



CTC Source Protection Region



# Source Water Protection Planning in Peel Region

Consultation on the *Draft Proposed Assessment Report: Toronto and Region Source Protection Area* & *Draft Proposed Assessment Report: Credit Valley Source Protection Area*

October 13, 2010

Susan Self, Chair, CTC Source Protection Committee



## Source Water Protection?

- **Source water** is the water used to supply public drinking water systems.
- **Source water protection** is simply protecting water sources from contamination or overuse.



*Source Water Protection is the best, and most cost-effective way to protect our drinking water for now and forever*

# Why Source Protection?

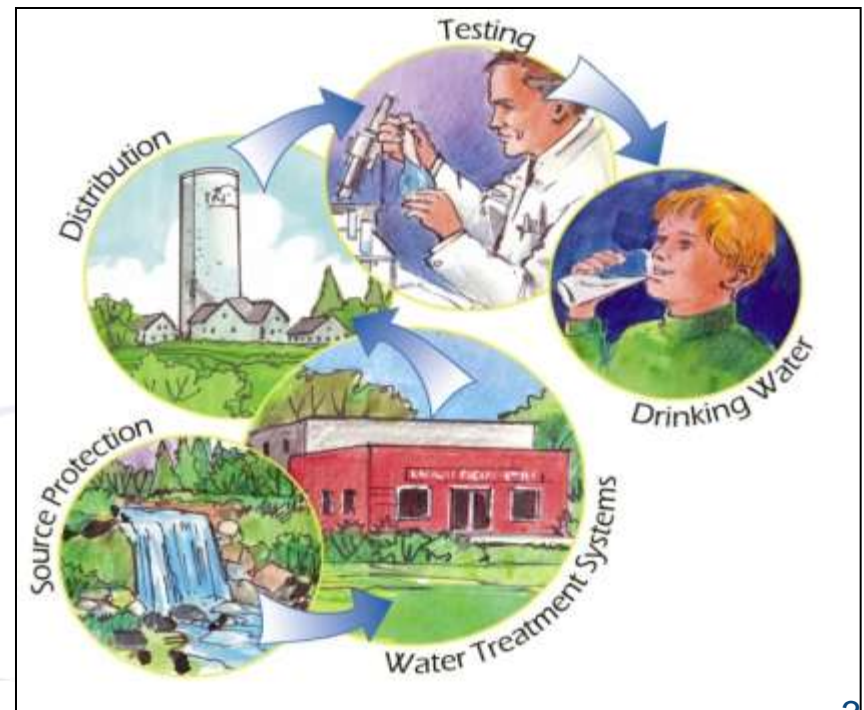


## Walkerton:

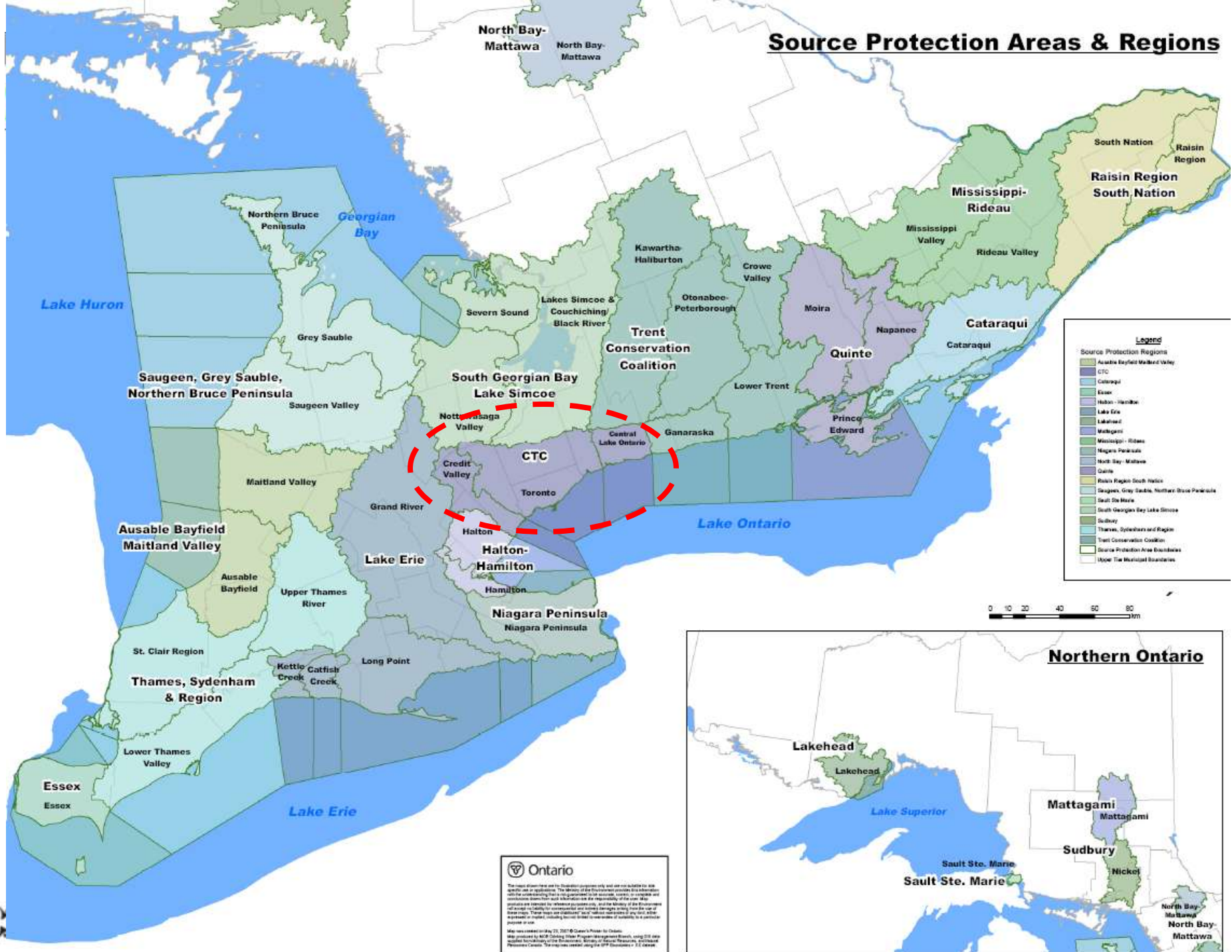
- 7 people died, half the town became sick and people are still being affected

## The Walkerton Inquiry:

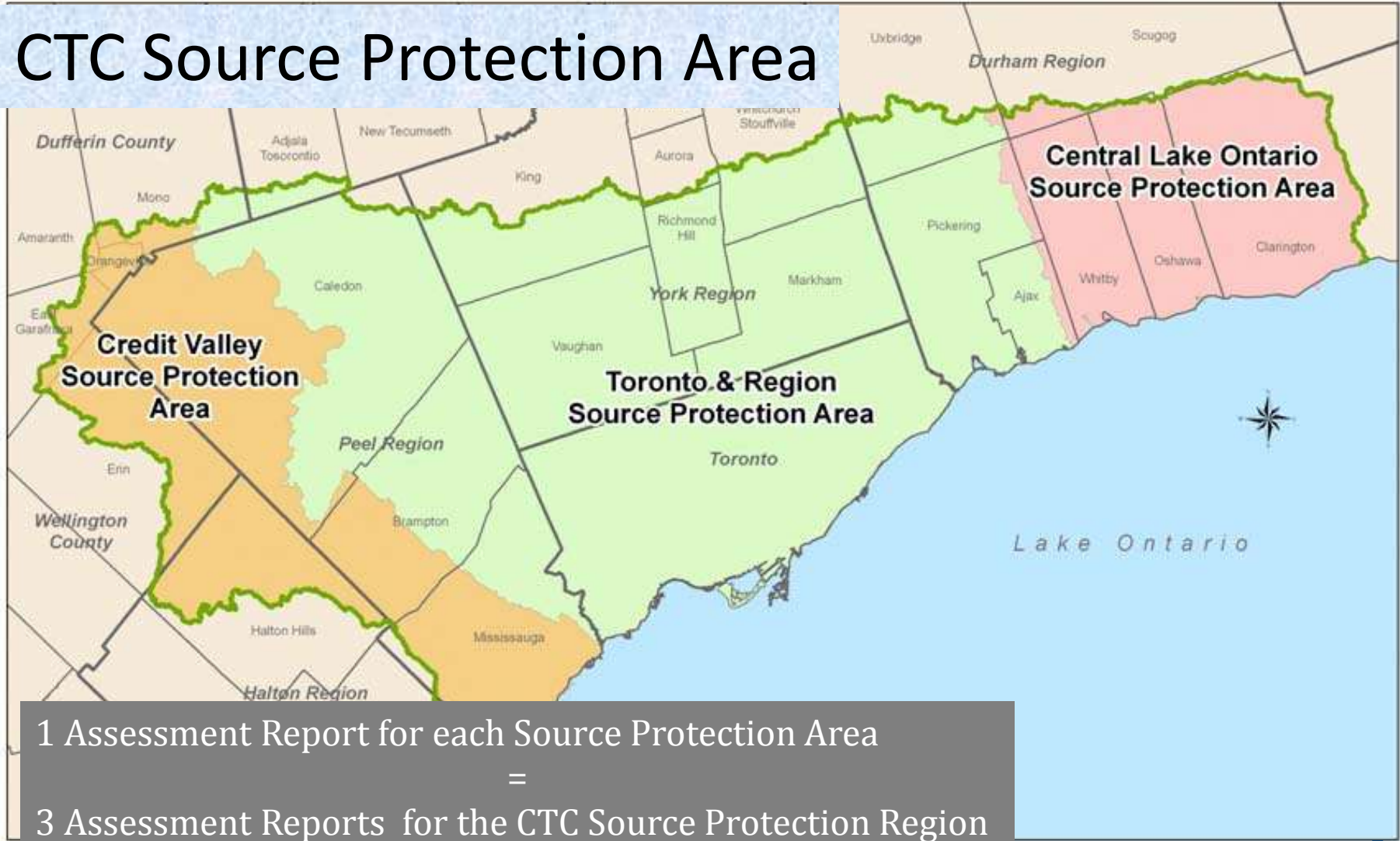
- Multi barrier approach to protecting municipal drinking water throughout Ontario.
- Each barrier deals with one or more of the flaws that came to light in Walkerton.



# Source Protection Areas & Regions

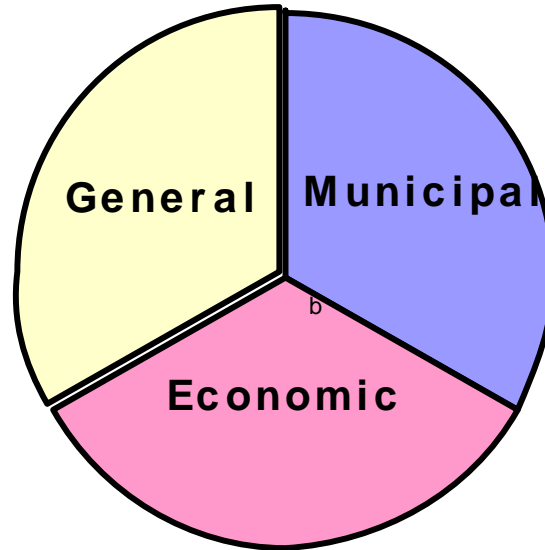


# CTC Source Protection Area



1 Assessment Report for each Source Protection Area  
=  
3 Assessment Reports for the CTC Source Protection Region

# Who is the CTC Source Protection Committee?



**Chair – Susan Self**

**Liaison Members:**

**Brian Denney (CA)**

**Norine Schofield (MOH)**

**John Westlake (MOE)**

**Juli Abouchar  
Michael Garrett  
Jessica Ginsburg  
Robert Goodings  
Irv Harrell  
Peter Orphanos  
Fred Ruf**

**Andrea Bourrie  
Doug Brown  
Wendy Burgess  
Louise Foster  
Heather Laidlaw  
Peter Miasek  
Lynne Moore**

**Bob Burnside  
Michael D'Andrea  
David Kentner  
Laura McDowell  
John Presta  
Mark Schiller  
Howard Shapiro**

# CTC Source Protection Region Timelines

<u>Terms of Reference</u>	<u>Assessment Reports</u>	<u>Source Protection Plans</u>
<ul style="list-style-type: none"> <li>• Road map for Source Protection Planning</li> </ul>	<ul style="list-style-type: none"> <li>• Scientific basis behind Source Protection Planning</li> <li>• Public consultation period</li> <li>• Due December 2010; updated report due June 2011</li> </ul>	<ul style="list-style-type: none"> <li>• Policy development               <ul style="list-style-type: none"> <li>✓ Reduce &amp; prevent threats</li> <li>✓ Future &amp; existing development</li> </ul> </li> <li>• Consult with               <ul style="list-style-type: none"> <li>✓ Municipalities</li> <li>✓ Potentially affected property owners</li> </ul> </li> </ul>
<p><b>2008</b></p>	<p><b>2010</b></p>	<p><b>2012</b></p>

# Assessment Report Components:

## Introduction

*Chapter 1*

## Watershed Characterization

*Chapter 2*

## Water Budgets and Water Quantity Threats

## Assessment

*Chapter 3*

## Groundwater Vulnerability and

## Surface Water Vulnerability

*Chapter 4*

## Threats and Issues - Water Quality Threats

## Assessment

*Chapter 5*

## Conclusion

*Chapter 6*

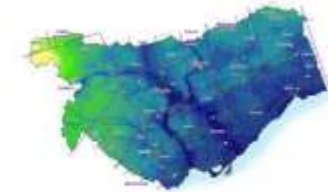


CTC Source Protection Region

Credit: Initial Source Protection Area  
Toronto and Region Source Protection Area  
Central Lake Ontario Source Protection Area

**Draft Proposed Assessment Report :  
Toronto and Region Source Protection Area**

**Volume 1 of 2: Report**



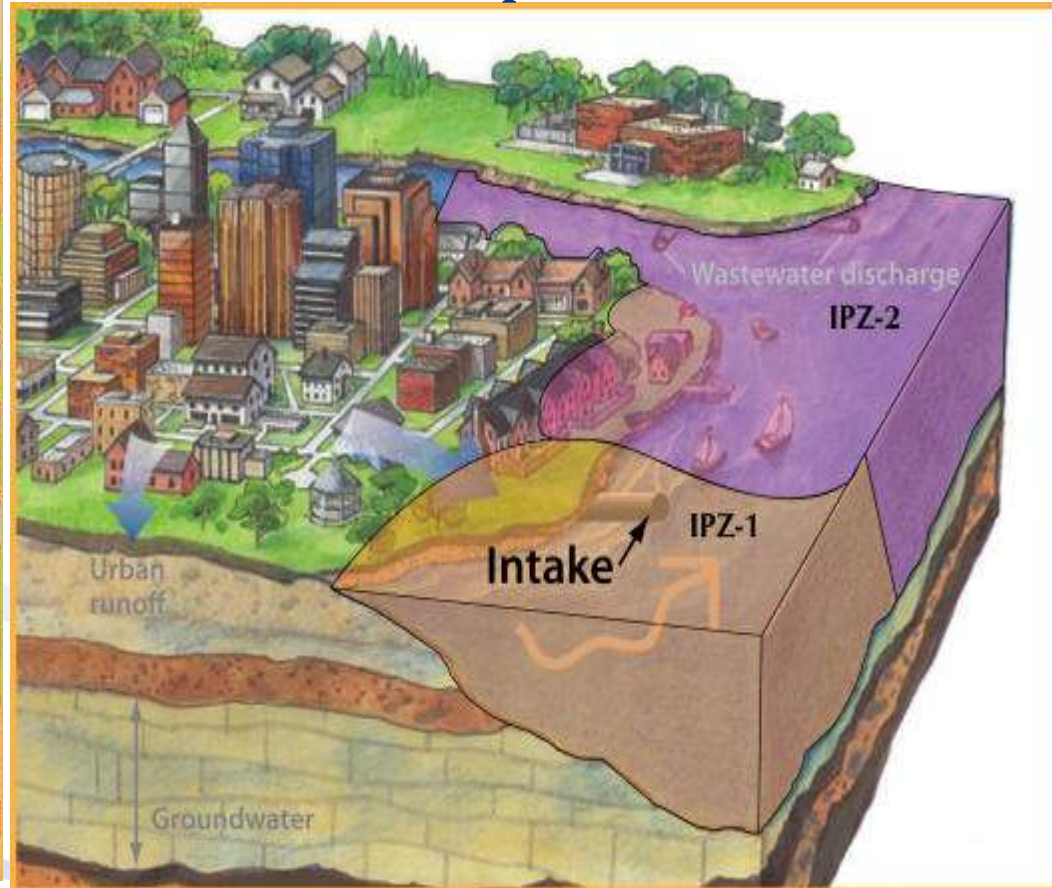
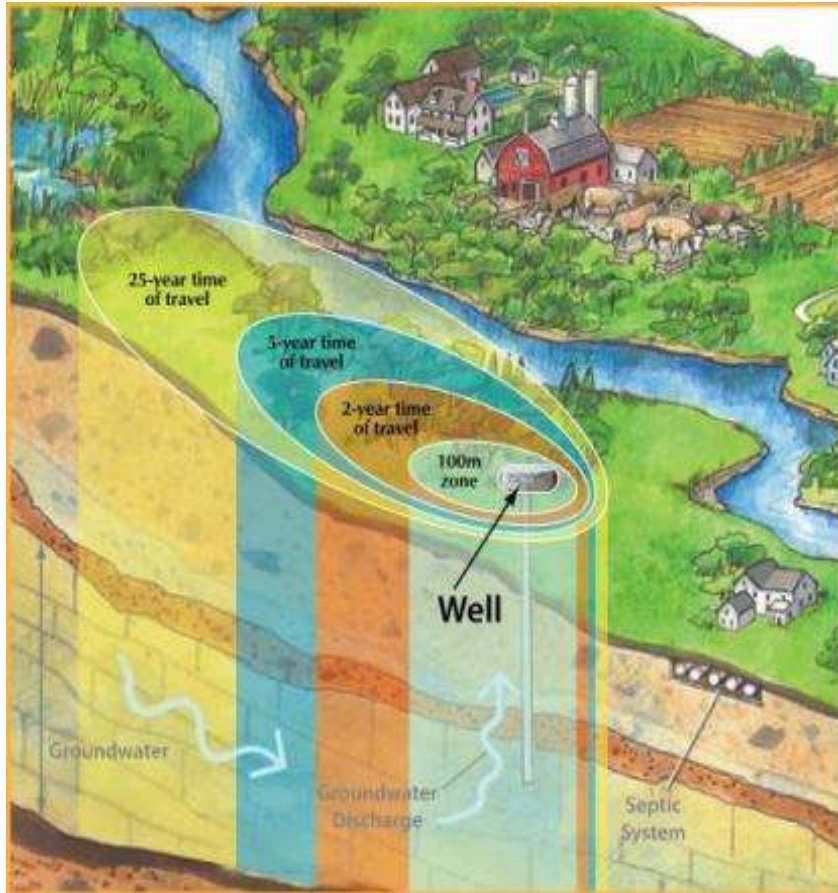
Sept. 16, 2010

Prepared by:  
Toronto and Region Conservation Authority

## The Four Vulnerable Areas:

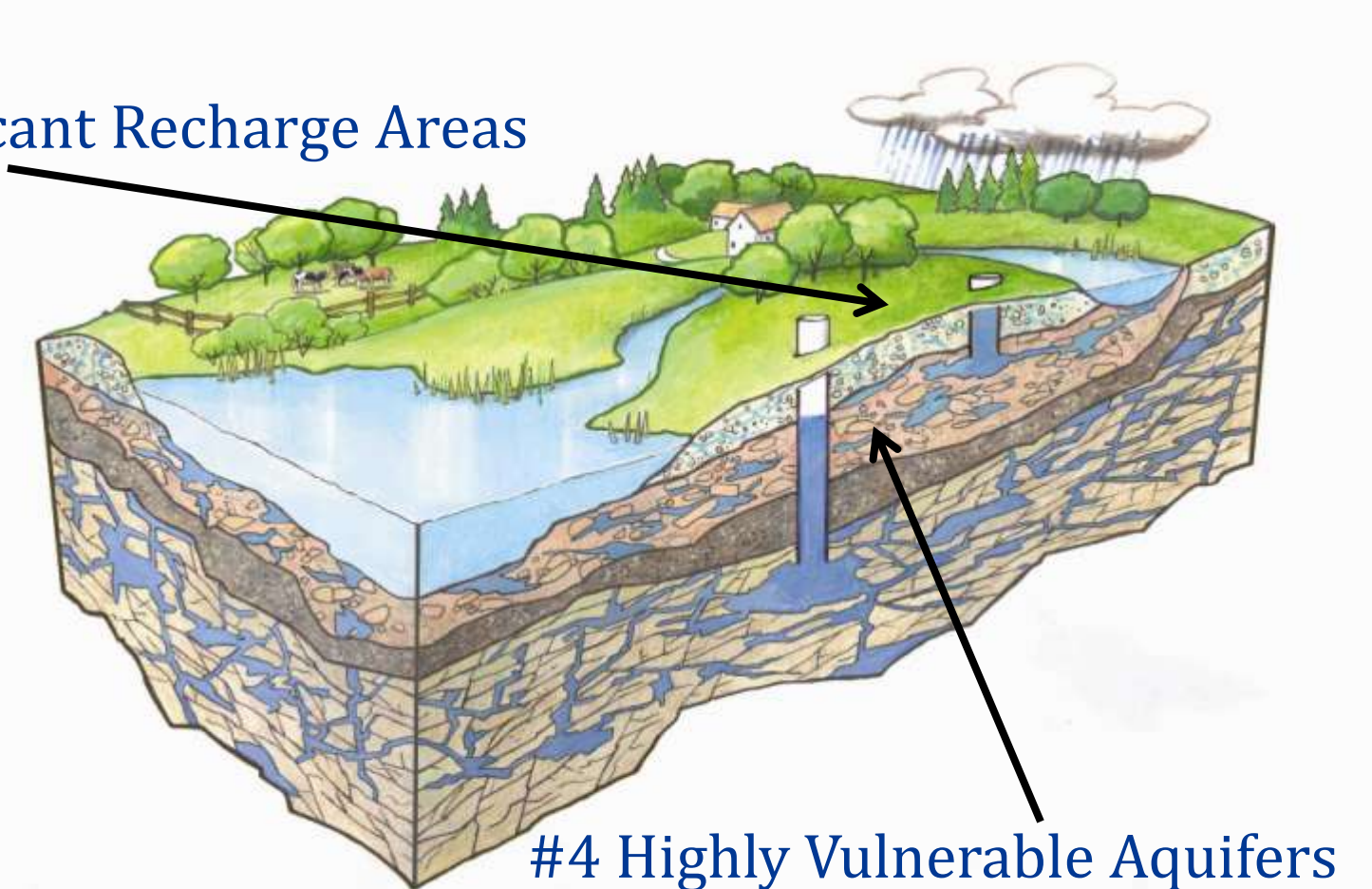
### #1 Wellhead Protection Area

### #2 Intake protection zone



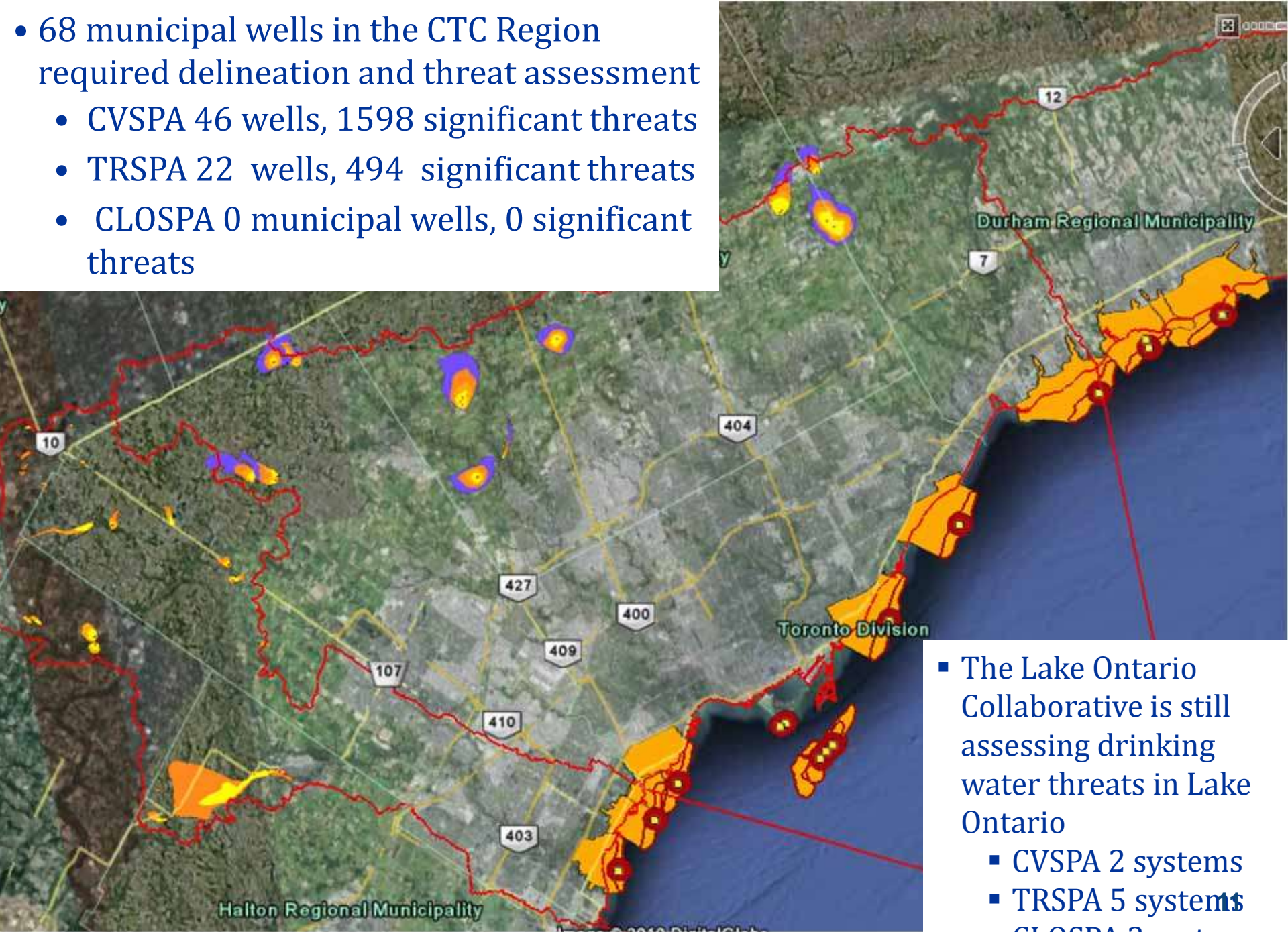
## The Four Vulnerable Areas:

### #3 Significant Recharge Areas



### #4 Highly Vulnerable Aquifers

- 68 municipal wells in the CTC Region
  - CVSPA 46 wells, 1598 significant threats
  - TRSPA 22 wells, 494 significant threats
  - CLOSPA 0 municipal wells, 0 significant threats



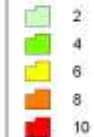
- The Lake Ontario Collaborative is still assessing drinking water threats in Lake Ontario
  - CVSPA 2 systems
  - TRSPA 5 systems
  - CLOSPA 3 systems

**The Toronto & Region  
Source Protection Area**

**Palgrave WHPAs with Scoring**

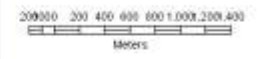
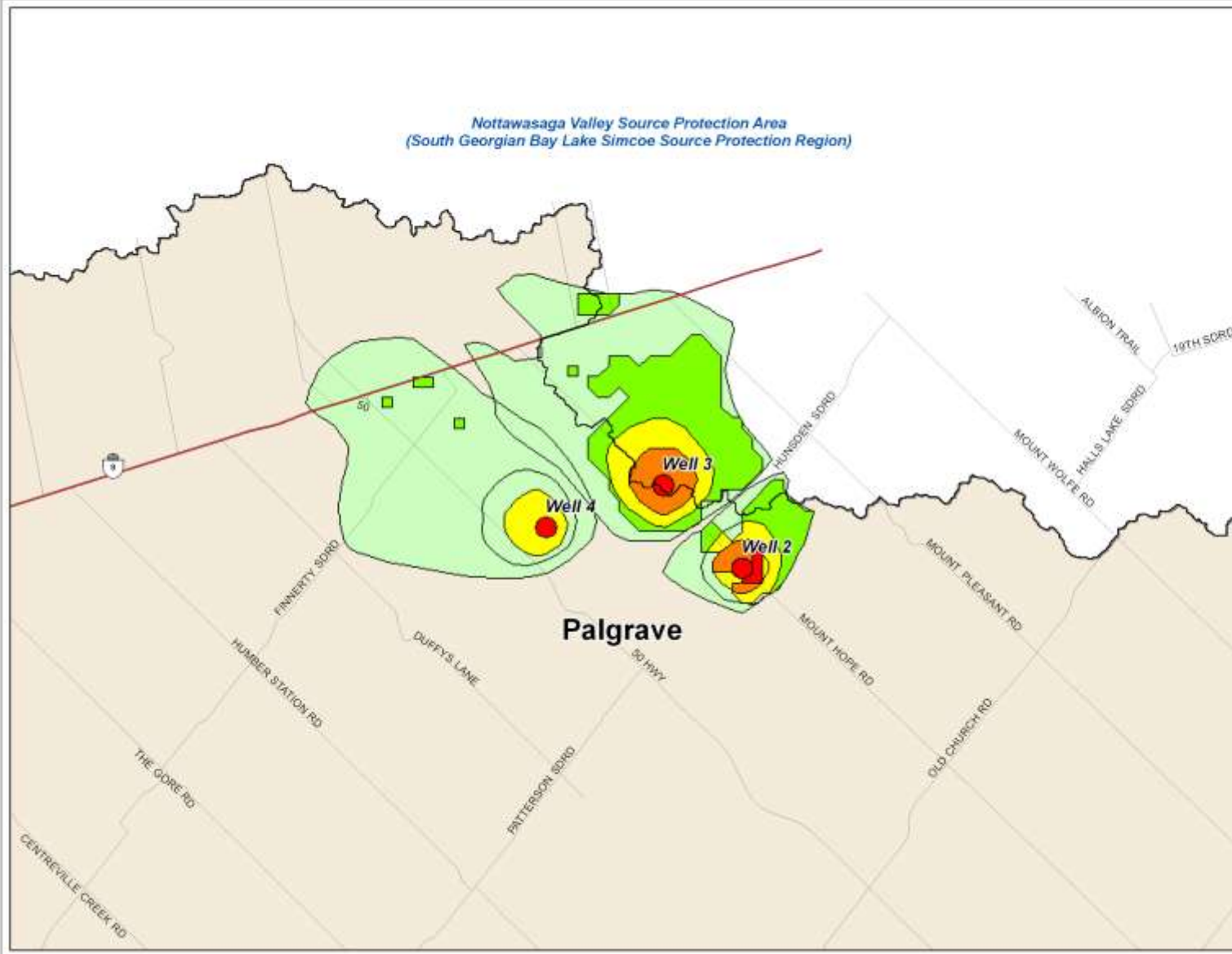
**Legend**

**Vulnerability**



**Transportation Network**

- Provincial Highway
- Major Roads
- Municipal Boundary
- TRSPA Jurisdiction



(c) Copyright Toronto & Region Source Protection Area, 2010.  
Source: TRCA, 2010; DM71 Spatial, 2010; MNR, 2010.

This map has been prepared to meet provincial requirements under the Clean Water Act, 2009 and should be used for other purposes ONLY after consultation with the responsible conservation authority or source protection authority. The analysis used to produce this map relies on best available information as of the date of the map. Priority should be given to site specific information collected in accordance with accepted scientific protocols when being used for other purposes.

**DRINKING WATER  
SOURCE PROTECTION**  
ACT FOR CLEAN WATER

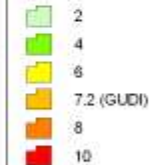
Conservation Ontario  
for The Living City

## The Toronto & Region Source Protection Area

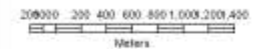
### Caledon East WHPAs with Scoring

#### Legend

##### Vulnerability



##### Transportation Network



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Source: TRCA, 2010; DMTI Spatial, 2010; MNR, 2010.

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Credit Valley Source Protection Area  
(CTC Protection Region)

Caledon East





Vulnerability Scores for WHPAs  
Cheltenham

Vulnerability Score



Wells

- Well Type 1 (Production)

Transportation network

- Highway
- Major road
- Secondary road
- Roadway

Hydrologic Network

- Main Credit River Branch
- Rivers and Streams
- Lakes and Ponds

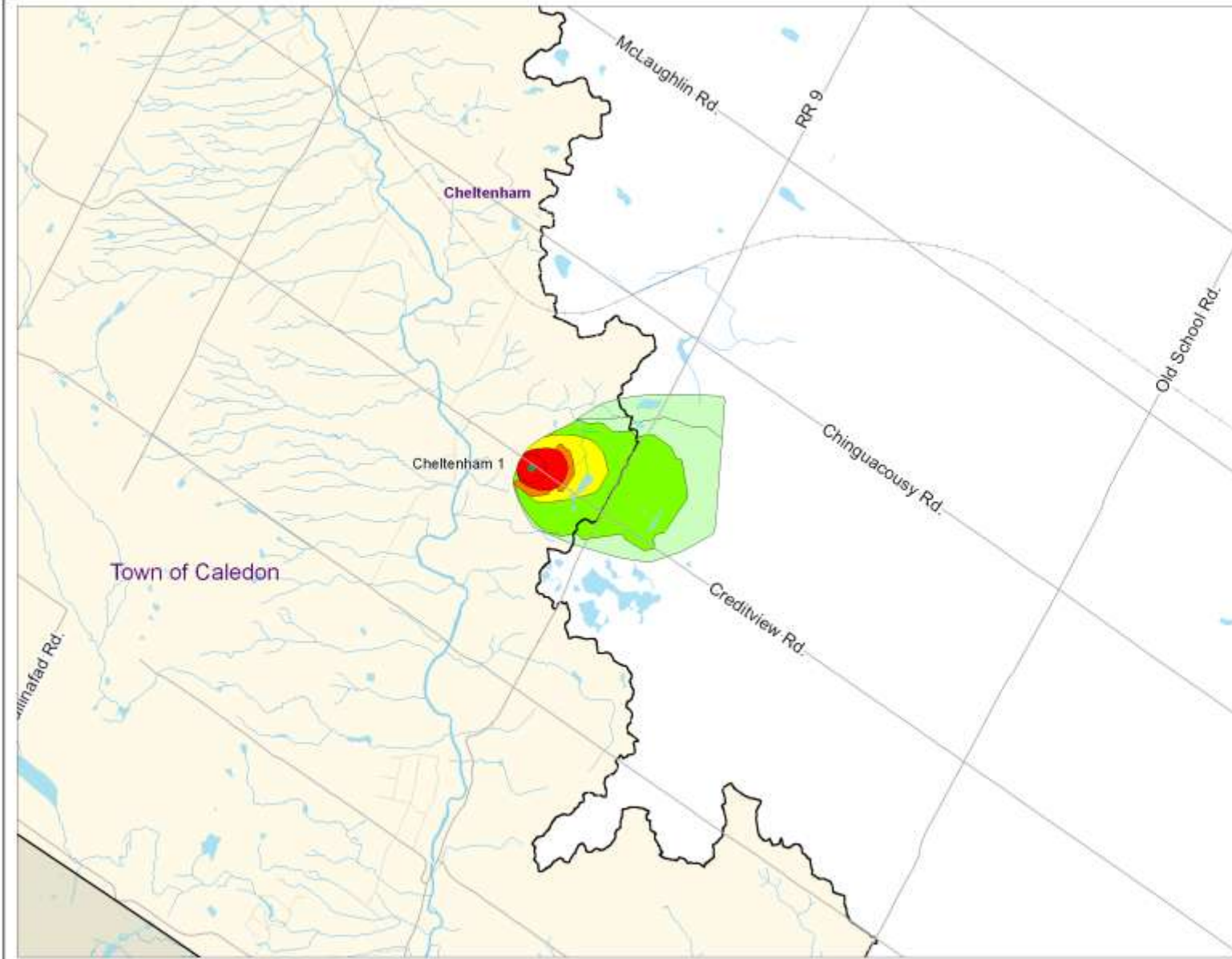
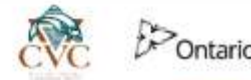
Boundaries

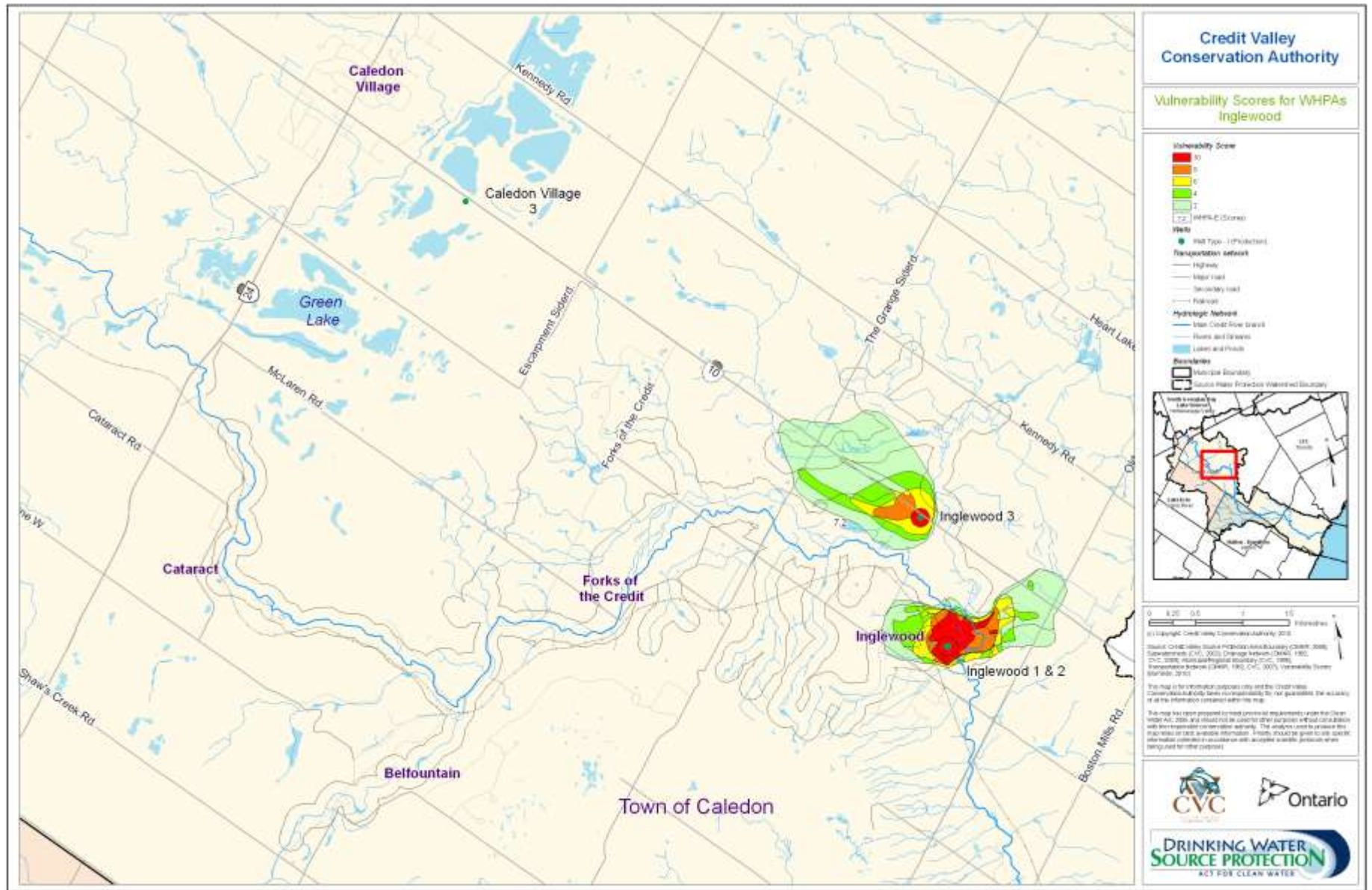
- Municipal Boundary
- Source Water Protection Watershed Boundary



© Copyright Credit Valley Conservation Authority 2016  
 Data by: CVC (Data Source: Province of Ontario, CVC, 2010; Subwatersheds (CVC, 2011); Drainage Networks (CVC, 1982); CVC, 2010; Municipal Boundaries (CVC, 2010); Hydrologic Network (CVC, 1982); CVC, 2010); Vulnerability Scores (2016)

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	Toronto and Region SPA		Credit Valley SPA			
Activity (or Threat Type)	Caledon East	Palgrave	Caledon Village	Alton	Inglewood	Cheltenham
1. The establishment, operation, or maintenance of a waste disposal site within the meaning of Part V of the <i>Environmental Protection Act (EPA)</i>	0	0	0	0	1	2
2. The establishment, operation, or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage	2	4	0	1	0	0
3. The application of agricultural source material to land	0	0	0	0	0	2
4. The storage of agricultural source material	0	0	0	0	1	2
5. The management of agricultural source material	0	0	0	0	0	0
6. The application of non-agricultural source material (NASM) to land	0	0	0	0	0	2
7. The handling and storage of non-agricultural source material NASM	0	0	0	0	0	0
8. The application of commercial fertilizer to land	0	0	0	0	0	2
9. The handling and storage of commercial fertilizer	0	0	0	0	0	2
10. The application of pesticide to land	0	0	0	0	0	1
11. The handling and storage of pesticide	0	0	0	0	0	2
12. The application of road salt	0	0	0	0	0	0
13. The handling and storage of road salt	0	0	0	0	0	0
14. The storage of snow	0	0	0	0	0	0
15. The handling and storage of fuel	2	4	2	2	1	2
16. The handling and storage of a dense non-aqueous phase liquid	10	0	2	2		0
17. The handling and storage of an organic solvent	1	0	0	0	0	0
18. The management of runoff that contains chemicals used in the de-icing of aircraft	0	0	0	0	0	0
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body	0	0	0	0	0	0
20. An activity that reduces the recharge of an aquifer	0	0	0	0	0	0
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area, or a farm-animal yard	0	0	0	0	1	2
<b>Total Threats</b>	<b>15</b>	<b>8</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>19</b>
<b>Total Parcels</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>6</b>

# Lake Ontario Collaborative

## Who?

All SPCs with Lake Ontario intakes from Niagara to Prince Edward County

*Management committee* chaired by CTC SPC Chair

*Steering committee* (directing the technical work) chaired by the Region of Peel

## What?

Undertaking technical work for inclusion in Assessment Reports

## Why?

Working together to minimize duplication and increase efficiency



## LOC achievements and upcoming milestones:

- Modeling has been completed for 6 Draft spill scenarios (e.g Pickering NGS, Hamilton Harbour fuel spill, Clarkson Refinery bulk fuel spill)
- Report preparation for these modeled spill scenarios is being undertaken
- Spill Scenario Modelling continues to evaluate for significant drinking water threats to CTC Lake Ontario intakes and delineate IPZ-3s
- Enumeration of Significant Drinking Water Threats, if any, for each intake based on Spill Scenario Modelling. To be included in updated Assessment Report(s)
- Pathogen monitoring will likely be expanded in the coming month(s)

## Updated Assessment Reports

- Due June of 2011 and will include:
  - Lake Ontario findings,
  - Tier 3 water budget and
  - Reassessment of vulnerability scores in areas of WHPAs due to presence of transport pathways (i.e. other wells)
- Public consultation will be undertaken in areas affected by the updates
- Updated information will be used in the source protection plan



TRSPA Tier 3  
Water Budget Area

## Source Protection Plans

- All “significant” threats *must* be addressed through Source Protection Plans and significant threat policies must be complied with
- Plans will dictate the methods by which the different significant threats can be made less harmful including:

1. *prescribed instruments (other provincial approvals such as certificates of approval);*
2. *requiring risk management plans (negotiated with individual businesses);*
3. *restricted land use;*
4. *prohibition of activities;*
5. *education and outreach; or*
6. *combination of the above tools*



## For more information:

### **Please talk with one of our staff:**

- Find out more about Source Protection
- What specific activities might be drinking water threats

### **Stay in touch:**

- Write or send an email with your comments or questions
- Sign up on our mailing list to receive information about updated Assessment Report findings and development of the Source Protection Plan

Contact us:

[www.ctcswp.ca](http://www.ctcswp.ca)

[sourcewater@trca.on.ca](mailto:sourcewater@trca.on.ca)

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Thank You for Coming