



CTC Source Protection Region



Source Water Protection Planning In Halton

Consultation on the *Draft Proposed Assessment Report: Credit Valley Source Protection Area*

October 27, 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?

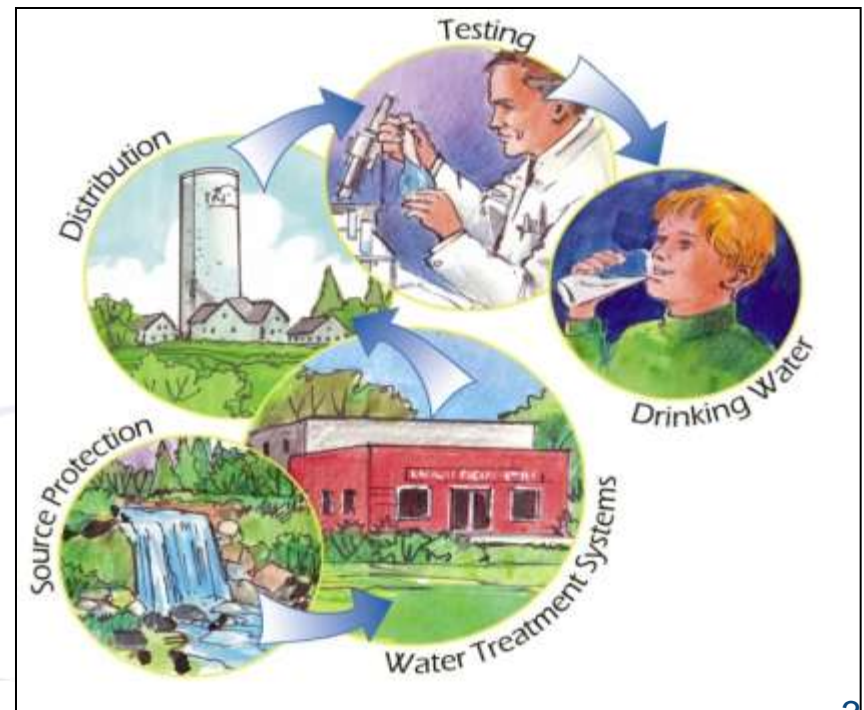


Walkerton:

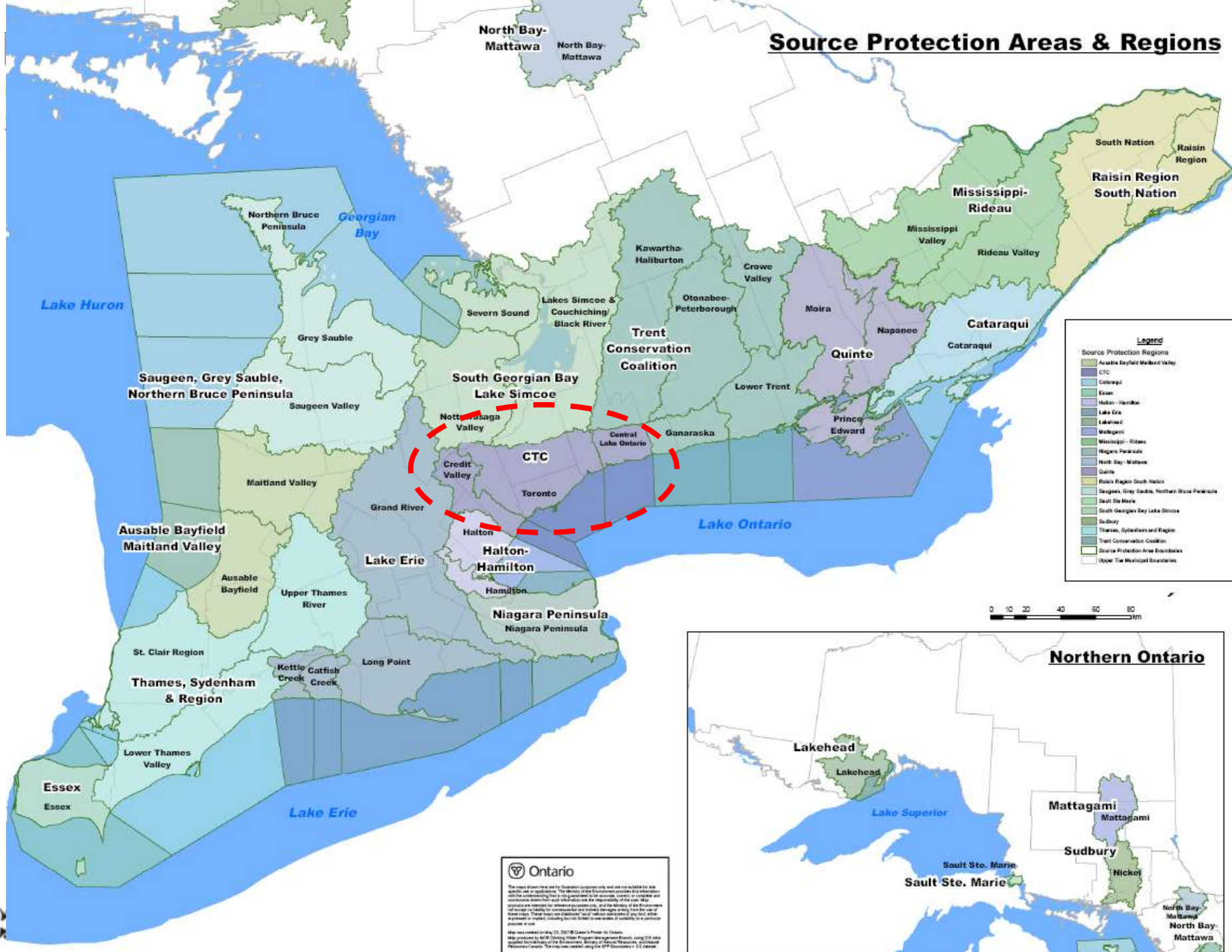
- 7 people died, half the town became sick and people are still being affected

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

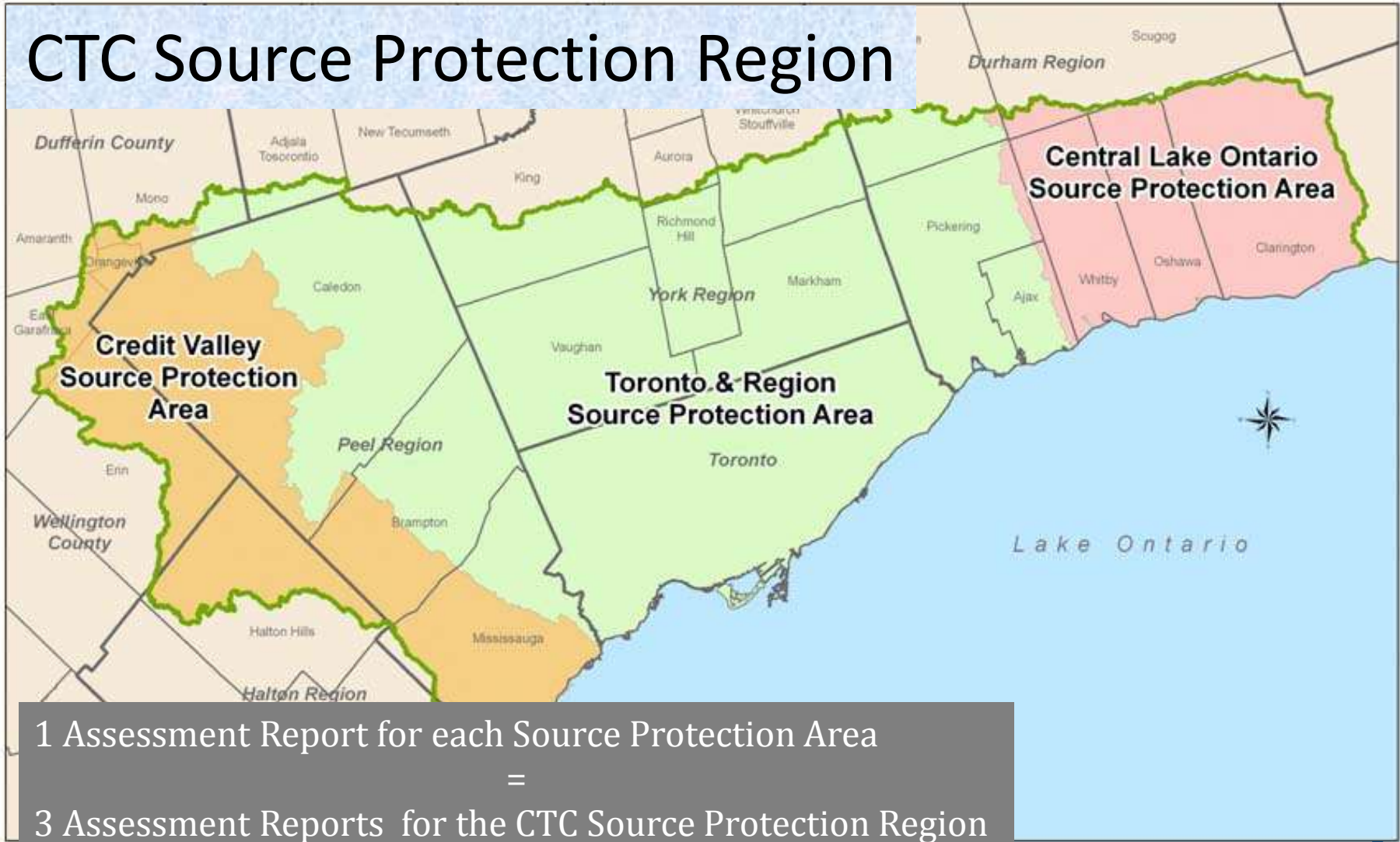


Ontario

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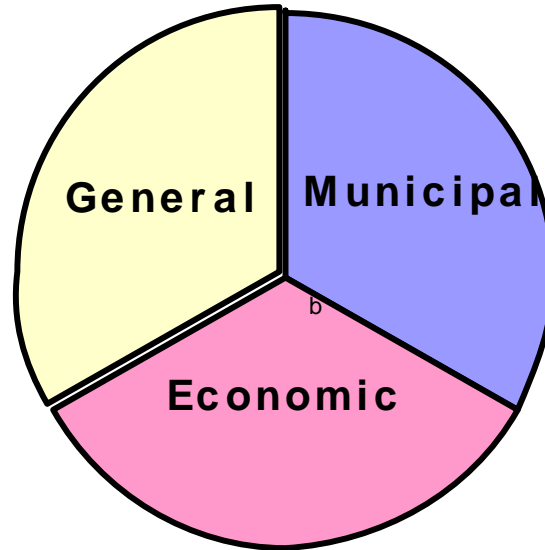
Map was created on July 25, 2017 © Crown's Privilege in Ontario
 Map produced by MCF/Strategic Urban Planning Development Branch, using GIS data supplied by the Ministry of the Environment, Ministry of Natural Resources, and the Province of Ontario. The map was created using the GIS/Geomatics 1.1.2 software.

CTC Source Protection Region



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"> • Road map for Source Protection Planning 	<ul style="list-style-type: none"> • Scientific basis behind Source Protection Planning • Public consultation period • Due December 2010; updated report due June 2011 	<ul style="list-style-type: none"> • Policy development <ul style="list-style-type: none"> ✓ Reduce & prevent threats ✓ Future & existing development • Consult with <ul style="list-style-type: none"> ✓ Municipalities ✓ Potentially affected property owners
<p>2008</p>	<p>2010</p>	<p>2012</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 Valley Source Protection Area
Toronto and Region Source Protection Area
Credit Lake Ontario Source Protection Area

**Draft Proposed Assessment Report:
Credit Valley Source Protection Area**

Volume 1 of 2: Report

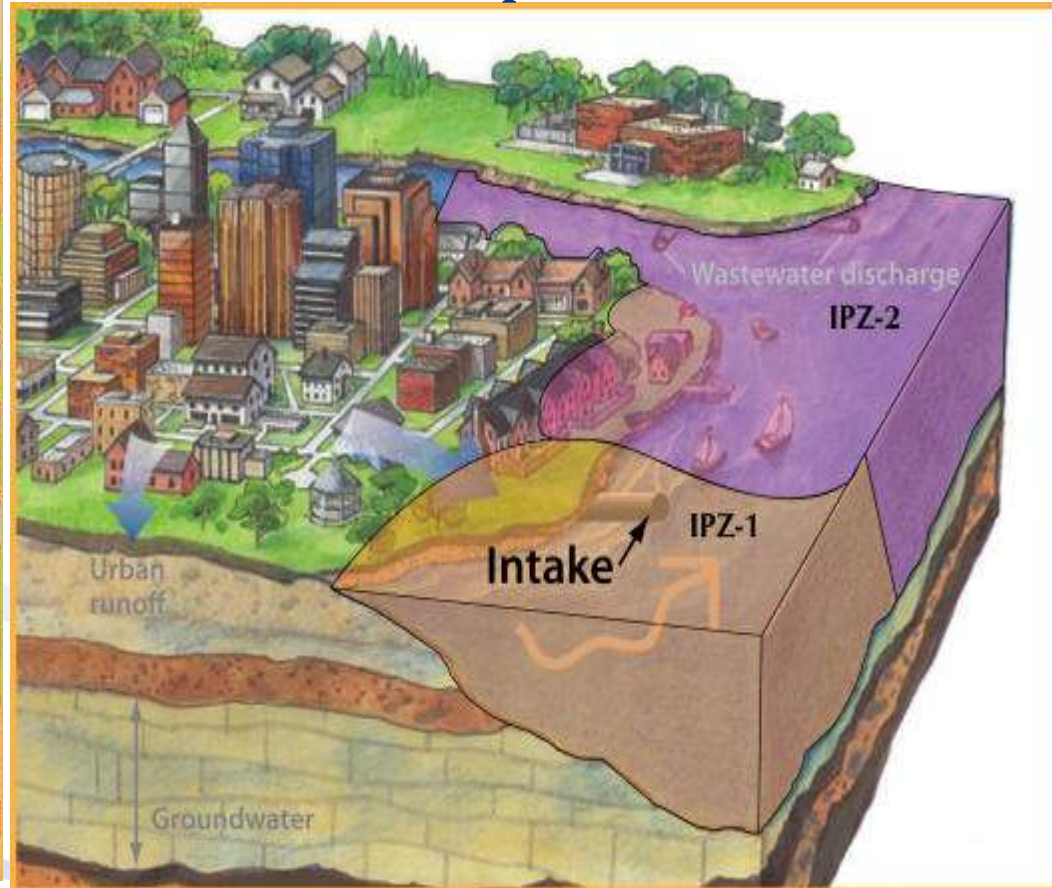
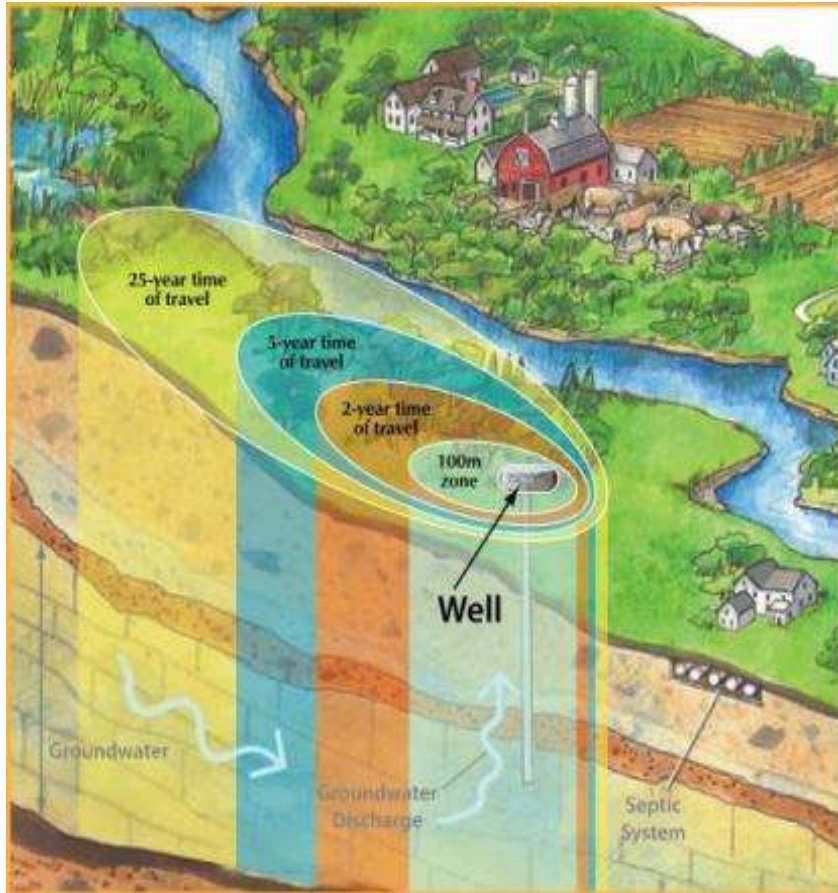


Prepared by:
Credit Valley Conservation Authority
Sept. 29, 2010

The Four Vulnerable Areas:

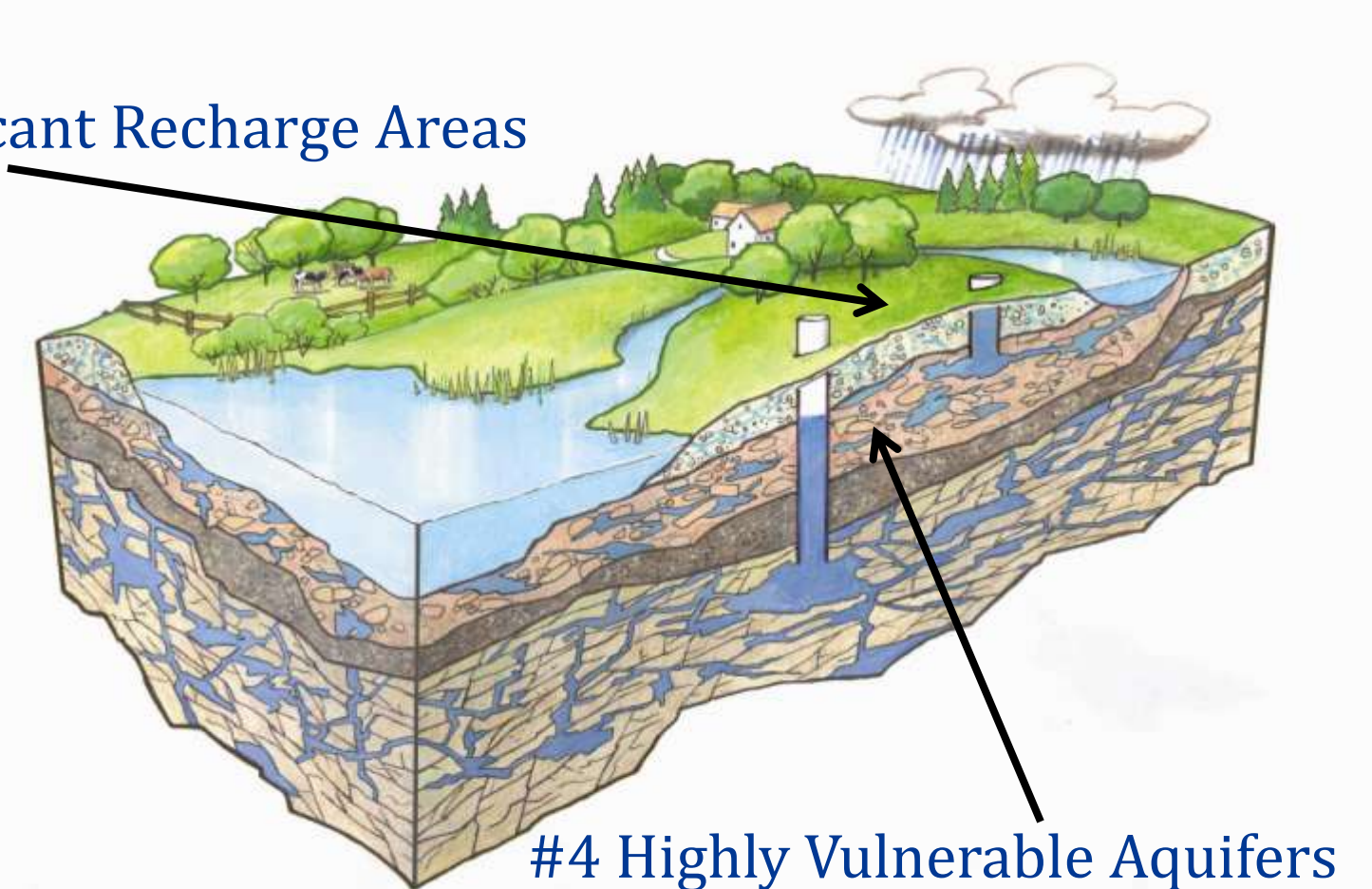
#1 Wellhead Protection Area

#2 Intake protection zone



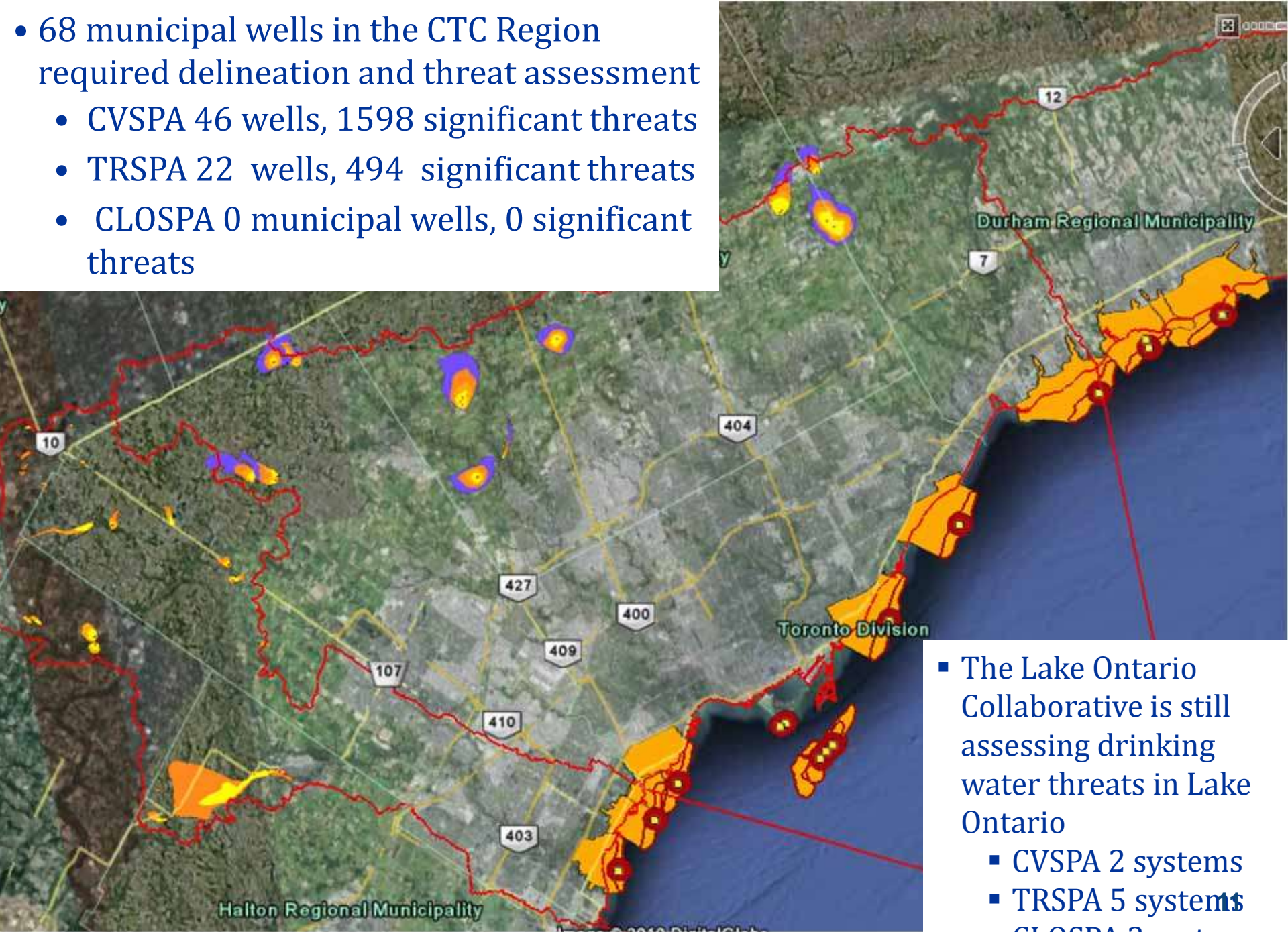
The Four Vulnerable Areas:

#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

Activity (or Threat Type)	Acton	Georgetown
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
2. The establishment, operation, or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage	233	78
3. The application of agricultural source material to land	82	10
4. The storage of agricultural source material	59	9
5. The management of agricultural source material	0	0
6. The application of non-agricultural source material (NASM) to land	0	0
7. The handling and storage of non-agricultural source material NASM	0	0
8. The application of commercial fertilizer to land	31	0
9. The handling and storage of commercial fertilizer	14	1
10. The application of pesticide to land	52	9
11. The handling and storage of pesticide	14	1
12. The application of road salt	133	159
13. The handling and storage of road salt	0	0
14. The storage of snow	0	0
15. The handling and storage of fuel	32	2
16. The handling and storage of a dense non-aqueous phase liquid	4	40
17. The handling and storage of an organic solvent	18	17
18. The management of runoff that contains chemicals used in the de-icing of aircraft	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	Tier 3 Water Budget Work Ongoing	
20. An activity that reduces the recharge of an aquifer	Tier 3 Water Budget Work Ongoing	
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area, or a farm-animal yard	9	4
Total Threats	672	239
Total Parcels	258	135

Vulnerability Scores for WHPAs Action

Vulnerability Score



- WHPA-E (Score)
- WHPA-D (Score)
- Transport Pathways
- Well Type - 1 (Producer)
- Transportation network
- Highway
- Major road
- Railroad
- Hydrologic Network
- Main Credit River branch
- Rivers and Streams
- Lakes and Ponds
- Boundaries
- ▭ Municipal Boundary
- ▭ Source Water Protection Watershed Boundary

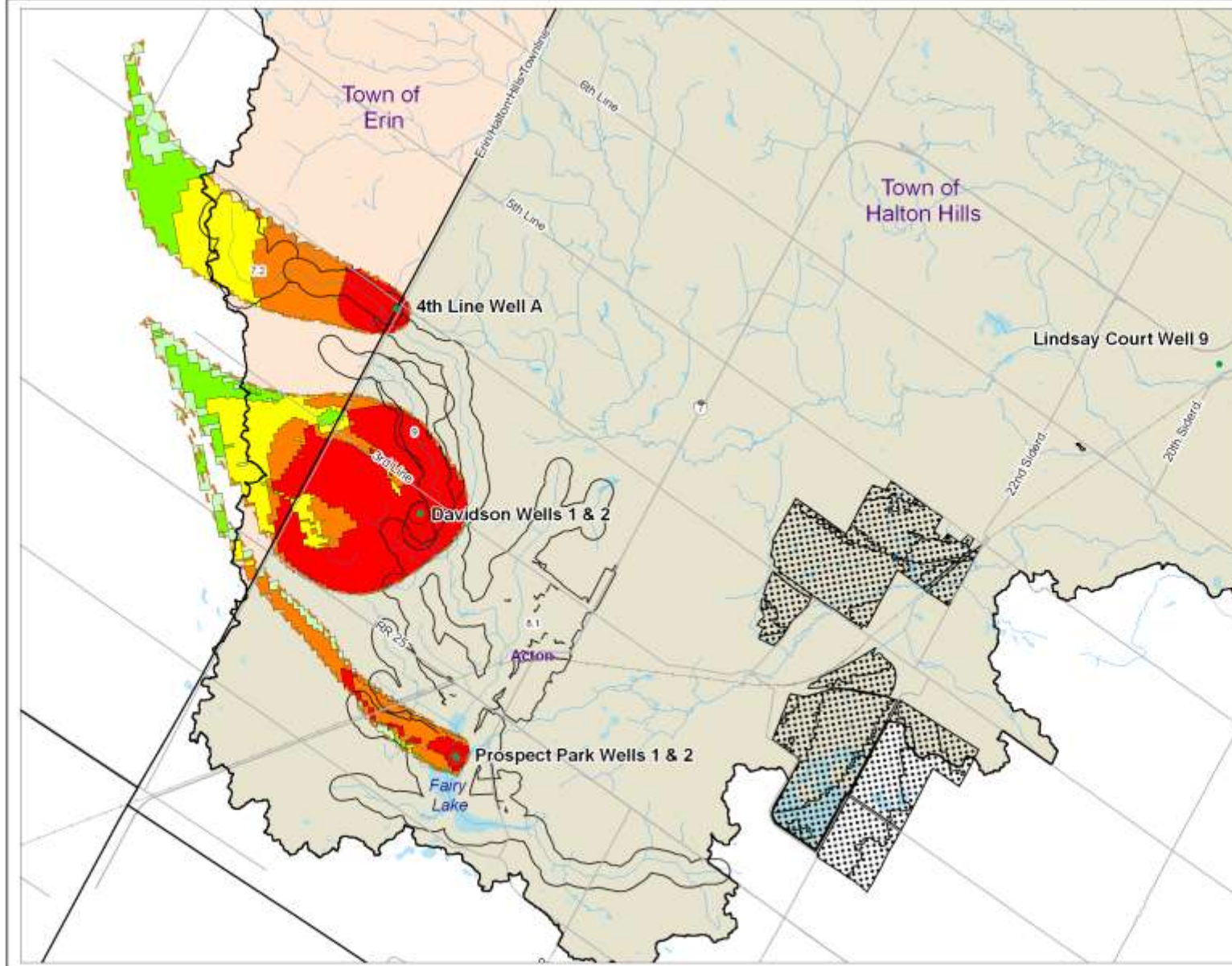


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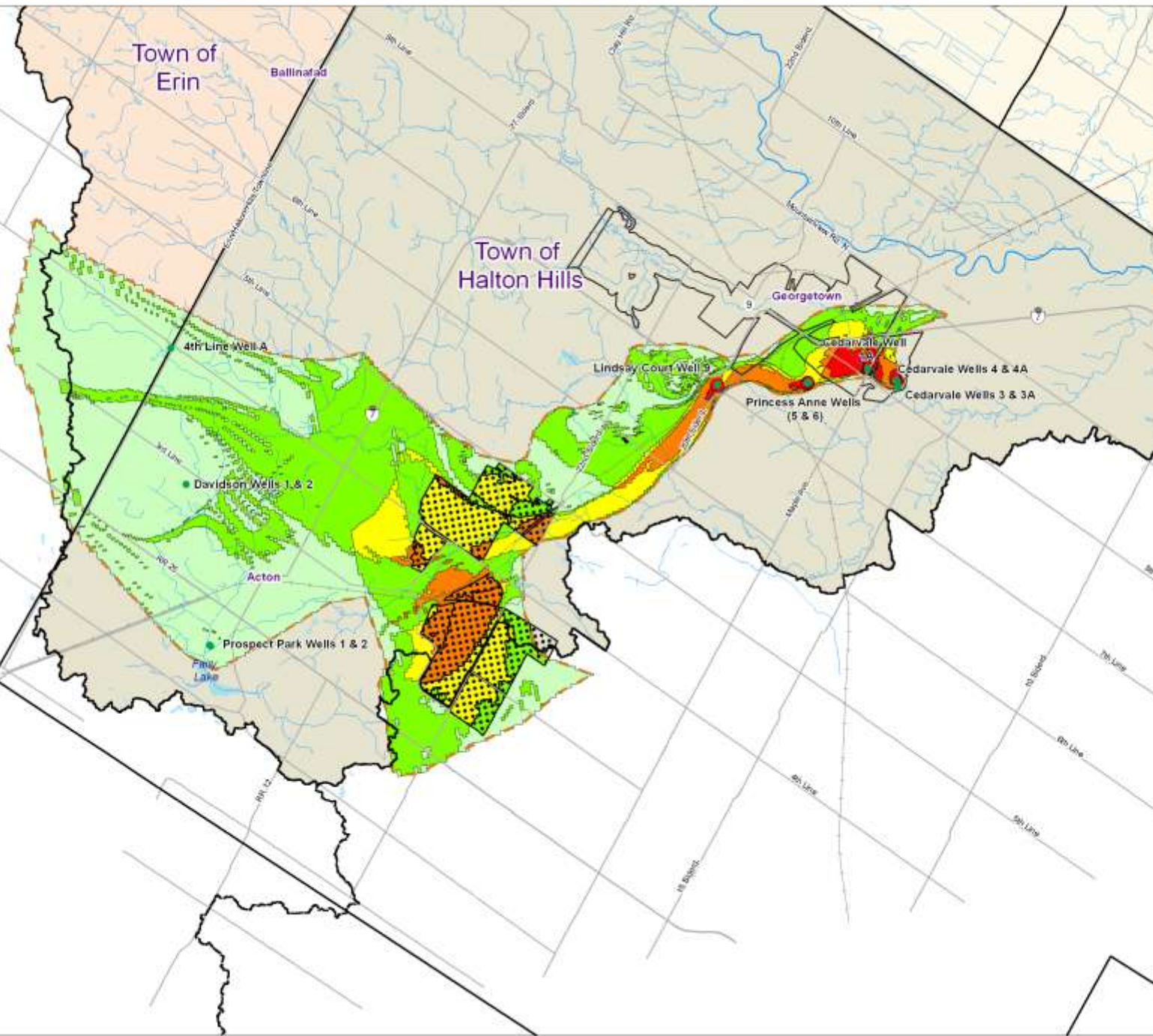
Map by CVCV. Data sources: Province of Ontario, 2000; Subwatersheds (CVC, 2011) Strategic Network (CVCV, 1982); CVCV, 2016; Major roads (CVCV, 2016); Transportation Network (CVCV, 1982); CVCV, 2011; Vulnerability Scores (CVCV, 2016); Municipal Roads (CVCV, 2016).

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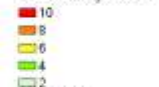
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Vulnerability Scores for WHF Georgetown



Vulnerability Scores



WMPAE

WMPAA-D

Transport Pathways

Wells

Well Type - I (Production)

Transportation network

Highway

Major road

Railroad

Hydrologic Network

Main Credit River branch

Rivers and Streams

Lakes and Ponds

Boundaries

Municipal Boundary

Source Water Protection Watershed Boundary



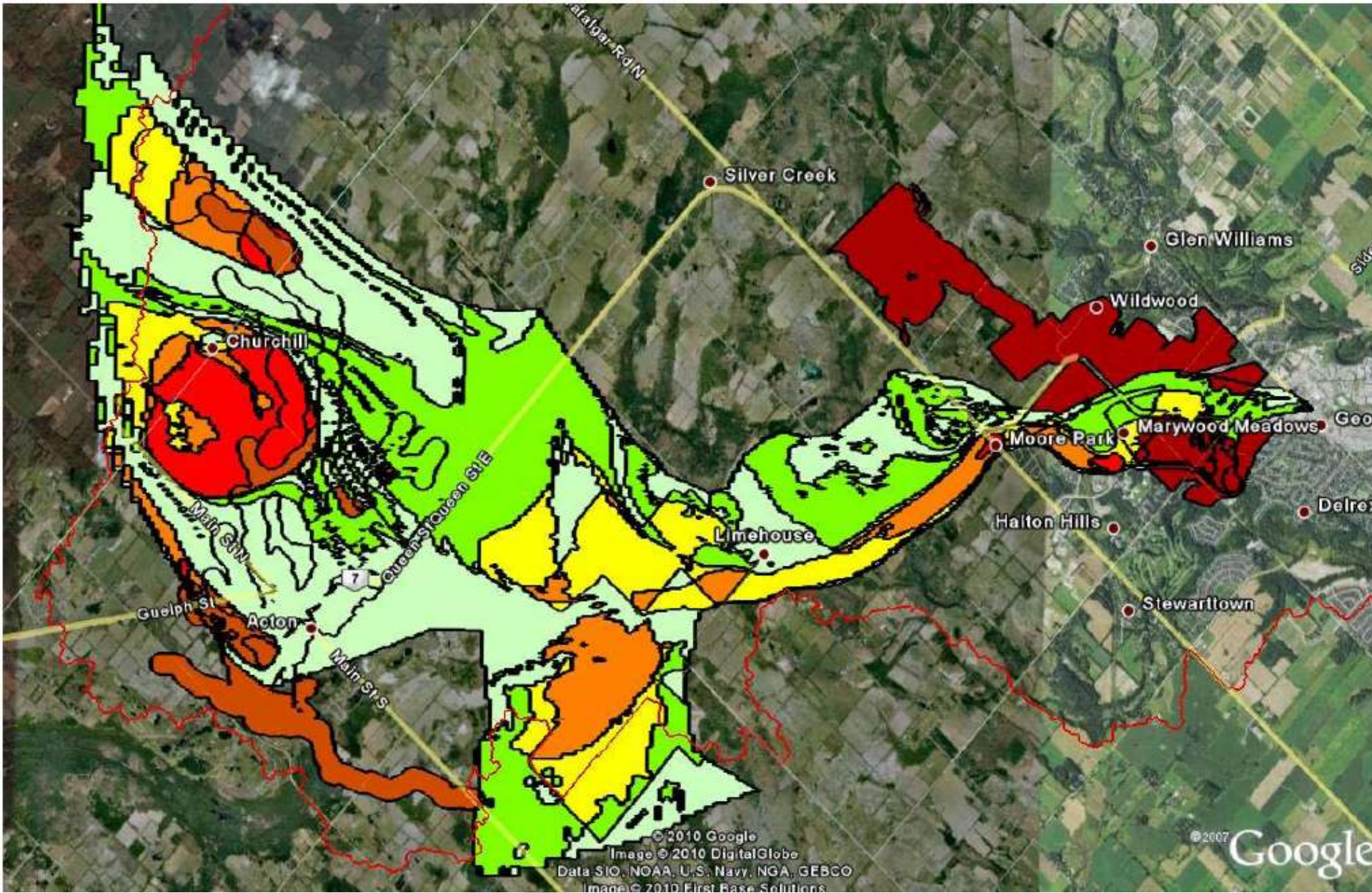
© Copyright: Credit Valley Conservation Authority, 2013.
 Source: Credit Valley Source Protection Area Boundary (OMAF, 2009);
 Subwatershed (CVC, 2002); Drainage Eaters (OHNF, 1980);
 CVC, 2008; Municipal Boundary (CVC, 1999);
 Transportation Network (MNR, 1982); CVC, 2007; Vulnerability Scores
 (CVC, 2013); Municipal Well Protection (2013)

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DRINKING WATER SOURCE PROTECTION
 ACT FOR CLEAN WATER



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

sourcewater@trca.on.ca

Chair, CTC SPC 5 Shoreham Dr.
Downsview ON M3N 1S4

Thank You for Coming