

Threats to Drinking Water Quality

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Threats to Drinking Water Quality



Threats

1. Threats to **Source Water**

- Spills
- Land Uses
- Pathogens & Emerging Contaminants
- Climate Change

2. Threats to **Water Treatment Process**

- Cyber Attack
- Extended Power Outage
- Equipment Failure
- Process Chemical Supply Chain

3. Threats to **Water Delivery**

- Aging Infrastructure
- 3rd Party Damage & Water Theft
- Water Age
- Excessive Water Demand

4. Threats Related to **Plumbing**

- Lead Plumbing
- Cross Connections
- Backflow

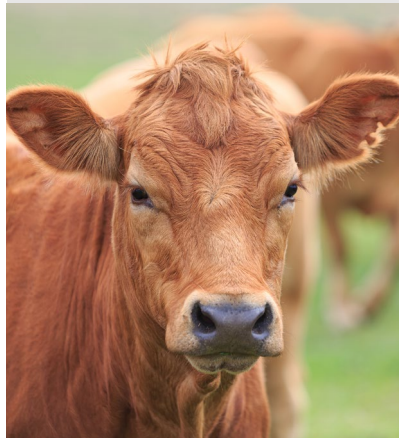
1. Threats to Source Water

Threats to **Source Water**

Spills



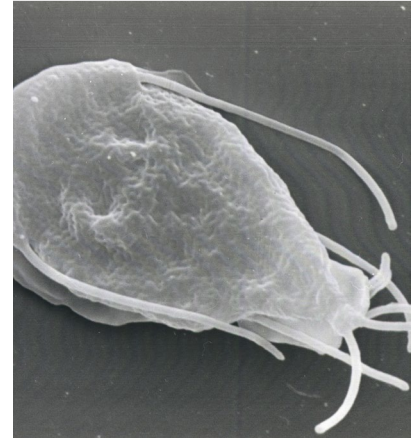
Land Uses



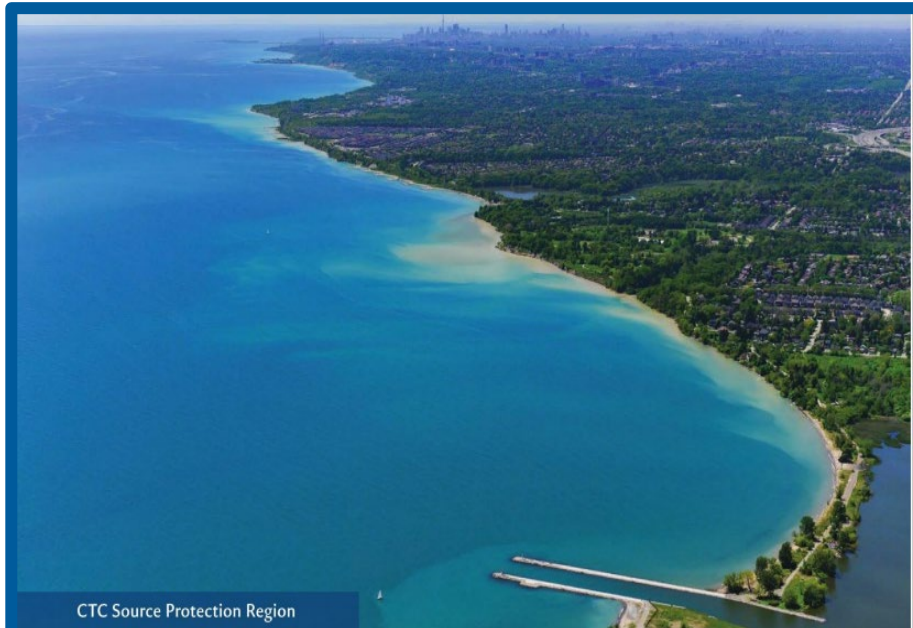
Climate Change



Pathogens &
Emerging
Contaminants



Protecting Sources of Drinking Water



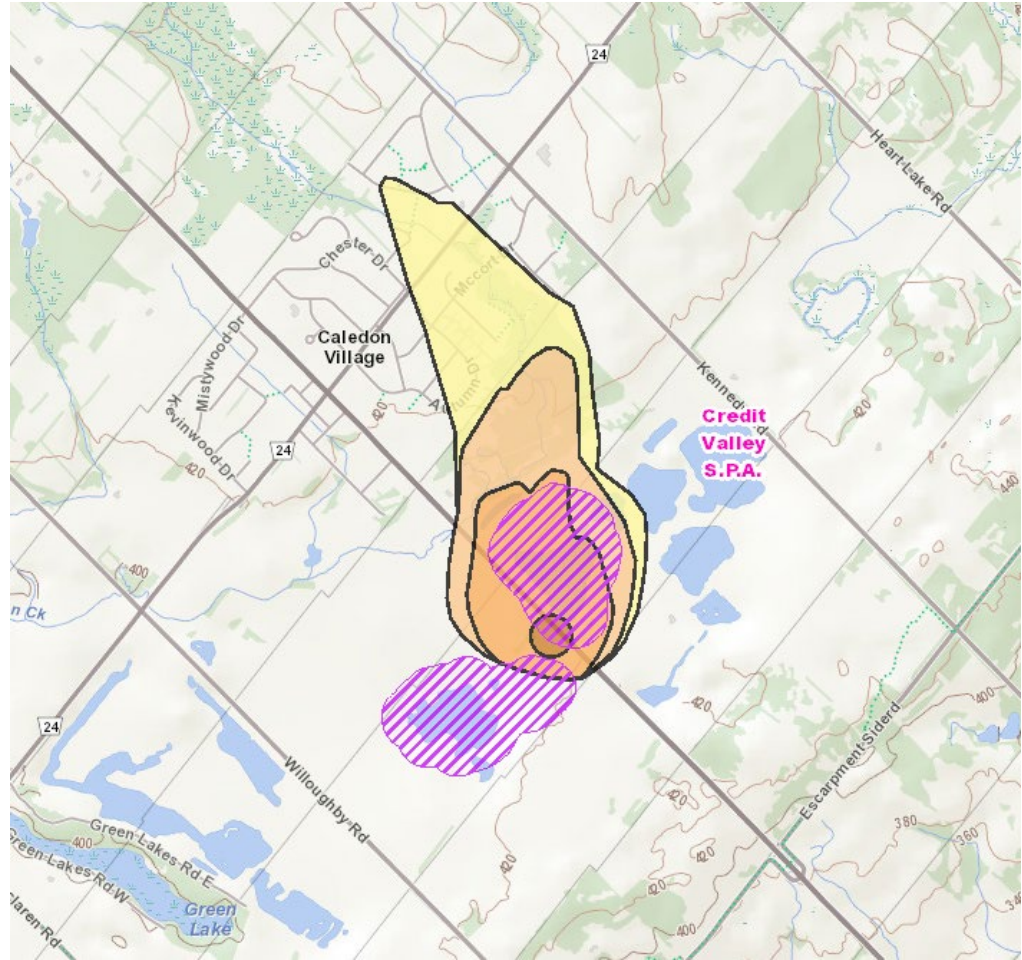
CTC Source Protection Region



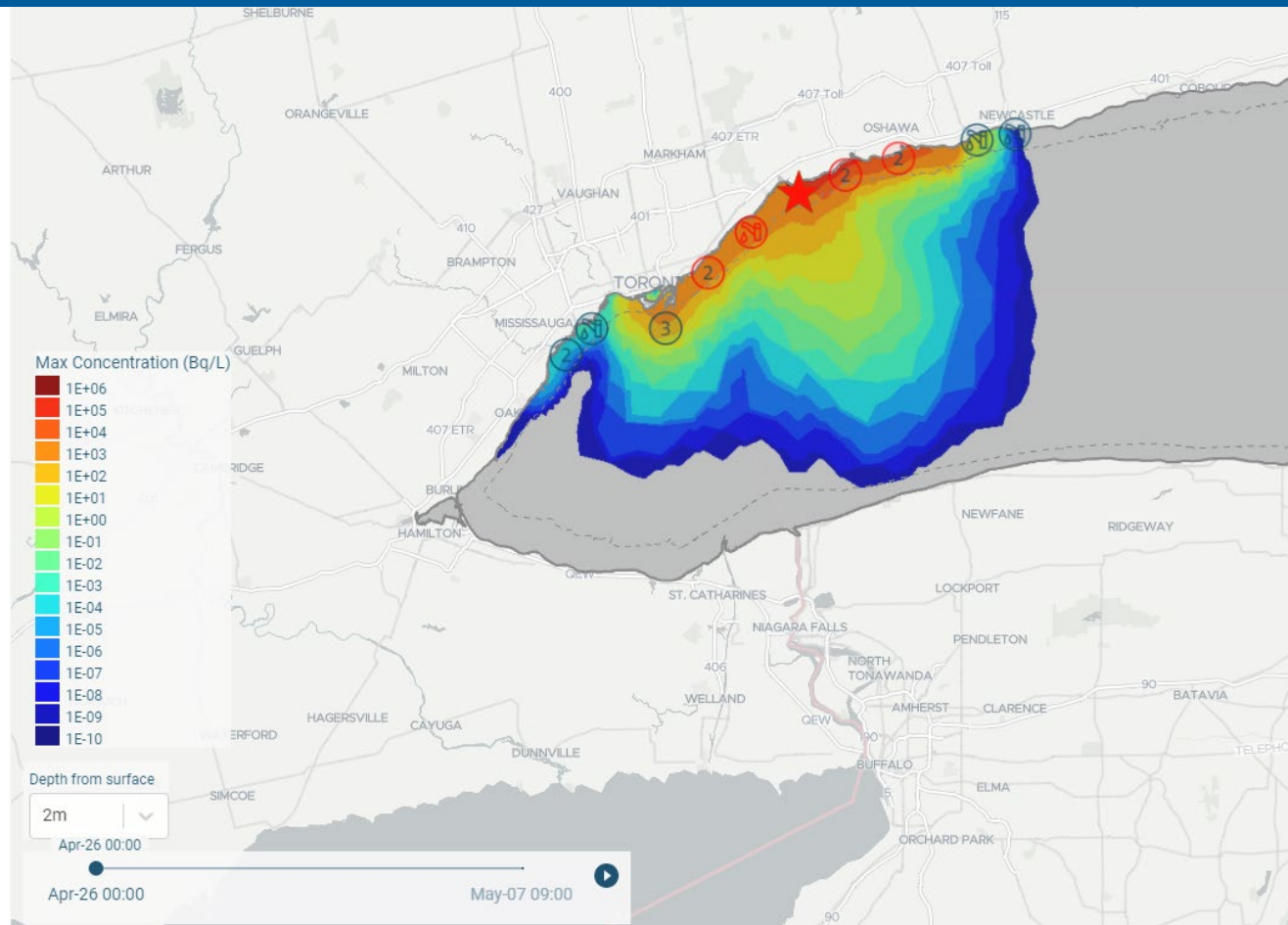
**Approved Source Protection Plan:
CTC Source Protection Region**

Protecting Our Municipal Wells

8.1-18



Predicting Impact of Spills



Preventing Waterborne Disease



Enhanced Water Treatment

Ozone



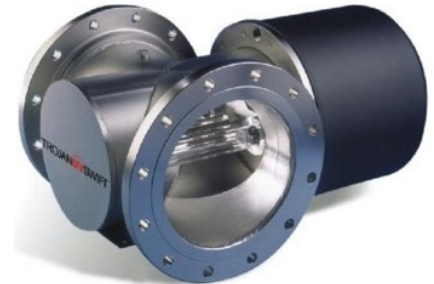
**Biologically
Active Carbon**



**Ultrafiltration
Membrane
Filters**



**Ultraviolet
Light**



2. Threats to Water Treatment Process

Threats to **Water Treatment Process**

Cyber Attacks



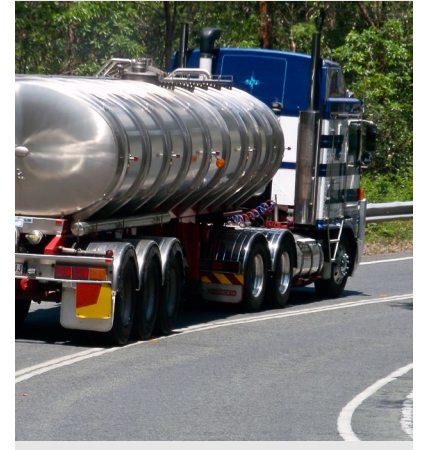
Extended Power Outage



Equipment Failure



Process Chemical Supply Chain



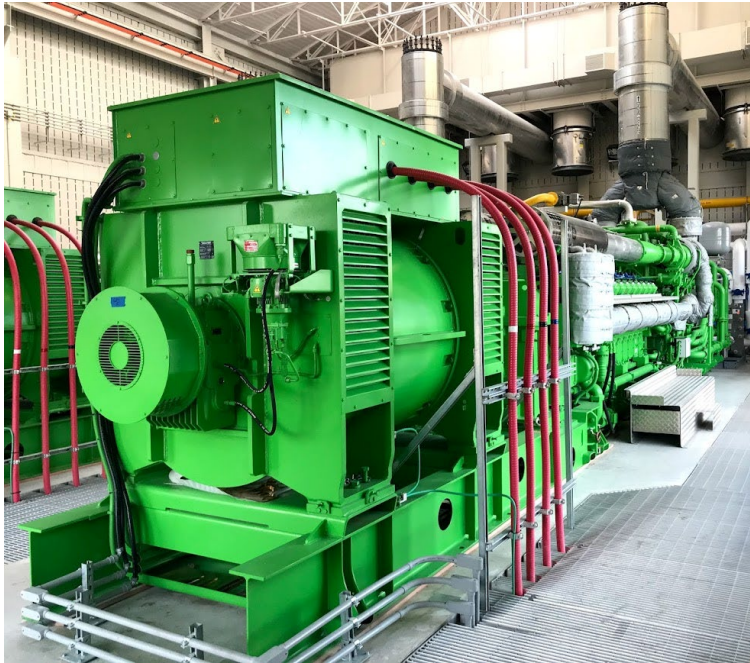
Service Reliability



Process Chemical Supply Chain



Emergency Power & Storage



Threats to Drinking Water Quality



Preventing Cyber Attacks



3. Threats to Water Delivery

Threats to **Water Delivery**

Aging
Infrastructure



Third Party
Damage &
Water Theft



Water Age



Excessive Water
Demands



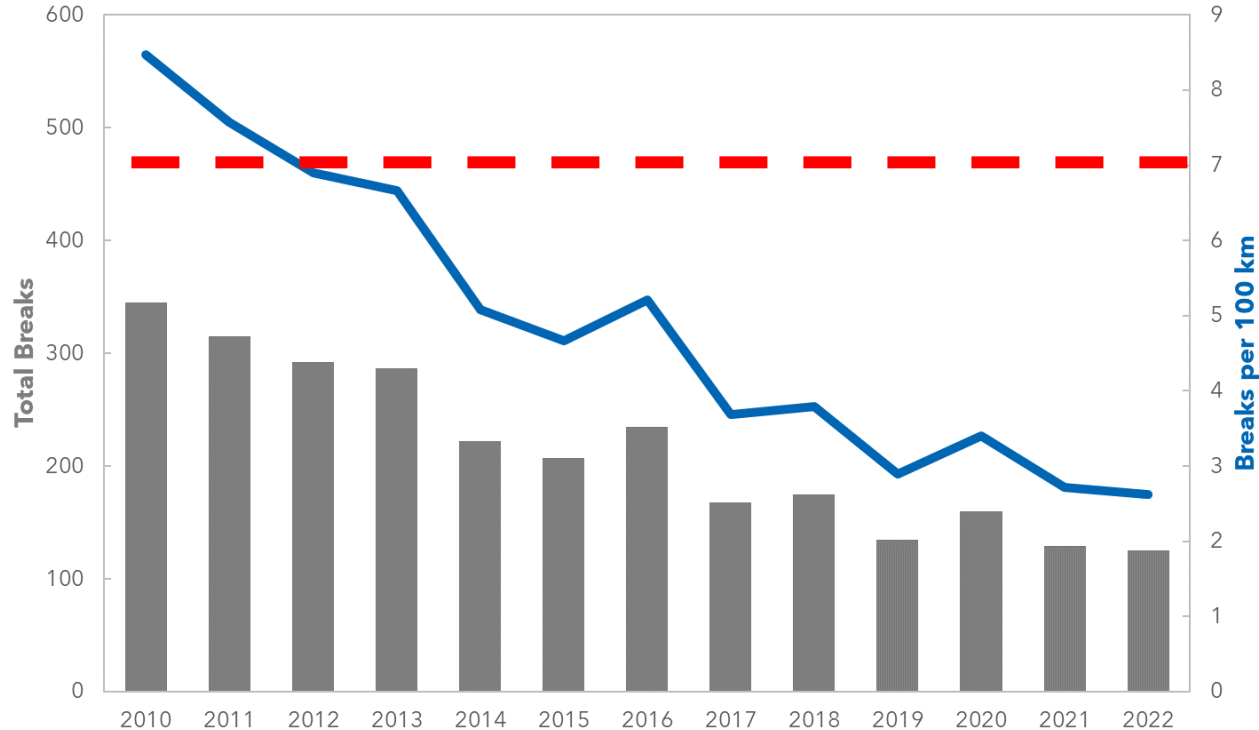
Water Theft & 3rd Party Damage



Replacing Aging Infrastructure



Water main breaks in Peel since 2010



Reducing Watermain Breaks

4. Threats Related to Plumbing

Threats Related to **Plumbing**

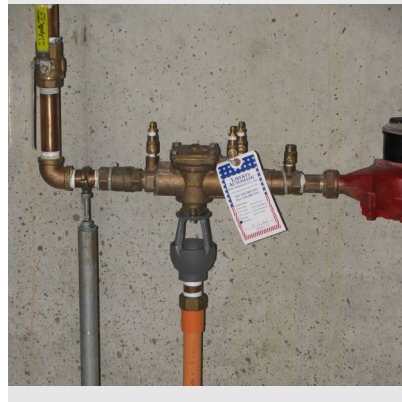
Lead Plumbing



Cross Connections



Backflow



Backflow Prevention By-Law Number 10-2017



Lead Plumbing



Quality Management



Peel's Drinking Water Quality Management System (DWQMS)

Thank you!