

Long Point Region Watershed Report Card 2023



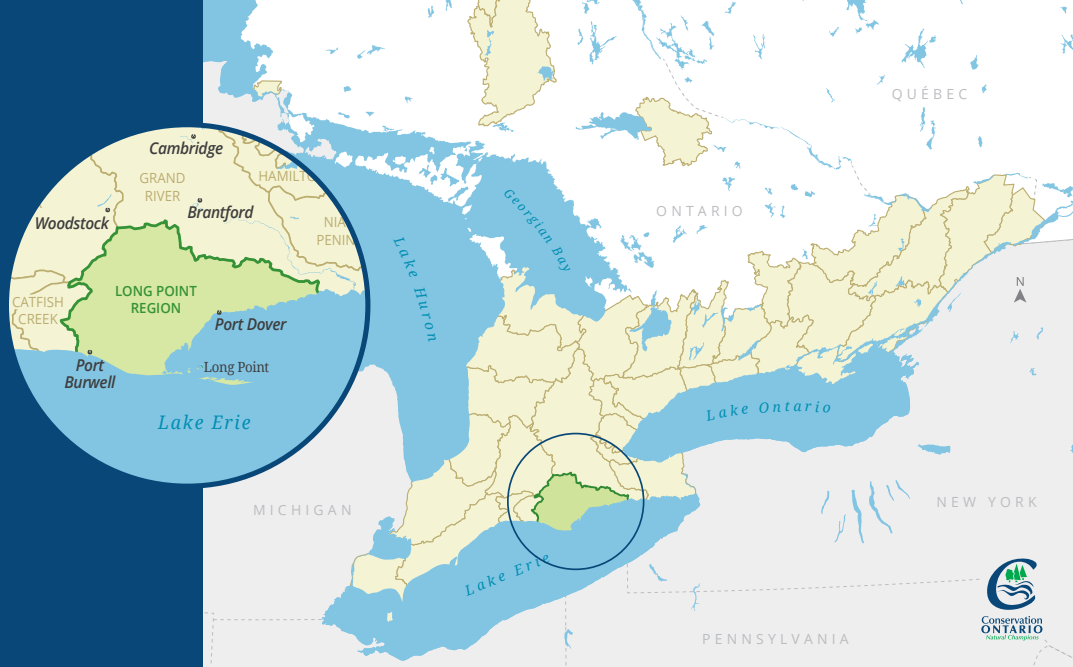
Long Point Region Conservation Authority has prepared this report card as a summary of the health of the forests, wetlands, and water resources.



Long Point Region
Conservation Authority



WHERE ARE WE?



What is a Watershed?

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

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



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 watershed report cards use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.



Surface water quality is evaluated using phosphorus and benthic macroinvertebrates (small aquatic animals without backbones). Concentrations of phosphorus were measured as part of the Provincial Water Quality Monitoring Network (PWQMN) at locations throughout the watershed designated by the Ministry of the Environment, Conservation and Parks (MECP). Benthic invertebrates were collected in spring or fall and identified according to the Ontario Benthos Biomonitoring Network protocol.

Phosphorus is essential to the growth and survival of organisms. High concentrations of this nutrient can lead to water with low oxygen levels, excessive algae growth and impaired aesthetics. Phosphorus levels tend to increase when products such as detergents, sewage and fertilizers find their way into the water, and are further increased through soil erosion. Since the previous *Report Card*, LPRCA has worked with 14 landowners to design erosion control projects and has used subsidies to incentivize the planting of 2,574 acres of cover crops, helping keep soil and nutrients in place on fields and out of waterways.

What Did We Find?

- The Provincial Water Quality Objective for phosphorus is 0.03 mg/L for streams and rivers. In total 33.7% of phosphorus samples from the watershed fell below this threshold.
- The type and presence of benthic organisms reflect water quality. Surface water quality grades are based on the Family Biotic Index which is calculated using each organism's tolerance value to pollutants. In total, 43% of samples received C grades, indicating that fairly substantial pollution is likely.
- Overall improvement since 2018 with the South Otter-Clear Creek subwatershed changing from a D to C grade.

GRADING

A Excellent

B Good

C Fair

D Poor

F Very Poor

Insufficient Data

The South Otter Creek and Dedrick-Young Creek grades are calculated using benthic data. The remaining subwatersheds are calculated using phosphorus and benthic data.





Long Point Region FOREST CONDITIONS

GRADE

C

Percentages of forest cover, forest interior and streamside cover are used to assess forest conditions. These indicators are measured with Geographic Information Systems (GIS). Data sources include the Ministry of Natural Resources and Forestry (MNRF) mapping, SOLRIS habitat loss data and internal resources.

Forest cover includes areas with more than 60% tree cover and trees greater than two meters in height. This means that tree planting and restoration activities don't impact the percent of forest cover in the watershed until the trees have grown large enough to count towards the total. Between 2007 and 2011, LPRCA planted 620,295 trees over 1,107 acres that did not factor into the previous *Report Card* in 2018 but are represented in this edition. An additional 786,702 trees planted across 1,420 acres by LPRCA since 2011 will impact forest coverage calculations in future *Report Cards*.

What Did We Find?

- Environment Canada recommends a minimum of 30% forest cover and 10% interior forest habitat to sustain natural diversity in a watershed. Streams should have a minimum 30-meter-wide riparian area that is 75% naturally vegetated, to provide and protect aquatic habitat.
- To help achieve these targets and improve watershed health, LPRCA and our partners offer a variety of programs to increase forest cover and expand stream buffers.
- Overall, 20.1% of the watershed is forested; 3.4% is forest interior and 36.4% of the riparian area is forested.
- Trees and buffers provide many benefits including wildlife habitat, improved air quality, temperature and climate regulation, carbon sequestration, water filtration and retention; while also offering recreation and economic opportunities.
- Forests grow slowly, but environmental benefits begin as soon as trees are planted.
- The grades of all subwatersheds have remained the same since the 2018 report card.

GRADING

A Excellent

B Good

C Fair

D Poor

F Very Poor

Insufficient Data

Forest conditions were calculated using data from Land Information Ontario and LPRCA data.





Long Point Region

GROUNDWATER QUALITY

GRADE

A

Concentrations of nitrate/nitrite and chloride were measured at 12 Provincial Groundwater Monitoring Network (PGMN) wells across the Long Point Region watershed. Grading developed by Conservation Ontario is guided by the Ontario Drinking Water Quality Standards (ODWQS).

What Did We Find?

- Nitrates and nitrites can enter groundwater through sources such as sewage, wastewater, fertilizers and manure. Where both nitrate and nitrite are present, the total of the two should not exceed 10 mg/L according to the ODWQS. All reported PGMN wells in the watershed were well below this threshold and received A grades, which remains the same as in 2018.
- Chloride is widely distributed in salts that can enter groundwater through de-icing, landfill leachate, wastewater or industrial effluent. Chloride concentrations are compared to the ODWQS Aesthetic Objective (AO) level of 250 mg/L. One PGMN well tested above this limit, resulting in an F grade for that well. All other reported wells received A grades, and were well below the AO. These grades are the same as in 2018.
- The results reflect the water measured within each well, and should not be used to assess groundwater quality in the broader area.

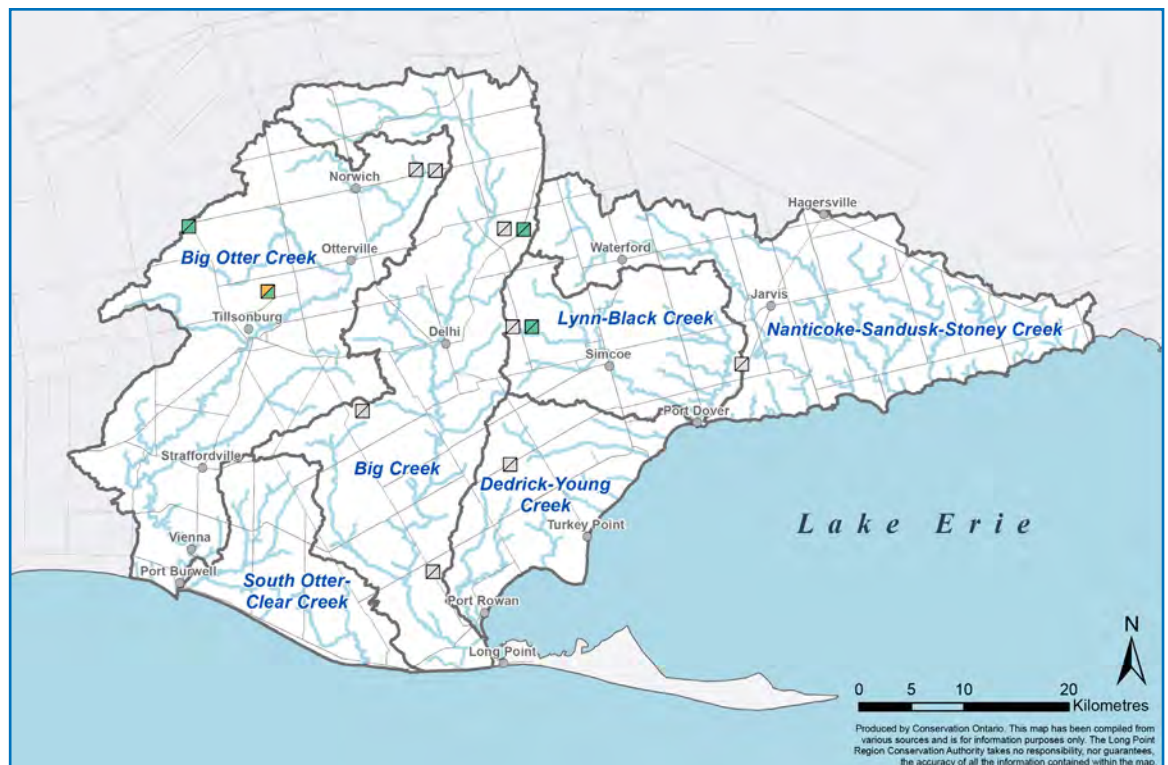
MONITORING WELL

Chloride ☒ Nitrate

GRADING

A	Excellent
B	Good
C	Fair
D	Poor
F	Very Poor
	Insufficient Data

Graded wells are based on up to 20 years of available data. As wells continued to be sampled, more will have sufficient data available to assign a grade in future reports.





Long Point Region **WETLAND COVER**

GRADE

D

Wetlands are areas of land covered by water for all or part of the year and have three different characteristics: a water source, poorly drained soils and wetland vegetation. Wetlands take on many forms and include marshes, bogs, fens and swamps. The percentage of wetland coverage was measured using the most recent Ministry of Natural Resources and Forestry (MNRF) GIS data and internal resources.

LPRCA has participated in the creation of 55 new wetlands in the Long Point Region watershed since the previous *Report Card* issued in 2018. Wetlands decrease flooding and erosion, capture and store nutrients like phosphorus and nitrogen, create wildlife habitat and provide recreational opportunities.

What Did We Find?

- Environment Canada recommends that a healthy watershed contains at least 10% wetland cover.
- Overall, about 4.6% of the watershed is covered by wetlands, which is a slight improvement from 2018.
- Wetlands provide valuable ecological and hydrological functions at site-specific and watershed scales.
- Wetlands are biodiversity hotspots. Many of Southern Ontario's flora and fauna, including species at risk, inhabit these habitats during all or part of the year.
- Wetlands are an important, yet often overlooked resource. Protecting and restoring wetlands is vital to conserving biodiversity and adapting to climate change.
- Wetland cover grades range from B to F.

GRADING

A Excellent

B Good

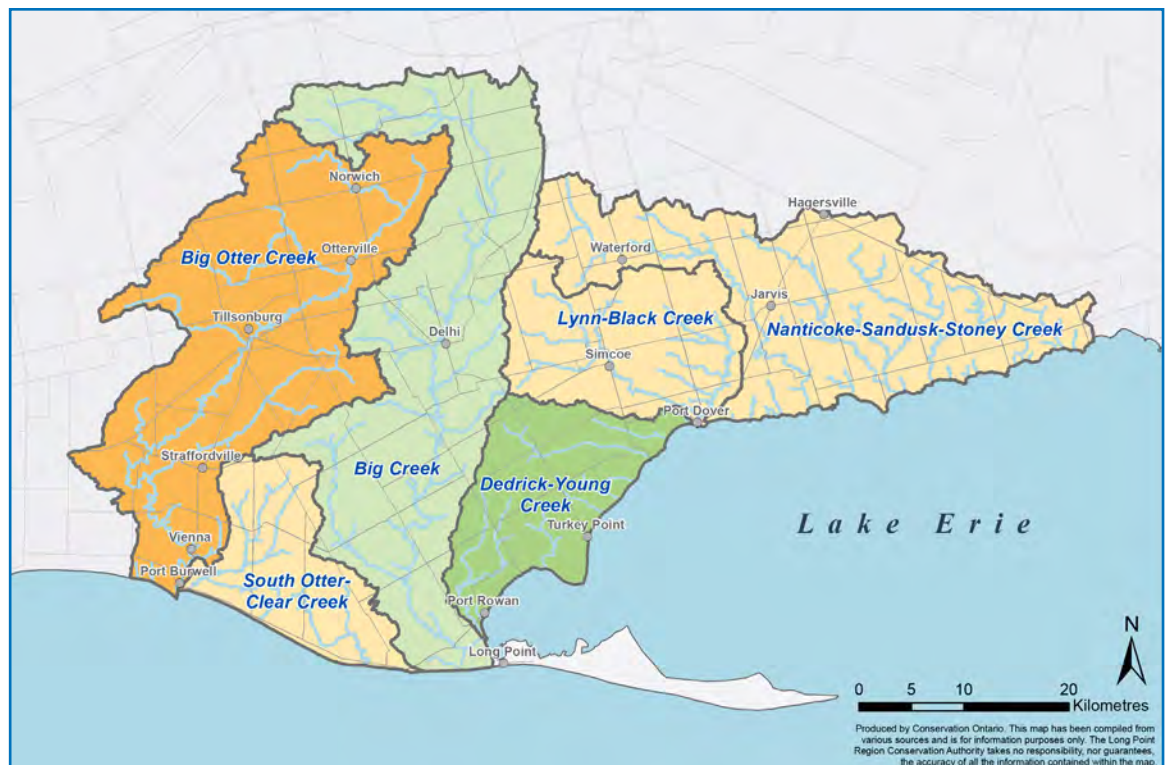
C Fair

D Poor

F Very Poor

Insufficient Data

Wetland cover was calculated using data from Land Information Ontario and LPRCA data.



WHAT IS OUR WATERSHED'S KEY ISSUE?



The Long Point Region watershed faces several key issues:

- Nutrient and sediment loading
- Habitat loss and fragmentation
- Biodiversity loss
- Invasive species
- Flooding and erosion
- Climate change
- Development pressure

What needs to be done to address these issues?

- Adopt best management practices on agricultural land to preserve water quality by reducing nutrient loading.
- Reduce soil erosion using cover crops, riparian buffers and other erosion control projects.
- Preserve and enhance existing natural habitat, and develop new habitat areas.
- Monitor and manage invasive species.
- Collaborate in watershed-wide efforts to preserve and protect the natural resources and biodiversity of the region.
- Decommission or implement bottom draw conversion on existing on-line ponds (ponds directly connected to a stream), decreasing stream temperatures.
- Direct development away from areas of environmental significance.
- Minimize fertilizer use on both urban and rural lands. Reducing fertilizer use next to streams also reduces the potential for nutrient loading of the watercourses to occur.

HOW CAN WE ENHANCE THE WATERSHED?



What Can You Do?

- Plant native trees, shrubs, grasses and wildflowers.
- Ensure proper maintenance of your septic system, if you have one.
- Limit your use of road salt during the winter by prioritizing alternative methods for improving traction and keeping paths of travel snow and ice free.
- If you own or operate agricultural property, adopt Best Management Practices to reduce erosion and protect water quality while also improving soil structure and crop yield. Consider the 4Rs of nutrient stewardship:

Apply the **right fertilizer source** at the

Right rate, at the

Right time and in the

Right place.

- Volunteer time or donate to local clubs, groups and organizations taking steps to protect and preserve the watershed.
- Report invasive species sightings through the appropriate channels.
- Advocate for the protection of environmentally significant areas.

HOW DOES LPRCA HELP?



Long Point Region Conservation Authority works with all levels of the government, local businesses, community groups and watershed landowners to protect, restore and manage the natural resources in the Long Point Region watershed.

LPRCA owns and manages 11,000+ acres of property that we maintain to preserve the natural biodiversity of the region and provide recreational opportunities. Beyond our campgrounds, conservation areas and forest tracts, we also offer a variety of programs and services to help watershed businesses and residents embrace their roles as stewards of their land.

LPRCA provides information and public outreach to create informed and engaged communities for a healthy watershed.

Healthy Watershed Services

LPRCA provides technical advisory services and offers cost-sharing programs to landowners and groups undertaking habitat restoration and enhancement projects.

Programs include cover crop incentives for agricultural landowners, tree planting services for private property, erosion control plan development and water quality protection through Rural Water Quality programs.

To learn more about the various landowner services available, visit LPRCA's website, lprca.on.ca/forestry-stewardship/landowner-services, or email watercare@lprca.on.ca.



Long Point Region
Conservation Authority

*Do you have questions?
Visit lprca.on.ca or contact us for more information:*

Long Point Region Conservation Authority

4 Elm Street, Tillsonburg, ON N4G 0C4

E-mail: conservation@lprca.on.ca | **Website:** lprca.on.ca

Phone: 519-842-4242 | **Fax:** 519-842-7123

Toll-free: 1-888-231-5408

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