

WHAT ARE OUR WATERSHED'S KEY ISSUES?



Non-point Source Pollution:

Surface water contamination occurs when rain or snowmelt runs off fields, streets, or backyards. Runoff may carry soil particles and pollutants to water bodies and groundwater.

Local Actions We Are Taking

- Providing expertise regarding development near waterways and wetlands.
- Working with municipalities and their residents to protect sources of drinking water.
- Working with residents to plant shorelines to aid in filtering runoff and enhancing habitat.
- Working with agricultural landowners to fence livestock from waterways and naturalize a 30 metre buffer between an agricultural field and a waterway.
- Conducting environmental assessments for the treatment of urban runoff.
- Monitoring surface water and groundwater quality and quantity and supporting local monitoring initiatives.
- Protecting over 30,000 acres (12,140 ha) of Quinte Conservation owned lands.
- Providing in-school and outdoor youth education programs to help foster environmental stewards in the next generation.

Climate Change:

With a changing climate we are experiencing more frequent extreme weather, leading to both historical high water levels and drought events.

Local Actions We Are Taking

- Monitoring at five climate monitoring stations to understand local impacts.
- Helping residents adapt to a changing climate through drought management plans, workshops, landowner education, and flooding studies.
- Planting trees to sequester carbon and managing our lands for healthy forests.
- Protecting and enhancing forests and wetlands to aid in runoff retention to help maintain water balance during wet and dry periods.

HOW CAN WE ENHANCE THE WATERSHED?

What Can You Do?

- Plant native trees, shrubs and wildflowers.
- Filter runoff by redirecting downspouts onto a grassy area or make a rain garden.
- Apply fertilizers as needed avoiding pathways and driveways.
- Inspect and pump your septic system every 3 to 5 years.
- Dispose of chemicals properly through household hazardous waste days or drop-off locations.
- Decommission unused wells to stop surface water and contaminants from entering our groundwater.
- Control soil erosion through the use of native plants, grassed waterways, berms, cover crops, and crop residue.



- Apply nutrients at rates and times that optimize plant/crop uptake.
- Leave natural buffers along waterways.
- Ensure manure storage facilities are adequate.
- Fence livestock from waterways.
- Seek ways to reduce carbon emissions.
- Seek ways to conserve water.
- Volunteer for local projects, join a community group, and engage youth.

What Can Your Community Do?

- Encourage the use of low impact development technologies in new development and re-development.
- Direct development away from areas of environmental significance.
- Support local initiatives to monitor water quality and quantity.
- Protect wetlands and forests and connect existing forests where possible.

Have additional questions? Visit quinteconservation.ca or contact us for more information:



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

Quinte Conservation WATERSHED Report Card 2018



Quinte 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 over which rain and snowfall drain into a common waterbody such as a river, creek, or lake. Everything in a watershed is connected and 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. This watershed report card uses data collected from 2012 - 2016 and measures:



Groundwater Quality



Surface Water Quality



Forest Conditions



Wetland Cover

GRADING

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

What is a watershed report card?

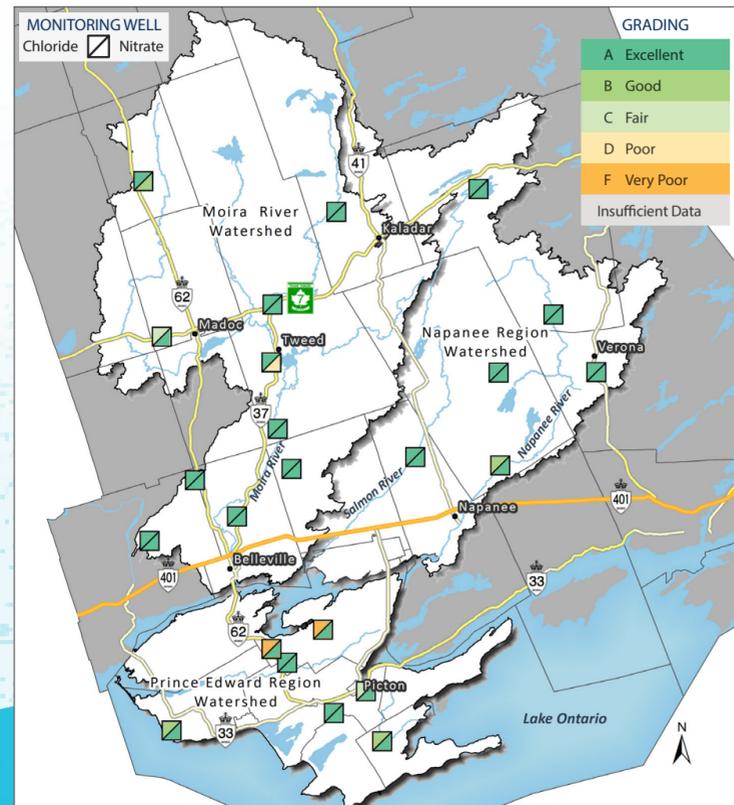
Ontario's Conservation Authorities report on watershed conditions every five years. The watershed report cards use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.

GROUNDWATER QUALITY

Groundwater quality grades are calculated using concentrations of nitrite, nitrate and chloride and were measured in 23 groundwater monitoring wells. Nitrate & Nitrite are forms of nitrogen which can occur naturally. High levels can be associated with leaching of contaminants from excessive amounts of fertilizers and manure or septic systems. Chloride can occur naturally and elevated levels can be related to contamination from road salting activities, landfills, septic systems and water softeners.

What Did we Find?

- All of the groundwater monitoring wells meet the Ontario Drinking Water Standard for nitrate and nitrite concentrations.
- All of the groundwater monitoring wells meet the Ontario Drinking Water Standard for chloride concentration with the exception of two wells.
- The quality of your well water may vary from that of monitoring wells. Private wells for drinking water should be inspected and tested regularly.

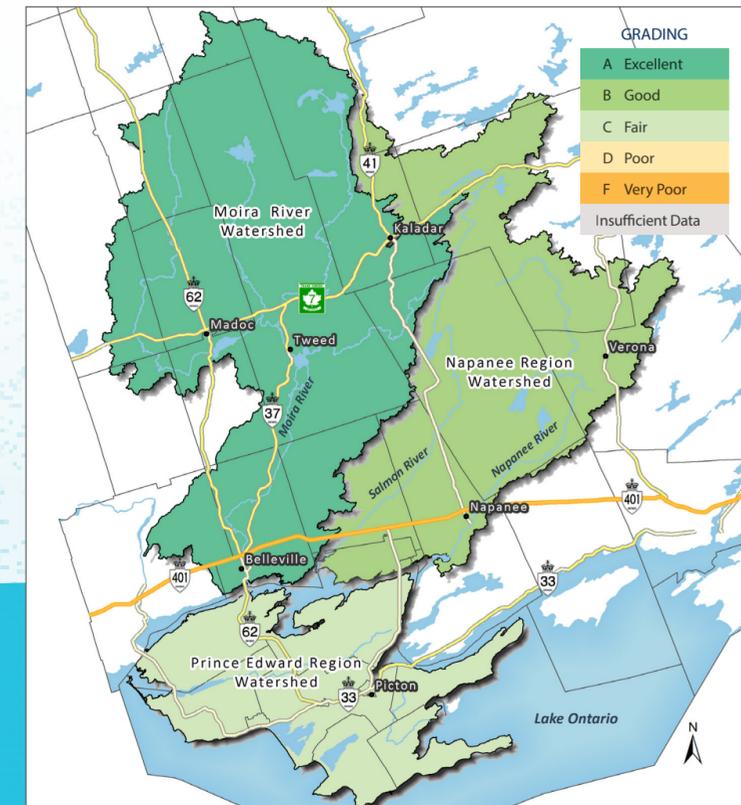


SURFACE WATER QUALITY

Surface water quality grades are calculated using concentrations of phosphorus and the health of benthic invertebrate communities. Phosphorus is a naturally occurring nutrient, but can be elevated due to products such as detergents, fertilizers and sewage. High concentrations contribute to excessive algae growth and low oxygen levels in streams and lakes. Benthic invertebrates are small aquatic animals that live in the sediment of streams and include insects, snails, clams and worms. They are good indicators of water quality and stream health.

What Did we Find?

- Majority of the Quinte Watershed is in Good to Excellent condition.
- Watersheds with lower water quality grades tend to have extensive urban or agricultural land uses.
- Watersheds with higher water quality grades tend to have a greater abundance of forests and wetlands, which can aid in the filtering of surface water.

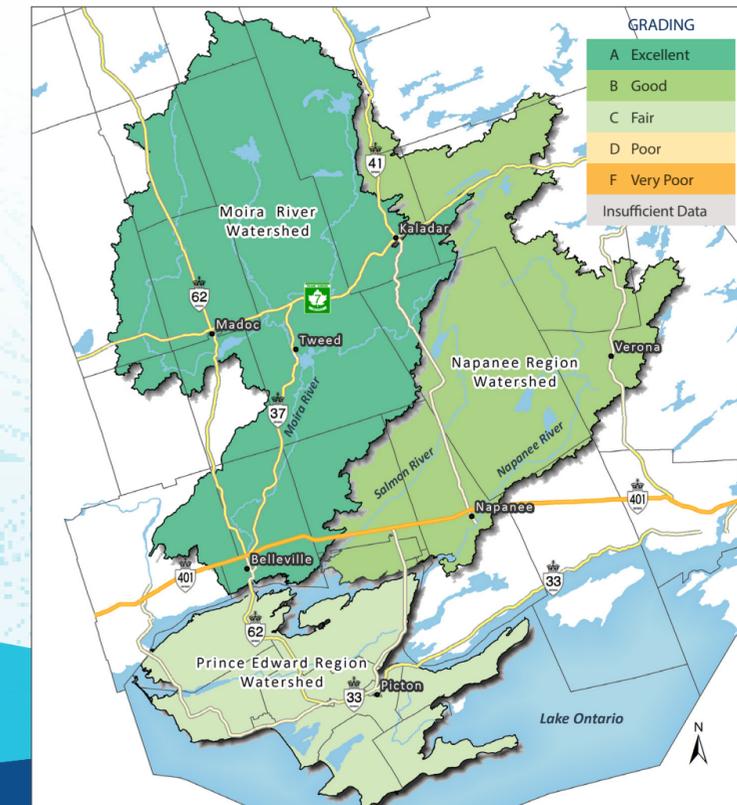


FOREST CONDITIONS

Forest conditions consist of forest cover, forest interior and riparian forest cover and are assessed using digital mapping data. Environment Canada recommends a minimum of 30 % forest cover, 10 % forest interior and 50 % riparian forest cover. Forest Cover represents the percentage of the watershed that is forested. Forest Interior is the portion of a forest that remains when a 100 metre buffer is removed from the inside perimeter of a woodlot. The Riparian Zone is a band of land, 30 metres wide, along both sides of a watercourse or an open body of water.

What Did we Find?

- Approximately 54 % of the Moira River Watershed is forested, 17 % is forest interior and 52 % is forested riparian zone.
- Approximately 37 % of the Napanee Region Watershed is forested, 8 % is forest interior and 32 % is forested riparian zone.
- Approximately 30 % of the Prince Edward Region Watershed is forested, 8 % is forest interior and 42 % is forested riparian zone.



WETLAND COVER

Wetlands are an essential part of a healthy and balanced ecosystem. They are home to many plant and animal species, help filter surface water runoff, assist in protecting against flooding and drought and allow recharge and discharge of groundwater.

Wetland Cover was assessed using digital mapping data. Environment Canada recommends that a healthy watershed should contain at least 10 % wetland cover.

What Did we Find?

- Approximately 13 % of the Moira River Watershed is covered by wetlands.
- Approximately 14 % of the Napanee Region Watershed is covered by wetlands.
- Approximately 21 % of the Prince Edward Region Watershed is covered by wetlands.

