergency Management Guideline, 2018" (January 2018) at 4, online (pdf): *Ontario Ministry of Health and Long-Term Care* <https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Emergency_Management_Guideline_2018_en.pdf>.

²³² *Report of the Walkerton Inquiry: Part 1 Summary*, at 4.


Boil Water Advisory Protocol

 Complete	<p>Part 1 Recommendation 7: The Public Health Branch should develop a Boil Water Protocol - a written protocol outlining the circumstances in which a boil water advisory or a boil water order could and should be issued. I will be commenting on the government’s current draft proposal in the Part 2 report.</p>
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Justice O’Connor recommended a boil water advisory protocol be developed to outline the circumstances in which a drinking water advisory should be issued and provide direction on an effective communications strategy for the dissemination of such advisories. In the spring of 2001, the MOHLTC’s Public Health Division developed a draft protocol, which does not appear to have been published or is no longer in use.²³³ However, there are other documents which provide guidance on issuing boil water advisories.

In 2015, Health Canada published “Guidance for Issuing and Rescinding Boil Water Advisories in Canadian Drinking Water Supplies” which includes conditions for issuing and rescinding advisories, suggested content for advisories, and a decision tree for determining if an advisory should be issued.²³⁴

The MOHLTC has published a guide for users of the web-based Drinking Water Advisory Reporting System which directs local boards of health to only report significant, community-wide incidents that may have public health implications.²³⁵ The guide then lists incidents which should be reported (such as incidents where there is evidence of contamination, that are likely to last more than 48 hours, or loss of appropriate treatment to the drinking water supply is suspected) and incidents that should not be reported (such as incidents that are likely to be corrected in less than 48 hours, routine precautionary notices for maintenance, or suspected to be the result of sampling errors).²³⁶

 Complete	<p>Part 1 Recommendation 8: The Boil Water Protocol should be developed by the Public Health Branch in consultation with Medical Officers of Health, municipalities, and the MOE. The Boil Water Protocol should provide guidance concerning an effective communications strategy for the dissemination of a boil water advisory or order.</p>
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The MOHLTC’s guide includes suggested means of communicating adverse conditions to drinking water users. Depending on the circumstances of the local community, it recommends door-to-

²³³ *Report of the Walkerton Inquiry: Part 2*, at 372.

²³⁴ Health Canada, *Guidance for Issuing and Rescinding Boil Water Advisories in Canadian Drinking Water Supplies* (Ottawa: Minister of Health, 2015).

²³⁵ Environmental Health Programs, Public Health Division, Ministry of Health and Long-Term Care, “Drinking Water Advisory Reporting System User Manual” (May 2011) at 7, online (pdf): *Ministry of Health and Long-Term Care* <https://dwa.moh.gov.on.ca/Documents/DWARS_User_Manual_05May2011.pdf> [Environmental Health Programs, Public Health Division, Ministry of Health and Long-Term Care, “Drinking Water Advisory Reporting System User Manual”].

²³⁶ Environmental Health Programs, Public Health Division, Ministry of Health and Long-Term Care, “Drinking Water Advisory Reporting System User Manual,” at 8.


door delivery of written notices, notification by phone, and notification through local media, or a combination of the three.²³⁷

6. The Role of Municipal Governments

The provincial government has empowered municipal governments to play a significant role in water resource management and drinking water safety. This section evaluates the recommendations made by Justice O'Connor devoted to the role that municipal governments play in implementing the multi-barrier approach.

a. Standard of Care

To ensure accountability, Justice O'Connor recommended that individuals who oversee water systems be held to a statutory standard of care for the safety of the water.

 Complete	<p>Part 2 Recommendation 45: Given that the safety of drinking water is essential for public health, those who discharge the oversight responsibilities of the municipality should be held to a statutory standard of care.</p>
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The *SDWA* created a statutory duty of care which applies to the owner of the municipal drinking water system, the person who oversees the accredited operating authority or who exercises decision-making authority over the system, and the officers and directors of the corporation that owns the system.²³⁸ The duty requires they exercise the level of care, diligence and skill in respect of a municipal drinking water system that a reasonably prudent person would be expected to exercise in a similar situation. It also requires that they act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the municipal drinking water system. Failure to carry out this standard is defined as an offence under the *SDWA* and individuals may be convicted of the offence regardless of whether the owner of the system is prosecuted or convicted.²³⁹ As of August 2022, no prosecutions had been pursued under this section of the *SDWA*.

b. Public-Private

To manage their water systems, some municipalities opt to contract with private operating agencies or the OCWA. Justice O'Connor made the following two recommendations for water systems operated by agencies instead of municipalities themselves.

²³⁷ Environmental Health Programs, Public Health Division, Ministry of Health and Long-Term Care, "Drinking Water Advisory Reporting System User Manual," at 8.

²³⁸ "Ontario *Safe Drinking Water Act, 2002* & Its Regulations," at 7.

²³⁹ "Ontario *Safe Drinking Water Act, 2002* & Its Regulations," at 7.

* Further Investigation	Part 2 Recommendation 49: Municipal contracts with external operating agencies should be made public.
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Public disclosure may be encompassed within municipal transparency policies as required by section 270 of the *Municipal Act, 2001*. It is common practice that municipalities make their major procurement contracts public; however, it is not clear whether this is a mandatory requirement.

! Needs Improvement	Part 2 Recommendation 50: The role of the Ontario Clean Water Agency in offering operational services to municipalities should be maintained. The provincial government should clarify the Ontario Clean Water Agency's status and mandate. In particular, OCWA should be: <ul style="list-style-type: none"> • an arm's-length agency with an independent, qualified board responsible for choosing the chief executive; and • available to provide standby emergency capabilities.
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The objects of the OCWA include the following activities, in a manner that “supports provincial policies for land use and settlement” and “protects human health and the environment”:

- assisting municipalities to provide water and sewage works and other related services by financing, planning, developing, building and operating those works and providing those services; and
- financing and promoting the development, testing, demonstration and commercialization of technologies and services for the treatment and management of water.²⁴⁰

Members of OCWA's Board of Directors are appointed by the Lieutenant-Governor-in-Council on the recommendation of the Premier and MECP.²⁴¹ The Board is accountable to the Provincial Legislature through the MECP.²⁴² As Justice O'Connor recommended, the OCWA is available to provide emergency standby capabilities and has Emergency Response Teams ready to respond rapidly to water and wastewater emergencies across the province, 24 hours a day, seven days a week.²⁴³ However, the agency has not been fully “an arm's-length agency with an independent, qualified board responsible for choosing the chief executive” (as Justice O'Connor recommended).

c. Management

Justice O'Connor made the following eight recommendations to ensure that municipal water systems across the province are held to a consistent management standard and capable of reliably providing safe drinking water.


²⁴⁰ *Capital Investment Plan Act, 1993*, SO 1993, c 23, s 49(1).

²⁴¹ “OCWA's Organization & People,” online: *Ontario Clean Water Agency* <<https://ocwa.com/who-we-are/organization-and-people>>.




²⁴² “Governance & Accountabilities,” online: *Ontario Clean Water Agency* <<https://www.ocwa.com/who-we-are/governance-accountabilities>>.

²⁴³ “Operations and Maintenance” (2013) at 3, online (pdf): *Ontario Clean Water Agency* <https://www.ocwa.com/sites/all/themes/ocwa/pdf/Services2013_Operations_EN.pdf>.

Management Standard

 Complete	Part 2 Recommendation 51: The provincial government should require all owners of municipal water systems, as condition of their licence (see Recommendation 71), to have an accredited operating agency, whether internal or external to the municipality.
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The *SDWA* requires that every owner of a municipal drinking water system has an accredited operating authority which is in charge of the system at all times.²⁴⁴ The Accreditation Protocol details the establishment and administration of an accreditation program for operating authorities who are required to be accredited by the *SDWA*.²⁴⁵ The Protocol is based upon the Drinking Water Quality Management Standard (DWQMS) for municipal residential drinking water systems, which was developed consistent with the following three recommendations.

 Complete	Part 2 Recommendation 53: The Ministry of the Environment should initiate the development of a drinking water quality management standard for Ontario. Municipalities, the water industry, and other relevant stakeholders should be actively recruited to take part in the development of the standard. The water industry is recognized as an essential participant in this initiative.
 Complete	Part 2 Recommendation 54: The Ministry of the Environment’s Drinking Water Branch (see Recommendation 69) should have the responsibility for recognizing the drinking water quality management standard that will apply in Ontario and for ensuring that accreditation is properly implemented.
 Complete	Part 2 Recommendation 55: The drinking water quality management standard should come into force by a date to be fixed by the provincial government. All municipalities should be required under the <i>Safe Drinking Water Act</i> (see Recommendation 67) to have an operating agency for their water system accredited within a specified time.

To become accredited, an operating authority must establish and maintain a quality management system (QMS). The DWQMS specifies the framework and minimum requirements for operating authorities to develop a QMS that is relevant and appropriate for their system.²⁴⁶ The DWQMS was developed in partnership between the MECP and Ontario’s water sector and mandated by section 21 of the *SDWA*. Subsection 21(1) required that the MECP approve the DWQMS “on or before the first anniversary of the coming into force of this section.”²⁴⁷


²⁴⁴ *SDWA*, s 13(1).

²⁴⁵ “Accreditation Protocol - Operating Authorities - Municipal Drinking Water Systems” (November 2016), online: *Ontario* <<https://www.ontario.ca/page/accreditation-protocol-operating-authorities-municipal-drinking-water-systems>> [“Accreditation Protocol”].

²⁴⁶ “Ontario’s Drinking Water Quality Management Standard - Pocket Guide” (24 June 2021), online: *Ontario*




<<https://www.ontario.ca/page/ontarios-drinking-water-quality-management-standard-pocket-guide>>.

²⁴⁷ *SDWA*, s 21(1).

 Complete	Part 2 Recommendation 52: Accreditation should be based on an independent audit and a periodic review by a certified accrediting body.
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Section 22 of the *SDWA* states that accreditation bodies can be designated or established to administering programs for the accreditation of operating authorities for drinking water systems.²⁴⁸ The Accreditation Protocol provides that the accreditation body will annually audit the QMS of accredited operating authorities.²⁴⁹ Justice O'Connor also said that audit results should be provided to the MECP and made available to the public, which the *SDWA* implements by requiring that every accreditation body provide a copy of audit reports to the Director within a specified time period and make the results of audits public.²⁵⁰

Operational Plans

 Complete	Part 2 Recommendation 44: Municipalities should review the management and operating structure for their water system to ensure that it is capable of providing safe drinking water on a reliable basis.
 Complete	Part 2 Recommendation 56: The provincial government should require municipalities to have operational plans for their water systems by a date to be fixed by the provincial government.
 Complete	Part 2 Recommendation 57: Operational plans should be approved and reviewed as part of the Ministry of the Environment approvals and inspections programs.

Owners of municipal systems were required to submit an operational plan to the Director for review by dates prescribed by Regulation 188/07.²⁵¹ The dates vary by municipality, all falling within 2009-2010.²⁵² Per section 15 of the *SDWA*, the Director issued directions for operational plans which detail the minimum content requirements for operational plans, provide rules regarding the retention of operational plans, and require public disclosure of operational plans.²⁵³ To obtain or renew a municipal water system licence (see Section 7(a): “The Role of the MECP”), owners must have operational plans that satisfy these directions.

7. The Role of the MECP

Justice O'Connor found several failures on behalf of the provincial government that contributed to the outbreak in Walkerton, which led him to make numerous recommendations to enhance provincial oversight of water delivery systems and improve the quality of provincial policy.

²⁴⁸ *SDWA*, s 22.

²⁴⁹ “Accreditation Protocol.”

²⁵⁰ *SDWA*, s 23(2).

²⁵¹ *SDWA*, s 16(3).


²⁵² *Licensing of Municipal Drinking Water Systems*, O Reg 188/07, sched 1-18.

²⁵³ “Director’s Directions: Minimum Requirements for Operational Plans.”

a. Approvals

As part of its oversight function, Justice O'Connor recommended that the MECP require water system owners to obtain licences. He set out the process and requirements he envisioned for obtaining these licences in the recommendations below.



Licence Requirements

 Complete	<p>Part 2 Recommendation 71: The Ministry of the Environment should require the owners of municipal water systems to obtain an owner's licence for the operation of their waterworks. In order to obtain a licence, an owner should have:</p> <ul style="list-style-type: none"> • a Certificate of Approval for the facility; • a Permit to Take Water; • approved operational plans; • an approved financial plan; and • an accredited operating agency.
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The *SDWA* requires that all owners of municipal drinking water systems obtain a licence from the Director of the MECP to operate. To get a licence, an owner must have:

- a drinking water works permit that is required to establish or alter a drinking-water system;
- a PTTW that provides the required provincial permissions to take water;
- an operational plan documenting the QMS the owner and operating authority have in place;
- a financial plan containing financial projections; and
- an accreditation of the operating authority confirming third-party verification that their QMS conforms to Ontario's DWQMS.²⁵⁴

Financial Planning

 Complete	<p>Part 2 Recommendation 47: The provincial government should require municipalities to submit a financial plan for their water system, in accordance with provincial standards, as a condition of licence for their water systems.</p>
 Complete	<p>Part 2 Recommendation 48: As a general principle, municipalities should plan to raise adequate resources for their water systems from local revenue sources, barring exceptional circumstances.</p>

In September 2002, Bill 175 – the *Sustainable Water and Sewage Systems Act, 2002 (SWSSA)* – was introduced for First Reading in the Ontario Legislature.²⁵⁵ The *SWSSA* (had it come into force) would have required municipalities to conduct an assessment of the full cost of providing the water and wastewater services and the revenue needed to provide them.²⁵⁶ These costs would

²⁵⁴ *SDWA*, s 31 (1).


²⁵⁵ Abouchar and Vince, at 8.

²⁵⁶ Abouchar and Vince, at 8.

have included source protection costs, operating costs, financing costs, renewal and replacement costs and improvement costs associated with extracting, treating or distributing water to the public.²⁵⁷ Although it became law in December 2002, the *SWSSA* was never proclaimed into force.²⁵⁸

In 2007, the Financial Plans Regulation under the *SDWA* came into force, requiring municipalities to prepare financial plans when they apply for or renew a municipal drinking water licence.²⁵⁹ For new systems, the financial plans must indicate that the drinking water system is financially viable, include a statement that the financial impacts of the drinking water system have been considered, and include details of the proposed or projected financial operations of the drinking water system.²⁶⁰ Applications for amendments to licences require more detailed information.²⁶¹ As of 2010, all municipal drinking water systems are required to create these financial plans.²⁶² The Financial Plans Regulation does not require full cost recovery as the *SWSSA* would have, it only requires that the system be “financially viable,” which is more feasible for smaller municipalities.

Renewal

 Complete	<p>Part 1 Recommendation 12: All Certificates of Approval should be limited to a specific period of time, probably five years, and be subject to a renewal process that considers the current circumstances, including recent indicators of water quality. Conditions should be added as required.</p>
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Municipal drinking water licences must be renewed every five years.²⁶³ To renew a licence, the owner of a municipal drinking water system must submit the same documents required in the initial application, and the MECP may impose any conditions it deems “necessary for the purposes of this Act,” such as staffing or treatment requirements.²⁶⁴ At the time of licence renewal, a full technical review of the system is undertaken by the MECP.²⁶⁵ Owners may have to submit detailed technical information about their system to satisfy the Ministry that the system has been, and will continue to be, operated in accordance with the requirements under the *SDWA* and the licence.²⁶⁶

²⁵⁷ Abouchar and Vince, at 8.

²⁵⁸ Abouchar and Vince, at 8.

²⁵⁹ Abouchar and Vince, at 9.

²⁶⁰ Abouchar and Vince, at 9.

²⁶¹ Abouchar and Vince, at 9.

²⁶² Abouchar and Vince, at 9.

²⁶³ *SDWA*, s 44 (2).

²⁶⁴ *SDWA*, s 47, 45 (2).

²⁶⁵ Environmental Assessment and Permissions Branch, Ministry of the Environment, Conservation and Parks, “Guide to Supporting Information Required for a Municipal Drinking Water Licence Renewal” (24 October 2018) at 4, online (pdf): *Walkerton Clean Water Centre* <<https://wcwc.ca/wp-content/uploads/2020/09/Guide-to-Supporting-Information-Required-for-a-Municipal-Drinking-Water-Licence-Renewal-MECP.pdf>>.

²⁶⁶ Environmental Assessment and Permissions Branch, Ministry of the Environment, Conservation and Parks, “Guide to Supporting Information Required for a Municipal Drinking Water Licence Renewal,” at 4.

b. Information Management

A significant issue leading to the Walkerton tragedy was the lack of protocols or procedures to ensure inter-agency communication and data-sharing. Justice O'Connor recommended that the MECP create an information management system to improve organization of and access to information. He noted this would enhance source protection efforts by making relevant information accessible to those involved in planning, such as CAs.


<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 6: Upon the implementation by the MOE of the Integrated Divisional System (management information system), access to it should be made available to local health units and, where appropriate, to the public. This should include access to profiles of municipal water systems, and data concerning adverse drinking water quality sample test results, as included in that database.</p>
<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 10: The MOE should maintain an information data system that includes all relevant information arising from an approval application process - in particular, information relating to the quality of source water and relevant details from expert reports and tests.</p>
<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 25: The MOE should proceed expeditiously to complete the design and implementation of the management information system now under development (that is, the Integrated Development System, or IDS). That system should include the capacity for the creation and maintenance over time, in electronic form, of water system operator profiles consisting of any hydrogeological or other consultant's report relating to the water system; relevant operator chlorine residual measurements; past inspection reports; drinking water test results for a reasonable period; all operator responses to inspection reports; and all applicable Certificates of Approval, Permits to Take Water (PTTW), Field and Director's Orders, occurrence reports, and information concerning the safety and security of public water sources and supplies.</p>
<p style="text-align: center;">? Unavailable</p>	<p>Part 2 Recommendation 79: The Ministry of the Environment should create an Integrated Divisional System which provides central electronic access to information:</p> <ul style="list-style-type: none"> • relevant to source protection; • relevant to each drinking water system in Ontario (including a description of the system, trend analyses, water quality, and systems data); • required by the Drinking Water Branch (including for approvals and inspections); and • required by local Boards of Health.

As Justice O'Connor recommended, the MECP created an integrated divisional system that "tracks business processes and produces documents to support MECP approvals and permits,

compliance and enforcement activities.”²⁶⁷ The specifics of the system are not public, so it is not clear exactly what is included.

c. Annual Reports

Throughout both of his reports, Justice O’Connor underscored the importance of transparency and public access to information to promote confidence in drinking water safety. To achieve this goal, he recommended that the MECP prepare an annual report on drinking water to be tabled in the Legislature and made public. This was fulfilled in the *SDWA*, which designates the Minister of the Environment as responsible for regulating drinking water in Ontario and requires that they issue annual reports.

 Complete	Part 2 Recommendation 80: The Drinking Water Branch should prepare an annual “State of Ontario’s Drinking Water Report,” which should be tabled in the Legislature.
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8. Enforcement

Enforcement is necessary to ensure that each of the barriers is functioning effectively. The Compliance and Enforcement Regulation under the *SWDA* came into force in 2005 and sets out specific inspection requirements such as the frequency of inspections of municipal drinking water systems and laboratories, the actions required and response time in the event of a deficiency, and the procedures to be followed for investigations and enforcement.²⁶⁸

a. Inspections

At the Walkerton Inquiry, issues were raised about “the frequency of inspections, the desirability of unannounced inspections, the need for more direction on the scope of inspections, the need for more attention to follow up on identified deficiencies, and the need to improve the training and qualifications of inspectors.”²⁶⁹ In response, Justice O’Connor made the following recommendations to strengthen the inspection program.

Inspectors

 Complete	Part 2 Recommendation 72: The provincial government should create an office of Chief Inspector - Drinking Water Systems.
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The *SDWA* gives broad inspection powers to officers of the MECP and created a new position of Chief Inspector with responsibility for overseeing inspections and enforcement activities under the *SDWA*.²⁷⁰ To foster public transparency, the Chief Inspector must submit annual reports to the Legislature.

²⁶⁷ “Integrated Divisional System,” online: Ontario <<https://data.ontario.ca/dataset/integrated-divisional-system>>.

²⁶⁸ *Compliance and Enforcement*.

²⁶⁹ *Report of the Walkerton Inquiry: Part 2*, at 424.

²⁷⁰ *SDWA*, s 81(1), s 7(1).

<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 73: Inspectors should be required to have the same or higher qualifications as the operators of the systems they inspect and should receive special training in inspections.</p>
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The *SDWA* gives the Chief Inspector the responsibility to develop training programs for inspectors and ensure their continued training; however, the Act does not explicitly require any specific level of training or qualification.²⁷¹

Frequency

<p>✓</p> <p>Complete</p>	<p>Part 1 Recommendation 13: The MOE's inspections program for municipal water systems should consist of a combination of announced and unannounced inspections. The inspector may conduct unannounced inspections when he or she deems it appropriate, and at least once every three years, taking into account such factors as work priority and planning, time constraints, and the record of the operating authority.</p>
<p>✓</p> <p>Complete</p>	<p>Part 1 Recommendation 15: As a matter of policy, inspections of municipal water systems, whether announced or unannounced, should be conducted at least annually. The government's current program for annual inspections should be continued.</p>
<p>✓</p> <p>Complete</p>	<p>Part 1 Recommendation 16: There should be a legal requirement that systems with significant deficiencies be inspected at least once per year. Ontario Regulation 459/00, also known as the Drinking Water Protection Regulation, should be amended to require that an inspection be conducted within one year of any inspection that discloses a deficiency as defined in the regulation. In this regard, deficiencies include any failure to comply with the treatment, monitoring, or testing requirements, or with specified performance criteria, set out in the regulation or in the accompanying drinking water standards.</p>

Regulation 242/05 under the *SDWA* requires all municipal residential drinking water systems to be inspected through an annual cycle of inspections.²⁷² It also requires at least one in three inspections to be unannounced and permits provincial officers to conduct inspections without a warrant or court order to determine compliance.²⁷³ In 2021, the MECP fulfilled this requirement, conducting 254 unannounced inspections and 402 announced inspections.²⁷⁴ If a violation is found during an inspection that poses a drinking water health hazard, the regulation requires a follow-up inspection within a year.²⁷⁵

²⁷¹ *SDWA*, s 7(1).

²⁷² *Compliance and Enforcement*, s 2.

²⁷³ "Ontario *Safe Drinking Water Act, 2002* & Its Regulations," at 6.

²⁷⁴ "2020-2021 Chief Drinking Water Inspector Annual Report."

²⁷⁵ "Ontario *Safe Drinking Water Act, 2002* & Its Regulations," at 6.

Public Health Board Inspections

<p>!</p> <p>Needs Improvement</p>	<p>Part 1 Recommendation 2: Random assessments should be conducted on a regular basis by the Minister of Health, or his or her delegate, pursuant to the <i>Health Protection and Promotion Act</i>, of public health boards in Ontario to ensure their compliance with the Mandatory Health Programs and Services Guidelines of the Public Health Branch. Further, the Public Health Branch or the Minister of Health’s delegate should continue to track, on an annual basis, trends in non-compliance by public health boards in Ontario, in order to assess whether altered programs and services guidelines are required and whether resourcing allocations by the Province of Ontario require adjustment to ensure full compliance.</p>
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While there are measures in place to assess public health boards, they are not institutionalized to the extent described by Justice O’Connor. For example, section 10(1) of the *HPPA* states that “every medical officer of health shall inspect or cause the inspection of the health unit [which are governed by boards] served by him or her for the purpose of preventing, eliminating, and decreasing the effects of health hazards in the health unit.”²⁷⁶ But the statute does not provide for specific time intervals between inspections, non-compliance tracking, or mention “compliance with the Mandatory Health Programs and Services Guidelines.”

The Ontario Public Health Standards, which set out standards for the provision of mandatory health programs and services, lay out an accountability framework that must be followed by public health units. To “enable boards of health to demonstrate that they comply with all legal requirements,” boards of health must submit the following to the Ministry:

- A strategic plan setting out the 3 to 5-year local vision, priorities and strategic directions for the board of health;
- An annual service plan and budget;
- Regular performance reports (programmatic and financial) on program achievements, finances, and local challenges in meeting outcomes; and
- An annual report on the affairs and operations, including how they are performing on requirements, delivering quality public health programs and services, practicing good governance, and complying with various legislative requirements.²⁷⁷

Operator Training Inspections

<p>✓</p> <p>Complete</p>	<p>Part 1 Recommendation 24: The MOE should inspect municipal water systems regularly for compliance with Ontario Regulation 435/93, enforce the regulation strictly, and follow up when non-compliance is found in order to ensure that operators meet certification and training standards.</p>
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²⁷⁶ *HPPA*, s 10(1).

²⁷⁷ “Ontario Public Health Standards: Requirements for Programs, Services and Accountability” (June 2021) at 62, online (pdf): *Ontario Ministry of Health and Long-Term Care* <https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Ontario_Public_Health_Standards_2021.pdf>.

Regulation 128/04 under the *SDWA* (which, as mentioned earlier, replaced Regulation 435/93) requires that owners or operating authorities display a copy of the certificate of every certified operator in a conspicuous place and checking these certificates is part of a routine inspection.²⁷⁸

Inspection Protocol

<p>?</p> <p>Unavailable</p>	<p>Part 1 Recommendation 14: The MOE should develop and make available to all MOE inspectors a written direction or protocol, for both announced and unannounced inspections:</p> <ul style="list-style-type: none"> • outlining the specific matters to be reviewed by an inspector in preparing for the inspection of a water system; • providing a checklist of matters that an inspector is required to review, as well as matters that it may be desirable to review, during an inspection of a water system; and • providing guidance concerning those matters to be discussed with the operator of a water system during an inspection.
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The MECP has a standard template for local environmental officers to follow when conducting inspections. The Ontario government website has a page on what drinking water system owners can expect during an inspection, but the protocol for inspections itself cannot be located online.²⁷⁹

Resources

<p>?</p> <p>Unavailable</p>	<p>Part 1 Recommendation 17: The government should ensure that adequate resources are provided to ensure that these inspections are thorough and effective.</p>
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Part 1 Recommendation 17 is marked as unavailable because it is difficult to operationalize “adequate” and “thorough and effective” to assess its implementation. Further, this recommendation requires continuous vigilance to ensure that the inspections program receives sustained funding.

Inspection Reports

<p>✓</p> <p>Complete</p>	<p>Part 1 Recommendation 18: Copies of MOE inspection reports should be provided to the manager of the water system, the members of the operating authority, the owner of the water system, the local Medical Officer of Health, the MOE’s local office, and the MOE’s Approvals Branch.</p>
<p>✓</p> <p>Complete</p>	<p>Part 1 Recommendation 19: The MOE should establish and require adherence to time lines for the preparation and delivery of inspection reports and operator responses, and for the delivery of interim status reports regarding remedial action.</p>

²⁷⁸ O Reg 128/04, s 15.

²⁷⁹ “What to Expect When an Environmental Officer Inspects Your Facility” (15 June 2021), online: Ontario <<https://www.ontario.ca/page/what-to-expect-when-environmental-officer-inspects-your-facility>>.

Regulation 242/05 under the *SDWA* requires that, within 45 days of an inspection of a municipal water system, a report is sent to the operating authority, the owner of the water system, the local Medical Officer of Health, the local CA, and the MECP.²⁸⁰

b. Abatement

Abatement describes the measures taken to bring individuals back into compliance with drinking water statutes, regulations, and policies. In the event someone has contravened the *SDWA*, the MECP may issue an order to remedy non-compliance or bring a prosecution.²⁸¹ Justice O'Connor strongly urged the MECP to utilize enforcement tools more readily than it previously had been and made the following two recommendations to this end.

? Unavailable	Part 2 Recommendation 74: The Ministry of the Environment should increase its commitment to the use of mandatory abatement.
? Unavailable	Part 2 Recommendation 75: The Ministry of the Environment should increase its commitment to strict enforcement of all regulations and provisions related to the safety of drinking water.

It is difficult to measure how aggressively enforcement measures are being employed because data only exists if non-compliance is detected and abatement is pursued. Between April 2020 to March 2021, the MECP conducted 656 inspections of municipal drinking water systems, 25 inspections of non-municipal year-round residential drinking water systems, and 27 inspections of systems serving designated facilities.²⁸² Based on findings from these inspections, only four prosecutions were pursued under the *SDWA*:

- One operating authority was convicted for failing to immediately report to the ministry a prescribed adverse result of a drinking water test.²⁸³
- An operator was convicted for including false chlorine residual sample results.²⁸⁴
- One individual was convicted for failing to:
 - ensure at least one distribution sample was taken every week;
 - use an approved device to test for free chlorine residual;
 - immediately report an adverse result of a drinking water test; and
 - ensure the drinking water system was operated by a properly certified person.²⁸⁵
- A corporation was convicted for conducting upgrade and repair work without a well technician's licence.²⁸⁶

²⁸⁰ *Compliance and Enforcement*, s 2(4).

²⁸¹ *SDWA*, s 105, s 142.

²⁸² "Minister's Annual Report."

²⁸³ *R v Ontario Clean Water Agency*, 2020 CarswellOnt 15984 (ONCJ).

²⁸⁴ *R v Fausto Macri*, 2021 CarswellOnt 1190 (ONCJ).

²⁸⁵ *Pizziol*.

²⁸⁶ *R v D Koets Plumbing and Heating Ltd*, 2021 CarswellOnt 4525 (ONCJ).

In the same timeframe, the following orders were issued:²⁸⁷

- Two orders were issued to the owners of two separate municipal residential drinking water systems. The orders required:
 - One owner to retain the services of a licenced engineer to assess the filtration system and implement any recommendations.
 - One owner to retain a third-party operator to oversee the actions of the system's operator and regularly report any instances of non-compliance to the ministry.
- An order was issued to a corporation requiring it to install backflow prevention devices and implement a procedure to prevent cross-contamination.
- Two orders were issued to owners of non-municipal residential drinking water systems. The orders required:
 - One order required the owner to provide proper treatment and to monitor for primary disinfection.
 - The other required the owner to submit documentation that a certified operator was hired.
- One order was issued requiring a school board to submit an action plan to help ensure that corrective actions for future lead exceedances are reported and implemented properly.
- Three orders were issued to owners of licenced laboratories. All orders required they identify deficiencies in the adverse reporting process and implement corrective actions.

Penalties

Penalties for non-compliance with the *SDWA* are onerous. Corporations facing charges under the *SDWA* that have a history of previous convictions potentially face penalties of up to \$200,000 per day.²⁸⁸ For individuals, fines for subsequent offences can be up to \$50,000 per day, imprisonment of up to a year or both.²⁸⁹ For serious offences, such as those that could have resulted in a drinking water health hazard, the maximum penalty for corporations for subsequent offences can be up to \$10,000,000 per day.²⁹⁰ For individuals, the maximum penalty is \$7,000,000 per day, imprisonment of up to five years less a day, or both.²⁹¹ In practice, fines have been significantly lower. A report from 2011 found that, for municipalities, fines for first convictions ranged from \$1,500 to \$13,000 per charge. Fines against municipalities for subsequent convictions ranged from \$3,500 to \$15,000 per charge. For non-municipal corporations, fines for first convictions ranged from \$1,500 to \$70,000.²⁹²

²⁸⁷ "Minister's Annual Report."

²⁸⁸ *SDWA*, s 141(2)(b).

²⁸⁹ *SDWA*, s 141(1)(b).

²⁹⁰ *SDWA*, s 143(1).

²⁹¹ *SDWA*, s 143(2).

²⁹² Abouchar and Vince, at 2.

Public Involvement

<p>! Needs Improvement</p>	<p>Part 2 Recommendation 76: The Ministry of the Environment should initiate a process whereby the public can require the Investigations and Enforcement Branch to investigate alleged violations of drinking water provisions.</p>
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The MECP’s “Compliance Policy Applying Abatement and Enforcement Tools” lists various means that violations of legislation or incidents with the potential to adversely affect human health or the natural environment are identified by Ministry staff.²⁹³ These channels include spills and pollution incident reports from private individuals. The public can easily make reports by phone or online to the Spills Action Centre, but this is limited to pollution and spills and not relevant for all violations of drinking water provisions.²⁹⁴

Individuals can also prompt an investigation by making a request through the *EBR*. Subsection 74(1) of the *EBR* provides that “any two persons resident in Ontario who believe that a prescribed Act, regulation or instrument has been contravened may apply to the minister responsible for the administration of the Act, regulation or instrument for an investigation by that minister of the alleged contravention.”²⁹⁵ However, in 2021, the Auditor General reported that the MECP is not providing educational programs about the *EBR* to the public.²⁹⁶ To exercise their rights under the *EBR*, Ontario residents need to know they have them. The Auditor General found that 52 percent of those surveyed had not heard of the *EBR* and of those who were aware of it, only one in ten could name a right provided by the Act.²⁹⁷

²⁹³ MECP, “Compliance Policy Applying Abatement and Enforcement Tools.”

²⁹⁴ “Report Pollution and Spills” (30 August 2021), online: *Ontario* <<https://www.ontario.ca/page/report-pollution-and-spills>>.

²⁹⁵ *EBR*, s 74(1)

²⁹⁶ “Annual Report of Environment Audits: Summaries” (2021) at 2, online (pdf): *Auditor General of Ontario*

<https://www.auditor.on.ca/en/content/news/21_summaries/2021_summary_ENV.pdf> [“Annual Report of Environment Audits”].

²⁹⁷ “Annual Report of Environment Audits,” at 2.

Chapter 4: Coverage of Various Populations

After the Walkerton tragedy, the provincial government took significant steps to implement the multi-barrier approach and improve drinking water protections in the province. However, not all residents of Ontario have benefitted from these measures equally. This chapter examines how various populations are differentially covered by the current drinking water protection framework.

Over two decades after the Walkerton tragedy, it is unacceptable that the recommendations have been selectively applied and only protects source water for some—but not all—residents of Ontario. As Justice O’Connor noted, water is a mobile resource that does not respect political boundaries and there is “no justification for permitting lower public health standards for some residents of Ontario than those enjoyed by others.”²⁹⁸

1. Municipal Water Systems

About 80 percent of the provincial population receives their drinking water from municipal water systems, which are closely regulated by the existing legal framework.²⁹⁹ These systems are protected by the *SDWA*, which establishes stringent standards for the treatment, distribution and testing of municipal drinking water to safeguard human health.

Similarly, sources of municipal drinking water have been identified and protected under the *CWA*. The *CWA* requires the development of enforceable SPPs to regulate (or prohibit) activities that pose significant threats to the quality or quantity of water that supplies municipal drinking water systems. The initial round of source protection planning from 2007 to 2015 was almost exclusively focused on identifying and protecting sources of municipal drinking water.³⁰⁰ The initial focus on municipal systems is reasonable and understandable given the amount of Ontario residents reliant on these systems and the novelty of the *CWA* framework when it was enacted.

This is good news for the majority of Ontario residents who are supplied by municipal water systems. However, the current legislative and regulatory regime fails to protect those who do not obtain their drinking water from a municipal system.

²⁹⁸ *Report of the Walkerton Inquiry: Part 2*, at 487.


²⁹⁹ *Report of the Walkerton Inquiry: Part 2*, at 278.

³⁰⁰ Richard Lindgren and Theresa McClenaghan, “Application for Review (Filed pursuant to Section 61 of the *Environmental Bill of Rights* RE: *Clean Water Act, 2006* and Regulation 287/07)” (12 December 2019) at 3, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2019/12/1308-EBR-App-for-Review-of-CWA-Regulations-December-2019.pdf>> [Lindgren and McClenaghan, “Application for Review”].

2. Small Drinking Water Systems

Small drinking water systems are located across the province in semi-rural to remote communities and provide drinking water in restaurants, places of worship, community centres, resorts, rental cabins, motels, bed and breakfasts, campgrounds and other public settings where there is not a municipal drinking water supply.³⁰¹ The MOHLTC oversees small drinking water systems in Ontario. Regulation 319/08 under the *HPPA* requires small drinking water system owners and operators to provide the public with safe drinking water at all times and to understand their responsibilities of owning and operating a small drinking water system.³⁰² The regulation outlines specific requirements that small drinking water system owners and operators must comply with, such as maintenance, water sampling and testing, and responding to adverse test results.³⁰³


Defining Small Drinking Water Systems

 Complete	Part 2 Recommendation 81: Ontario Regulation 459/00 should apply to any system that provides drinking water to more than a prescribed number of private residences.
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Regulation 319/08 under the *HPPA* (which replaced Regulation 459/00 and 505/01 under the *OWRA*) applies to small drinking water systems, which are defined as:

- every municipal drinking water system that does not serve a major residential development or a designated facility;
- every non-municipal drinking water system that does not serve a major residential development or a trailer park or campground that has more than five service connections and that does not serve a designated facility; and
- every non-municipal drinking water system that serves a major residential development or a trailer park or campground that has more than five service connections.³⁰⁴

Subsection 2(7) of Regulation 319/08 defines “major residential development” as a development of six or more private residences on one or more properties.

 Not Applicable	Part 2 Recommendation 82: The Ministry of the Environment should establish a procedure under which owners of communal water systems may apply for a variance from provincial regulations only if a risk analysis and management plan demonstrate that safe drinking water can be provided by means other than those laid down in regulations.
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Part 2 Recommendation 82, though not implemented exactly as Justice O’Connor envisioned, is embodied in the way the regulation for small drinking water systems was established.


³⁰¹ “2020-2021 Chief Drinking Water Inspector Annual Report.”

³⁰² *Small Drinking Water Systems*.

³⁰³ *Small Drinking Water Systems*.

³⁰⁴ O Reg 319/08, s 1(1).

Since there are many types of small systems, public health inspectors conduct initial risk assessments of each site to determine what requirements must be followed and what actions must be taken by their owners and operators.³⁰⁵ Following the site-specific risk assessment, basic operating requirements are set to assist owners and operators in maintaining and supervising the provision of drinking water to their users. These operating requirements are provided as written “directives” that specifically apply to their system and could provide direction on sampling and testing frequency, operational checks, training for operators, and more. Owners can request that a directive or an amendment to a directive be reviewed by the local medical officer of health, as long as they do so within seven days of receiving the directive or amendment.³⁰⁶

 Complete	Part 2 Recommendation 85: The application of Ontario Regulation 505/01 should be broadened to include all owners of water systems that serve the public for a commercial or institutional purpose and that do not come within the requirements of Ontario Regulation 459/00.
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Systems serving designated facilities (such as children’s camps, health care facilities, social care facilities, schools, universities, colleges, and other degree-granting institutions) are not considered small systems and fall within the MECP’s jurisdiction.³⁰⁷

Economic Viability

* Further Investigation	Part 2 Recommendation 83: The provincial government should not approve water systems that would not be economically viable under the regulatory regime existing at the time of the application.
* Further Investigation	Part 2 Recommendation 84: Approved systems that are not economically viable under the improved regulatory scheme should be required to explore all managerial, operational, and technological options to find the most economical way of providing safe drinking water. If the system is still too expensive, the provincial government should make assistance available to lower the cost per household to a predetermined level.

The *HPPA* and its regulations do not refer to the financing or economic viability of small drinking water systems. Systems are approved subject to operating requirements; however, it does not appear that having the resources to meet these requirements is a condition of approval. These small systems are not required to have the financial plans that larger systems must have under the *SDWA* regulations.

³⁰⁵ O Reg 319/08, s 7(1).

³⁰⁶ O Reg 319/08, s 38.

³⁰⁷ O Reg 170/03, s 1(1).

Bulk Water Delivery

<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 87: The provincial government should review the current practices for the delivery of drinking water in bulk and the need for a regulatory framework in this area.</p>
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Water haulers are not regulated by the MECP or the *HPPA*. The “Drinking Water Hauling Guidance Document” notes that “under Section 1 d) of the Drinking Water Protocol, boards of health are required to inspect drinking water haulage vehicles annually” and provides factors for public health officers to consider when conducting these inspections.³⁰⁸ However, this guidance document was published in 2008 and the most recent Safe Drinking Water and Fluoride Monitoring Protocol, which was published in 2019, does not mention water hauling.³⁰⁹

Cisterns or systems that store transported water may be regulated under Regulation 170/03 if they provide water to the public. The MECP recommends that the water hauling truck retained by these owners is only used for transporting treated drinking water.³¹⁰ Some public health units have recommendations for using water haulers and municipalities may keep lists of haulers that regularly transport treated municipal water; however, such initiatives are completely discretionary and vary by area.³¹¹

3. Remote Communities and Non-Municipal Water Sources

A significant flaw in the provincial source water protection framework is its exclusion of populations who do not obtain their water from sources under the jurisdiction of a CA. A watershed approach managed by existing CAs was seen by the province as an effective way to implement the *CWA*, since over 95 percent of Ontario’s population lives in areas covered by CAs.³¹² While this initial focus is understandable, the continued exclusion of certain populations leaves them vulnerable to health risks posed by unsafe drinking water.

The current framework has yet to be applied to many small and remote communities, private wells, or other non-municipal drinking water sources (see Figures 4 and 5). The former ECO’s 2018 report highlights that over 3 percent of Ontario’s population, mostly northern and First Nations reserve communities, reside outside of a SPA and are not protected by SPPs.³¹³

³⁰⁸ Environmental Health Branch, Public Health Division, Ministry of Health and Long-Term Care, “Drinking Water Haulage Guidance Document” (December 2008) at 3, online (pdf): *Legislative Assembly of Ontario* <<https://collections.ola.org/mon/23007/293935.pdf>>.

³⁰⁹ “Safe Drinking Water and Fluoride Monitoring Protocol, 2019” (February 2019), online (pdf): *Ontario Ministry of Health and Long-Term Care* <https://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Safe_Water_Fluoride_Protocol_2019_en.pdf>.

³¹⁰ “Providing Safe Drinking Water to Cisterns at Non-Residential Drinking Water Systems Serving Designated Facilities” (20 June 2022) online: *Ontario* <<https://www.ontario.ca/page/providing-safe-drinking-water-cisterns-non-residential-drinking-water-systems>> [“Providing Safe Drinking Water to Cisterns”].

³¹¹ “Providing Safe Drinking Water to Cisterns.”

³¹² Collins et al, at 2.

³¹³ ECO, *2018 Report*, at 37.

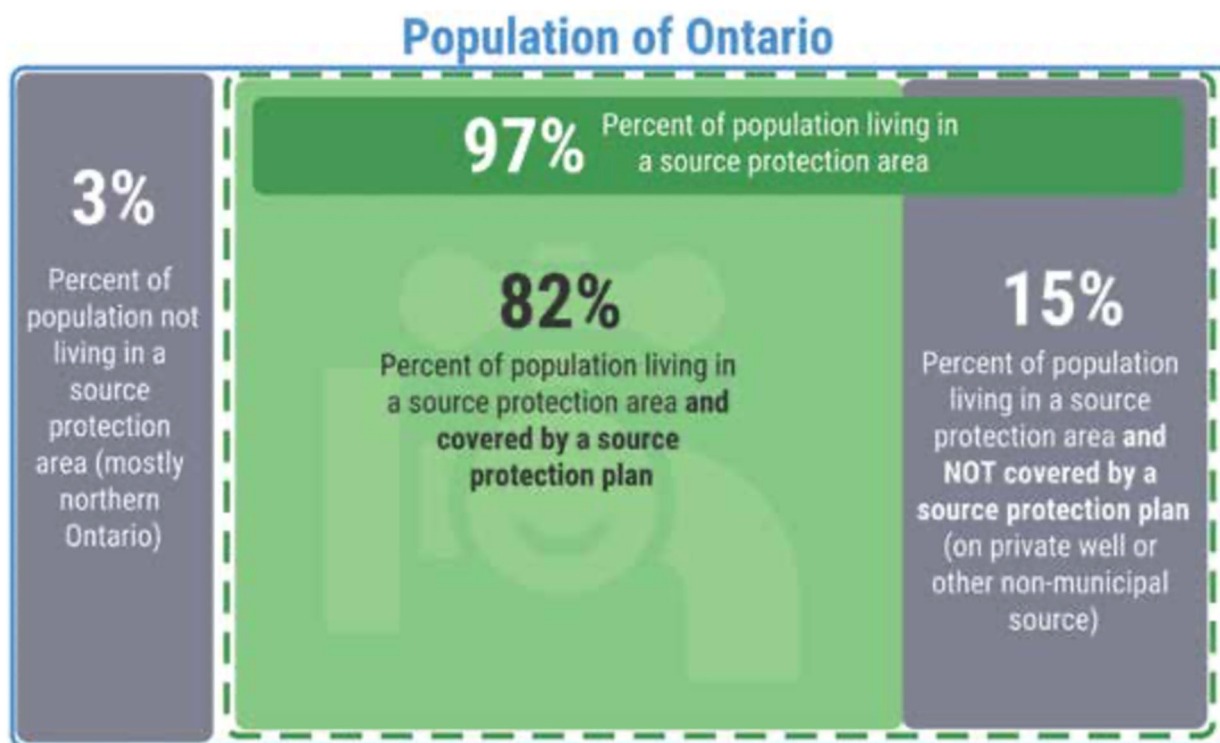


Figure 4: Proportion of Ontario covered by the CWA framework (Source: ECO 2018, based on data from the MECP).



Figure 5: Areas in Ontario covered by the CWA framework (Source: Source Protection Information Atlas 2022, based on data from the MECP).

The Minister may establish SPAs in any part of the province but has only established two additional SPAs, which were each incorporated into larger SPRs.³¹⁴ Another 15 percent of Ontario’s population live within a SPA but rely on a private well or other non-municipal drinking water supply, meaning their water is also excluded from SPPs.³¹⁵ Similarly, the 2019 annual report by Ontario’s Auditor General raised red flags about drinking water safety in many communities across Ontario that are not served by municipal drinking water systems.³¹⁶

a. Muskrat Lake Case Study

The Village of Cobden is an example of a municipality that has been left behind by the CWA framework. Cobden sources its water from Muskrat Lake. The town’s drinking-water plant is the only municipal system on the lake and serves approximately 1,000 people.³¹⁷ There is no local CA to coordinate actions in the Muskrat Lake watershed, meaning it falls outside of the SPAs established pursuant to the CWA and is not subject to the regulations for the development of SPPs.³¹⁸ Although the municipal system must meet provincial drinking water standards, there is no SPP or coordinated oversight to address the pollution of Cobden’s source water.³¹⁹ Since at least the early 1980s, local and provincial authorities have recognized that the water quality in Muskrat Lake is the poorest in the county.³²⁰ The levels of phosphorus in the lake exceed the provincial standard due to manure and fertilizer run-off from small agricultural operations in watershed.³²¹ There have been concerns from local residents about bad odours and excessive algal growth, drinking water and property values, and impacts on recreation and tourism.³²²

b. Private Wells

The existing legal framework does little or nothing to safeguard the Ontario residents who use private wells for obtaining drinking water. The SDWA provides rules for ensuring the safety of residential drinking water from municipal and some non-municipal water treatment systems (such as the water supply for a trailer park or small complex of homes). There are no comparable rules to protect drinking water from private wells. Private well owners are responsible for taking samples of their own water supply, maintaining their well, and any treatment they choose to utilize.³²³

³¹⁴ ECO, 2018 Report, at 38.

³¹⁵ ECO, 2018 Report, at 37.

³¹⁶ Theresa McClenaghan and Richard Lindgren, “Blog: Water Wells Remain at Risk in Ontario” (08 January 2020), online: *Canadian Environmental Law Association* <<https://cela.ca/water-wells-remain-at-risk/>> [McClenaghan and Lindgren, “Water Wells Remain at Risk in Ontario”].

³¹⁷ Bruce Bateman, “RE: Application for Review of the Need for New Policy and Legislation to Address Environmental Problems in Muskrat Lake” (28 June 2019) at 6.

³¹⁸ Bateman, at 6.

³¹⁹ Montgomery.

³²⁰ Montgomery.

³²¹ Bateman, at 1.

³²² Bateman, at 2.

³²³ “Ontario Safe Drinking Water Act, 2002 & Its Regulations,” at 10.

The CWA also does not regulate drinking water from these wells. Without the benefit of the SDWA's requirements for testing and treatment, source protection is the main (or only) line of defence for private water supplies.³²⁴ This is especially concerning because well owners often have no control over the surrounding activities that may be impacting the drinking water sources on which they rely.

During the first round of source protection planning, the MOE took a number of steps to restrict efforts to raw water sources drawn by municipal intakes and wellheads, rather than by private wells or other non-municipal systems.³²⁵ MOE officials issued an early directive that effectively discouraged municipalities from elevating clusters of private wells at the time (for example, whole towns, villages, and hamlets).³²⁶ The MECP had originally suggested that private water supplies "would be considered in subsequent phases."³²⁷ However, the MECP confirmed to the then ECO in 2015 that it was unlikely to include private water supplies in future source protection planning.³²⁸ The Ministry told the Auditor General in 2016 that their focus is on larger drinking water systems and municipalities are authorized to include private wells in their SPPs, although they would not provide funding for them to do so.³²⁹

Water Quality Concerns

It is well-documented that poorly constructed or improperly abandoned wells can serve as direct pathways for surface contaminants to enter and degrade aquifers that are being used as drinking water supplies by Ontario residents.³³⁰

Studies of well water quality in Ontario have had alarming results. The 2008 Ontario Household Water Well Owner Survey found that, although most well owners were confident in their water quality, many of these wells did not meet current regulatory standards.³³¹ Almost half of the reported wells were constructed prior to the creation of the Regulation 903 (aka Wells Regulation) and 16 percent of well water was contaminated.³³² In 2014, the Auditor General reported that 36 percent of the water samples from private wells tested positive for bacteria including *E. Coli*.³³³ If private wells were held to the same safety standard used for public drinking water systems, water from these wells that tested positive for bacteria would be considered

³²⁴ ECO, 2018 Report, at 39.

³²⁵ McClenaghan and Lindgren, "RE: Protection of Drinking Water Quality in Ontario," at 4.

³²⁶ McClenaghan and Lindgren, "RE: Protection of Drinking Water Quality in Ontario," at 4.

³²⁷ ECO, 2018 Report, at 38.

³²⁸ ECO, 2018 Report, at 38.

³²⁹ "Source Water Protection: Follow-Up Report", at 162.

³³⁰ Theresa McClenaghan and Richard Lindgren, "RE: Proposed Amendments to Regulation 903 (Wells)" (26 November 2019) at 4, online (pdf): <https://cela.ca/wp-content/uploads/2019/11/1305-CELA-Comments-Reg-903-changes-Nov-2019.pdf> [McClenaghan and Lindgren, "RE: Proposed Amendments to Regulation 903"].

³³¹ R Kreutzwiser, RC de Loë, & K Imgrund, "Out of Mind: Private Water Well Stewardship in Ontario: Report on the Findings of the Ontario Household Water Well Owner Survey 2008," (December 2010) at v, online (pdf): <https://www.nvca.on.ca/Shared%20Documents/Private%20Well%20Water%20Stewardship%20in%20Ontario%202008.pdf>.

³³² Kreutzwiser, de Loë, & Imgrund, at v.

³³³ "2014 Annual Report" (9 December 2014) at 411, online (pdf): *Auditor General of Ontario*

<https://www.auditor.on.ca/en/content/annualreports/arreports/en14/2014AR_en_web.pdf> ["Auditor General 2014 Annual Report"].

unsafe to drink.”³³⁴ In 2016, the Auditor General estimated there were 730,000 wells abandoned in Ontario, many of which may not have been properly decommissioned.³³⁵ Abandoned wells that have not been properly decommissioned pose a risk to groundwater because they provide open pathways to aquifers, and bypass the natural filtration provided by the different layers of the earth.³³⁶

To address threats to well water, the Auditor General recommended that the MECP “consider the feasibility of requiring [SPPs] to identify and address threats to sources of water that supply private wells and intakes.”³³⁷ However, the Auditor General’s recommendation still has not been acted upon by the Ontario government.

Public Information

<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 86: With regard to private drinking water systems that are not covered by either Ontario Regulation 459/00 or Ontario Regulation 505/01, the provincial government should provide the public with information about how to supply water safely and should ensure that this information is well distributed. It should also maintain the system of licensing well drillers and ensure the easy availability of microbiological testing, including testing for <i>E. coli</i>.</p>
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A 2008 study on well stewardship initiatives indicates that public information on well water safety is not being effectively distributed. The study found that most well owners were unclear about the importance of visual examinations and source water protection, and did not know how to undertake these activities properly.³³⁸ This was likely exacerbated by the discontinuance of the “Well Aware” program, which was initiated in 2003 to provide important public education and outreach to private well owners on how to manage and protect the quality of their well water.³³⁹

Private well water testing is provided free of charge by Public Health Ontario. Public Health Ontario tests for the bacterial indicator organisms *E. coli* and total coliforms but does not test for other contaminants such as chemicals.³⁴⁰

Regulation 903

The only line of regulatory defence for Ontario residents who are wholly dependent upon private domestic wells for potable water is Regulation 903 under the *OWRA*, making it vital that its requirements are clear, robust and enforceable. However, Regulation 903 has been subject to immense criticism.

³³⁴ Auditor General 2014 Annual Report,” at 411.

³³⁵ “Source Water Protection: Follow-Up Report”, at 162.

³³⁶ “Source Water Protection: Follow-Up Report”, at 162.

³³⁷ McClenaghan and Lindgren, “Water Wells Remain at Risk in Ontario”

³³⁸ Kreutzwiser, de Loë, & Imgrund, at vi.

³³⁹ Lindgren and McClenaghan, “Application for Review,” at 16.

³⁴⁰ “Testing and Treating Private Water Wells” (28 April 2022), online: Ontario <<https://www.ontario.ca/page/testing-and-treating-private-water-wells>>.

Regulation 903 sets out provincial requirements for the construction, cleaning, maintenance, abandonment, and reporting of wells throughout Ontario and creates licensing and training requirements for those who work in the well construction sector.³⁴¹ This regulation was passed in recognition that poorly constructed or improperly abandoned wells can serve as pathways for surface contaminants to enter and degrade aquifers that are being used as drinking water supplies.³⁴²

The former ECO repeatedly criticized Regulation 903, stating that Ontario's continuing failure to improve it "endangers public health and impedes environmental protection."³⁴³ The former ECO rebuked the Ontario government "for neglecting its obligations to those whose drinking water comes from the most vulnerable of sources: small private wells."³⁴⁴ Justice O'Connor recommended that "Regulation 903 should be updated and reviewed if necessary to ensure that it requires best construction practices."³⁴⁵ Minor amendments were made by the Ontario government in 2003, but the former ECO identified residual problems in the amended regulation in their 2003-04 Annual Report. The former ECO voiced concerns that "the regulation does not require well constructors to verify, through water testing, that new wells have indeed been disinfected. Nor is there a requirement that well contractors disinfect private wells after carrying out repairs."³⁴⁶ The former ECO's concerns have been affirmed by ODWAC, which advised the MECP in 2005 that the Regulation's disinfection requirements for well construction and repair are "deficient."³⁴⁷ The ODWAC recommended that Regulation 903 should ensure that a rigorous five-step disinfection and sampling protocol is followed before well water is consumed after well construction or repair.³⁴⁸ This advice has not been fully acted upon by successive provincial governments. In the meantime, countless wells have been constructed, repaired, and cleaned in accordance with an insufficient regulatory standard.³⁴⁹

In 2019, the Ontario government proposed amendments to Regulation 903 that were relatively minor and did not address the Regulation's well-recognized shortcomings. Similarly, they do not implement various commitments made by the MECP in response to CELA's most recent Application for Review of Regulation 903.³⁵⁰ Instead, the amendments are aimed at making "it easier for the well construction industry to operate in Ontario by reducing "administrative

³⁴¹ Richard Lindgren, "Why won't Ontario Fix the Deficient Wells Regulation" (3 December 2019), online: *Canadian Environmental Law Association* <<https://cela.ca/deficient-wells-regulation/>> [Lindgren, "Why won't Ontario Fix the Deficient Wells Regulation"].

³⁴² Lindgren, "Why won't Ontario Fix the Deficient Wells Regulation."

³⁴³ Lindgren, "Why won't Ontario Fix the Deficient Wells Regulation."

³⁴⁴ McClenaghan and Lindgren, "Water Wells Remain at Risk in Ontario"

³⁴⁵ *Report of the Walkerton Inquiry: Part 2*, at 479.

³⁴⁶ Environmental Commissioner of Ontario, *2003-2004 Annual Report* (Toronto, ECO, 2004) at 113.

³⁴⁷ Lindgren, "Why won't Ontario Fix the Deficient Wells Regulation."

³⁴⁸ Lindgren and McClenaghan, "Application for Review," at 16.

³⁴⁹ Lindgren, "Why won't Ontario Fix the Deficient Wells Regulation."

³⁵⁰ McClenaghan and Lindgren, "RE: Proposed Amendments to Regulation 903," at 1.

burden,” rather than improving the protection of public health or the environment.³⁵¹ This misplaced priority on reducing “red tape” instead of protecting public health is unacceptable.³⁵² Further, this preoccupation with “red tape” is frighteningly reminiscent of the mindset that led to the MOE budget reductions which Justice O’Connor found contributed to the tragedy in Walkerton.

c. Expanding Drinking Water Protections

While it is possible under the *CWA* for non-municipal drinking water systems to be included in the source protection planning process, no such systems have been elevated in the past 15 years under the discretionary provisions of the *CWA* regime.³⁵³ Notably, several SPCs characterized the continuing non-inclusion of such systems as a “future policy need” or “future consideration” as SPPs are updated.³⁵⁴

The discrepancy in source protection prompted the Auditor General to recommend that “to strengthen source protection, the MOECC should consider the feasibility of requiring SPPs to identify and address threats to sources of water that supply private wells and intakes.”³⁵⁵ However, in her 2016 report, the Auditor General found that the provincial government has made “little or no progress” on this recommendation.³⁵⁶

The Ontario government’s ongoing refusal to bring non-municipal drinking water systems under the *CWA* is contrary to the expectations of many stakeholders who understood from previous MECP representations that, while the initial focus under the *CWA* would be on municipal systems, source protection measures would eventually be developed for non-municipal systems.³⁵⁷ These expectations mirror the advice given to the government by the province’s Implementation Committee and Technical Experts Committee during the development of the *CWA*. These Committees advised that “diverse communities, including those on municipal and private supplies, as well as First Nations, should be protected by the approach to source water protection.”³⁵⁸

Existing Discretionary Options

In response to CELA’s requests to extend source protection to non-municipal systems, the MECP claimed that it is open to municipalities to use their discretionary *Planning Act* powers to protect

³⁵¹ Ministry of the Environment, Conservation and Parks, “Amendments to the Wells Regulation” (20 December 2019), online: *Environmental Registry of Ontario* <<https://ero.ontario.ca/notice/013-1513>>.

³⁵² McClenaghan and Lindgren, “RE: Proposed Amendments to Regulation 903,” at 4.

³⁵³ Theresa McClenaghan, Richard Lindgren, and Krystal-Anne Roussel, “Re: Best Practices for Source Water Protection” (14 April 2022) at 3, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2022/04/CELA-Letter-Best-Practices-for-SWP.pdf>>.

³⁵⁴ Lindgren and McClenaghan, “Application for Review,” at 4.

³⁵⁵ Richard Lindgren, “The Walkerton Tragedy- Lessons Learned and Unfinished Business” (22 May 2018), online: *Canadian Environmental Law Association* <<https://cela.ca/the-walkerton-tragedy-lessons-learned-and-unfinished-business/>> [Lindgren, “The Walkerton Tragedy”].

³⁵⁶ Lindgren, “The Walkerton Tragedy.”

³⁵⁷ Lindgren and McClenaghan, “Application for Review,” at 3.

³⁵⁸ Lindgren and McClenaghan, “Application for Review,” at 2.

non-municipal groundwater or surface water sources.³⁵⁹ But municipal planning powers are highly discretionary. It is not legally mandatory for municipalities to use their land use planning powers to implement source protection measures for non-municipal systems.³⁶⁰ Even if a municipality sought to enact protective official plan policies and zoning by-laws, these instruments are always subject to proponents' applications for site-specific amendments or appeals to the Ontario Land Tribunal.³⁶¹ The result is an "uncertain and inconsistent patchwork of municipal planning instruments" across the province.³⁶² The specialized CWA was enacted despite the existence of the *Municipal Act*, *Planning Act*, and other provincial statutes of general application because the province recognized that the discretionary nature of these existing instruments was insufficient to protect source water.³⁶³ The protection of the public right to safe drinking water should not be *ad hoc* or dependant on municipal discretion, but consistent and reliable regardless of the particular area a resident lives in or the water source they rely on.

In 2022, the MECP released its "Best Practices for Source Water Protection" which compiles general information about water and what individuals can do to protect it.³⁶⁴ Voluntary, non-binding guidance is not an adequate substitute for effective and enforceable protection of non-municipal sources of drinking water under the CWA. Leaving it to the discretion of individuals and municipalities to take steps to safeguard the source water of non-municipal systems is unjustifiable, particularly given the serious public health risks posed by contaminated drinking water sources. Further, without funding to support technical assessments or implement measures, the "Best Practices" do very little to provide meaningful protection for water sources.³⁶⁵

Extending CWA Coverage

Protecting non-municipal source water through the CWA would legally oblige municipalities to amend their official plans and zoning by-laws to bring them into conformity with significant threat policies. Similarly, provincial authorities would be prohibited from issuing or amending prescribed instruments unless they conform with significant threat policies that are established to safeguard non-municipal systems.

The former ECO acknowledged that the CWA's source protection planning process may not necessarily be the ideal mechanism to protect all types of drinking water sources.³⁶⁶ In northern Ontario, the CWA process would be more difficult because of the size of the watersheds and the

³⁵⁹ Lindgren and McClenaghan, "Application for Review," at 19.

³⁶⁰ Lindgren and McClenaghan, "Application for Review," at 20.

³⁶¹ Lindgren and McClenaghan, "Application for Review," at 20.

³⁶² Lindgren and McClenaghan, "Application for Review," at 20.

³⁶³ McClenaghan, Lindgren, and Roussel, at 3.

³⁶⁴ Ministry of the Environment, Parks and Conservation, "Best Practices for Source Water Protection" (2 August 2022), online: *Ontario* <<https://www.ontario.ca/document/best-practices-source-water-protection>>.

³⁶⁵ McClenaghan, Lindgren, and Roussel, at 2.

³⁶⁶ ECO, *2018 Report*, at 38.

absence of CAs. Similarly, mapping and addressing the threats of each individual private well would be a major undertaking. Nonetheless, the province undeniably has the responsibility to protect sources of drinking water for *all* Ontario residents.

4. Indigenous Communities

Justice O'Connor noted that the water in Indigenous communities is some of the "poorest quality water in the province" and does not meet the standards that generally prevail throughout Ontario.³⁶⁷ Many Indigenous communities are plagued by long-term "boil water" advisories, "do not consume" warnings, and other serious water problems. As of May 2022, there were 34 long-term drinking water advisories impacting 29 Indigenous communities in Ontario.³⁶⁸ The disparity in drinking water quality between Indigenous and non-Indigenous communities is unacceptable. This section details the jurisdictional and political complexities involved in improving access to safe drinking water for Indigenous communities and provides an overview of various approaches and efforts undertaken to date.

a. Federal Efforts

The water crisis in Indigenous communities in Ontario is complicated by the federal government's constitutional jurisdiction over reserve lands and the inherent right of Indigenous self-governance. The federal government's exclusive jurisdiction in these areas means the provincial standards relating to drinking water are not legally enforceable on reserves. To fill this gap, Justice O'Connor made the following recommendations.

<p>X Incomplete</p>	<p>Part 2 Recommendation 23: I encourage the federal government to adopt standards that are as stringent as, or more stringent than, Ontario Regulation 459/00 for all federal facilities, Indian reserves, national parks, military installations, and other lands under federal jurisdiction in Ontario.</p>
<p>X Incomplete</p>	<p>Part 2 Recommendation 89: I encourage First Nations and the federal government to formally adopt drinking water standards, applicable to reserves, that are as stringent as, or more stringent than, the standards adopted by the provincial government.</p>
<p>X Incomplete</p>	<p>Part 2 Recommendation 90: I encourage First Nations and the federal government to consider moving to a quality management standard over time, even if the consequence is that several communities, perhaps both reserve and non-reserve, might collaborate on a regional basis, or that First Nation communities might choose to contract with others to manage their water supply systems.</p>

³⁶⁷ *Report of the Walkerton Inquiry: Part 2*, at 486.

³⁶⁸ Indigenous Services Canada, "Ending Long-Term Drinking Water Advisories" (22 July 2022), online: *Government of Canada* <<https://www.sac-isc.gc.ca/eng/1506514143353/1533317130660>>.

Safe Drinking Water for First Nations Act (SDWFNA)

In 2006, the federal government established the Expert Panel on Safe Drinking Water for First Nations to explore options to regulate drinking water on reserves. The panel found that a new federal legislation could bring uniform standards to all Indigenous communities and improve their capacity to deal with water issues.³⁶⁹ Another advantage is such legislation could be a bridge to self-government by incorporating a broader role for Indigenous people through a commission with approval, licensing, enforcement, and policy roles.³⁷⁰

Based on the Panel's findings, the federal government initiated a legislative process in 2010 to regulate drinking water in Indigenous communities. Federal engagement and consultation with affected communities were limited, and in 2013, the *SDWFNA* was enacted.³⁷¹ Although the legislation was never implemented, it would have given the federal government sweeping powers to draft and enforce water quality standards in Indigenous communities and to enact water system regulations water systems.³⁷²

The *SDWFNA* was met with broad disapproval as the legislation did not reflect core concerns and, thus, failed to address Indigenous water security. The Chiefs of Ontario in particular found there was a lack of adequate consultation and resources to identify the potential impacts of legislation.³⁷³ The *SDWFNA* has been widely criticized for absolving the federal government of all responsibility for providing safe drinking water in communities—placing this burden on First Nation Chiefs instead.³⁷⁴ The legislation also failed to mention where the necessary funding and resources required to establish and maintain safe drinking water would come from.³⁷⁵ The federal government would have been able to enforce standards that Indigenous communities were not given the necessary human resources or technical capacity to meet. This aligns with the historic trend, noted in 2005 at the First Nations Roundtable, of governments incrementally downloading responsibility for environmental issues to band councils without the transfer of adequate resources.³⁷⁶

Long-Term Drinking Water Advisories

In 2015, the federal government pledged to end all long-term drinking water advisories in Indigenous communities by 2021.³⁷⁷ However, this initiative was put on hold due to the COVID-19 pandemic.³⁷⁸ Nishnawbe Aski Nation released a statement in early December 2020 claiming

³⁶⁹ *Report of the Expert Panel on Safe Drinking Water for First Nations* (Ottawa: Minister of Indian Affairs and Northern Development and Federal Interlocutor for Métis and Non-Status Indians, 2006) at 4.

³⁷⁰ *Report of the Expert Panel on Safe Drinking Water for First Nations*, at 4.

³⁷¹ Rachel Arsenault, "Water Insecurity in Ontario First Nations: An Exploratory Study on Past Interventions and the Need for Indigenous Water Governance" (2021) 13 *Water* 717 at 4.

³⁷² Collins et al, at 4.

³⁷³ Collins et al, at 4.

³⁷⁴ Arsenault, at 4.

³⁷⁵ Arsenault, at 4.

³⁷⁶ First Nations Roundtable, *Summary Report*, (31 March 2005) at 15.

³⁷⁷ Arsenault, at 4.

³⁷⁸ Arsenault, at 4.

that this delay would impact fifteen communities with long and short-term drinking water advisories in their region alone.³⁷⁹ Wilson et al. argued that the pandemic should be a reason to expedite the delivery of water security to Indigenous communities, rather than an excuse to impede progress.³⁸⁰ Rachel Arsenault contrasts these ongoing delays with the Walkerton crisis, where water issues were resolved within six months, and concludes that “it is clear...that these timelines do not apply to Indigenous communities.”³⁸¹

b. Applying the Provincial Framework

Applying the provincial SPP framework to Indigenous communities is fraught with difficulty. Because the federal government has exclusive jurisdiction to make laws in relation to “Indians and lands reserved for the Indians,” Indigenous communities are isolated from efforts being undertaken elsewhere in the province to improve water standards. Yet, as the Chiefs of Ontario mentioned during the Walkerton Inquiry, the cross-border nature of water issues means “that First Nations cannot afford to be oblivious to provincial requirements.”³⁸² For those Indigenous communities that are willing and able to participate in the provincial process, positions are allocated on local SPCs, per Part 2 Recommendation 88.

<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 88: Ontario First Nations should be invited to join in the watershed planning process outlined in Chapter 4 of this report.</p>
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Overall, a study conducted by Leslie Collins et al. in 2017 found that the provincial framework “does not adequately address the needs of Indigenous communities in Ontario, either geographically or politically.”³⁸³

Geographic Difficulties

Reserve lands do not fall under provincial jurisdiction, so Indigenous communities may only be included in SPPs if the reserve community is located within or adjacent to a SPA and if they opt into the SPP process. While Indigenous communities are able to opt-in if they choose (per Part 2 Recommendation 88, as noted above), only 27 of the 133 First Nation communities in Ontario are within the boundaries of a watershed managed by an existing CA and potentially able to opt-in.³⁸⁴ Of these 27, only three have opted to be “elevated” for inclusion in SPPs.³⁸⁵ See Chapter 4, Subsection 4(d): “Case Studies” for a discussion of one of the communities that opted to join the provincial framework.

³⁷⁹ Arsenault, at 4.

³⁸⁰ Arsenault, at 4.

³⁸¹ Arsenault, at 4.

³⁸² *Report of the Walkerton Inquiry: Part 2*, at 492.

³⁸³ Collins et al, at 3.

³⁸⁴ ECO, *2018 Report*, at 37.

³⁸⁵ ECO, *2018 Report*, at 37.

Political Difficulties

Collins et al. noted that some see the SPP approach as an abrogation of inherent and treaty rights and choose not to participate.³⁸⁶ Additionally, Traditional Knowledge (TK) is not incorporated into the provincial framework, which Collins et al. noted that many communities considered essential to drinking water protection. Similarly, a 2018 study—which interviewed 14 Ontario First Nation participants to determine the causes of the water crisis—recommended that TK and Indigenous laws be included in water security initiatives and water governance.³⁸⁷

c. Provincial Support

The provincial government can offer support to Indigenous communities, although this has been limited in practice.

<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 92: The provincial government should actively offer, on a cost-recovery basis, its training facilities and curriculum to First Nations water system operators.</p>
<p>!</p> <p>Needs Improvement</p>	<p>Part 2 Recommendation 93: As a matter of principle, the provincial government should make technical assistance, drinking water testing, inspection, and enforcement available to First Nations communities on a cost-recovery basis, if requested.</p>

The province states it is available to offer support to Indigenous communities³⁸⁸, although this is complicated in reality by the unique circumstances of individual communities. Constitutional constraints mean that this support must be requested, so communities require the capacity and political will to cooperate with the provincial government.

The MECP's 2021 Report on Drinking Water and the province's website highlight numerous initiatives it is undertaking to help Indigenous communities protect their water. When asked, the MECP provides technical advice to support safe, sustainable water infrastructure in Indigenous communities so that they can develop the capacity to end long-term drinking water advisories.³⁸⁹

The Ministry is also able to facilitate access to operator training and certification programs. Through the WCWC, the province has also been working with Indigenous communities on the development of training programs to support operators, managers and community leaders in maintaining safe drinking water systems.³⁹⁰ To support these initiatives, Ontario committed \$1.85 million in funding through the WCWC to develop and provide additional training to

³⁸⁶ Collins et al, at 3.

³⁸⁷ Arseneault, at 1.

³⁸⁸ "Working With First Nations to Improve Drinking Water" (24 June 2021), online: Ontario <<https://www.ontario.ca/page/working-first-nations-improve-drinking-water>>.

³⁸⁹ "Minister's Annual Report."

³⁹⁰ "Minister's Annual Report."

Indigenous drinking water system operators.³⁹¹ Registration for entry-level training is free for Indigenous operators and course participants' travel and accommodation expenses are reimbursed by the province.³⁹²

In June 2016, the Indigenous Drinking Water Projects Office was established to provide a single window for Indigenous communities, Tribal Councils, and Political Territorial Organizations to access the provincial technical resources and expertise that are available.³⁹³ The Indigenous Drinking Water Projects Office provides technical advice to Indigenous communities when requested but is not responsible for eliminating drinking-water advisories.

OCWA Services

<p>! Needs Improvement</p>	<p>Part 2 Recommendation 91: The provincial government should require the Ontario Clean Water Agency (OCWA) to offer its services to First Nations band councils for operating on-reserve water systems on a normal commercial basis.</p>
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The OCWA provides training and operational support services to support communities in operating and maintaining their drinking water and wastewater systems. The agency's role in the water and wastewater industry is to fill gaps in the marketplace, especially for smaller, remote, and Indigenous communities where private operators are unwilling to offer their services.³⁹⁴ Over the last several years, the MECP (through mandate letters for 2018, 2020, and 2021) has stated that one of the OCWA's priorities is to help improve drinking water for Indigenous communities.³⁹⁵

Drinking water continues to be an issue in Indigenous communities and the Ontario Auditor General's 2021 report states that the OCWA's support of these communities is limited. According to the MECP, the OCWA is able and willing to deploy resources effectively across the province but it only has service contracts with nine of the 133 First Nations communities in Ontario.³⁹⁶ The MECP stated that the OCWA is not responsible for eliminating boil water advisories but is merely mandated to help improve drinking water for Indigenous communities through training and operational support—as long as it receives payment for the services provided.³⁹⁷ The audit found that the OCWA is hesitant to provide support without fully recovering its costs. The OCWA can provide cheaper services than the private sector but there is no evidence it does so in practice.

³⁹¹ "Working With First Nations to Improve Drinking Water."

³⁹² "First Nations Zone," online: *Walkerton Clean Water Centre* <<https://wcwc.ca/first-nations-zone/>>.

³⁹³ "Working With First Nations to Improve Drinking Water."

³⁹⁴ "Value-for-Money Audit: Ontario Clean Water Agency" (December 2021) at 10, online (pdf): *Auditor General of Ontario* <https://www.auditor.on.ca/en/content/annualreports/arreports/en21/AR_OCWA_en21.pdf> ["Value-for-Money Audit"].

³⁹⁵ "Value-for-Money Audit," at 12.

³⁹⁶ "Value-for-Money Audit."

³⁹⁷ "Value-for-Money Audit."

The Auditor General could not find any instances where the OCWA knowingly entered into an operations and maintenance contract where it would not be able to recover its costs.³⁹⁸

In December 2021, the OCWA announced it would be collaborating with Indigenous communities to create a First Nations Advisory Circle focusing on enhanced conservation and protection of land and water.³⁹⁹ The First Nations Advisory Circle aims to facilitate the sharing of knowledge and unique experiences to incorporate Indigenous perspectives into the OCWA's strategies.⁴⁰⁰ To improve the quality of water for Indigenous communities, the OCWA must commit itself to implementing any recommendations resulting from this Advisory Circle.

d. Case Studies

Below, a selection of approaches taken by Indigenous communities to protect their drinking water, along with their benefits and drawbacks, are presented. These case studies are meant to offer examples of potential options rather than suggest a universal approach. Each community is unique and both levels of government must work in collaboration with communities to evaluate courses of action best suited to specific needs.

Opting Into the Provincial Framework

Six Nations of the Grand River is one of the three nations that opted to join a provincial SPP.⁴⁰¹ Opting in enabled Six Nations to leverage the technical capacity of the provincial framework and have the Oshweken water treatment plant be considered in the overall Grand River SPP.⁴⁰² However, Six Nations has no regulatory control over actions taken by area municipalities toward the plan, the SPP only addresses issues that occur off-reserve, and no provincial funds are allocated for use to mitigate threats on reserve.⁴⁰³ Additionally, TK is not incorporated into plan development.⁴⁰⁴

Alternative Approaches

Numerous communities have undertaken their own initiatives or developed their own SPPs to protect drinking water sources, including Pays Plat, Whitefish River, and M'Chigeeng nations. In 2013-2014, Pays Plat First Nation partnered with CELA using funding from the Law Foundation of Ontario to develop a toolkit to help Indigenous governments with the implementation of source protection measures. The toolkit describes a process that parallels the provincial planning process: threat identification, an assessment of threat severity, development of a plan to mitigate

³⁹⁸ "Value-for-Money Audit."

³⁹⁹ "Minister's Annual Report."

⁴⁰⁰ "Minister's Annual Report."

⁴⁰¹ Collins et al, at 5.

⁴⁰² Collins et al, at 6.

⁴⁰³ Collins et al, at 13.

⁴⁰⁴ Collins et al, at 13.

threats, and implementation of mitigation measures.⁴⁰⁵ Following these steps to develop their own SPP allowed the Pays Plat community to have significant input into and control over policies and regulatory measures.

Whitefish River First Nation (WRFN) developed a community-based SPP, which acknowledged the community's existing expertise and TK as a basis for community engagement. WRFN already knew how to care for and protect water but had to find ways to implement this in practice and navigate the complexities of regulatory gaps and impacts from outside the community.⁴⁰⁶

In 2013, the Ontario First Nations Technical Services Corporation (OFNTSC) began exploring options to address source protection in Indigenous communities in Ontario.⁴⁰⁷ They conducted a pilot project with M'Chigeeng First Nation to determine how to develop and implement a SPP given the reality of chronic underfunding. This pilot project approach prioritized community engagement and incorporating community knowledge, and reduced costs by employing existing resources. Through partnership with OFNTSC, the community was able to access technical expertise from partner agencies which was then combined with community members' insights to develop and assess a list of threats.⁴⁰⁸

Each of these approaches was constrained by a lack of funding to develop plans and implement the policies once they were conceived. With insufficient federal funding for source protection, Indigenous communities are competing for special project, private, or charitable funding sources to protect their drinking water sources. In 2018, the then ECO encouraged the MECP to acknowledge and support the implementation of SPPs created by Indigenous communities, whether or not they were created through the formal CWA process.⁴⁰⁹ The province should also readily provide technical, scientific, and financial assistance to Indigenous communities that wish to adopt, utilize, or opt into various source protection tools.

Indigenous-led Water Authority

In Atlantic Canada, the complexities of water access prompted Atlantic First Nations to establish their own Indigenous-led, federally-funded water authority to serve participating communities in the region. In June 2020, Atlantic First Nations Water Authority (AFNWA) and Indigenous Services Canada signed an agreement allowing AFNWA to take full control of water and wastewater service delivery to up to 17 communities in 2022, which is about 60 percent of First

⁴⁰⁵ "A First Nations Source Protection Toolkit" (December 2015) at 8, online (pdf): *Canadian Environmental Law Association* <<https://cela.ca/wp-content/uploads/2019/07/FNSP-Toolkit.pdf>>.

⁴⁰⁶ Collins et al, at 9.

⁴⁰⁷ Collins et al, at 10.

⁴⁰⁸ Collins et al, at 11.

⁴⁰⁹ ECO, *2018 Report*, at 38.

Nations people who live on reserve in Atlantic Canada.⁴¹⁰ The AFNWA supports communities in upgrading, maintaining, and managing their water services.⁴¹¹

The agreement also outlines the “transfer of responsibility” of the water authority once it is in operation, meaning the federal government will surrender its authority over this policy area to the AFNWA who would then assume responsibility and management.⁴¹² Transferring responsibility has a number of benefits, including allowing AFNWA to:

- Support long-term self-governance goals;
- Build capacity in water and wastewater operations;
- Achieve financial independence;
- Deliver the required level of service;
- Address risk management requirements; and
- Integrate culture and tradition considerations and aspirations to achieve self-determination and governance.⁴¹³

Of concern is the reliability of sustained funding, as the duration of the funding provided by the federal government is not documented.⁴¹⁴

e. Expanding Drinking Water Protections

Given the complexities involved in protecting Indigenous water sources, if the federal and provincial governments are to ensure safe drinking water for all, they must enhance their efforts to engage with and assist Indigenous communities across Ontario. A coordinated and cooperative approach is necessary to effectively prevent the ingress of contaminants into water used to supply drinking water to Indigenous communities. The 2005 First Nations Roundtable cautioned against a top-down approach, recommending all levels of government form nation-to-nation relationships with Indigenous communities to effectively develop policies that will protect and conserve all natural resources.⁴¹⁵

⁴¹⁰ “Blazing a Trail: First Nations to Control Their Water Delivery Services in Atlantic Canada” (30 May 2022), online: *Government of Canada* <<https://www.sac-isc.gc.ca/eng/1620235776914/1620235816241>> [“Blazing a Trail”].

⁴¹¹ “Blazing a Trail.”

⁴¹² Michaela K Sferrazza, “Determinants of Success: the Atlantic First Nations Water Authority,” (July 2021) at 22, online (pdf): <<https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1220&context=lgp-mrps>>.

⁴¹³ Sferrazza, at 22.

⁴¹⁴ Sferrazza, at 38.






⁴¹⁵ First Nations Roundtable, at 15.

Abbreviations

Atlantic First Nations Water Authority (AFNWA)
 Canadian Environmental Law Association (CELA)
Clean Water Act, 2006 (CWA)
 Concerned Walkerton Citizens (CWC)
 Conservation Authority (CA)
 Drinking Water Quality Management Standard (DWQMS)
Environmental Assessment Act (EAA)
Environmental Bill of Rights, 1993 (EBR)
 Environmental Commissioner of Ontario (ECO)
Environmental Protection Act (EPA)
Health Protection and Promotion Act (HPPA)
 Lead Service Line (LSL)
 Maximum Acceptable Concentration (MAC)
 Ministry of the Environment (MOE) / Ministry of the Environment and Climate Change (MOECC)
 / Ministry of the Environment, Conservation and Parks (MECP) [used interchangeably for
 the Ontario ministry primarily responsible for implementing the multi-barrier approach
 to drinking water protection]
 Ministry of Health and Long-Term Care (MOHLTC)
Nutrient Management Act, 2002 (NMA)
 Ontario Clean Water Agency (OCWA)
 Ontario First Nations Technical Services Corporation (OFNTSC)
 Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
Ontario Water Resources Act (OWRA)
 Permit to Take Water (PTTW)
Public Utilities Act (PUA)
 Quality Management System (QMS)
Safe Drinking Water for First Nations Act (SDWFNA)
Safe Drinking Water Act, 2002 (SDWA)
 Source Protection Area (SPA)
 Source Protection Committee (SPC)
 Source Protection Plan (SPP)
 Source Protection Region (SPR)
 Traditional Knowledge (TK)
 Walkerton Clean Water Centre (WCWC)

Recommendations Index

1. Part 1

Status	Recommendation	Page
 Complete	Part 1 Recommendation 1: The <i>Health Protection and Promotion Act</i> should be amended to require boards of health and the Minister of Health, acting in concert, to expeditiously fill any vacant Medical Officer of Health position with a full-time Medical Officer of Health.	45
 Needs Improvement	Part 1 Recommendation 2: Random assessments should be conducted on a regular basis by the Minister of Health, or his or her delegate, pursuant to the <i>Health Protection and Promotion Act</i> , of public health boards in Ontario to ensure their compliance with the Mandatory Health Programs and Services Guidelines of the Public Health Branch. Further, the Public Health Branch or the Minister of Health's delegate should continue to track, on an annual basis, trends in non-compliance by public health boards in Ontario, in order to assess whether altered programs and services guidelines are required and whether resourcing allocations by the Province of Ontario require adjustment to ensure full compliance.	59
 Complete	Part 1 Recommendation 3: The role of the local Medical Officers of Health and health units in relation to public health issues concerning treated and untreated municipal water systems, should be clarified and strengthened. In particular, clarification is required as to whether local Medical Officers of Health are required to implement a proactive approach to responding to adverse drinking water sample test results upon receiving notification of those results.	45
 Complete	Part 1 Recommendation 4: Written guidance - developed in cooperation with Medical Officers of Health and the MOE - should be provided to Medical Officers of Health by the Public Health Branch. It should include steps to be taken by Medical Officers of Health upon receipt of MOE inspection reports and adverse drinking water sample test results.	46
 Further Investigation	Part 1 Recommendation 5: Regular meetings should be scheduled between the local MOE office and local health unit personnel to discuss public health issues, including issues related to waterworks facilities as documented in MOE inspection reports. Any affected operator or laboratory should be invited to attend the meeting.	47

<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 6: Upon the implementation by the MOE of the Integrated Divisional System (management information system), access to it should be made available to local health units and, where appropriate, to the public. This should include access to profiles of municipal water systems, and data concerning adverse drinking water quality sample test results, as included in that database.</p>	56
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 7: The Public Health Branch should develop a Boil Water Protocol - a written protocol outlining the circumstances in which a boil water advisory or a boil water order could and should be issued. I will be commenting on the government's current draft proposal in the Part 2 report.</p>	49
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 8: The Boil Water Protocol should be developed by the Public Health Branch in consultation with Medical Officers of Health, municipalities, and the MOE. The Boil Water Protocol should provide guidance concerning an effective communications strategy for the dissemination of a boil water advisory or order.</p>	49
<p style="text-align: center;">- Not Applicable</p>	<p>Part 1 Recommendation 9: The MOE should develop criteria for identifying "groundwater under the direct influence of surface water."</p>	8-9
<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 10: The MOE should maintain an information data system that includes all relevant information arising from an approval application process - in particular, information relating to the quality of source water and relevant details from expert reports and tests.</p>	56
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 11: The MOE should require continuous chlorine and turbidity monitors for all groundwater sources that are under the direct influence of surface water or that serve municipal populations greater than a size prescribed by the MOE.</p>	37
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 12: All Certificates of Approval should be limited to a specific period of time, probably five years, and be subject to a renewal process that considers the current circumstances, including recent indicators of water quality. Conditions should be added as required.</p>	55

<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 13: The MOE’s inspections program for municipal water systems should consist of a combination of announced and unannounced inspections. The inspector may conduct unannounced inspections when he or she deems it appropriate, and at least once every three years, taking into account such factors as work priority and planning, time constraints, and the record of the operating authority.</p>	58
<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 14: The MOE should develop and make available to all MOE inspectors a written direction or protocol, for both announced and unannounced inspections:</p> <ul style="list-style-type: none"> • outlining the specific matters to be reviewed by an inspector in preparing for the inspection of a water system; • providing a checklist of matters that an inspector is required to review, as well as matters that it may be desirable to review, during an inspection of a water system; and • providing guidance concerning those matters to be discussed with the operator of a water system during an inspection. 	60
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 15: As a matter of policy, inspections of municipal water systems, whether announced or unannounced, should be conducted at least annually. The government’s current program for annual inspections should be continued.</p>	58
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 16: There should be a legal requirement that systems with significant deficiencies be inspected at least once per year. Ontario Regulation 459/00, also known as the Drinking Water Protection Regulation, should be amended to require that an inspection be conducted within one year of any inspection that discloses a deficiency as defined in the regulation. In this regard, deficiencies include any failure to comply with the treatment, monitoring, or testing requirements, or with specified performance criteria, set out in the regulation or in the accompanying drinking water standards.</p>	58
<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 17: The government should ensure that adequate resources are provided to ensure that these inspections are thorough and effective.</p>	60
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 18: Copies of MOE inspection reports should be provided to the manager of the water system, the members of the operating authority, the owner of the water system, the local Medical Officer of Health, the MOE’s local office, and the MOE’s Approvals Branch.</p>	60

<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 19: The MOE should establish and require adherence to time lines for the preparation and delivery of inspection reports and operator responses, and for the delivery of interim status reports regarding remedial action.</p>	60
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 20: The government should require all water system operators, including those who now hold certificates voluntarily obtained through the grandparenting process, to become certified through examination within two years, and to be periodically recertified.</p>	34
<p style="text-align: center;">! Needs Improvement</p>	<p>Part 1 Recommendation 21: The materials for water operator course examinations and continuing education courses should emphasize, in addition to the technical requirements necessary for performing the functions of each class of operator, the gravity of the public health risks associated with a failure to treat and/or monitor drinking water properly, the need to seek appropriate assistance when such risks are identified, and the rationale for and importance of regulatory measures designed to prevent or identify those public health risks.</p>	31-32
<p style="text-align: center;">! Needs Improvement</p>	<p>Part 1 Recommendation 22: The government should amend Ontario Regulation 435/93 to define “training” clearly, for the purposes of the 40 hours of annual mandatory training, with an emphasis on the subject matter described in Recommendation 21.</p>	31-32
<p style="text-align: center;">! Needs Improvement</p>	<p>Part 1 Recommendation 23: The government should proceed with the proposed requirement that operators undertake 36 hours of MOE-approved training every three years as a condition of certification or renewal. Such courses should include training in emerging issues in water treatment and pathogen risks, emergency and contingency planning, the gravity of the public health risks associated with a failure to treat and/or monitor drinking water properly, the need to seek appropriate assistance when such risks are identified, and the rationale for and importance of regulatory measures designed to prevent or identify those public health risks.</p>	31-32
<p style="text-align: center;">✓ Complete</p>	<p>Part 1 Recommendation 24: The MOE should inspect municipal water systems regularly for compliance with Ontario Regulation 435/93, enforce the regulation strictly, and follow up when non-compliance is found in order to ensure that operators meet certification and training standards.</p>	59

<p style="text-align: center;">? Unavailable</p>	<p>Part 1 Recommendation 25: The MOE should proceed expeditiously to complete the design and implementation of the management information system now under development (that is, the Integrated Development System, or IDS). That system should include the capacity for the creation and maintenance over time, in electronic form, of water system operator profiles consisting of any hydrogeological or other consultant’s report relating to the water system; relevant operator chlorine residual measurements; past inspection reports; drinking water test results for a reasonable period; all operator responses to inspection reports; and all applicable Certificates of Approval, Permits to Take Water (PTTW), Field and Director’s Orders, occurrence reports, and information concerning the safety and security of public water sources and supplies.</p>	56
<p style="text-align: center;">* Further Investigation</p>	<p>Part 1 Recommendation 26: A full needs assessment for training should be undertaken for MOE technical staff, and a component of that assessment should focus on communal drinking water.</p>	35
<p style="text-align: center;">* Further Investigation</p>	<p>Part 1 Recommendation 27: The MOE, on the basis of the needs assessment, should develop and maintain both introductory and advanced mandatory courses for environmental officers pertaining to communal drinking water systems. These courses should emphasize science and technology, including all matters that could present a risk to public health and safety; emerging pathogen risks; existing, new, and emerging treatment technologies; the limits of particular technologies; and the proper interpretation and application of government regulations, guidelines, and policies.</p>	35
<p style="text-align: center;">* Further Investigation</p>	<p>Part 1 Recommendation 28: The MOE should devote sufficient resources to technical training to allow the ministry to meet the challenges outlined in its “Human Resources Business Plan and Learning Plan for Fiscal Year 2000-2001.”</p>	35

2. Part 2

Status	Recommendation	Page
<i>Source Protection (Chapter 4)</i>		
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 1: Drinking water sources should be protected by developing watershed- based source protection plans. Source protection plans should be required for all watersheds in Ontario.</p>	17

<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 2: The Ministry of the Environment should ensure that draft source protection plans are prepared through an inclusive process of local consultation. Where appropriate, this process should be managed by conservation authorities.</p>	18
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 3: Draft source protection plans should be reviewed by the Ministry of the Environment and subject to ministry approval.</p>	20
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 4: Provincial government decisions that affect the quality of drinking water sources must be consistent with approved source protection plans.</p>	20-21
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 5: Where the potential exists for a significant direct threat to drinking water sources, municipal official plans and decisions must be consistent with the applicable source protection plan. Otherwise, municipal official plans and decisions should have regard to the source protection plan. The plans should designate areas where consistency is required.</p>	20-21
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 6: The provincial government should provide for limited rights of appeal to challenge source protection plans, and provincial and municipal decisions that are inconsistent with the plans.</p>	22
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 7: The provincial government should ensure that sufficient funds are available to complete the planning and adoption of source protection plans.</p>	25
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 8: Conservation authorities (or, in their absence, the Ministry of the Environment) should be responsible for implementing local initiatives to educate landowners, industry, and the public about the requirements and importance of drinking water source protection.</p>	22
<p style="text-align: center;">? Unavailable</p>	<p>Part 2 Recommendation 9: Septic systems should be inspected as a condition for the transfer of a deed.</p>	23
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 10: The Ministry of the Environment should not issue Certificates of Approval for the spreading of waste materials unless they are compatible with the applicable source protection plan.</p>	20-21

<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 11: The Ministry of the Environment should take the lead role in regulating the potential impacts of farm activities on drinking water sources. The Ministry of Agriculture, Food and Rural Affairs should provide technical support to the Ministry of the Environment and should continue to advise farmers about the protection of drinking water sources.</p>	27
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 12: Where necessary, the Ministry of the Environment should establish minimum regulatory requirements for agricultural activities that generate impacts on drinking water sources.</p>	27
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 13: All large or intensive farms, and all farms in areas designated as sensitive or high-risk by the applicable source protection plan, should be required to develop binding individual water protection plans consistent with the source protection plan.</p>	27
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 14: Once a farm has in place an individual water protection plan that is consistent with the applicable source protection plan, municipalities should not have the authority to require that farm to meet a higher standard of protection of drinking water sources than that which is laid out in the farm's water protection plan.</p>	27
<p style="text-align: center;">X</p> <p style="text-align: center;">Incomplete</p>	<p>Part 2 Recommendation 15: The Ministry of the Environment should work with the Ministry of Agriculture, Food and Rural Affairs, agricultural groups, conservation authorities, municipalities, and other interested groups to create a provincial framework for developing individual farm water protection plans.</p>	27
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 16: The provincial government, through the Ministry of Agriculture, Food and Rural Affairs in collaboration with the Ministry of the Environment, should establish a system of cost-share incentives for water protection projects on farms.</p>	27
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 17: The regulation of other industries by the provincial government and by municipalities must be consistent with provincially approved source protection plans.</p>	20-21
<p><i>Standards (Chapter 5)</i></p>		
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 18: In setting drinking water quality standards, the objective should be such that, if the standards are met, a reasonable and informed person would feel safe drinking the water.</p>	43

<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 19: Standards setting should be based on a precautionary approach, particularly with respect to contaminants whose effects on human health are unknown.</p>	43
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 20: Regarding drinking water quality research, I encourage Health Canada and other agencies to adopt as a priority the development of sufficiently detailed definitions of the susceptibility of vulnerable population groups to drinking water contaminant exposures to allow appropriate adjustments in drinking water quality guidelines.</p>	41
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 21: I suggest that the federal-provincial process for proposing drinking water quality guidelines be refined to provide for greater transparency and public participation.</p>	41
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 22: I suggest that the Federal-Provincial Subcommittee on Drinking Water focus on drinking water quality guidelines. I encourage Health Canada to commit the required scientific support to the federal-provincial process for proposing drinking water quality guidelines.</p>	41
<p style="text-align: center;">X</p> <p style="text-align: center;">Incomplete</p>	<p>Part 2 Recommendation 23: I encourage the federal government to adopt standards that are as stringent as, or more stringent than, Ontario Regulation 459/00 for all federal facilities, Indian reserves, national parks, military installations, and other lands under federal jurisdiction in Ontario.</p>	75
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 24: The provincial government should continue to be the government responsible for setting legally binding drinking water quality standards.</p>	40
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 25: In setting drinking water quality standards for Ontario, the Minister of the Environment should be advised by an Advisory Council on Standards.</p>	40
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 26: The Advisory Council on Standards should have the authority to recommend that the provincial government adopt standards for contaminants that are not on the current federal-provincial agenda.</p>	40
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 27: The Advisory Council on Standards should consider whether to replace the total coliform test with an <i>E. coli</i> test.</p>	42

! Needs Improvement	Part 2 Recommendation 28: No formal maximum contaminant level for protozoa should be established until real-time tests are available. The objective, as with bacterial and viral pathogens, should be zero, and the regulations should so state; but the standard should be a treatment standard, specified in terms of log removal dependent on source water quality.	42
* Further Investigation	Part 2 Recommendation 29: The provincial government should seek the advice of the Advisory Council on Standards regarding the desirability of a turbidity limit that is lower than the limit specified in the federal-provincial <i>Guidelines</i> .	42
<i>Treatment (Chapter 6)</i>		
✓ Complete	Part 2 Recommendation 30: All raw water intended for drinking water should be subject to a characterization of each parameter that could indicate a public health risk. The results, regardless of the type of source, should be taken into account in designing and approving any treatment system.	30
! Needs Improvement	Part 2 Recommendation 31: The Advisory Council on Standards should review Ontario's standards for disinfection by-products to take account of the risks that may be posed by the by-products of all chemical and radiation-based disinfectants.	44
! Needs Improvement	Part 2 Recommendation 32: The provincial government should support major wastewater plant operators in collaborative studies aimed at identifying practical methods of reducing or removing heavy metals and priority organics (such as endocrine disruptors) that are not removed by conventional treatment.	30
✓ Complete	Part 2 Recommendation 33: The Ministry of the Environment should be adequately resourced to support a water sciences and standards function in relation to drinking water.	40
<i>Distribution (Chapter 7)</i>		
✓ Complete	Part 2 Recommendation 34: The provincial government should encourage the federal government, working with the Standards Council of Canada and with advice from municipalities, the water industry, and other stakeholders, to develop standards for materials, including piping, valves, storage tanks, and bulk chemicals, that come into contact with drinking water.	36
! Needs Improvement	Part 2 Recommendation 35: As part of an asset management program, lead service lines should be located and replaced over time with safer materials.	36

<i>Monitoring (Chapter 8)</i>		
✓ Complete	Part 2 Recommendation 36: All municipal water providers in Ontario should have, as a minimum, continuous inline monitoring of turbidity, disinfectant residual, and pressure at the treatment plant, together with alarms that signal immediately when any regulatory parameters are exceeded. The disinfectant residual should be continuously or frequently measured in the distribution system. Where needed, alarms should be accompanied by automatic shut-off mechanisms.	37
✓ Complete	Part 2 Recommendation 37: Every municipal water provider should be responsible for developing an adequate sampling and continuous measurement plan as part of its operational plan, as recommended in Chapter 11 of this report.	38
X Incomplete	Part 2 Recommendation 38: Sampling plans should provide for sampling under the conditions most challenging to the system, such as after heavy rainfalls or spring floods.	38
! Needs Improvement	Part 2 Recommendation 39: Ontario Regulation 459/00 should be modified to require standard protocols for the collection, transport, custody, labelling, testing, and reporting of drinking water samples, and for testing all scheduled contaminants, that meet or better the protocols in <i>Standard Methods</i> .	38
! Needs Improvement	Part 2 Recommendation 40: Where remoteness dictates that samples for bacteriological analysis cannot be delivered to a lab either within regulated times or under guaranteed conditions, the Ministry of the Environment should determine the feasibility of alternative means of providing microbiological testing that meet the requirements of <i>Standard Methods</i> .	38
<i>Laboratories (Chapter 9)</i>		
✓ Complete	Part 2 Recommendation 41: The provincial government should phase in the mandatory accreditation of laboratories for all testing parameters, and all drinking water testing should be performed only by accredited facilities.	39
✓ Complete	Part 2 Recommendation 42: The Ministry of the Environment should licence and periodically inspect, as required, environmental laboratories that offer drinking water testing; as with water treatment operations, continuing accreditation should be a condition of licence.	39

✓ Complete	Part 2 Recommendation 43: The results of laboratory accreditation audits should be provided to the Ministry of the Environment and should be publicly available.	39
<i>Municipal Governments (Chapter 10)</i>		
✓ Complete	Part 2 Recommendation 44: Municipalities should review the management and operating structure for their water system to ensure that it is capable of providing safe drinking water on a reliable basis.	53
✓ Complete	Part 2 Recommendation 45: Given that the safety of drinking water is essential for public health, those who discharge the oversight responsibilities of the municipality should be held to a statutory standard of care.	50
✓ Complete	Part 2 Recommendation 46: The provincial government should provide guidance and technical advice to support municipal reviews of water systems.	24
✓ Complete	Part 2 Recommendation 47: The provincial government should require municipalities to submit a financial plan for their water system, in accordance with provincial standards, as a condition of licence for their water systems.	54
✓ Complete	Part 2 Recommendation 48: As a general principle, municipalities should plan to raise adequate resources for their water systems from local revenue sources, barring exceptional circumstances.	54
* Further Investigation	Part 2 Recommendation 49: Municipal contracts with external operating agencies should be made public.	51
! Needs Improvement	Part 2 Recommendation 50: The role of the Ontario Clean Water Agency in offering operational services to municipalities should be maintained. The provincial government should clarify the Ontario Clean Water Agency's status and mandate. In particular, OCWA should be: <ul style="list-style-type: none"> • an arm's-length agency with an independent, qualified board responsible for choosing the chief executive; and • available to provide standby emergency capabilities. 	51
<i>Quality Management (Chapter 11)</i>		
✓ Complete	Part 2 Recommendation 51: The provincial government should require all owners of municipal water systems, as condition of their licence (see Recommendation 71), to have an accredited operating agency, whether internal or external to the municipality.	52

✓ Complete	Part 2 Recommendation 52: Accreditation should be based on an independent audit and a periodic review by a certified accrediting body.	53
✓ Complete	Part 2 Recommendation 53: The Ministry of the Environment should initiate the development of a drinking water quality management standard for Ontario. Municipalities, the water industry, and other relevant stakeholders should be actively recruited to take part in the development of the standard. The water industry is recognized as an essential participant in this initiative.	52
✓ Complete	Part 2 Recommendation 54: The Ministry of the Environment's Drinking Water Branch (see Recommendation 69) should have the responsibility for recognizing the drinking water quality management standard that will apply in Ontario and for ensuring that accreditation is properly implemented.	52
✓ Complete	Part 2 Recommendation 55: The drinking water quality management standard should come into force by a date to be fixed by the provincial government. All municipalities should be required under the <i>Safe Drinking Water Act</i> (see Recommendation 67) to have an operating agency for their water system accredited within a specified time.	52
✓ Complete	Part 2 Recommendation 56: The provincial government should require municipalities to have operational plans for their water systems by a date to be fixed by the provincial government.	53
✓ Complete	Part 2 Recommendation 57: Operational plans should be approved and reviewed as part of the Ministry of the Environment approvals and inspections programs.	53
! Needs Improvement	Part 2 Recommendation 58: The Ministry of the Environment should work with Emergency Measures Ontario and water industry associations to develop a generic emergency response plan for municipal water providers. A viable and current emergency response plan, and procedures for training and periodic testing of the plan, should be an essential element of mandatory accreditation and operational planning.	48
<i>Training of Individual Operators (Chapter 12)</i>		
✓ Complete	Part 2 Recommendation 59: The Ministry of the Environment should continue to require the mandatory certification of persons who perform operational work in water treatment and distribution facilities. Education, examination, and experience are essential components of ensuring competence.	33

✓ Complete	Part 2 Recommendation 60: The Ministry of the Environment should require water system operators who currently hold certificates obtained through the grandparenting process to become certified through examination within two years, and it should require operators to be recertified periodically.	34
✓ Complete	Part 2 Recommendation 61: The Ministry of the Environment should require all applicants for an operator’s licence at the entry level to complete a training course that has a specific curriculum to ensure a basic minimum knowledge of principles in relevant subject areas.	35
✓ Complete	Part 2 Recommendation 62: The Ministry of the Environment should develop a comprehensive training curriculum for operators and should consolidate the current annual training requirement in Ontario Regulation 435/93 and the proposed requirement of ministry-approved training into a single, integrated program approved by the Ministry of the Environment.	31-32
✓ Complete	Part 2 Recommendation 63: The Ministry of the Environment should take measures to ensure that training courses are accessible to operators in small and remote communities and that the courses are tailored to meet the needs of the operators of these water systems.	31-32
* Further Investigation	Part 2 Recommendation 64: The Ministry of the Environment should meet with stakeholders to evaluate existing training courses and to determine the long-term training requirements of the waterworks industry. The ministry should play an active role in ensuring the availability of an array of courses on the subjects required to train operators.	33
<i>Provincial Government (Chapter 13)</i>		
✓ Complete	Part 2 Recommendation 65: The provincial government should develop a comprehensive “source to tap” drinking water policy covering all elements of the provision of drinking water, from source protection to standards development, treatment, distribution, and emergency response.	17
✓ Complete	Part 2 Recommendation 66: The Ministry of the Environment should be the lead ministry responsible for developing and implementing the “source to tap” Drinking Water Policy.	17
✓ Complete	Part 2 Recommendation 67: The provincial government should enact a <i>Safe Drinking Water Act</i> to deal with matters related to the treatment and distribution of drinking water.	13

- Not Applicable	Part 2 Recommendation 68: The provincial government should amend the <i>Environmental Protection Act</i> to implement the recommendations regarding source protection.	17
! Needs Improvement	Part 2 Recommendation 69: The provincial government should create a Drinking Water Branch within the Ministry of the Environment to be responsible for overseeing the drinking water treatment and distribution system.	30
✓ Complete	Part 2 Recommendation 70: The provincial government should create a Watershed Management Branch within the Ministry of the Environment to be responsible for oversight of watershed-based source protection plans and, if implemented, watershed management plans.	20
✓ Complete	Part 2 Recommendation 71: The Ministry of the Environment should require the owners of municipal water systems to obtain an owner's licence for the operation of their waterworks. In order to obtain a licence, an owner should have: <ul style="list-style-type: none"> • a Certificate of Approval for the facility; • a Permit to Take Water; • approved operational plans; • an approved financial plan; and • an accredited operating agency. 	54
✓ Complete	Part 2 Recommendation 72: The provincial government should create an office of Chief Inspector - Drinking Water Systems.	57
! Needs Improvement	Part 2 Recommendation 73: Inspectors should be required to have the same or higher qualifications as the operators of the systems they inspect and should receive special training in inspections.	58
? Unavailable	Part 2 Recommendation 74: The Ministry of the Environment should increase its commitment to the use of mandatory abatement.	61
? Unavailable	Part 2 Recommendation 75: The Ministry of the Environment should increase its commitment to strict enforcement of all regulations and provisions related to the safety of drinking water.	61
! Needs Improvement	Part 2 Recommendation 76: The Ministry of the Environment should initiate a process whereby the public can require the Investigations and Enforcement Branch to investigate alleged violations of drinking water provisions.	63

<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 77: A steering group should be established within each public health unit area in the province, comprised of representatives of affected local hospitals, municipalities, local Ministry of the Environment offices and local boards of health, for the purpose of developing in a coordinated fashion emergency response plans for the control of, or the response to, infectious diseases and public health hazard outbreaks.</p>	47
<p style="text-align: center;">?</p> <p style="text-align: center;">Unavailable</p>	<p>Part 2 Recommendation 78: The provincial government should ensure that programs relating to the safety of drinking water are adequately funded.</p>	24
<p style="text-align: center;">?</p> <p style="text-align: center;">Unavailable</p>	<p>Part 2 Recommendation 79: The Ministry of the Environment should create an Integrated Divisional System which provides central electronic access to information:</p> <ul style="list-style-type: none"> • relevant to source protection; • relevant to each drinking water system in Ontario (including a description of the system, trend analyses, water quality, and systems data); • required by the Drinking Water Branch (including for approvals and inspections); and • required by local Boards of Health. 	58
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 80: The Drinking Water Branch should prepare an annual “State of Ontario’s Drinking Water Report,” which should be tabled in the Legislature.</p>	57
<i>Small Systems (Chapter 14)</i>		
<p style="text-align: center;">✓</p> <p style="text-align: center;">Complete</p>	<p>Part 2 Recommendation 81: Ontario Regulation 459/00 should apply to any system that provides drinking water to more than a prescribed number of private residences.</p>	65
<p style="text-align: center;">-</p> <p style="text-align: center;">Not Applicable</p>	<p>Part 2 Recommendation 82: The Ministry of the Environment should establish a procedure under which owners of communal water systems may apply for a variance from provincial regulations only if a risk analysis and management plan demonstrate that safe drinking water can be provided by means other than those laid down in regulations.</p>	65
<p style="text-align: center;">*</p> <p style="text-align: center;">Further Investigation</p>	<p>Part 2 Recommendation 83: The provincial government should not approve water systems that would not be economically viable under the regulatory regime existing at the time of the application.</p>	66

<p style="text-align: center;">* Further Investigation</p>	<p>Part 2 Recommendation 84: Approved systems that are not economically viable under the improved regulatory scheme should be required to explore all managerial, operational, and technological options to find the most economical way of providing safe drinking water. If the system is still too expensive, the provincial government should make assistance available to lower the cost per household to a predetermined level.</p>	66
<p style="text-align: center;">✓ Complete</p>	<p>Part 2 Recommendation 85: The application of Ontario Regulation 505/01 should be broadened to include all owners of water systems that serve the public for a commercial or institutional purpose and that do not come within the requirements of Ontario Regulation 459/00.</p>	66
<p style="text-align: center;">! Needs Improvement</p>	<p>Part 2 Recommendation 86: With regard to private drinking water systems that are not covered by either Ontario Regulation 459/00 or Ontario Regulation 505/01, the provincial government should provide the public with information about how to supply water safely and should ensure that this information is well distributed. It should also maintain the system of licensing well drillers and ensure the easy availability of microbiological testing, including testing for <i>E. coli</i>.</p>	71
<p style="text-align: center;">! Needs Improvement</p>	<p>Part 2 Recommendation 87: The provincial government should review the current practices for the delivery of drinking water in bulk and the need for a regulatory framework in this area.</p>	67
<i>First Nations (Chapter 15)</i>		
<p style="text-align: center;">! Needs Improvement</p>	<p>Part 2 Recommendation 88: Ontario First Nations should be invited to join in the watershed planning process outlined in Chapter 4 of this report.</p>	77
<p style="text-align: center;">X Incomplete</p>	<p>Part 2 Recommendation 89: I encourage First Nations and the federal government to formally adopt drinking water standards, applicable to reserves, that are as stringent as, or more stringent than, the standards adopted by the provincial government.</p>	75
<p style="text-align: center;">X Incomplete</p>	<p>Part 2 Recommendation 90: I encourage First Nations and the federal government to consider moving to a quality management standard over time, even if the consequence is that several communities, perhaps both reserve and non-reserve, might collaborate on a regional basis, or that First Nation communities might choose to contract with others to manage their water supply systems.</p>	75

<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 91: The provincial government should require the Ontario Clean Water Agency (OCWA) to offer its services to First Nations band councils for operating on-reserve water systems on a normal commercial basis.</p>	<p style="text-align: center;">79</p>
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 92: The provincial government should actively offer, on a cost-recovery basis, its training facilities and curriculum to First Nations water system operators.</p>	<p style="text-align: center;">78</p>
<p style="text-align: center;">!</p> <p style="text-align: center;">Needs Improvement</p>	<p>Part 2 Recommendation 93: As a matter of principle, the provincial government should make technical assistance, drinking water testing, inspection, and enforcement available to First Nations communities on a cost-recovery basis, if requested.</p>	<p style="text-align: center;">78</p>