

DRINKING WATER SOURCE PROTECTION

Our Actions Matter



Drinking Water Source Protection Efforts in Ontario

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Drinking Water Source Protection – What is it?

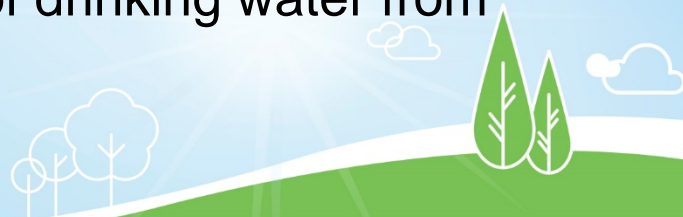
What is Source Water?

Source water is the untreated water in lakes and rivers, and in underground aquifers, that people use for drinking water.



What is Source Water Protection?

Established under the Ontario Clean Water Act, 2006, source water protection means protecting our sources of drinking water from contamination or overuse.



Drinking Water Source Protection – Where Did it Start?



Walkerton Water Crisis

Canada's worst ever E. coli outbreak occurred in Walkerton, Ontario in May 2000

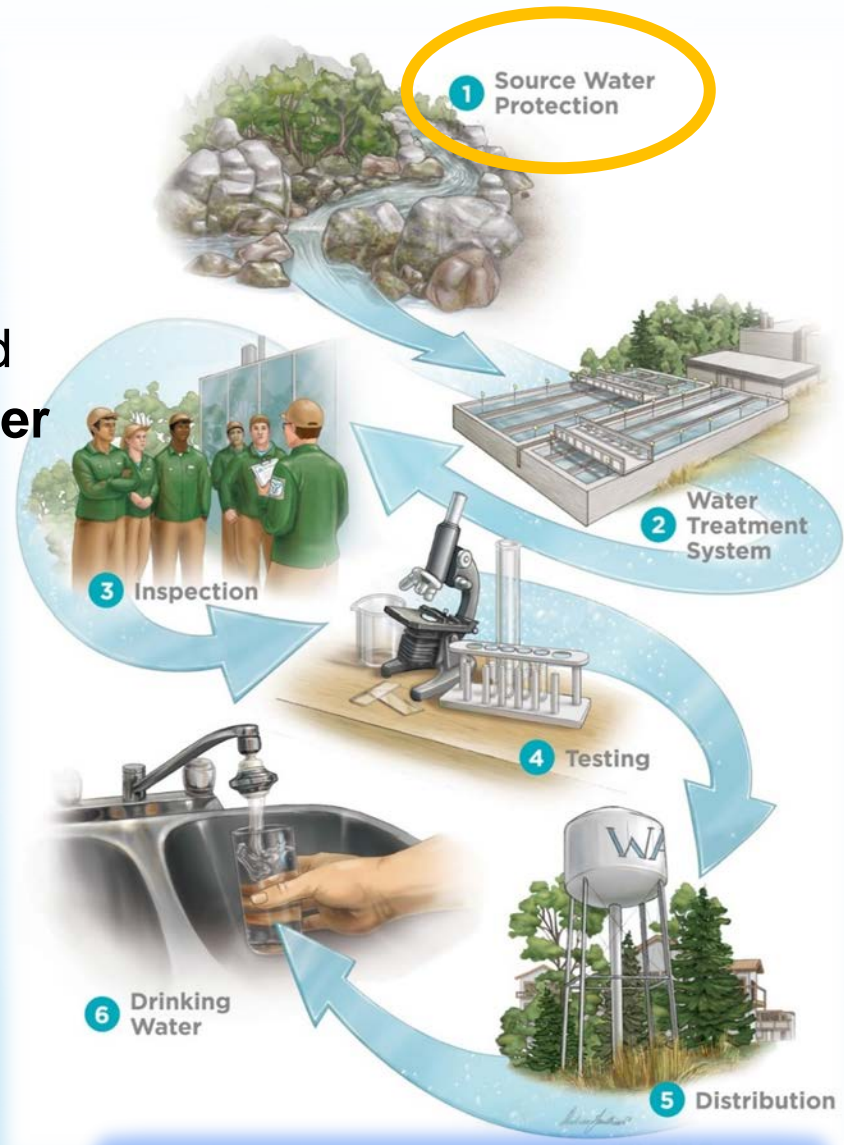
The contamination of the water supply led to 7 deaths and over 2300 people ill.

Many still living with long-term chronic illness.



The Clean Water Act

- Justice O'Connor's **inquiry** in 2002 included recommendations for source water protection.
- Ontario's **Clean Water Act** was passed in 2007, establishing the **Drinking Water Source Protection** program led by the Ministry of Environment, Conservation and Parks.
- The Act is mandatory for **municipal** residential systems. Municipalities can bring in **other** systems. **First Nations** have the option to join.



*Multi-barrier approach:
Protecting from Source to Tap*

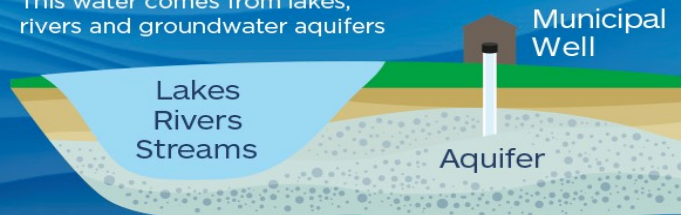
In the Know About H2O

Protecting municipal drinking water at its source



 **85%**
of Ontarians
rely on municipal water¹

This water comes from lakes,
rivers and groundwater aquifers



Your water is treated at a
municipal treatment plant

But pollutants can

be expensive



or

impossible to
~~remove~~

Prevention is key to protecting our drinking water sources

How is it protected?

Under the *Clean Water Act*, local **source protection plans** are in place across Ontario.



These plans protect
municipal drinking
water sources from
contamination
and overuse

More than

10

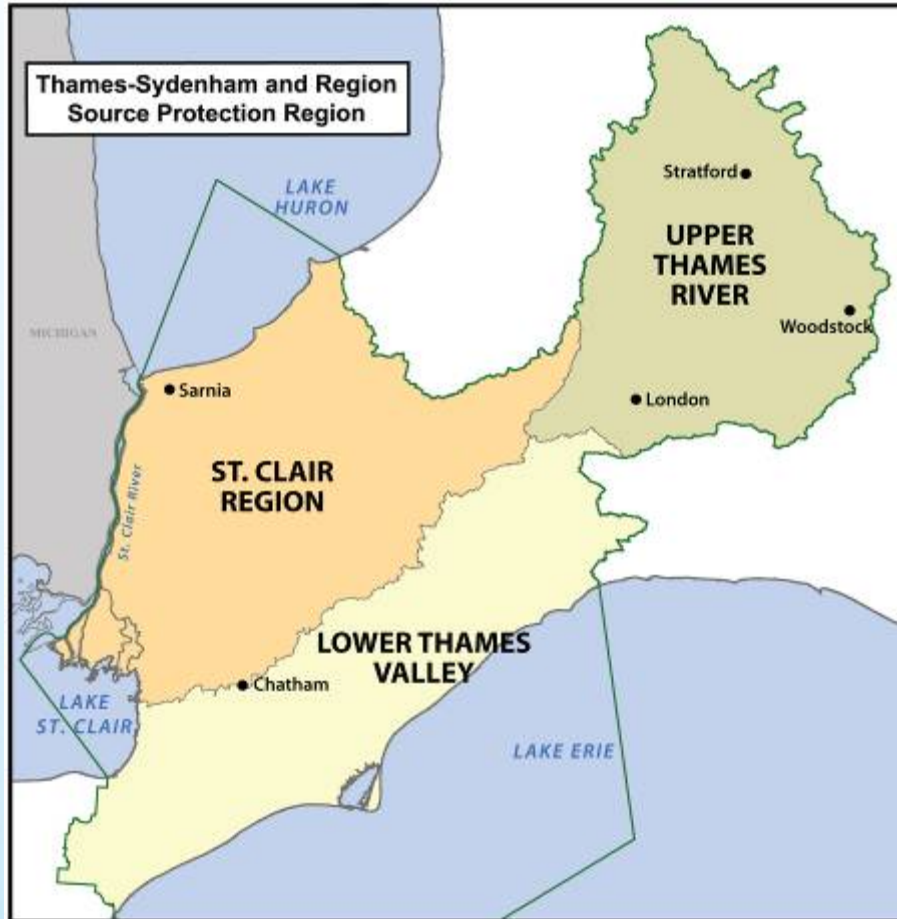
million people
are protected through the
Ontario Drinking Water
Source Protection Program



We all **play a role** in keeping our sources of drinking water clean and abundant

¹Statistics Canada, 2013

Thames-Sydenham & Region (TSR) Source Protection Region

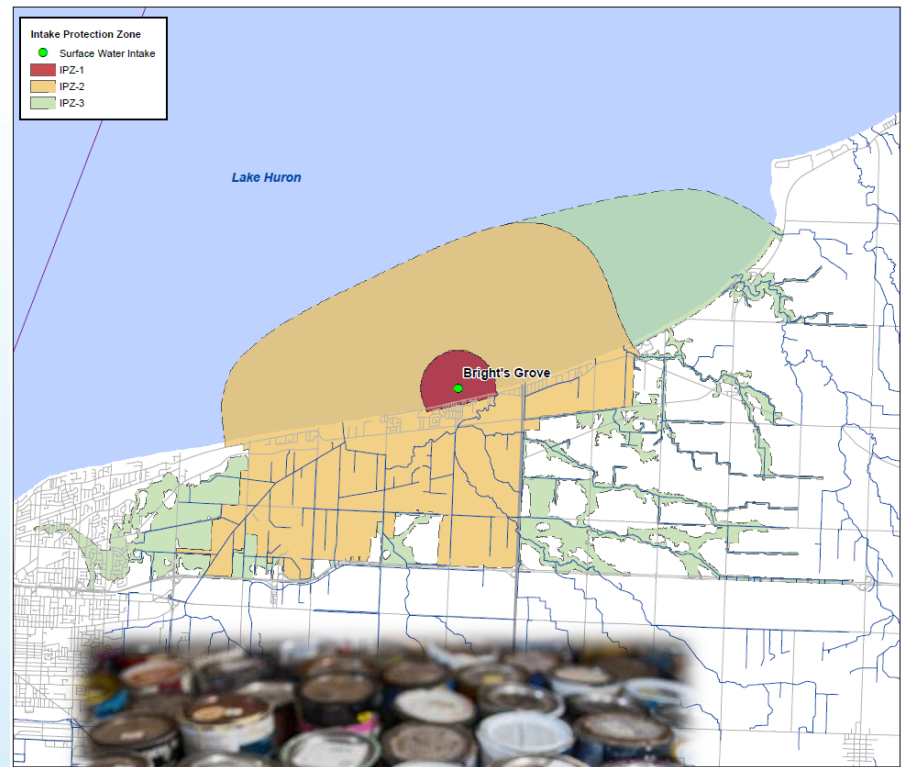


- 8 First Nations
- 3 CAs
- 47 Municipalities
- 8 Health Units
- 746,000 people
- 3 Conservation Authorities have a staff team that facilitates the Source Protection planning process



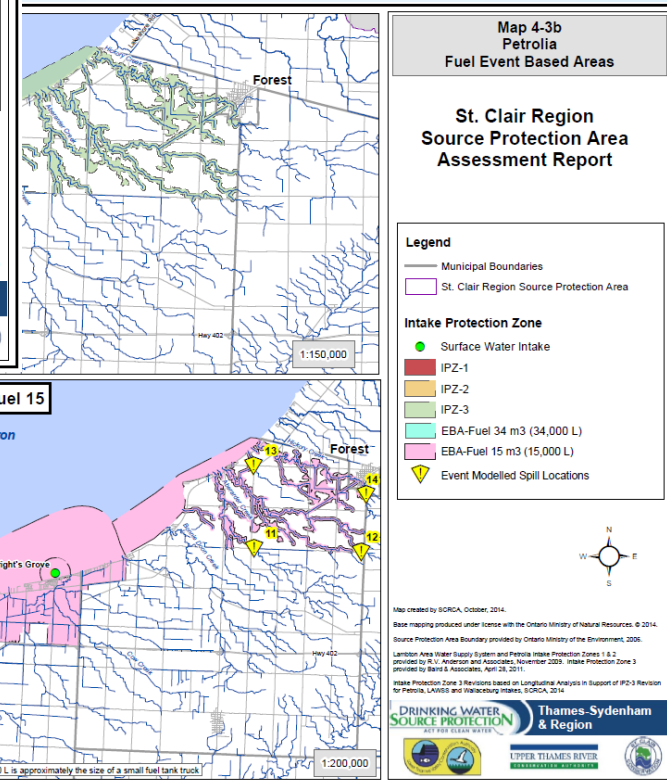
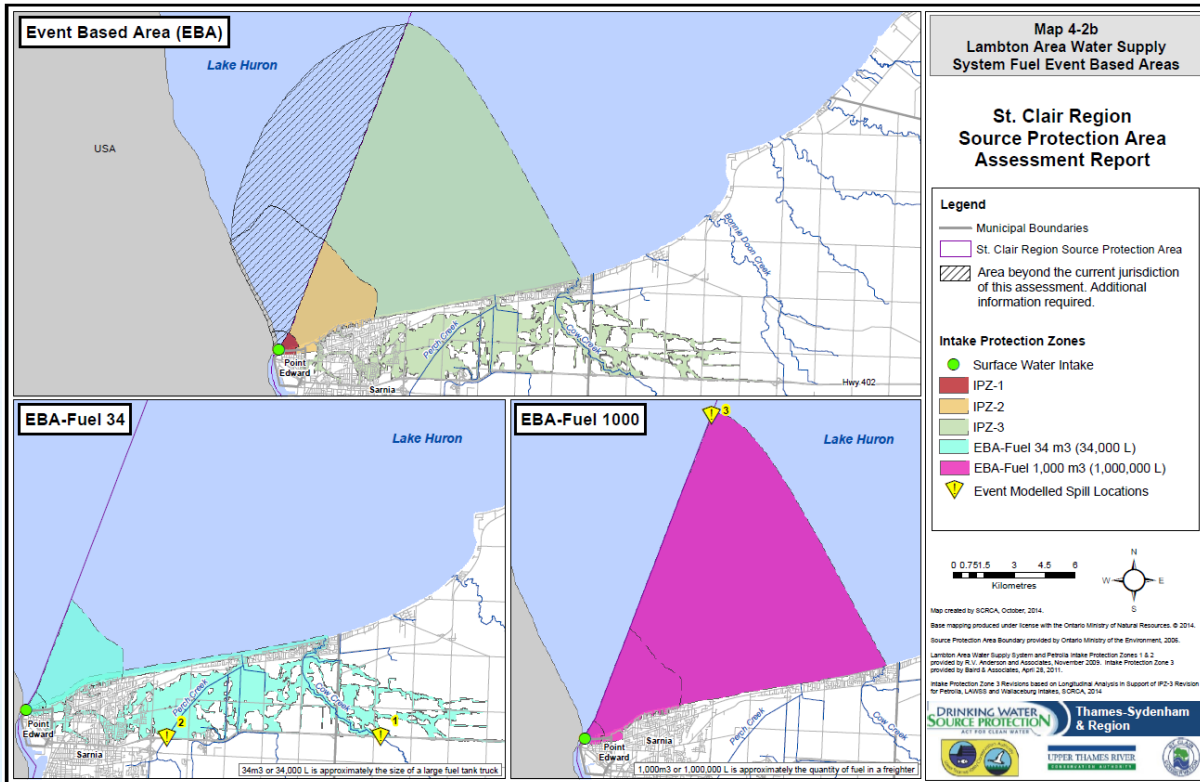
The Science

- **Vulnerable areas:** Wells, Intakes, vulnerable aquifers, groundwater recharge areas.
- **Possible threat activities:**
 - Commercial/industrial: landfills, gas stations, chemicals, water taking, impervious surfaces, etc.
 - Agricultural: manure, commercial fertilizers, biosolids, pesticides, livestock grazing, feedlots, etc.
 - Residential: septic systems, home heating oil, road salt, pesticides, etc.



Source Protection Science in St. Clair SPA

The St. Clair Region watershed is 4129 km², with drinking water supplies drawn from Lake Huron, Lake St. Clair and the Chenal Ecarte.



The handling and storage of large volumes of liquid fuel (>15,000 L) was identified as a significant drinking water threat. Modeling studies showed that such spills could result in contamination of the source water at the intakes.

Source Protection Plans: The Policies

- Local multi-stakeholder **Source Protection Committees** decided on the policy type and approach to address various threat activities.
- Policies either **manage** or **prohibit** a threat activity.
- Policies are **mandatory** to address activities assessed as **significant** level risks to sources of drinking water.



Municipalities and Source Protection

Municipalities have an ongoing role in source protection:

- Make up 1/3 of the membership of local source protection committees.
- Are required to work with local source protection authorities to keep plans current.
- Implementation and enforcement of the majority of policies identified in plans to address significant risks to municipal drinking water sources.



Municipal Roles & Responsibilities

Plan Implementation

- Under the Clean Water Act, municipalities must satisfy any obligations resulting from significant drinking water threat policies:
 - Day-to-day decisions under the *Planning Act* or *Condominium Act* must conform with Land Use Planning policies that address significant threats.
 - Official Plans and Zoning by-laws must also conform with Land Use Planning policies.
 - Must satisfy actions specified in other policies (e.g, spills response, road salt management plans).
- Where a source protection plan used Part IV policies (Risk Management Plans, Prohibition), municipalities must ensure that:
 - They have a trained Risk Management Official and Inspector (on staff or contracted); and
 - Have appropriate processes in place to screen and assess building permit and development applications for significant risks.



Risk Management Services

What Does it Mean?

- Source Protection Plan policies rely on tools under Part IV of the *Clean Water Act, 2006* to regulate or prohibit significant drinking water threats.
- Part IV tools include Prohibitions (S. 57), Risk Management Plans (S.58), and Restricted Land Use (S.59).
- The implementation of these Part IV tools is often referred to as “Risk Management Services”



Clean Water Act – Part IV

Under the Clean Water Act, **municipalities** are responsible for the implementation of Part IV policies.

Part IV under the CWA is administered and enforced by a Risk Management Official (RMO) and Risk Management Inspector (RMI)

Municipalities can delegate the RMO and RMI function to others, including Conservation Authorities.



What is a Risk Management Plan?

- Negotiated agreement between a person engaged in significant drinking water threat activity and the RMO
 - Flexible agreement
 - If not negotiated one can be established by the RMO
- Enforcement and compliance monitoring
 - Ability to “cause things to be done” and assess costs
 - Ability to lay charges and seek prosecution
- May be identified through
 - Site visits to existing activities
 - Development or building application
- Usually based on Best Management Practices



The Agreements

Risk Management Service Agreement

- between LAWSS and UTRCA

Delegation of Authority Agreements

- between UTRCA and the following four Lambton municipalities with Part IV implementation responsibilities: Lambton Shores, Plympton-Wyoming, Point Edward and St. Clair.

Agreement Term

- January 1, 2019 – December 31, 2020



What's Included.....

- **Completion of RMP's.**
- **Addressing threats on newly identified sites.**
- **Ongoing review of development proposals in vulnerable areas.**
- **Negotiation and establishment of new RMP's for newly identified threats.**
- **Develop and establish monitoring and inspection program.**
- **Initiate monitoring and inspection program.**



What's Included Continued.....

- Regular drive-by inspection of vulnerable areas to ensure compliance with RMP policies.
- Review and amend RMP's as activities or property owners change.
- Review and amend RMP's to address technical/program changes.
- Fulfillment of annual reporting requirements
- Further development of risk management services database to streamline and automate reporting.



Risk Management Service Staff

Jenna Allain

Source Protection Program Coordinator

- Administration
- Program Management

Katie Ebel

**Risk Management
Official/Inspector**

- City of London
- City of Stratford
- Town of St. Marys
- Municipality of West Perth
- Township of Perth South
- Township of Perth East



Steve Clark

**Risk Management
Official/Inspector**

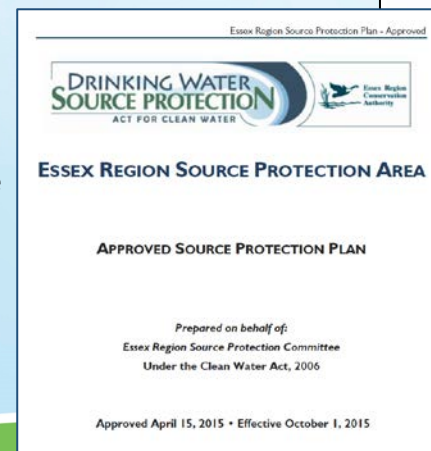
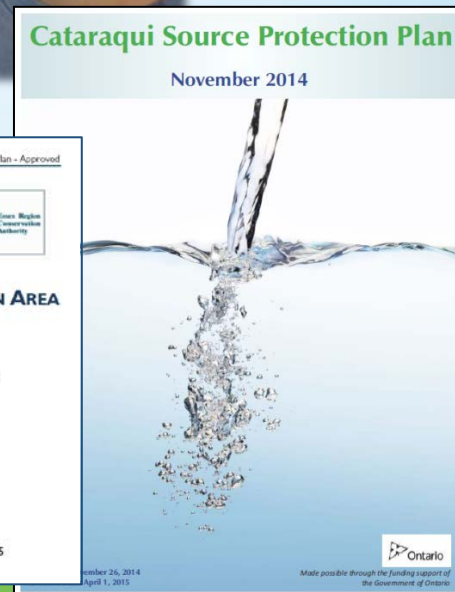
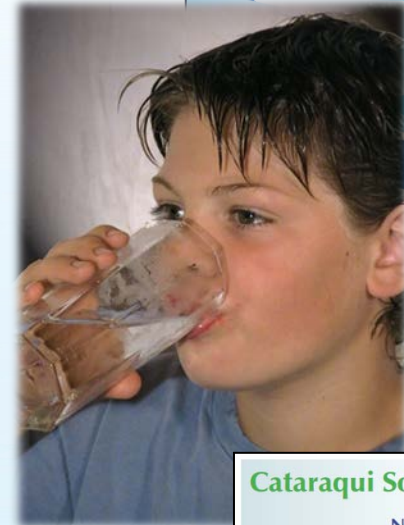
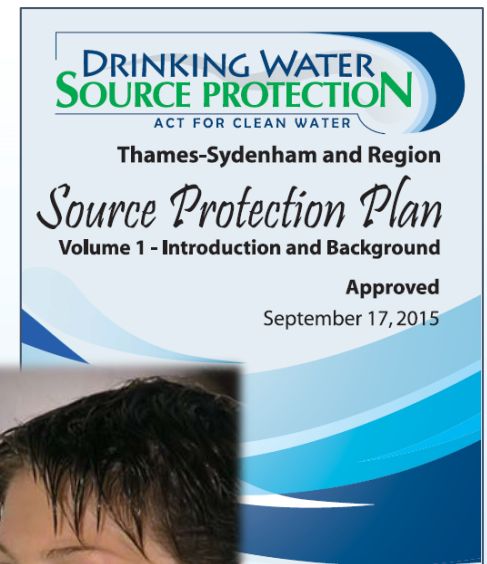
- Municipality of Chatham-Kent
- St. Clair Township
- Town of Plympton-Wyoming
- Village of Point Edward
- Municipality of Lambton Shores



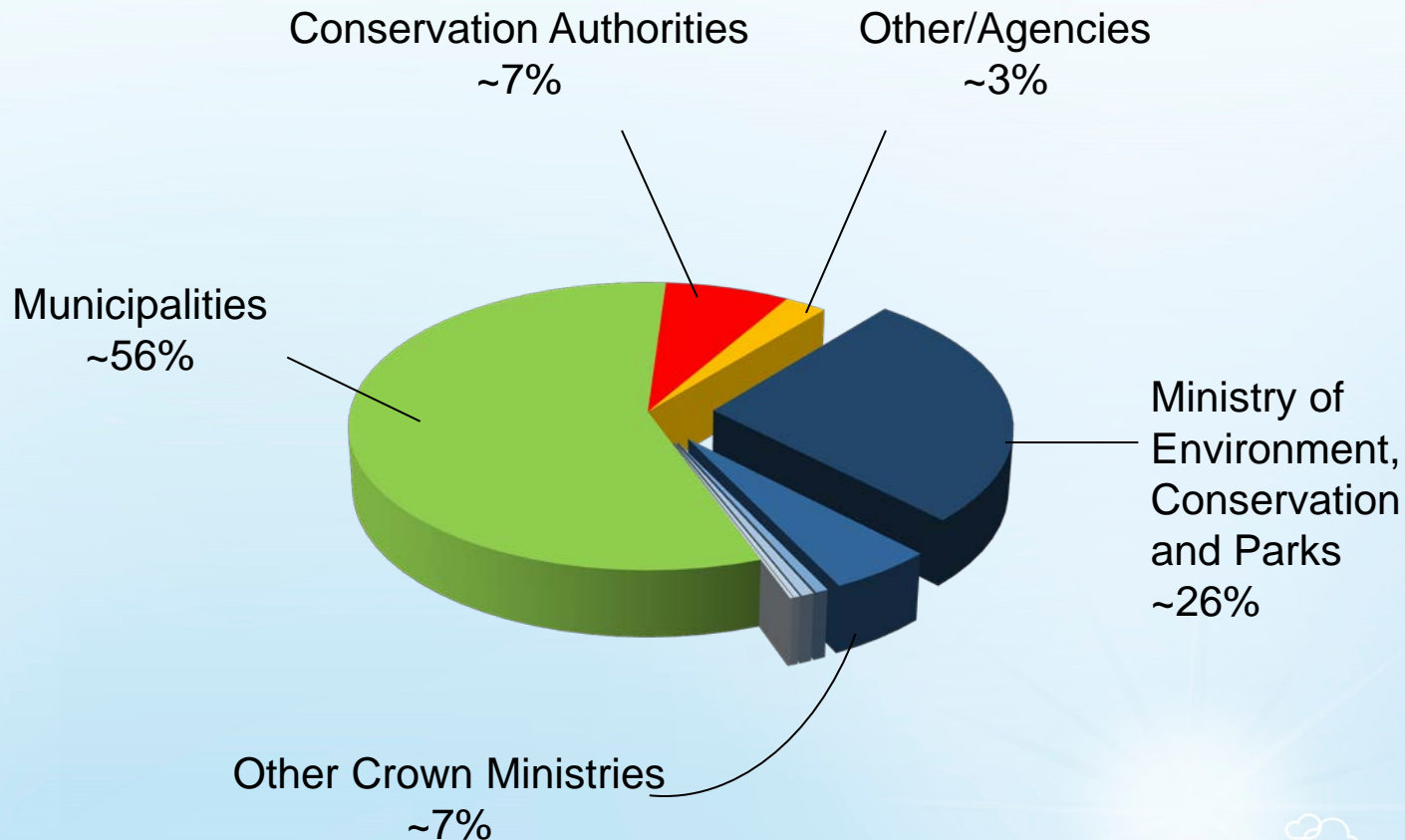
Drinking Water Source Protection in Ontario

- There are 22 local **Source Protection Plans** being implemented across Ontario.
- More than **12,500 policies** in the Source Protection Plans protect sources of municipal drinking water in Ontario for:
 - ✓ Over 900 groundwater wells
 - ✓ Over 70 Great Lakes intakes
 - ✓ Over 60 inland intakes
 - ✓ 13 Lake St. Clair and St. Lawrence River intakes.

Wells and intakes information from: [Source Protection Information Atlas](#) (Under 'Help and Resources' – 'Source Water Statistics').



Drinking Water Source Protection in Ontario



Policy Implementation Responsibility

Source Protection and First Nations

- **First Nations** community members participate on several local source protection committees.
- Three First Nations have included their drinking water systems in source protection planning:
 - Chippewas of Kettle and Stony Point
 - Chippewas of Rama First Nation
 - Six Nations of the Grand River.



“The resources and the environment are not separate issues from an Aboriginal worldview because we believe that we should live in harmony and hold resources in trust for future generations”.

Dr. Dean Jacobs, Walpole Island Heritage Centre. May 2004.

Source Protection Plan Progress Reporting Across Ontario

II. A message from your local Source Protection Committee

Our progress score on achieving source protection plan objectives this reporting period:



P : Progressing Well/On Target – The majority of the source protection plan policies have been implemented and/or are progressing.



S : Satisfactory – Some of the source protection plan policies have been implemented and/or are progressing.



L : Limited progress – A few of source protection plan policies have been implemented and/or are progressing.

✓ **Thousands of threat activities are being addressed through local source protection plan implementation, fulfilling the mandate of Ontario's Clean Water Act, 2006.**



Source Protection Plan Progress Reporting Across Ontario

- **Official Plan Conformity**

- Most municipalities in Ontario are amending or have amended their Official Plans and zoning by laws to conform with local source protection plan policies.

- **Provincial Instruments**

- These are instruments help to address future (new) and existing significant drinking water threats e.g. Environmental Compliance Approvals.
- The Ontario government has a screening mechanism in place for new applications and they amend Instruments as needed to address any new threats.



Source Protection Plan Progress Reporting Across Ontario

- **Septic Inspections:** These occur in certain vulnerable areas around wells and intakes, septic systems are subject to mandatory inspections.
 - **Risk Management Plans:**
 - These include actions to prevent contamination and overuse of water sources. For example, measures to prevent runoff and spills.
 - They are required to be established in consultation with a Risk Management Official.
 - Inspections are by a Risk Management Inspector.
- ✓ Over 4000 septic systems are inspected.
 - ✓ Over 400 risk management plans are established.



Source Protection Plan Progress Reporting Across Ontario

✓ Over 900 Road Signs Installed!

- The Ministry of Transportation Ontario and municipalities in Ontario have installed road signs.
- The signs enhance awareness about Drinking Water Protection Zones and the program in Ontario.



Education and Outreach

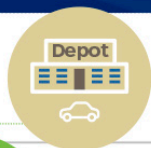
Our Actions Matter

5 things you can do at home to protect and conserve water

The best way to protect our drinking water is to keep the source of it clean and plentiful in the first place. Here are some practical tips:

Properly dispose of **hazardous waste**

Drop it off at your Hazardous Waste Depot.



Reduce use of **pesticides and herbicides** – and apply as directed.



Apply **winter salt** only as needed.



Select **non-toxic chemicals and cleaners**.



Keep fuel away from **storm drains**.



Find out more on protecting our sources of drinking water and how you can help at protectingwatermatters.ca.



UV-2018

Drinking Water Source Protection Primer: For Real Estate Sales Representatives

This primer was developed to help you understand the impact of drinking water source protection – so you can provide your clients (whether you represent a buyer or a seller) with relevant information about the property for sale.

What is drinking water source protection?

We all rely on safe, sustainable drinking water. While municipal drinking water in Ontario is considered safe and reliable – it's important to consider the source of the water that comes into your municipality's treatment plant. Protecting the water at its source is an important first step in the drinking water safety net.

Ontario has a comprehensive Drinking Water Source Protection Program to ensure sources of municipal drinking water are protected now and



Where does our drinking water come from?

Our province's drinking water comes from

Aide à protéger et à conserver notre eau



Réduisons l'épandage de sel abrasif



NEW: Climate Change Project

- Drinking water source protection stakeholders asked for a means to determine **how climate change may impact source water quality**.
- Therefore, the Ministry of the Environment, Conservation and Parks initiated a project 2017-18.
- The results of this project may lead to Clean Water Act amendments to enable Source Protection Authorities to apply the approach, subject to local decision making by Source Protection Committees.



Thank you.

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SOURCE PROTECTION
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