

Drinking Water Source Protection *Program*

**Sustainable Peterborough Coordinating Committee
January 15, 2015**



Presented by Meredith Carter, Otonabee Conservation

Presentation Outline

- Source Protection Program Overview
- Assessment Report
- Source Protection Plan
- Implementation
- Q & A





7 people died

2,500 became ill

Why?

- Lack of regulation and enforcement
- Improper operating practices

Clean Water Act, 2006



To protect surface and groundwater sources from contamination and overuse (*water quality and quantity*) now and in the future.

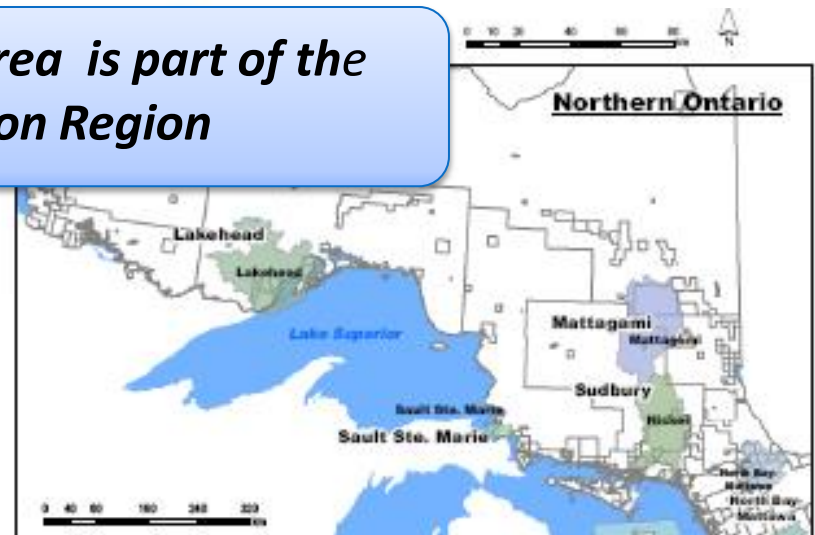
Focus is municipal drinking water systems

‘Multi-barrier’ approach to protecting drinking water

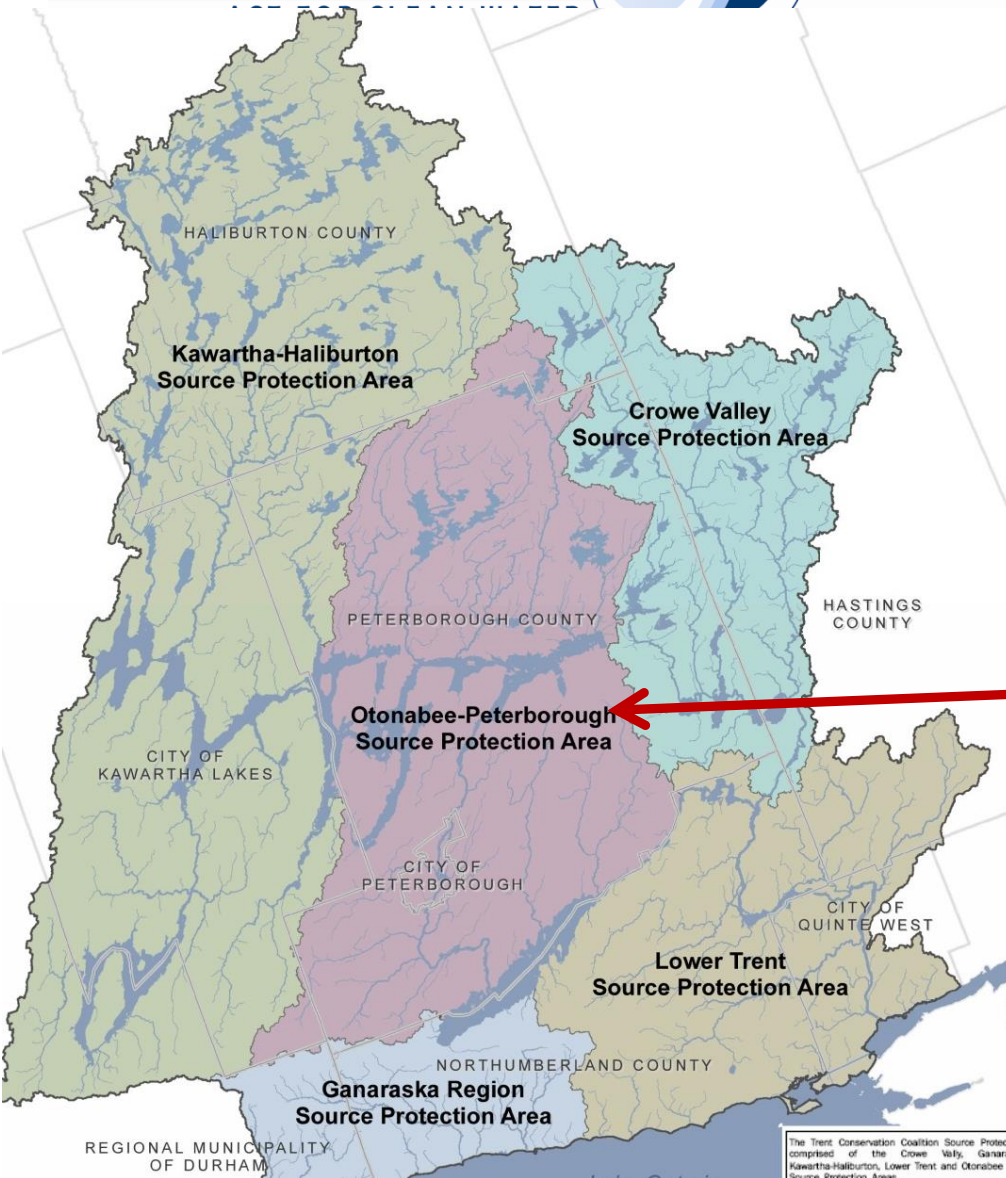
- ✓ **Source water protection**
- ✓ Reliable treatment
- ✓ Sound distribution system
- ✓ Testing and monitoring
- ✓ Plans to deal with adverse situations



- *each has a multi-stakeholder committee*



Otonabee-Peterborough Source Protection Area



Conservation Source Protection Region

5 Source Protection Areas








- Crowe Valley
- Ganaraska Region
- Kawartha-Haliburton
- Lower Trent
- **Otonabee-Peterborough**

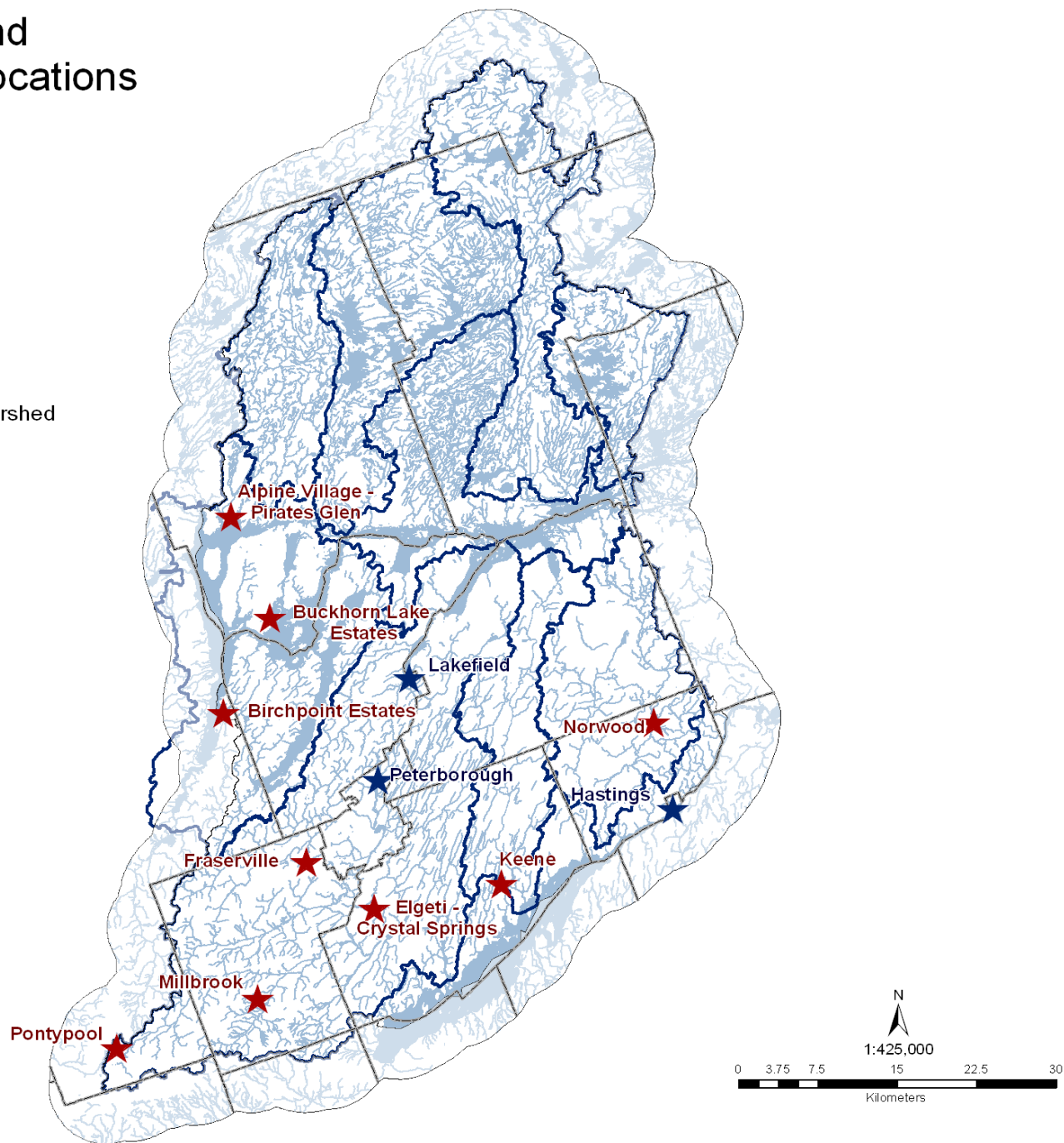
Municipal Drinking Water Systems

System	Municipality	Type
Lakefield	Selwyn	Surface Water
Hastings	Trent Hills	Surface Water
Peterborough	City of Peterborough	Surface Water
Buckhorn Lake Estates	Trent Lakes	Ground Water
Birch Point Estates	City of Kawartha Lakes	Ground Water
Alpine Village	Trent Lakes	Ground Water
Crystal Springs	Otonabee-South Monaghan	Ground Water
Keene	Otonabee-South Monaghan	Ground Water
Norwood	Asphodel-Norwood	Ground Water
Pontypool	City of Kawartha Lakes	Ground Water
Millbrook	Cavan Monaghan	Ground Water
Lansdowne (Planned)	Cavan Monaghan	Ground Water

Municipal Wells and Surface Water Intake Locations

Legend

-  Otonabee-Peterborough SPA Watershed
-  Watershed
-  Waterbody
-  Watercourse
-  Municipal Boundary
-  Surface Water Intake
-  Municipal Well



Stage 1 Laying the Foundation

- Establish SPAs
- Establish SPCs
- Negotiate Terms of Reference and work plan

Stage 2 Assessment of Threats

ID & assess drinking water threats & vulnerable areas considering physical conditions & land use

**Approved in
October 2014**

Stage 3 Source Protection Planning

Prepare source protection plan (SPP) with policies to address significant drinking water threats (based on AR)

**Approved on
October 23, 2014**

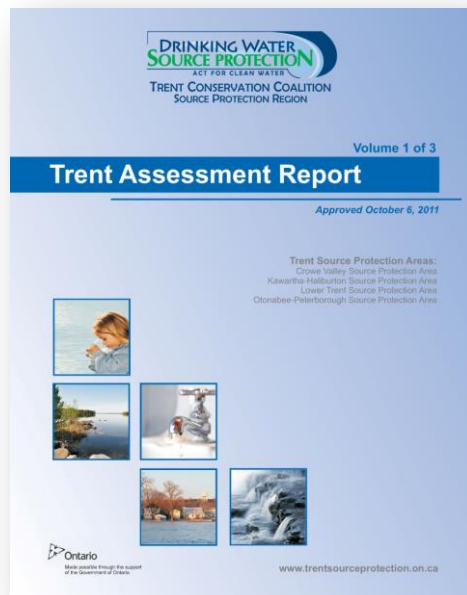
**Effective on
January 1, 2015**

Stage 4 Implementation

- Implement SPP
- Inspect & Enforce
- Monitor & Report
- Review Plan

The Science: Assessment Report

*Science-based building block for
developing policies*



- Watershed characterization
- Defines 'vulnerable areas'
 - Surface Water: Intake Protection Zones (IPZs)
 - Groundwater: Wellhead Protection Areas (WHPAs)
- Identifies potential threats to water quality & quantity
- Approved by MOE in 2011, updated and submitted to MOE in March 2014

MOE list of Potential Threats to Drinking Water

- ✓ Conventional Septic Systems
- ✓ Large Sewage Systems (incl. wastewater collection, storm water management facilities)
- ✓ Most agricultural activities including:
 - Pesticide storage, handling and application
 - Fertilizer storage, handling and application
 - Manure storage, handling and application
 - Non-agricultural source material storage, handling and application
 - Pasturing or grazing
- ✓ Road salt storage, handling and application
- ✓ Fuel Storage and Handling
- ✓ Chemical Storage and Handling
- ✓ Snow Storage
- ✓ Aircraft De-Icing

The MOE document Table of Drinking Water Threats sets out the specific circumstances that make each listed activity a SDWT.

The Trent Assessment Report (2011) identifies the following:

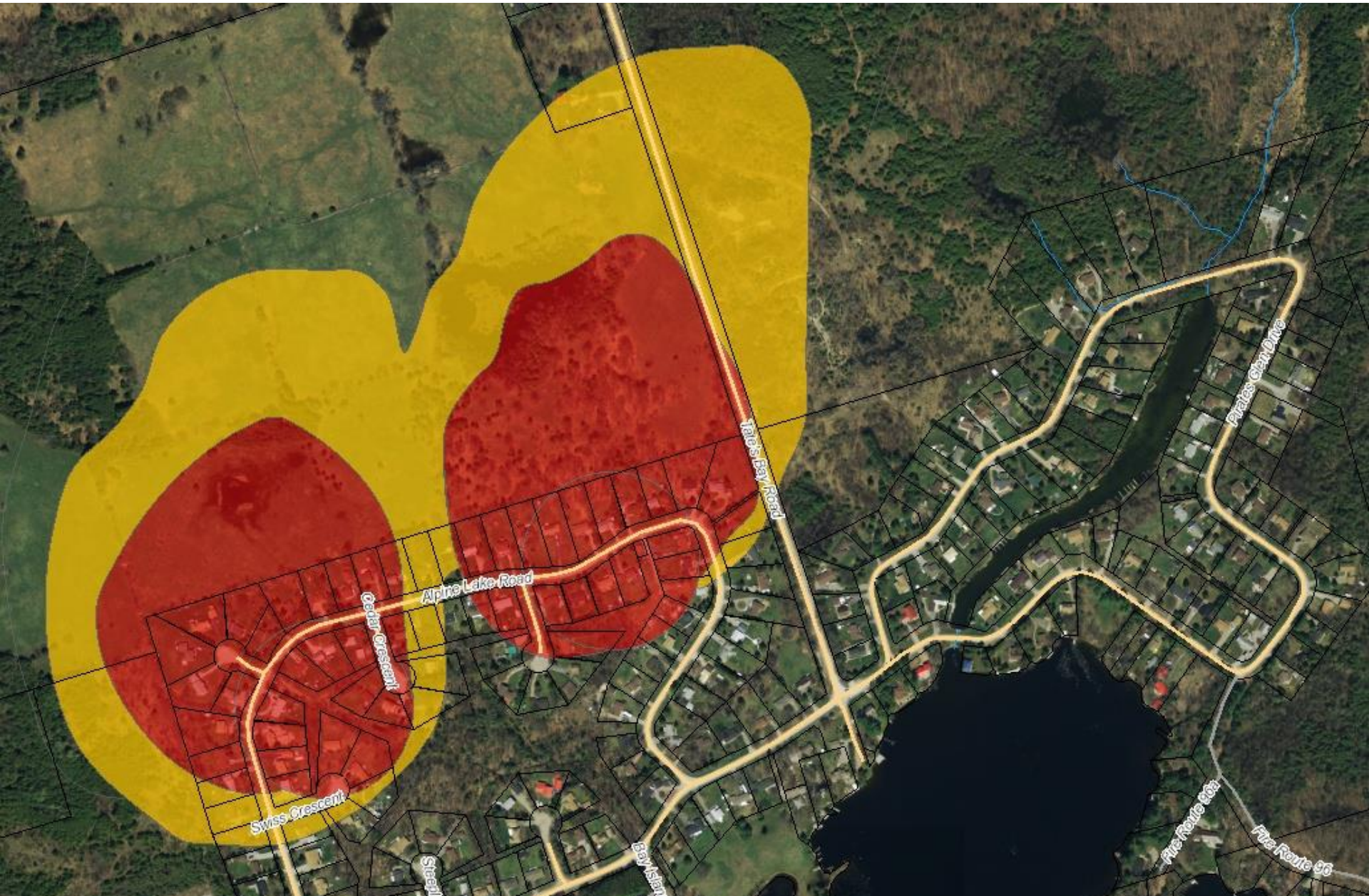
Area	Area (km ²)	No. SDWT	No. SDWT parcels
Trent Watershed	12,900	1,643	989
O-P Source Protection Area	3,365	402	265

What is a Vulnerable Area?

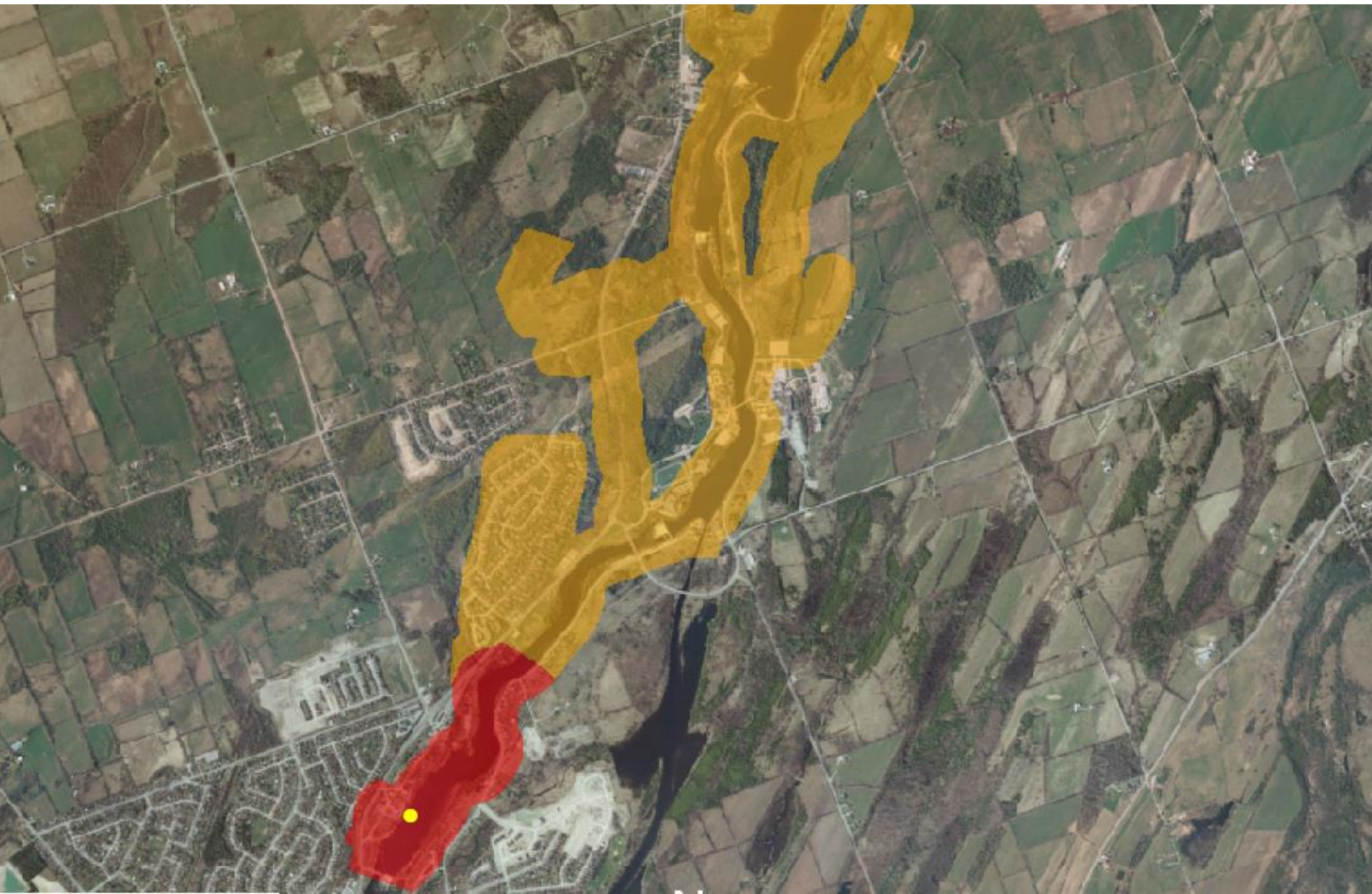
Mapped geographic area where land based activities might impact the source of the municipal drinking water supply.

- Groundwater: Wellhead Protection Areas (WHPA)
 - Surface water: Intake Protection Zone (IPZ)
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Alpine Village Municipal Drinking Water System Wellhead Protection Area



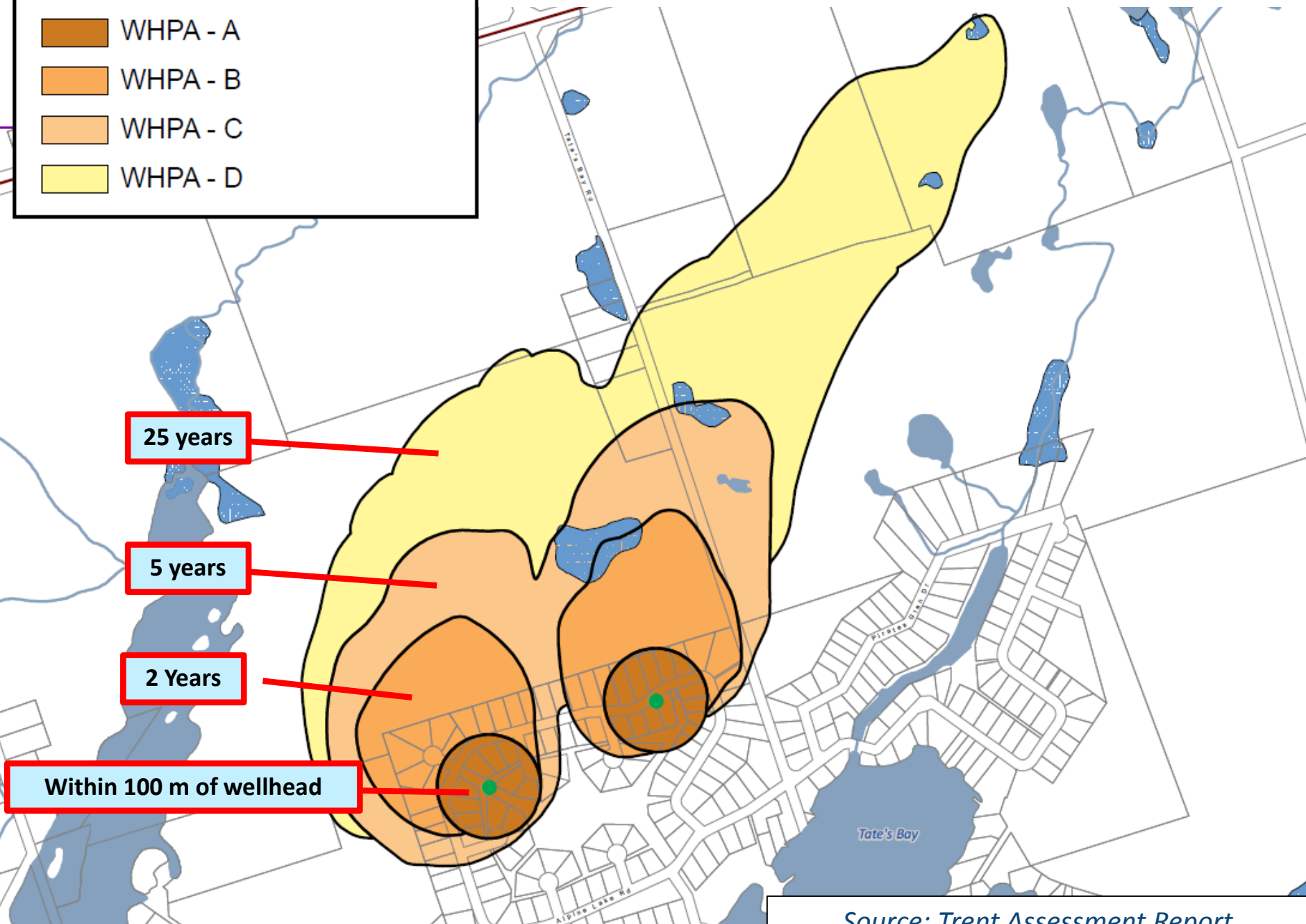
City of Peterborough Municipal Drinking Water System: Intake Protection Zone



Wellhead Protection Areas

- WHPA - A
- WHPA - B
- WHPA - C
- WHPA - D

Alpine Village Municipal Drinking Water System



Source Protection Plan



- Policy Document
- A plan to protect municipal sources of drinking water, now and in the future
- Contains a policy for every area where an activity could be a significant drinking water threat as identified in an assessment report.
- Goal of policies is to manage activities on the landscape so they cease to be a threat or do not become significant threats.

The nature and location of an activity determines if it is a SDWT.

Source Protection Plan



- Apply to areas where an activity is or would be a significant drinking water threat
- Manages or eliminates threats
- Does not mean all activities must stop!
- It may require:
 - Changing how an activity is carried out
 - A Risk Management Plan
 - Regular inspections

The nature and location of an activity determines if it is a SDWT.

Policy Approaches

Less
restrictive

Existing

- Education and Outreach
- Incentive Programs
- Land Use Planning Approaches
- Prescribed Instruments

**New
Tools**

- Restricted Land Uses
- Risk Management Plans
- Section 57 Prohibition

More
restrictive



What is a Source Protection Policy?

- Policies to protect drinking water sources from drinking water threats
- Statements that describe what will be done to address specific drinking water threats and who will do it
- Policies must address:
 - *Significant* threats – per Assessment Report
 - Monitoring of significant threats
 - *Existing* and *future* occurrences of activities

Implementation

Municipalities are responsible for implementation

- **Land Use Planning** (OP/Zoning by-law updates, conformity, review of new planning applications).
 - **Risk Management Official /Risk Management Inspector** (ORCA to fulfill this role for 7 municipalities)
 - **Septic System Inspections** (PCCHU, must be completed by Oct. 2016)
 - **Education / Outreach & Incentive Programs** (ORCA to fulfill this role for 7 municipalities)
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Thank you! Questions?

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