

## WHAT ARE THE WATERSHED'S KEY ISSUES?



### Stormwater Management

- The Etobicoke Creek watershed is a heavily urbanized watershed. It has limited and often outdated stormwater management infrastructure.
- High water flows associated with stormwater results in streambank erosion and increased flooding during storm events.
- Poor stormwater management also contributes to poor water quality as sediment and contaminants get picked up in the flows and deposited into the aquatic ecosystem.
- In the past, thousands of metres of stream were straightened and, in places, lined with concrete to quickly remove water from the area. Large sections of these hardened and straightened channels are now failing due to age and extreme storm events. Where removing concrete or addressing altered channels will not increase flood risk, the preferred practice is to restore and naturalize the watercourse.

### Urban Heat Island

- When greenspace and natural features are replaced with development such as buildings and roads, it changes the properties of the land surface.
- Hard, urban surfaces typically absorb more heat from the sun's energy compared to natural areas. This can cause the Urban Heat Island (UHI) effect. UHI has negative effects on natural systems and human health. These impacts will be increased by climate change.
- Enhancing greenspace and natural areas can reduce the UHI effect. This is an important way to adapt to climate change as well as to achieve other important benefits such as improved air and water quality.

## HOW CAN WE ENHANCE THE WATERSHED?

### What can you do?

- **Plant** native trees and shrubs on your property.
- **Reduce** or eliminate the use of deicing salt, pesticides, and fertilizers which can contaminate water.
- **Volunteer** for community tree plantings, litter pick-ups, or other stewardship events: [trca.ca/get-involved](http://trca.ca/get-involved)
- **Subscribe** to the *Creek Time* newsletter: [trca.on.ca/emcreeks](http://trca.on.ca/emcreeks)

### What local actions have been taken?

#### Alfred Kuehne Naturalization Project

- A 400 m stretch of straightened concrete channel was removed and naturalized. The new channel has a more natural course, habitat features such as riffles and pools, and riparian vegetation was planted along the creek. The floodplain was reconnected with the stream to provide flood relief to downstream areas and create wetland habitat.

#### County Court SNAP Implementation in Brampton

- More than a quarter of neighbourhood homeowners have been undertaking various home retrofit initiatives including landscaping, tree planting, energy and water efficiency measures. The City of Brampton also constructed a bio-filter swale to capture and treat local stormwater runoff in the neighbourhood.
- A *Green Home Makeover* was undertaken at a resident's home to serve as a demonstration site for water efficient landscaping and rainwater management practices, as well as building energy and water efficiency retrofits.

[trca.ca/etobicoke-mimico](http://trca.ca/etobicoke-mimico) | email: [eminfo@trca.on.ca](mailto:eminfo@trca.on.ca)

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To learn about The Living City Foundation: [thelivingcity.org](http://thelivingcity.org)



This Watershed Report Card is available online at [reportcard.trca.ca](http://reportcard.trca.ca)

## Etobicoke Creek

# WATERSHED

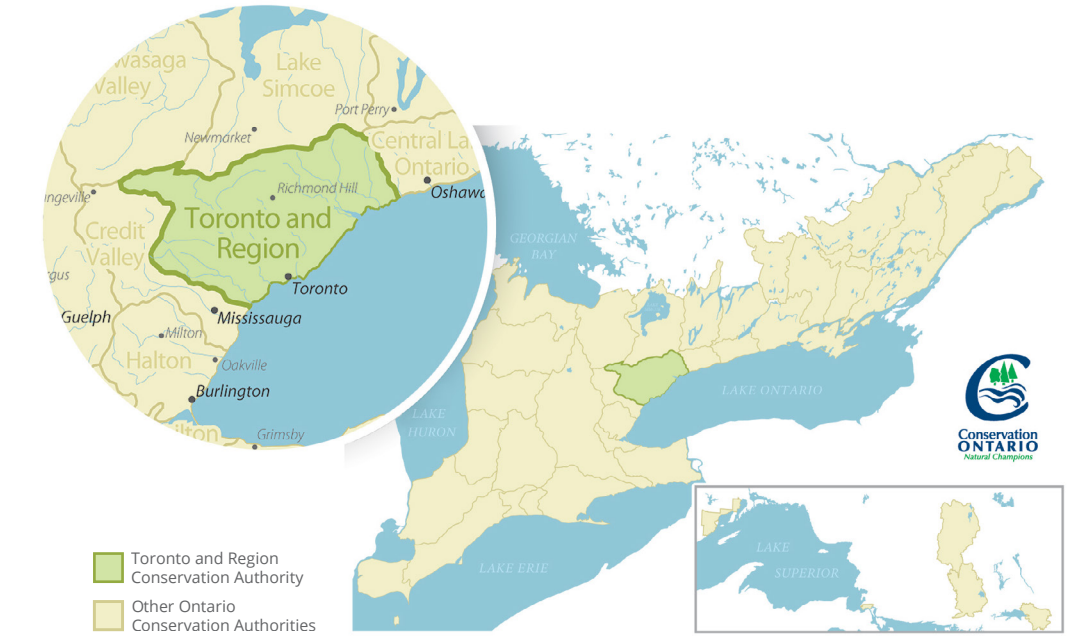
## Report Card 2018



Toronto and Region Conservation has prepared this report card as a summary of the state of our forest and water resources.



## WHERE ARE WE?



### What is a watershed?

A watershed is an area of land, drained by a creek or stream into a river, which drains into a body of water such as a lake. Everything in a watershed is connected. Our actions upstream affect conditions downstream.

### GRADING

<b>A</b> Excellent
<b>B</b> Good
<b>C</b> Fair
<b>D</b> Poor
<b>F</b> Very Poor
Insufficient Data

### What is a watershed report card?

Ontario's Conservation Authorities report on watershed conditions every five years. The watershed report cards use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.

### Why measure?

Measuring helps us better understand our watershed. We can target our work where it is needed and track progress. We measured:



Groundwater Quality



Surface Water Quality



Forest Conditions



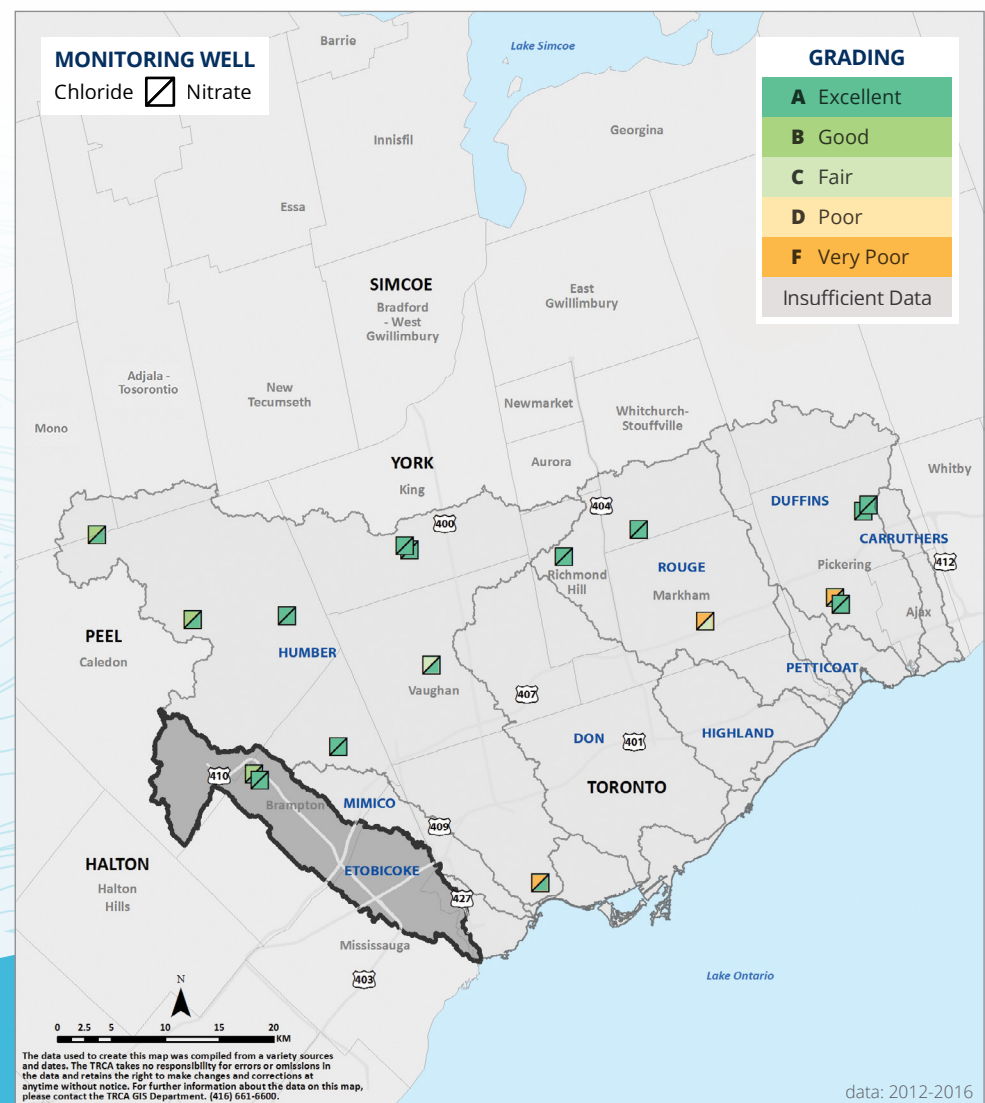
Land Cover

# GROUNDWATER QUALITY

Fertilizers (nitrogen) and road salt (chloride) are common sources of contamination in groundwater. Concentrations of nitrate and chloride were measured at 17 monitoring wells across the TRCA jurisdiction. Grades were calculated for each well but not for each watershed. Learn more about groundwater at [trca.ca/source-water-protection](http://trca.ca/source-water-protection)

## What did we find?

- Generally, concentrations of nitrate were better than the drinking water guidelines ('A' grade) in most wells across the jurisdiction.
- The 2 wells located in the Etobicoke Creek watershed received 'A' grades for nitrate and a 'B' or better grade for chloride.



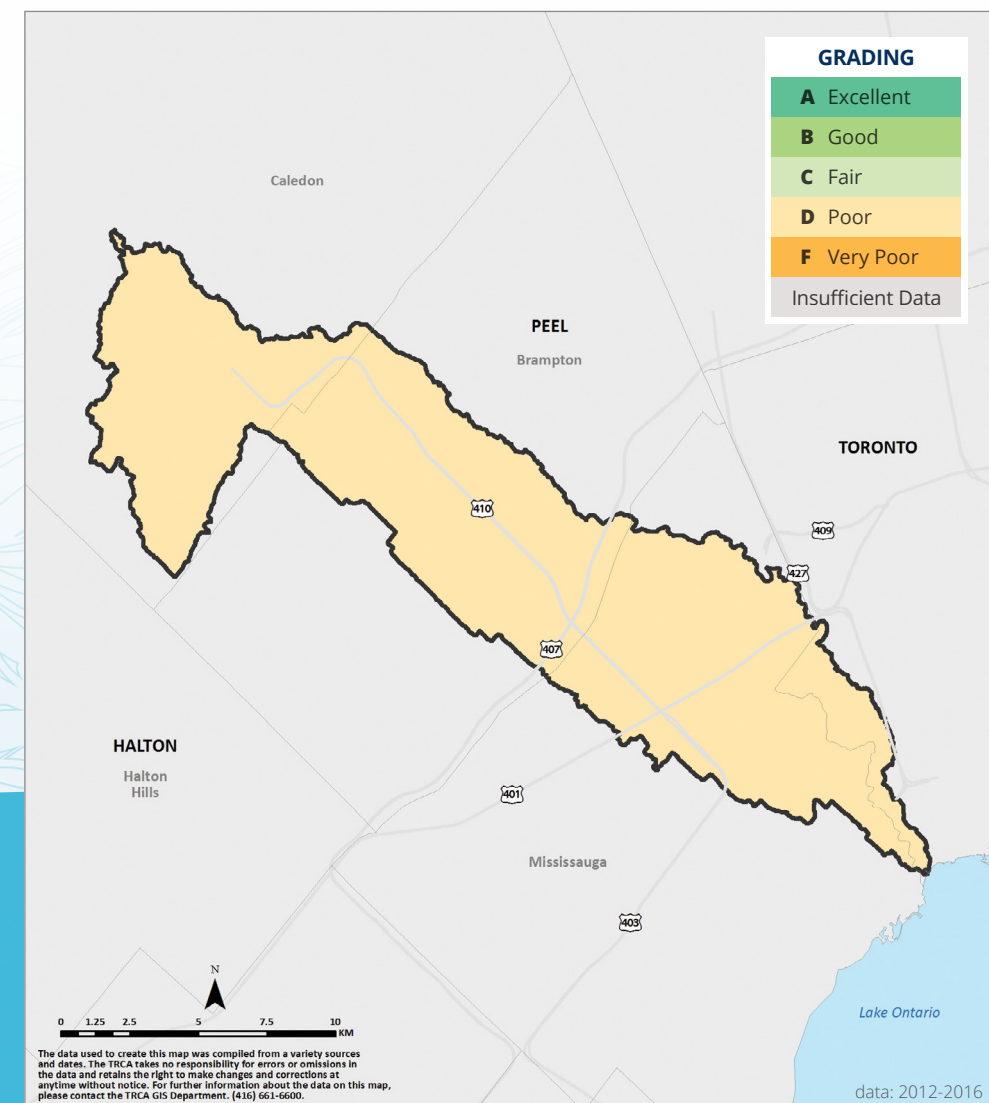
Monitoring wells are part of the Ontario Ministry of the Environment and Climate Change's Provincial Groundwater Monitoring Network (PGMN).

# SURFACE WATER QUALITY

Concentrations of phosphorus and *Escherichia coli* (*E. coli*) bacteria were measured at 3 stations in the Etobicoke Creek watershed. Benthic invertebrates (small aquatic animals living in the sediment) were identified at 13 stations. The type and proportion of these animals are indicators of water quality conditions. These indicators were combined to provide a grade for the watershed.

## What did we find?

- The Etobicoke Creek watershed received overall 'D' grade for surface water quality which has not improved since the 2013 report card.
- Chloride concentrations are not included in the grade but chloride is an issue in the watershed. Over 75% of the samples collected had concentrations greater than the recommended guideline. The chloride found in streams is typically from road salt and elevated concentrations can harm aquatic life.



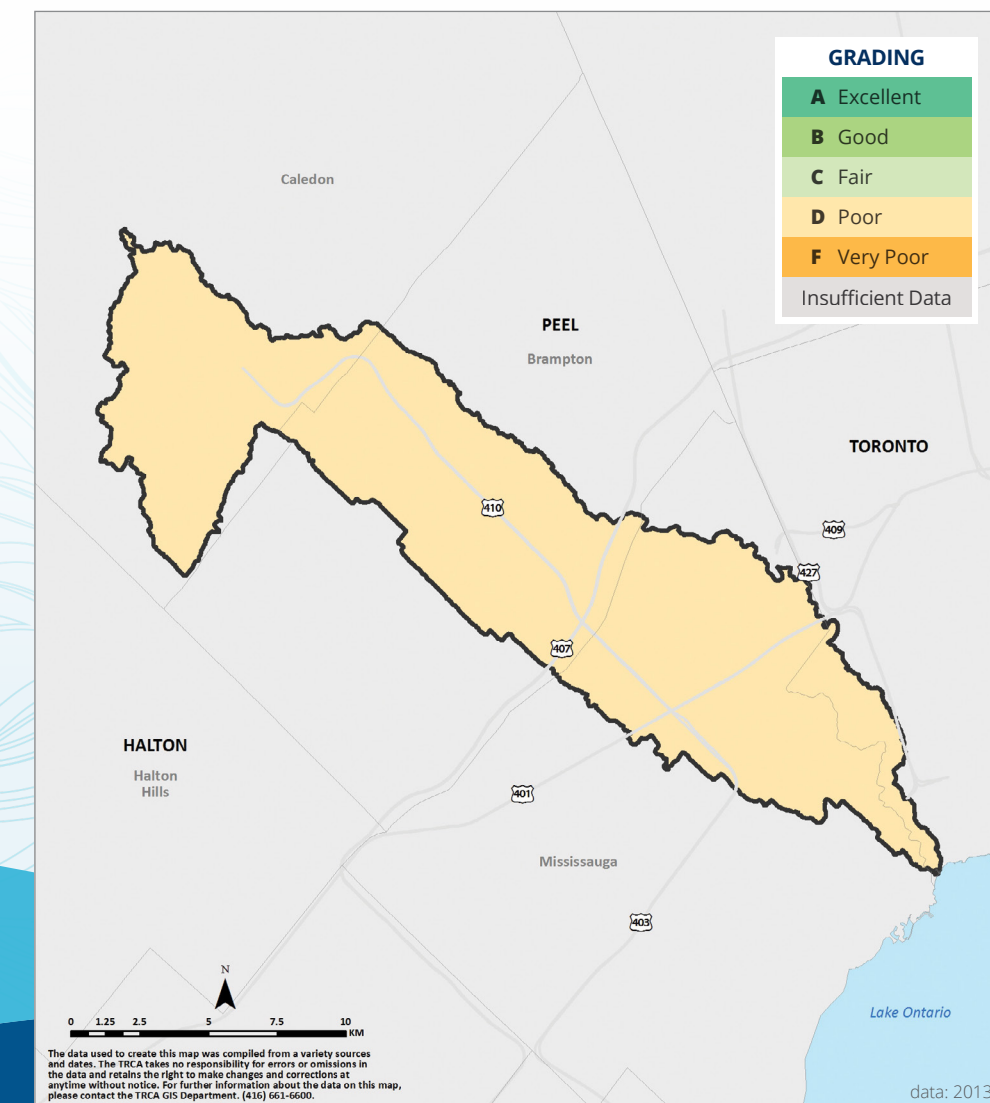
Data are based on surface water quality monitoring stations that are part of the Ontario Ministry of the Environment and Climate Change's Provincial Water Quality Monitoring Network (PWQMN) and/or TRCA's Regional Watershed Monitoring Program (RWMP).

# FOREST CONDITIONS

Forests help to clean our air and water, provide habitat and shade, improve water infiltration, and help to reduce both erosion and flooding. The percentages of forest cover, forest interior, and streamside cover were measured with Geographic Information Systems (GIS) and combined to provide a grade for the watershed.

## What did we find?

- The Etobicoke Creek watershed received a 'D' grade for forest conditions which is the same as the previous report card in 2013.
- There was about 5% forest cover, <1% interior forest cover, and 22% streamside cover. Streamside cover has increased by almost 4% since the last report card which is a sign of improvement.



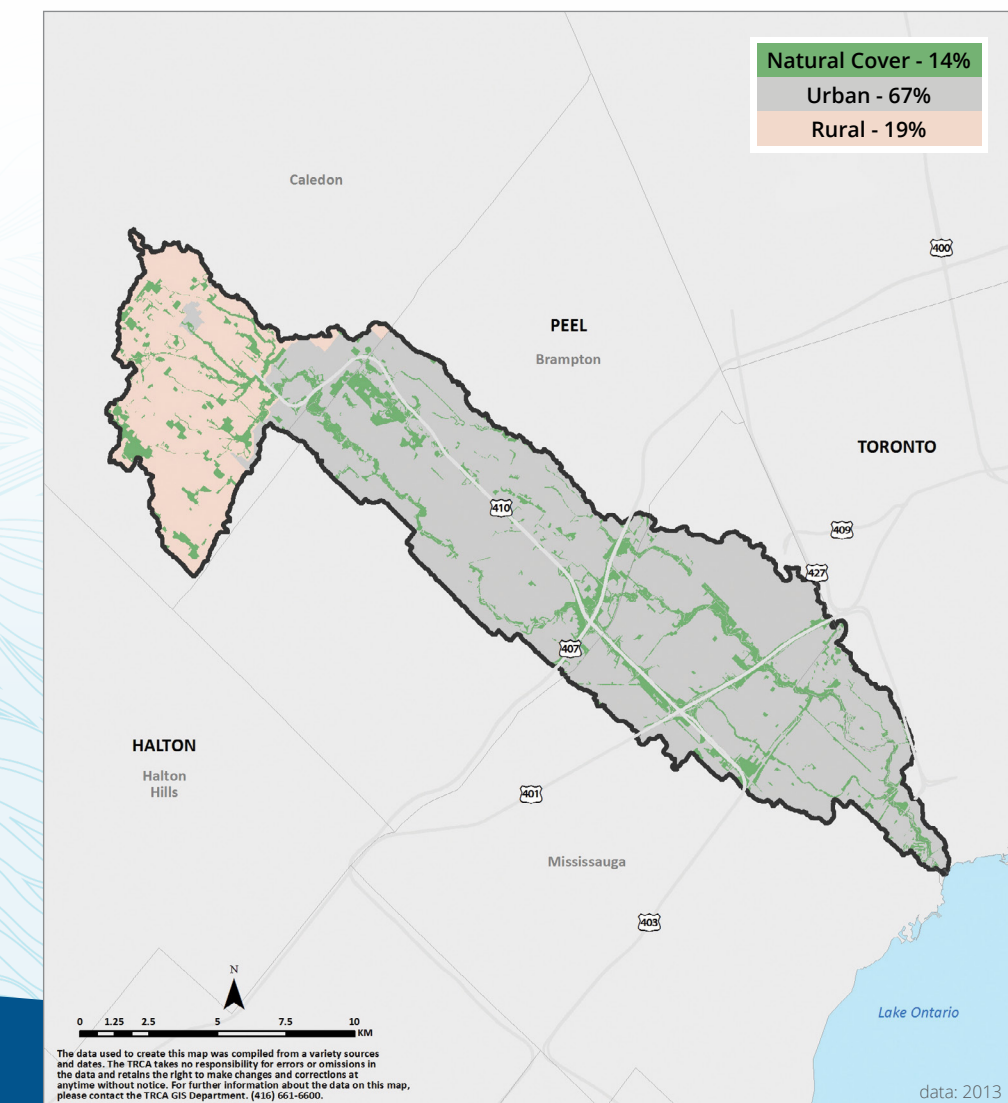
Forest condition targets were set by Conservation Ontario. TRCA has a unique set of targets for natural cover which consists of areas of natural vegetation such as forest, wetland, and meadow. TRCA specific targets are not included in this report card.

# LAND COVER

How we use land affects the natural environment and our health. Forests and wetlands have been removed over time because agricultural and urban land uses have expanded. As our region continues to grow, we need to consider how to increase the amount of natural cover and greenspace available so that people can enjoy the many health benefits of nearby nature.

## What did we find?

- The Etobicoke Creek watershed is comprised of 67% urban area, 19% rural area, and 14% natural cover.
- Just under 60% of the population in the watershed is within 300 m of natural cover greater than 1 ha in size.
- Natural cover is unevenly distributed across the Toronto region. More natural cover would mean additional opportunities to support wildlife populations and habitat, and equal access to nature for residents.



Natural cover consists of vegetation such as forest, wetland, and meadow. Distance to natural cover and size values are based on indicators recommended in scientific literature (e.g. Van den Bosch et al., 2015).