

WHAT ARE THE WATERSHED'S KEY ISSUES?



Increased Urbanization and Stormwater Runoff

- Urbanization is the cause of a unique set of issues for humans, plants, and animals.
- Increased urbanization and its consequences (example: more roads, cars, pollution) are and will continue to impact the natural environment.
- Stormwater runoff is also challenge. Water from rain or snow runs off surfaces like pavement and farm fields into nearby streams.
- The high water flows associated with stormwater result in streambank erosion and increased flooding during storm events.
- Stormwater is also associated with poor water quality because it carries sediments and contaminants directly into the river system.
- Stormwater carries chloride from road salt to streams, ponds, and lakes.
- Old stormwater infrastructure in existing urban areas was designed for water quantity control only and does not mitigate water quality impacts.

HOW CAN WE ENHANCE THE WATERSHED?

There is a need to improve the sustainability of the urbanized portions of the Petticoat Creek watershed, and to protect and restore the remaining natural systems.

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 supplies.
- **Volunteer** for community tree plantings, litter pick-ups, or other stewardship events: trca.ca/get-involved

What local actions have been taken?

- Several restoration projects such as tree and meadow planting were completed in priority urban areas such as hydro corridors.
- TRCA partnered with the Altona Forest Stewardship Committee for activities such as the annual clean-up and invasive species plant removal in Altona Forest. www.altonaforest.org



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To learn about The Living City Foundation: thelivingcity.org



This Watershed Report Card is available online at reportcard.trca.ca

Petticoat 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

A Excellent
B Good
C Fair
D Poor
F 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:



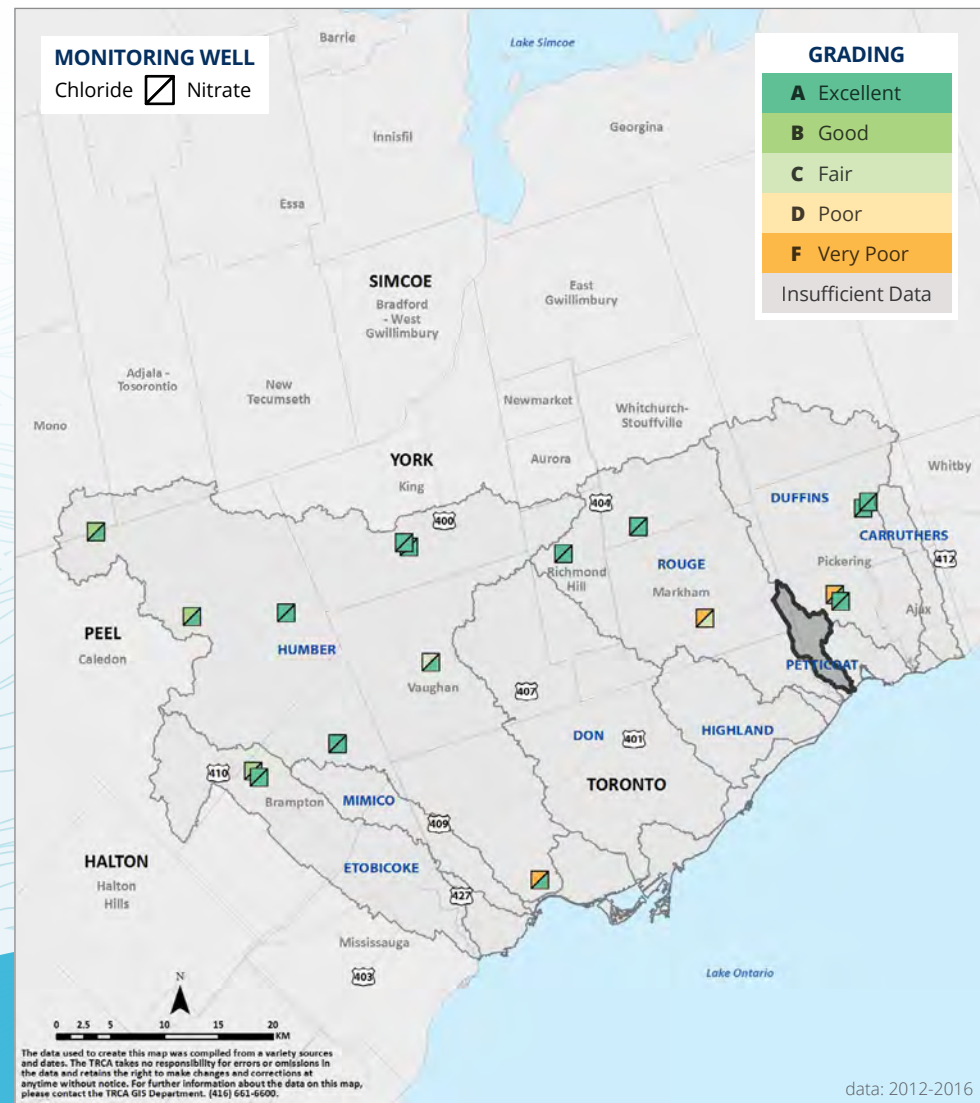


GROUNDWATER QUALITY

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

What did we find?

- Generally, concentrations of nitrate were better than the drinking water guidelines in most wells across the TRCA jurisdiction.
- About 60% of the monitoring wells in the TRCA jurisdiction received an 'A' grade for chloride. The 'F' grades were located in urban areas close to major roads.



Monitoring wells are part of the Ontario Ministry of the Environment and Climate Change's Provincial Groundwater Monitoring Network (PGMN). No wells were located within Petticoat Creek watershed.

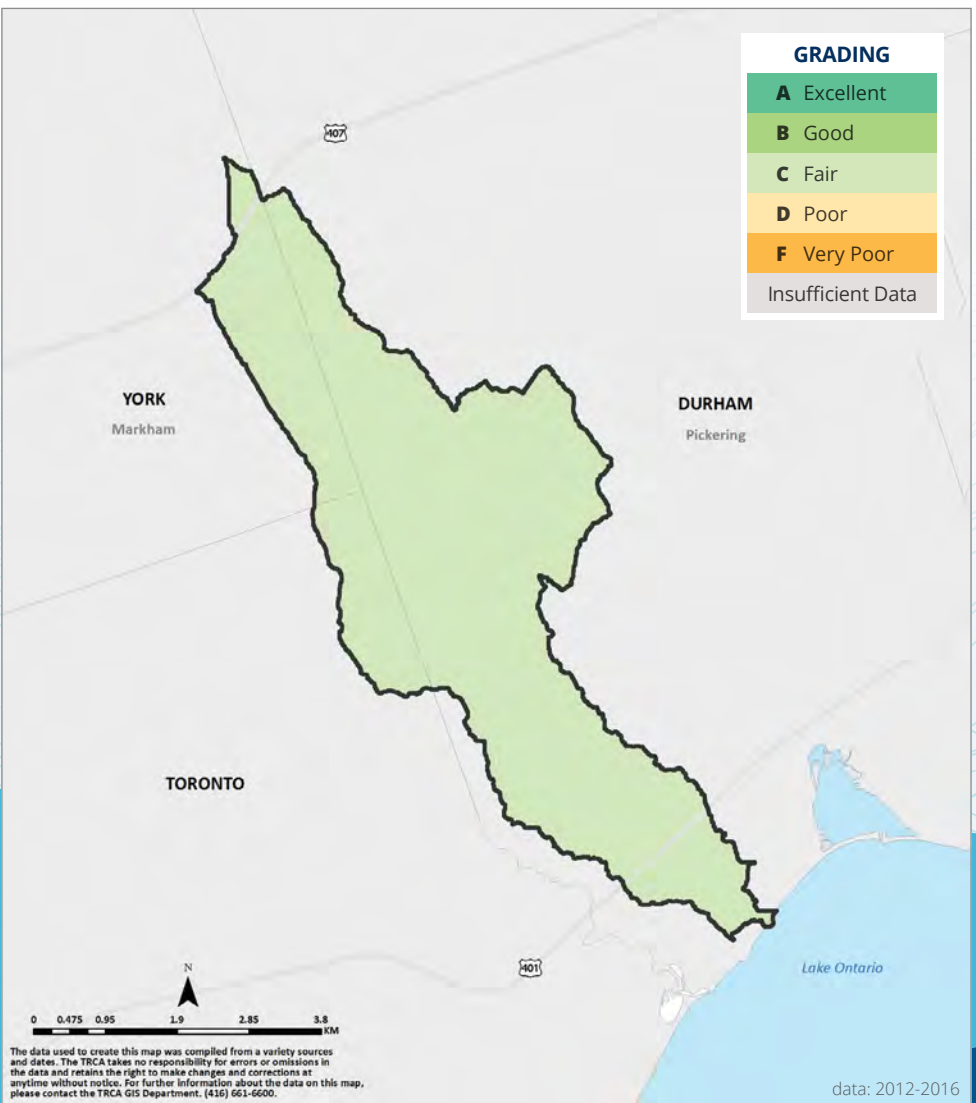


SURFACE WATER QUALITY

Concentrations of phosphorus and Escherichia coli (E. coli) bacteria were measured at one station in the Petticoat Creek watershed. Benthic invertebrates (small aquatic animals living in the sediment) were identified at 4 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 Petticoat Creek watershed received an overall 'C' grade for surface water quality which is similar to most TRCA watersheds.
- Chloride concentrations are not part of the grade but chloride is an issue for the watershed. Almost 100% of the samples collected were above the recommended guideline. The chloride found in streams is typically from road salt and elevated chloride concentrations can harm aquatic life.



Data 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).

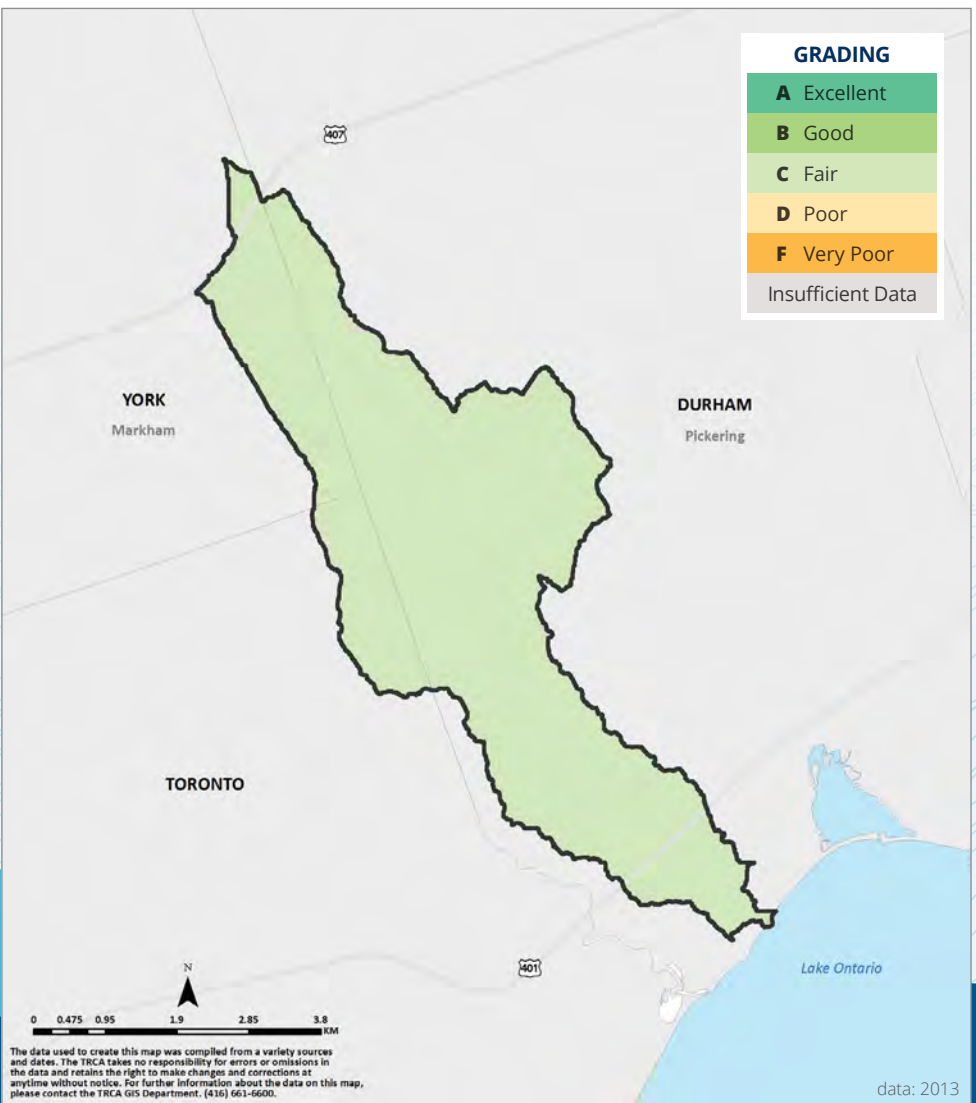


FOREST CONDITIONS

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 Petticoat Creek watershed received a 'C' grade for forest conditions which has improved from a 'D' grade in the last report card in 2013.
- There was approximately 16% forest cover, 1% interior forest cover, and 45% streamside cover. Both the forest and streamside cover increased by about 3% since the last report card in 2013 which is a positive improvement for the watershed.



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.

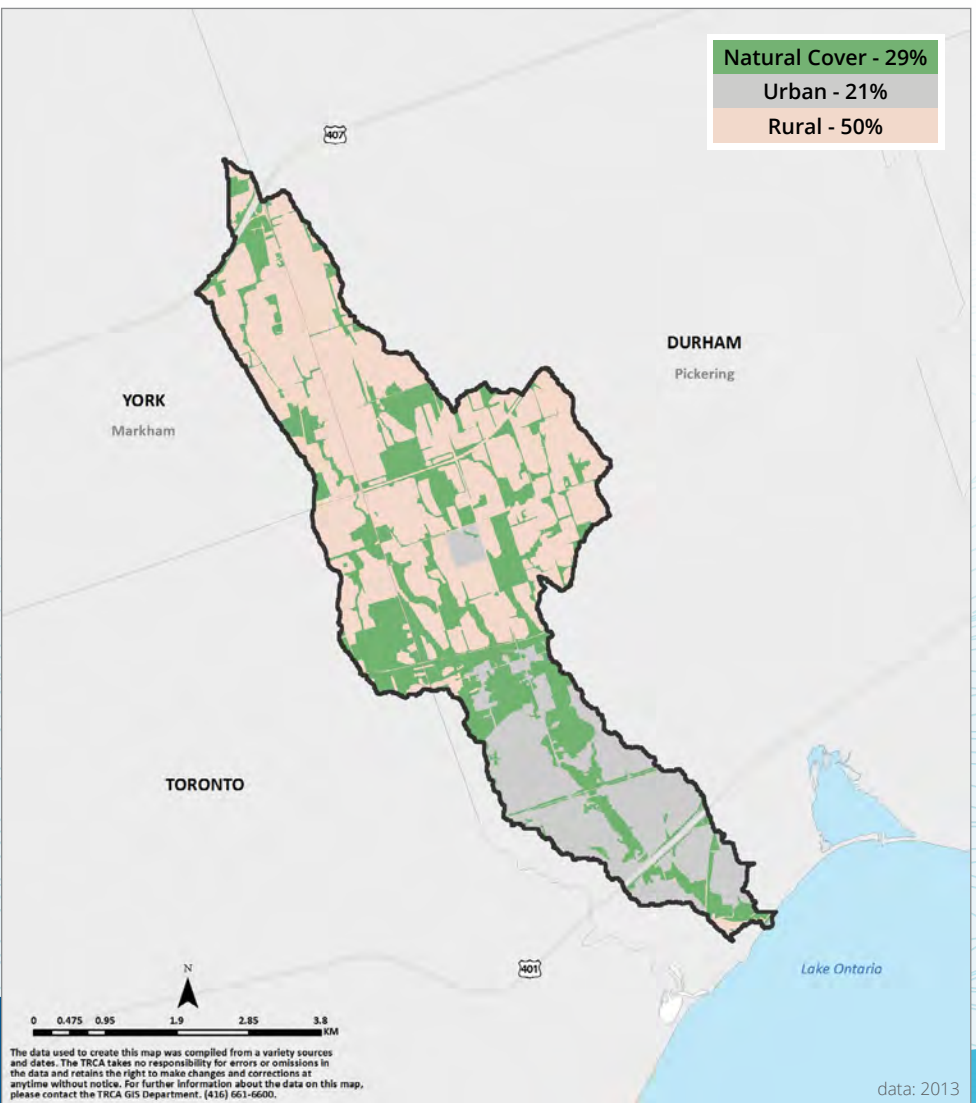


LAND COVER

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 Petticoat Creek watershed has the highest proportion of rural area in the TRCA jurisdiction at 50%.
- Almost the entire population (95%) of the Petticoat Creek 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).