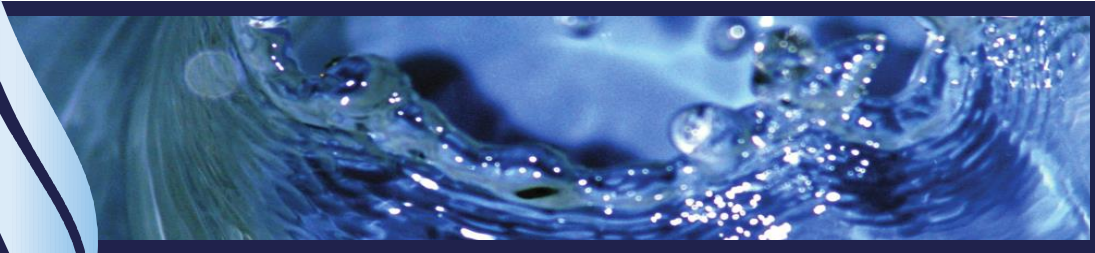


1

Background

Explaining Source Protection in Ontario



Ontario, with its plentiful lakes and rivers and vast underground aquifers, is the envy of many jurisdictions around the world because it possesses abundant, clean, reliable sources of drinking water. However, with abundance comes responsibility. If not protected, water resources can become contaminated and potentially unusable as a source of drinking water. While this is often thought of as an environmental issue, it is actually a public health and economic priority because people, communities and economies need clean drinking water to survive.

Over the years there have been many incidents of contamination in Ontario, large and small. The results have been illness, costly clean-ups and stigmatized communities. These incidents remind us that in order to protect the drinking water sources we have, we must remain vigilant, now and in the future. This is the purpose of Ontario's *Clean Water Act*.

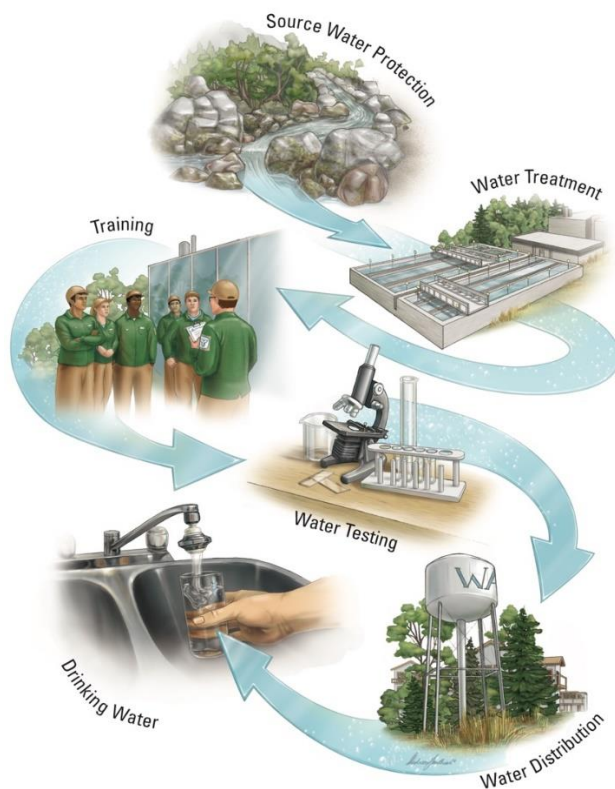
1. Background

What You Will Find in This Section

This section describes why sources of drinking water need to be protected and how this is being done in Ontario under the *Clean Water Act*. It also highlights the unique approach this Act is taking which involves:

- Watershed scale areas
- Science-based decisions
- Locally developed policies

1.1 Importance of Source Water Protection



Courtesy of: Conservation Ontario

Multi-barrier approach to protecting drinking water

The reality of what can happen when sources of drinking water become contaminated was no more apparent than in Walkerton Ontario in May 2000. After Walkerton's groundwater became contaminated with *E. coli*, multiple protection measures failed, and seven people died while thousands more were made ill.

Justice Dennis O'Connor led a public inquiry that looked into this tragedy. The inquiry made 121 recommendations to better protect Ontario's drinking water in the future. A key conclusion was the need to have multiple layers of protection in place, a concept commonly referred to as the "multi-barrier approach."

Protecting drinking water through a multi-barrier approach is not a new concept. For years, drinking water has been protected directly or indirectly, through a variety of regulations, policies and programs. These have been administered by federal, provincial and municipal governments, as well as Health Units and Conservation Authorities. What the Walkerton Inquiry highlighted was a need to ensure every barrier is robust so there is a strong safety net protecting Ontario's drinking water. The Ontario Government responded to the inquiry recommendations by strengthening existing legislation and introducing new legislation to fill regulatory gaps. A key part of this response was enacting the *Clean Water Act* in 2006 and funding the drinking water source protection program that followed.

The Need for Source Water Protection

- Water treatment is not always enough. Water treatment systems do not remove all contaminants from water, particularly chemicals such as fuels and solvents. The safest approach is to prevent contamination.
- Prevention saves money. It is much cheaper to keep water clean than it is to try and remove contaminants. A 2010 spill from a home heating oil tank in eastern Ontario cost about \$1 million to clean up. The spill might have been avoided through a few preventative changes to the tank and supply lines.
- Contamination can ruin a water source forever. Sometimes contamination cannot be cleaned up and a water supply must be shut down. The community of Manotick, Ontario lost access to its groundwater in the 1990s when it was contaminated by chemicals from a dry cleaning business. Since then water has been piped into Manotick from urban Ottawa.
- Source protection has other benefits. Clean and plentiful sources of drinking water protect property values and support tourism and recreation, business development, and fish and wildlife habitat. All of which are important to local economies

1.2 Ontario's Clean Water Act

Purpose

The *Clean Water Act* is not designed to protect water resources in general. Its purpose is to protect those water resources that are used as a source of drinking water. Specifically, it is focused on protecting rivers, lakes and groundwater where they supply municipal drinking water systems (the large systems that serve towns, villages and cities). Under the Act, sources of water for these municipal systems must be studied and policies created to

protect them from contamination and depletion. Protecting “the source” is intended to complement the work of water treatment plant operators who ensure municipal drinking water is properly treated, tested and safely distributed to homes and businesses.

While the focus of the *Clean Water Act* is protecting sources of municipal drinking water, it does provide some opportunities to help protect regional groundwater. Under the Act, groundwater supplying private wells is studied at a regional scale and non-restrictive policies can be created to help protect it.

Approach

Unlike other legislation, the *Clean Water Act* does not apply a standard set of policies across Ontario. Instead, multi-stakeholder Committees create policies to protect their local sources of drinking water. The Act specified the list of drinking water threats that Committees had to write policies for, the tools they could use to manage or prohibit these threats and the technical studies that had to be undertaken to understand where policies would apply. Committees then had to create policies that were reasonable and effective for their watershed.

Funding

The Ontario Ministry of the Environment and Climate Change (MOECC) oversees the implementation of the *Clean Water Act* and has fully funded the source protection process up to the completion of Source Protection Plans. This included costs associated with technical studies, policy development, staff and Committees. In addition, many municipalities, Conservation Authorities, businesses, residents, farmers and members of the public generously contributed their time in support of local source protection work.

1.3 Source Protection Areas and Regions

Mississippi-Rideau Source Protection Region

The Mississippi-Rideau Source Protection Region is 8,500 km² and is made up of the jurisdictions of the Mississippi Valley and Rideau Valley Conservation Authorities (see Figure 2). These jurisdictions encompass lands that drain into the Mississippi and Rideau Rivers and then into the Ottawa River. All or part of 31 municipalities fall within this jurisdiction (they are listed in Appendix C2).

The Walkerton Inquiry recognized that source protection should be undertaken at the watershed scale. This is because a source of drinking water often flows through many municipalities before it is drawn into a drinking water system. Being able to study the

whole watershed and develop policies that cross political boundaries is the only way to truly protect a source of drinking water.

The *Clean Water Act* divided southern Ontario and parts of northern Ontario into 38 Source Protection Areas. These are watershed-based areas, most of which mirror Conservation Authority boundaries. Many of these areas were then grouped into regions so staff and resources could be shared to reduce costs. The result was 19 Source Protection Regions or individual Areas administering the source protection program across Ontario.

Eastern Ontario was divided into the Cataraqui Source Protection Area, Quinte Source Protection Region, Mississippi-Rideau Source Protection Region and the Raisin-South Nation Source Protection Region. These areas and regions are shown on Figure 1.

1.4 Source Protection Authorities

While the MOECC oversees the *Clean Water Act* provincially, Conservation Authorities are tasked with administering the program at the local level. Their role is to manage the source protection budget, establish a Source Protection Committee, submit deliverables completed by the Committee to the MOECC for review and approval, and report annually to the MOECC on policy implementation. Conservation Authorities were selected because they already operate at the watershed scale and have experience protecting water resources. Officially, Conservation Authorities are referred to as Source Protection Authorities when undertaking their responsibilities under *the Clean Water Act*.

The Mississippi Valley Source Protection Authority (made up of the 15-member Board of Directors for Mississippi Valley Conservation) and the Rideau Valley Source Protection Authority (made up of the 22-member Board of Directors for the Rideau Valley Conservation Authority) jointly oversee the source protection program in the Mississippi-Rideau Source Protection Region.

1.5 Source Protection Committee

Under the *Clean Water Act*, a Source Protection Committee is required for each of the 19 Source Protection Regions / Areas. Committees are made up of:

- 1/3 municipal representatives
- 1/3 economic sector representatives
- 1/3 public sector representatives

Committee Chairs were appointed by the Minister of the Environment while Committee members were appointed by Source Protection Authorities. Each Committee also has

three non-voting liaison members representing the MOECC, public health units, and the Source Protection Authorities.

These Committees were responsible for working with conservation authority staff to develop policies that would effectively protect local sources of drinking water. The composition of the Committees was intended to ensure that a variety of local interests were represented at the decision-making table. While policy development was led by Source Protection Committees, they relied heavily on input and advice from all municipalities, health units, ministries, First Nations, business sectors, farmers, environmental groups, property owners and the public. Developing policies at the local level with broad involvement from all sectors and stakeholders ensured policies were reasonable, practical, cost-effective and had widespread support.

Mississippi-Rideau Source Protection Committee

In 2007, the Minister of the Environment appointed Janet Stavinga as Chair of the Mississippi-Rideau Source Protection Committee. The Mississippi

Valley and Rideau Valley Source Protection Authorities then appointed 15 Committee members representing the following interests:

Municipal Interests:

- 2 representatives from the City of Ottawa
- 1 representative from municipalities with groundwater-based municipal drinking water systems
- 1 representative from municipalities with surface water-based municipal drinking water systems
- 1 representative from municipalities without municipal drinking water systems

Economic Interests:

- 2 agriculture representatives
- 2 industry representatives
- 1 small business representative

Public Interests:

- 1 First Nations representative
- 1 environmental representative
- 1 non-governmental organization representative
- 2 general public representatives
- Member biographies can be found in Appendix F

1.6 Source Protection Process

Under the *Clean Water Act*, the process to develop science-based policies required Source Protection Committees to develop Terms of Reference, Assessment Reports and Source Protection Plans.

Terms of Reference — 2008

Terms of Reference outline how Assessment Reports and Source Protection Plans would be developed and who was responsible for each task. The Terms of Reference for the Mississippi Valley Source Protection Area was approved by the MOECC on February 5, 2009 and for the Rideau Valley Source Protection Area on March 16, 2009.

Assessment Reports — 2010

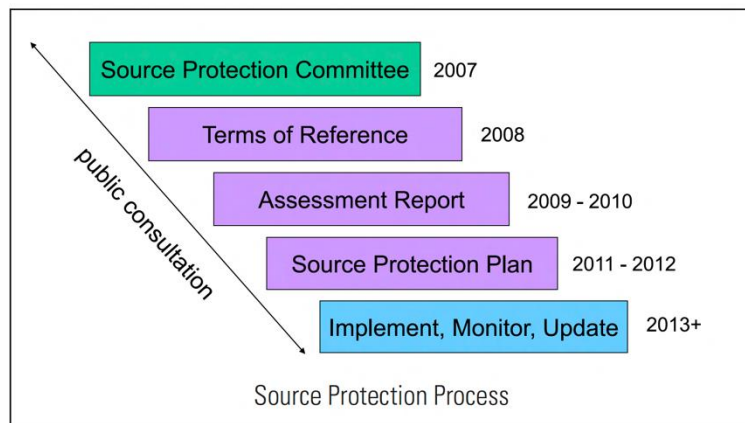
Assessment Reports identify where local drinking water comes from, the areas where it is most vulnerable to contamination and what potential sources of contamination might be in those areas. These technical findings were used to make source protection policy decisions and they determine the areas where policies apply. An Assessment Report for the Mississippi Valley Source Protection Area was approved by the MOECC on August 4, 2011 and one for the Rideau Valley Source Protection Area was approved on December 19, 2011.

Approved documents can be viewed online at: www.mrsourcewater.ca

Electronic copies can also be obtained by contacting:

- Mississippi Valley Conservation Authority at 613-253-0006
- Rideau Valley Conservation Authority at 613-692-3571 or 1-800-267-3504

Source Protection Plan — 2012



Source Protection Plans contain policies to protect local sources of drinking water from contamination and overuse. This Source Protection Plan for the Mississippi Valley and Rideau Valley Source Protection Areas contains:

- Required policies
- Other permissible policies
- Reasons for each policy
- Where each policy applies
- Body responsible for implementing each policy
- Date by which each policy must be implemented
- Policies to monitor implementation progress

Implementation and Updates — 2013+

Once approved, the policies in this Plan will be implemented by a variety of agencies including municipalities, provincial ministries, and Conservation Authorities. There is also a requirement to monitor implementation progress and report on it annually. The source protection process is intended to continue over the long term and this Plan will be reviewed and updated as needed.