

Kawartha Conservation Watershed Report Card 2023



Kawartha Conservation has prepared this report card as a summary of the state of your forests, wetlands, 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 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.



Kawartha Conservation SURFACE WATER QUALITY

GRADE

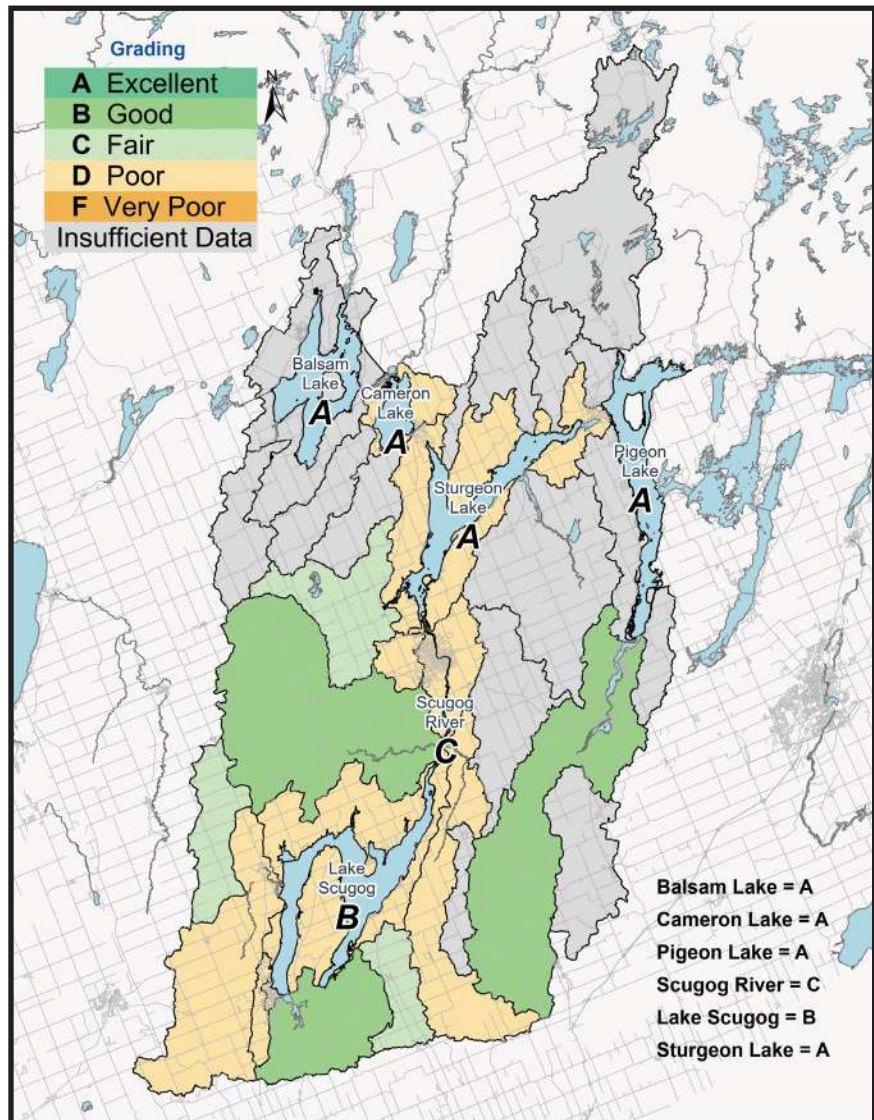
C

Levels of phosphorus, *E. coli* (fecal indicator bacteria), and benthic invertebrates (small aquatic animals living in the sediment) were used to grade surface water quality in each subwatershed. The type and number of these animals can be used to indicate the quality of the water.

All components were collected at the [Ontario Ministry of the Environment, Conservation and Parks](#) and Kawartha Conservation sampling stations.

What Did We Find?

- Water quality grades for lakes ranged from A to B, with mostly A grades.
- Water quality grades for rivers and streams ranged from B to D, with mostly D grades.
- ***E. coli** was only measured in the Balsam Lake, Cameron Lake, Sturgeon Lake, Pigeon Lake, and Lake Scugog subwatersheds.
- Benthic invertebrate sampling primarily took place in streams flowing through the urban areas of Lindsay, Port Perry, Fenelon Falls, Bobcaygeon, and Omemee. Streams with lower grades generally produced more pollutant-tolerant species such as the aquatic sowbug.
- Due to a shift in monitoring objectives, there are various subwatersheds that do not have sufficient data to satisfy the criteria of the Watershed Report Card scoring system.





Kawartha Conservation FOREST CONDITIONS

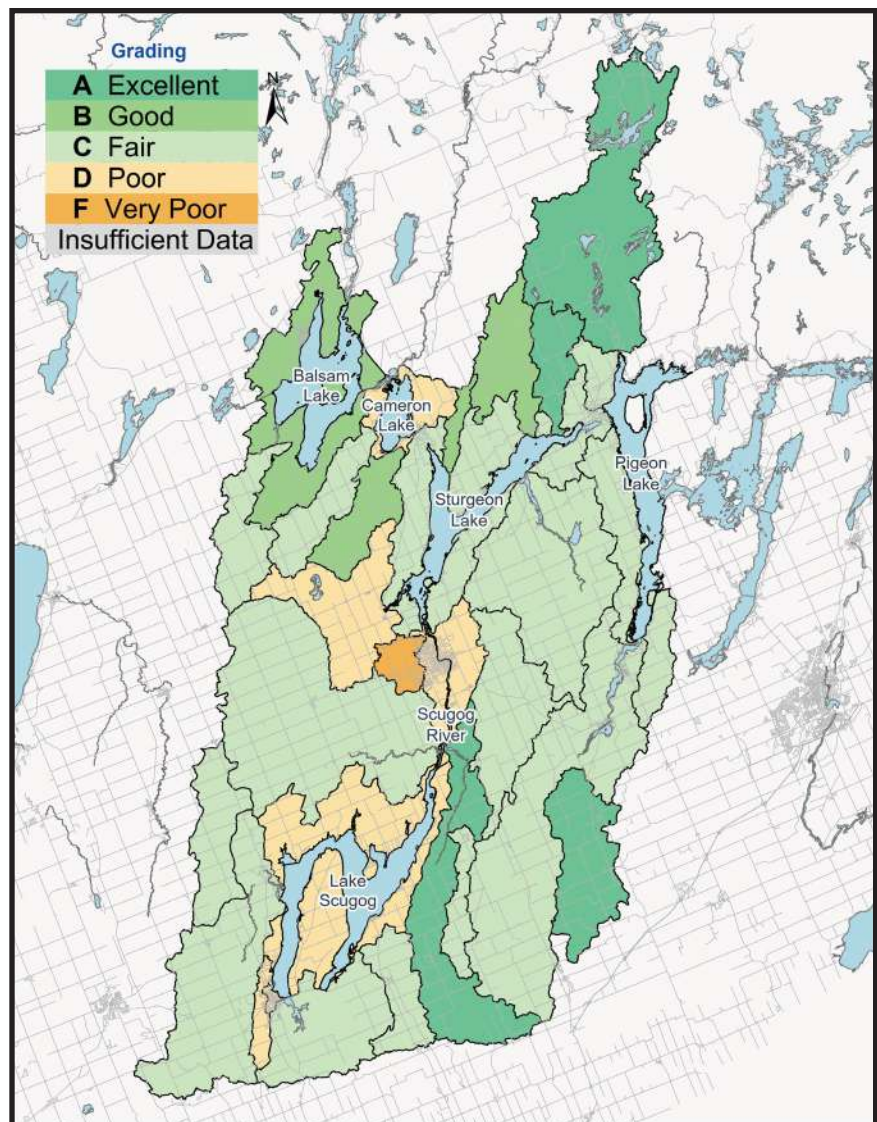
GRADE

C

The percentages of forest cover, forest interior, and streamside cover were identified through aerial photography interpretation and through available data. Analysis was conducted with Geographic Information Systems (GIS).

What Did We Find?

- Grades range from A to F, with mostly C grades.
- The Balsam Lake, Cameron Lake, Mariposa Brook, and McLarens Creek subwatersheds received a lower grade in comparison to the 2018 Watershed Report Card due to the loss of forested land caused by different land use pressures.
- Kawartha Conservation's watershed benefits from 33% forest cover.
- Watersheds with less than 30% forest cover provide limited support to aquatic systems and habitat, which leads to decreased water quality and biodiversity, limited recreational opportunities, and more.
- *Forest grades were derived using 2018 imagery, which was the best available data at the time of publishing but may not reflect present day conditions. Contact Kawartha Conservation to learn more.





Kawartha Conservation GROUNDWATER QUALITY

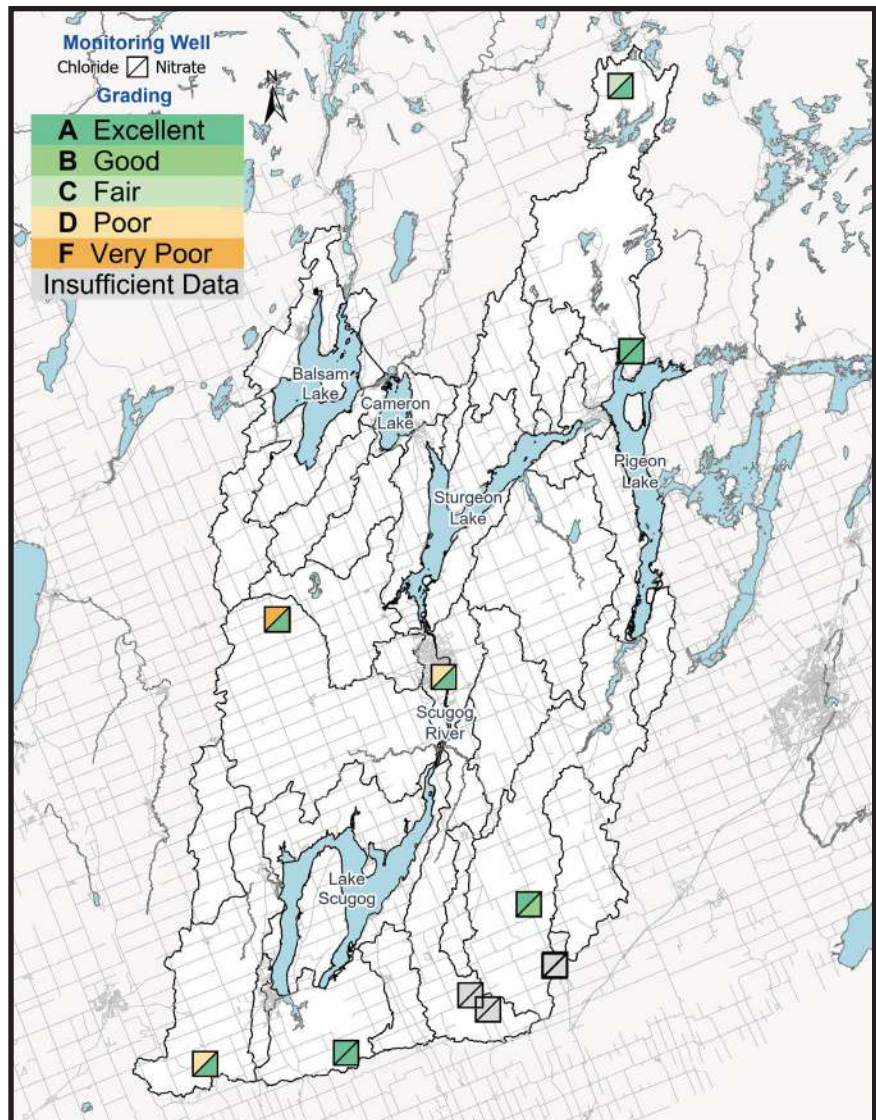
GRADE

B

Concentrations of nitrate + nitrite, and chloride were measured at 10 Ontario Ministry of the Environment, Conservation and Parks sampling stations. View a map of sampling stations at www.ontario.ca/page/map-provincial-groundwater-monitoring-network.

What Did We Find?

- Due to unforeseen equipment malfunctions, 3 of the 10 monitoring wells had insufficient data. Impacted monitoring stations include two wells in the north and south of Durham East Cross Forest, and one in Pontypool.
- Groundwater quality grades for **nitrate + nitrite** ranged from A to B, with mostly A grades. Levels of **nitrate + nitrite** met the Ontario Drinking Water Standards, indicating good water quality.
- Groundwater quality grades for **chloride** ranged from A to F, with mostly A grades. However, **chloride** levels in some areas are approaching or have exceeded the Canadian Drinking Water Guidelines, suggesting possible groundwater contamination through winter salt application.
- The quality of your private well water may vary from that of the provincial monitoring wells.





Kawartha Conservation WETLAND COVER

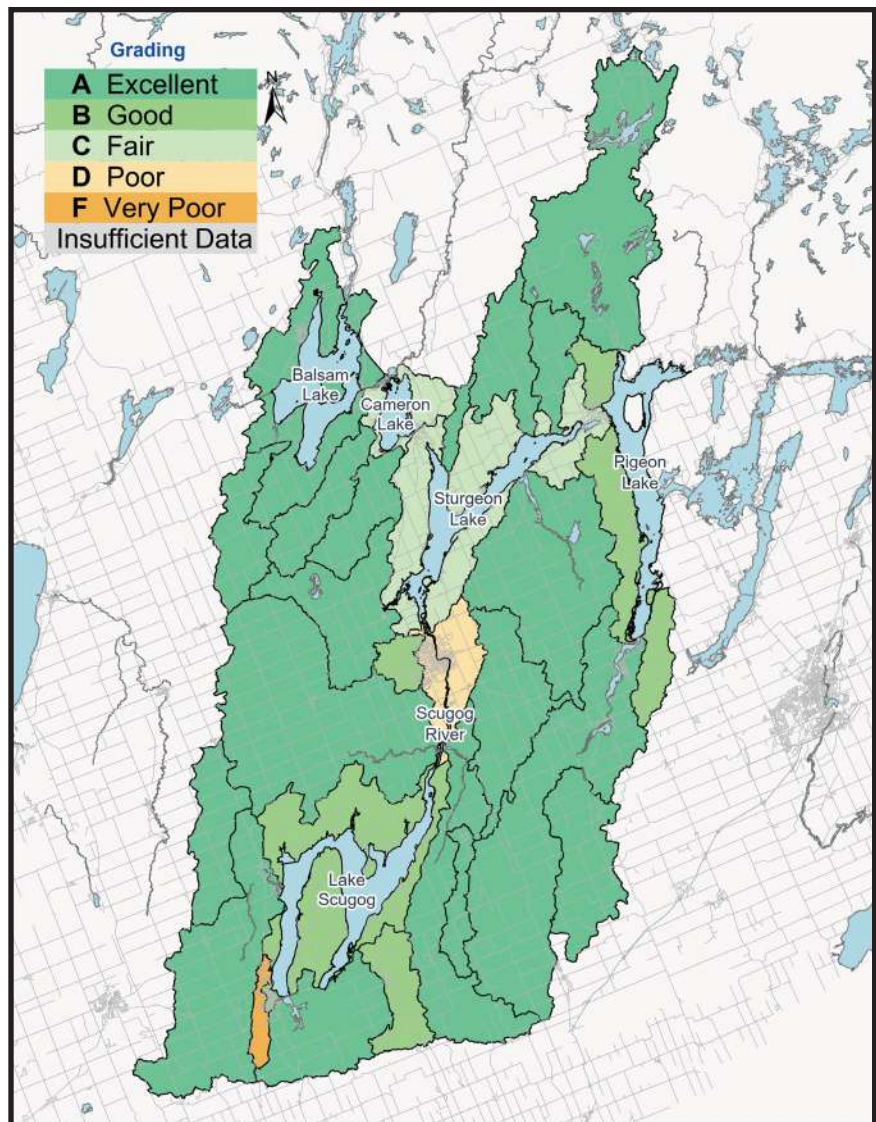
GRADE

B

The percentage of wetland cover was identified through aerial photography interpretation and through available data. Analysis was conducted with Geographic Information Systems (GIS).

What Did We Find?

- Grades ranged from A to F, with mostly A grades.
- The Cameron Lake and Pigeon Lake subwatersheds received a lower grade in comparison to the 2018 Watershed Report Card due to the loss of wetlands caused by different land use pressures.
- Kawartha Conservation's watershed benefits from 15.4% wetland cover.
- Watersheds with less than 10% wetland cover are at risk for increased flooding, decreased biodiversity and water quality, which is why it is important to protect and restore wetlands within our region.
- *Wetland grades were derived using 2018 imagery, which was the best available data at the time of publishing but may not reflect present day conditions. Contact Kawartha Conservation to learn more.



WHAT IS OUR WATERSHED'S KEY ISSUE?



Emerging Issues

- Increasing levels of **chloride** in both surface water (lakes and rivers) and groundwater (underground).
- Increasing levels of erosion causing murky waters.
- Decreasing natural land cover and impacts to natural heritage features.

What actions can you take to prevent these emerging issues?

- Conserve and connect existing woodlands.
- Create natural landscapes to filter stormwater.
- Control soil erosion by using grassed waterways, berms, cover crops, and crop residue.
- Apply nutrients to farmland at rates and times that optimize crop uptake.
- Dispose of chemicals properly through household hazardous waste days or drop-off locations.

What local action has been taken?

Kawartha Conservation collaborates with local agencies and community members to develop and implement scientific and community-based watershed management plans and strategies, while also providing resources and funding opportunities that makes protecting natural resources more accessible for the local community.

To learn more about our impact, visit:

- kawarthaconservation.com/LakePlans
- kawarthaconservation.com/ESC
- kawarthaconservation.com/CitizenScience
- kawarthaconservation.com/WaterFund

To learn more about actions taken by local municipalities, visit:

- [Cavan-Monaghan](#)
- [City of Kawartha Lakes](#)
- [County of Peterborough](#)
- [Municipality of Clarington](#)
- [Municipality of Trent Lakes](#)
- [Regional Municipality of Durham](#)
- [Township of Scugog](#)

HOW CAN WE PROTECT AND RESTORE THE WATERSHED?



How can you help?

- Plant native species on your property.
- Plant 75% of your waterfront with native shrubs.
- Implement Best Management Practices (BMPs) on your property to protect water quality.
- Manage stormwater on your property by installing raingardens, French drains, and rain barrels.
- Inspect and pump out your septic system every three to five years.
- Decommission aging and inoperable wells.
- Volunteer at community tree planting events.
- Participate in our annual Tree Seedling Sale and Native Plant Sale.
- Schedule a consultation with our staff for technical advice and assistance.

How can communities help?

- Support ongoing improvements to municipal infrastructure.
- Direct development away from areas of environmental significance.
- Support local initiatives to monitor water quality and quantity.
- Take care of our shared natural spaces.

How can agencies help?

- Protect wetlands, waterways, and natural spaces.
- Green their operations and grounds.
- Implement and evaluate the effectiveness of environmental programs.

Visit kawarthaconservation.com/Stewardship to learn more.



Looking to learn more about how Kawartha Conservation monitors the health of the watershed? Visit kawarthaconservation.com/WatershedMonitoring or contact us for more information.

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This Watershed Report Card is available online at kawarthaconservation.com/WRC.