

# **Brownfields and the Source Protection Program in Guelph**

## **Presentation to the Canadian Brownfields Network**

by:


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## **Presentation Outline**

- **City of Guelph Background**
- **Protecting our Drinking Water Supplies**
- **Shortcomings of the Clean Water Act and Source Protection Program**
- **Making it work**

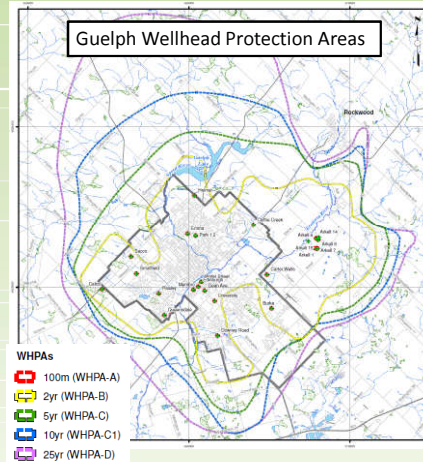


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## City of Guelph Background

**Guelph is one of the largest Canadian cities reliant on groundwater**

- Population - 135,000
- 21 municipal wells and a shallow ground water collector system
- 97% of City is within a Wellhead Protection Area “vulnerable area” as defined by the Clean Water Act (CWA)



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## Regulatory Requirements

### Clean Water Act, 2006

- Focuses on existing and future sources of water for existing and planned municipal residential drinking water systems
- Threats will cease to be or never become significant drinking water threats



### Environmental Protection Act, 1990

- The aim of the Environmental Protection Act is to protect and conserve our natural environment.
- The act includes provisions on vehicles, waste management, renewable energy, spills, and it covers the prohibition, reporting, and handling of contamination.



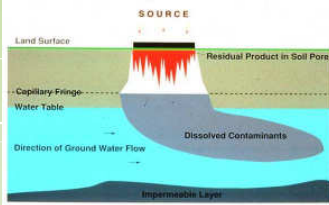
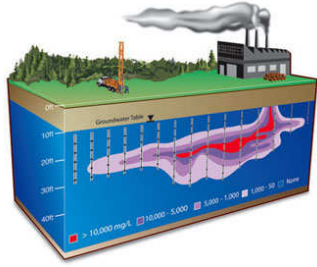
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## “Condition Sites” Under CWA

“Conditions resulting from past activities” = Contaminated Sites

MECP Technical Rules:

- Non-aqueous phase liquids or dissolved phase
- Off-site migration
- Exceedances of Schedule 1, 2 or 3 of the ODWQS or Table 4 of the Technical Support Document for ODWQS, Objectives and Guidelines
- Details outlined in O.Reg. 287/07 and MOE Technical Rules

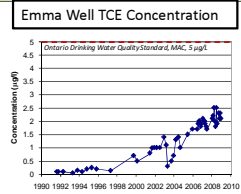
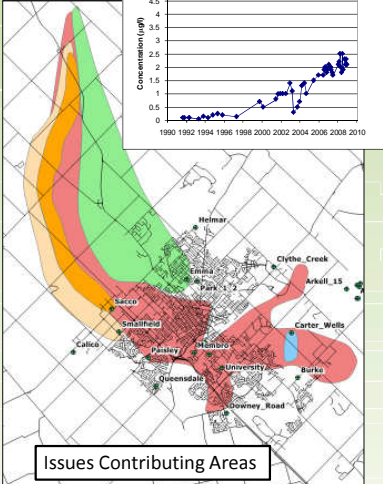



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## “Condition Sites” Under CWA

MECP Technical Rules:

- A Condition Site would be classified as a Significant Threat if:
  - The condition is associated with a drinking water issue (Issues Contributing Areas); or
  - There is evidence that the condition is or may be causing off-site contamination
- Guelph has TCE ICAs - Emma, Membro, Smallfield and Sacco Wells
- Condition Sites with TCE are a Significant Threat

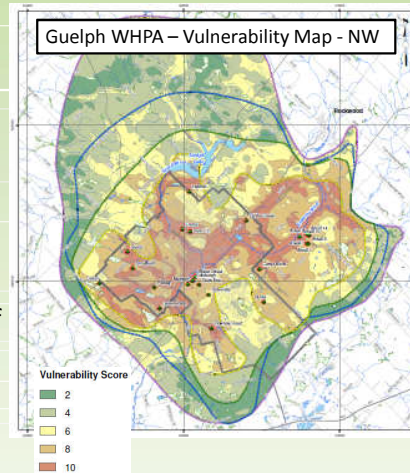



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## “Condition Sites” Under CWA

### MECP Technical Rules:

- Risk Score = Hazard Rating x Vulnerability Score
- Off-Site Contamination: hazard rating = 10
- Condition on a property containing well, intake or monitoring well = 10
- All else, hazard rating = 6
- Significant threat if  $\geq 80$
- Therefore Vulnerability Score of 8 or 10
- Guelph- 24 sites, RMOW- 18 sites

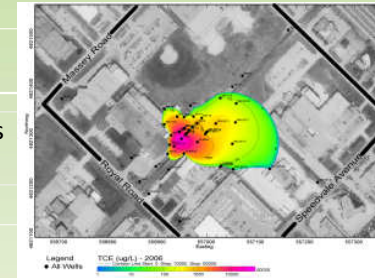


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## “Condition Sites” Under CWA

### How were Condition Sites Assessed?

- Initiated through information requests to MECP
- Dependent on available information for contaminated sites
- Information assessed against criteria
- However:
  - Information may not be current
  - Groundwater data may be limited to the property only (i.e. no offsite data)
  - Difficulties differentiating “Source” sites versus “Impacted” sites



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## Shortcomings of the CWA and Source Protection Program

The 2018 Report of the Environmental Commissioner of Ontario:

- ***“The Clean Water Act provides no effective means for source protection committees to address drinking water threats posed by historical contamination”.***
- ***“Clean Water Act provides minimal policy options”.***



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## Shortcomings of the CWA

The 2018 Report of the Environmental Commissioner of Ontario:

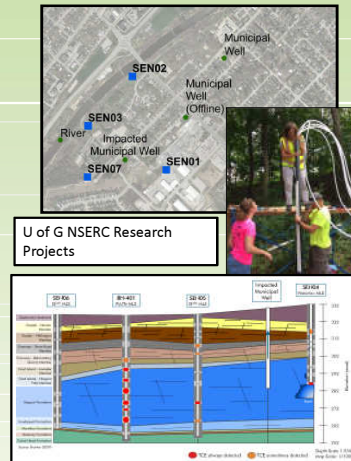
- *“Although SPC has identified a contaminated property as a threat..., there is no obligation on the ministry to address the issue at all.”*
- *“The Clean Water Act gives the perception that the law addresses conditions that are drinking water threats, without actually doing so.”*
- *The ECO recommends: that the MECP take action to ensure that historical conditions that have been identified as significant drinking water threats are controlled or remediated so that they cease to pose a risk to drinking water sources.*



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## What is the City of Guelph doing about this?

- Drilling and installation of Sentry Wells to characterize groundwater quality in the City
- Implement “Conditions” policies - regular meetings with MECP to discuss Condition Sites and updates
- Freedom of Information requests for properties in close proximity to the municipal wells impacted by historical contamination
- Feasibility study to assess current and projected concentrations of TCE from Condition sites near municipal wells



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## What can Conditions Site Owners do?

- Work to “De-List” the site:
  - Demonstrate Conditions Site criteria no longer apply
  - Reduce concentrations to below ODWQS
  - Clean-up offsite contamination
  - Address contaminants that are Drinking Water Issues (e.g., TCE)
- Lobby the MECP to provide concurrence on results
- Work with municipalities to deliver documentation
- If confirmed, municipalities will revise Source Protection Assessment Report to remove site
- RESULT – meet the purpose and objectives of the Clean Water Act

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# Thank you!

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