

# What Are We Doing?

Conservation Halton is a community-based environmental agency that protects, restores and manages natural resources, such as creeks, forests and Niagara Escarpment lands through science-based programs and services. Our watershed region covers approximately 1000 square kilometers and includes Milton, Burlington, Oakville and parts of Mississauga, Hamilton, Halton Hills and Puslinch. There are three major watersheds in our jurisdiction – the Sixteen Mile Creek, Bronte Creek and Grindstone Creek.

## Environmental Planning

Conservation Halton protects local ecosystems and contributes to the quality of life in communities throughout the watershed. We provide land-use planning input and administration of Ontario Regulation 162/06, which ensures that development does not impact wetlands, shorelines or waterways. We also collect data through a number of ecological monitoring activities and use it to evaluate and report on existing conditions within the watershed and help establish targets for protection and rehabilitation activities.

## Water Resources Management

We manage water resources using multiple techniques, such as operating dams and overflow channels, flood forecasting, and the Source Water Protection program. These services help maintain secure supplies of clean water to protect communities from flooding and erosion, and to ensure that environmental planning is an integral part of community development.

## Forest Resources Management

We monitor and enhance forest resources using sustainable forest management practices and wildlife habitat improvements which contribute to the health of our watershed's natural environment.

## Lifelong Education and Recreation

We offer education and recreation experiences in natural environments that enrich the lives of people of all ages by increasing awareness and appreciation of the watershed's natural and cultural heritage.



# What You Can Do.

## Be a Watershed Steward

If we all work together, we can make a difference. Imagine if close to 500,000 people living in our watershed all made wise environmental choices! Collectively, private landowners own the majority of natural areas in Conservation Halton's watershed. Each parcel of land, whether it is urban or rural, and each individual action, can make a real difference to the health of our environment. Ultimately, we must balance human demand with the earth's ability to regenerate resources and provide services. Whether you live in a city, or close to a forest, wetland, meadow or stream, there are lots of actions you can do to help our natural environment thrive!

- Plant native species on your property
- Keep yard waste and garbage out of natural areas
- Avoid using toxic pesticides and fertilizers
- Resist the urge to "tidy up" the forest floor
- Learn to recognize and control the spread of invasive species
- Protect your well from contamination
- Regularly maintain and upgrade your septic system

## We are here to help

Our website has information on everything from planting trees, to selecting native species of plants, to helping protect critical fish and wildlife habitats. We also have a number of community action and volunteer programs, education programs for children, and stewardship tips. We can offer suggestions about how to make your property more environmentally friendly and guide you to available funding opportunities.

For a more detailed discussion please visit  
[www.conservationhalton.ca/reportcard](http://www.conservationhalton.ca/reportcard)



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Halton

# WATERSHED Report Card 2013



# Where Are We?



We are one of 36 Conservation Authorities across Ontario under the umbrella organization of Conservation Ontario.

## What Does This Report Card Measure?



Surface Water Quality



Forest Conditions



Impervious Land Cover



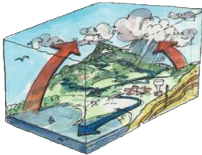
Groundwater Quality

## Why Measure?

Measuring helps us better understand our watershed. It helps us to focus our efforts where they are needed most and track progress. It also helps us to identify healthy and ecologically important areas that require protection or enhancement.

## What is a Watershed?

A watershed is an area of land drained by a river or stream.



Similar to the branch of a tree, creeks empty into streams, which then empty into larger streams, eventually forming one main trunk.

Within this system, everything is connected to everything else. In other words, actions which take place at the top of the system can and do affect those downstream.

## Grading

- A Excellent
- B Good
- C Fair
- D Poor
- F Very Poor

The standards used in this report card were developed by Conservation Authorities to ensure consistent reportings across the Province of Ontario and are intended to provide watershed residents with information to protect, enhance and improve the precious resources that surround us.

Conservation Halton has prepared this report card as a summary on the state of our forests, impervious land cover, surface water, and ground water resources.

Member of







## Surface Water Quality

Water quality in Conservation Halton's watershed ranges from a grade of B to F, with an overall average of C. The best water quality is found in the headwater areas where human activities have the least negative impact.



## Forest Conditions

Forests provide many ecological functions such as wildlife habitat, air purification, erosion control, and recreational opportunities. The overall forest cover in our watershed is 26.4% or a grade of C. The majority of large forested areas are located above the Niagara Escarpment.



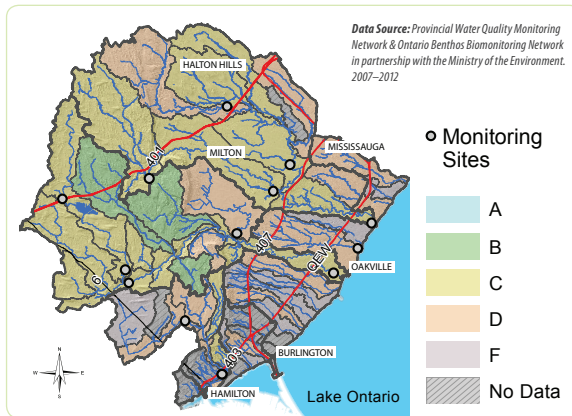
## Impervious Land Cover

If 10% of a watershed's land cover is impervious it can begin to result in the loss of aquatic species. By the time you reach 26 to 30% imperviousness, entire aquatic ecosystems can be permanently damaged. Overall imperviousness in our watershed is 21.4% which is a grade of D.



## Groundwater Quality

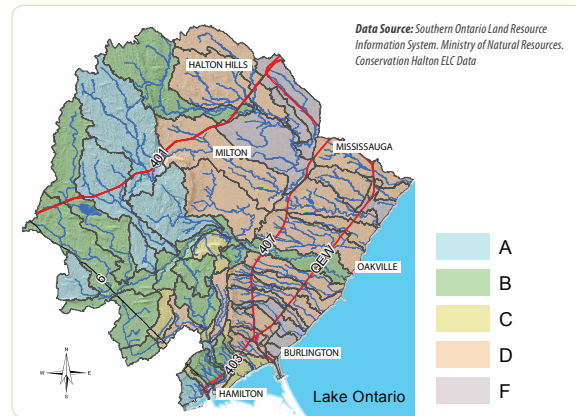
Groundwater quality varies across the watershed based on geology and land use. Nitrogen and chloride were used to characterize the quality of groundwater with the watershed, receiving an overall grade of A, indicating excellent conditions.



Conservation Halton monitors surface water quality as part of the Provincial Water Quality Monitoring Network (PWQMN) and the Ontario Benthos Biomonitoring Network (OBBN). The overall surface water quality grades are a combination of both scores.

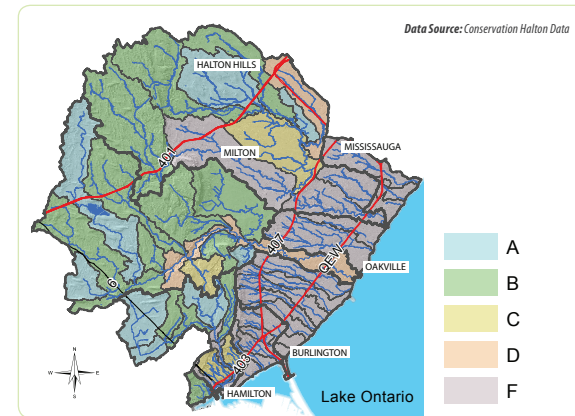
As part of the PWQMN, water samples are collected monthly from March to October at locations across the watershed and analyzed for 37 parameters (e.g. total phosphorus, chlorides and nitrates). As Conservation Halton does not monitor for *E.coli*, it was not a factor in the final grading.

Benthic invertebrates, collected as part of OBBN, are aquatic organisms that live in the stream bed. They are excellent indicators of water and habitat quality because they tolerate a range of conditions and can reflect long term trends in water quality.



A minimum of 30% forest cover is typically required to sustain species biodiversity within a watershed. The size and shape of individual forests are also important because some species require large forested areas with breeding habitat that is well buffered from the edge of the forest. In addition, the specific species of plants within a forest help determine which wildlife species can live there.

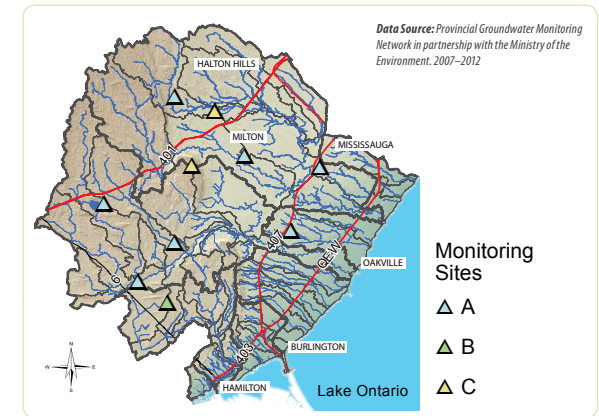
The location of individual forests in relation to one another is also an important factor in the distribution of plants and wildlife. In fragmented landscapes such as in southern Ontario, the maintenance and restoration of natural corridors to link forest patches is valuable in creating natural heritage systems which are more resilient to disturbance.



Impervious land cover includes hard surfaces that do not allow water to absorb into the soil, such as roads, driveways, parking lots and rooftops. Runoff can carry pollutants as it runs along these surfaces and reach local creeks, lakes and aquifers. These pollutants can include gasoline, fertilizers, detergents, salts, pet waste and other toxic chemicals.

Runoff from hard surfaces also increases the amount of water that would naturally occur in a stream, since less is absorbed by the ground. This can cause higher, faster flows resulting in flooding, erosion and habitat degradation.

Areas with natural vegetation absorb runoff from rain and snow and help to filter impurities before they impact water quality, quantity and stream health. Natural vegetation also helps to moderate stream temperatures and flows, and supports aquatic life.



Groundwater is the water found beneath the earth's surface in layers known as aquifers. We monitor the quality of groundwater using eleven wells of the Provincial Groundwater Monitoring Network (PGMN) across the watershed. Samples are collected annually and are analyzed for calcium, magnesium, chloride, sodium, nitrogen, phosphorous and metals.

Nitrogen and chloride were used as the basis for grading the watershed since they are influenced by human activities. For example, fertilizers and septic systems can increase nitrogen concentrations. Similarly, chloride in groundwater is the result of both natural and human influences, and can be released by septic systems, water softeners and through the salting of roads.

Base maps: Copyright Queen's Printer

