

Healthy Watersheds



What happens here matters

We continue to report the overall health of the Central Lake Ontario Conservation (CLOCA) watershed declines as you travel from the headwater areas in the Oak Ridges Moraine to the more urban and developing areas located in the mid reaches and along the Lake Ontario Waterfront. There are still significant areas of habitat features such as wetlands, forests and riparian buffers in the headwaters that protect ground and surface water resources. The following is a brief summary of work we completed with our partners, from 2012 to 2016 supporting watershed health across our jurisdiction.

Working together

CLOCA staff continue to develop Watershed Management Plans, Strategies and Action Plans to support implementation of programs and projects to improve watershed health. A Land Securement Strategy was developed in 2013, to assist us with the acquisition of sensitive lands that will contribute to maintaining forest cover and improving ground and surface water quality over the long term.

During the period of this Watershed Report Card, we have planted 83,000 native trees, creating 70 hectares of forest cover for the future. The Durham Region Coastal Wetland Monitoring Program has identified and implemented a number of wetland restoration initiatives in Bowmanville Marsh, Second Marsh and McLaughlin Bay.

In partnership with the University Of Ontario Institute Of Technology and the City of Oshawa, we initiated the Oshawa Creek Water Quality study in 2013 to collect water quality data throughout the Oshawa Creek watershed.

How Can We Enhance The Watershed?

We need your help

Install a rain barrel under your downspout to reduce surface water runoff. Not only do you get a great clean source of water for your garden, but local creek water quality will improve.

If you have a creek running through your property, stop mowing to the edge and don't dump yard waste there, it only smothers the vegetation, causes erosion and attracts invasive plant species.

If you happen to have an unmaintained well that you no longer use, we can help you decommission it with a financial grant to further protect groundwater resources in our watershed.



Do you have questions beyond the scope of this summary document? Visit CLOCA.com for the full report or more information.



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The Watershed Report Card is available online and in other formats upon request.

Central Lake Ontario Conservation

WATERSHED Report Card 2018



Central Lake Ontario Conservation has prepared this report card as a summary of the state of your forests, coastal wetlands, ground and surface water resources.



Where Are We?



What is a Watershed?

A watershed is an area of land drained by a river or creek. Similar to the branches of a tree, small creeks empty into larger creeks eventually forming the main trunk or tributary which eventually drains into a body of water like Lake Ontario, as happens in the Central Lake Ontario Conservation watershed.

Why Measure?

Measuring helps us better understand overall how our watershed is performing. With this information, we can better target our priority efforts and resources where it is most needed. We measured:



Groundwater Quality



Surface Water Quality



Forest Conditions



Wetland Conditions

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 data used in the preparation of this Watershed Report Card was collected between 2012 and 2016. We use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners. We now have 10 years of data, and clearly show both improvement and decline in watersheds across our jurisdiction.



Groundwater Quality

Groundwater provides an important source of baseflow to our creeks and potable water to residents and businesses in our rural communities. Two indicators, nitrate and chloride, are used to assess groundwater quality. Concentrations of these indicators were measured at 11 Ontario Ministry of the Environment and Climate Change (MOECC) monitoring wells across our jurisdiction.

What Did we Find?

- Nitrate and chloride concentrations are better than the MOECC drinking water guidelines in 9 out of 11 wells which received an A grade.
- Concentrations of nitrate and chloride approach or exceed the drinking water guidelines at 2 of 11 wells resulting in poorer grades (less than an A grade). One of these wells is located in a shallow aquifer.
- The quality of water in a private well may vary from that of the monitoring wells. In some cases, the location of wells was selected to monitor local water quality issues.



Surface Water Quality

Water in a creek is influenced by the surrounding land use and how that is managed. Concentrations of phosphorous, Escherichia coli (E.coli) and benthic invertebrates (small aquatic organisms living in the sediment) are measured at monitoring stations in our creeks to determine overall surface water quality in our watersheds. Only 1 watershed, the Oshawa Creek, has data to represent all 3 indicators.

What Did we Find?

- Grades range from C to F.
- While there has been an improvement in the Bowmanville Creek, we have seen a decline in the Lynde, Oshawa and Farewell Creek watersheds since the 2013 Watershed Report Card. More efforts are needed to reduce bacterial and nutrient inputs through improvements to land management practices. This will improve water quality and support healthy aquatic ecosystems.



Forest Conditions

We know that trees clean our air and water, prevent erosion, reduce flooding and provide important habitat for wildlife. The more forested a watershed is, the healthier and more resilient it will be to change. The percentages of forest cover, forest interior and streamside cover were measured with Geographic Information Systems (GIS).

What Did we Find?

- Grades across our jurisdiction range from C to F.
- Bowmanville Creek was our highest scoring watershed with a C grade. Several watersheds including Soper, Pringle and Harmony Creeks have declined a grade since our last Watershed Report Card in 2013. Again many of the small watersheds in the southern portion of our jurisdiction, which sustain little forest cover due to urban and agricultural land use, continue to receive an F grade.
- Many forests across our jurisdiction are not well connected and interior forest is becoming increasingly rare in all of our major watersheds. Additional stressors like invasive species, building highways and continued urbanization contribute significantly to declining forest conditions.



Durham Region Coastal Wetland Monitoring Program

Durham Region Coastal Wetland Monitoring Program

The Durham Region Coastal Wetland Monitoring Project (DRCWMP) is a long-term monitoring program that uses biological and physical indicators to assess the condition of 18 coastal wetlands. The information collected through monitoring provides direction for management and restoration. Data is collected on water quality, water levels, bird, amphibian, fish, macroinvertebrate and submerged aquatic vegetation communities.

Monitoring data collected between 2012 to 2016 shows the wetlands in our jurisdiction, are generally in a state of poor health. Conditions in coastal wetlands reflect the cumulative impacts of changing land-use activities in our watersheds. Restoration and enhancement initiatives to improve water quality, vegetation cover, and wildlife habitat, will be necessary in both the wetlands and their watersheds to improve overall health of these important ecosystems.

