

WHO WE ARE AND WHAT WE DO



Crowe Valley Conservation Authority (CVCA) watershed covers an area of approximately 2,006 km², and is comprised of three primary sub-watersheds: the Crowe River, the North River, and Beaver Creek. Numerous wetlands, natural riverbank corridors, and forests are intertwined throughout the watershed, providing essential habitat to many species of fish, mammals, birds, reptiles, amphibians and insects that thrive in this region.

For over 50 years, Crowe Valley Conservation Authority has worked in partnerships with its member municipalities, the Ministry of Natural Resources and Forestry and the Ministry of Environment and Climate Change. With its early beginnings in dam management dating back to the 1950s, the Authority has been continuously evolving in response to increasing environmental demands regarding the responsible management of watershed resources.

What Actions Are We Taking?

- Seeking support and fostering our relationships with CVCA municipal councils to promote our regulations program and inform municipalities of our initiatives to ensure capacity to execute the program.
- Monitoring and managing water levels and flow to help safeguard the public from flooding risks.
- Participating in provincial monitoring programs to identify changes to the environment.
- Build awareness and promote stewardship of the environment.

HOW CAN WE ENHANCE THE WATERSHED?

What Can You Do?

By working together, we can make a difference. Imagine the impact if everyone in the watershed made wise environmental choices! Improving the health of the watershed requires us to make choices that balance environmental concerns with everyday life. Here are some examples of good environmental stewardship activities you can do to enhance your property, protect your health and protect our natural environment:

- Ensure your septic system is properly maintained and inspected every three to five years.
- Properly plug unused water wells and upgrade substandard ones.
- Reduce the amount of household chemicals you use, store and consider green alternatives.
- Wash your boat before moving to another lake and don't release live bait.
- Plant native trees, shrubs and wildflowers to enhance wildlife habitat, especially along shorelines of lakes and rivers.
- Get to know the environment – visit a conservation area.

What Can Your Community Do?

- Adopt low impact development practices to help reduce runoff.
- Encourage your local municipality to direct development away from environmentally sensitive areas.
- Support monitoring initiatives to track environmental changes.
- Properly dispose of harmful pollutants at municipal hazardous waste drop-off locations.

Do you have questions not answered by this summary document? Visit www.crowevalley.com for the full report or contact us for more information:



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

Crowe Valley WATERSHED Report Card 2018



Crowe Valley Conservation Authority has prepared this report card as a summary of the state of your forests, wetlands, and water resources using data from 2012 to 2016.



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



Groundwater Quality



Surface Water Quality



Forest 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. Watershed report cards use Conservation Ontario guidelines and standards to ensure consistent reporting across Ontario. Data from 2012 to 2016 was used to assess watershed conditions presented in this report card.



GROUNDWATER QUALITY

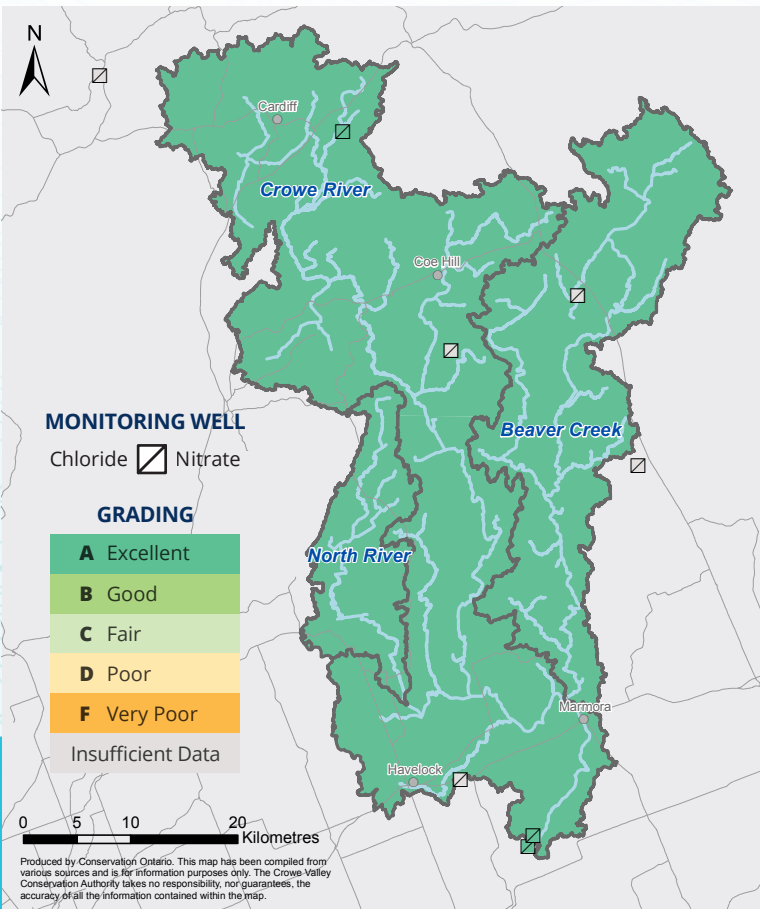
Groundwater quality is determined by measuring chloride, nitrite and nitrate levels in samples that were collected at 8 groundwater wells.

Chlorine is a naturally occurring element in groundwater. Elevated levels can be related to contamination from road salt and water softeners.

Nitrite and nitrate also occurs naturally in groundwater. The concentration of nitrogen in water can increase significantly from human causes such as fertilizer and manure use and leaky septic systems.

What Did we Find?

- Grades for 3 out of 8 groundwater monitoring wells have scored a Grade A.
- Groundwater quality has not been graded for 5 out of 8 monitoring wells due to lack of consistent long-term data.



SURFACE WATER QUALITY

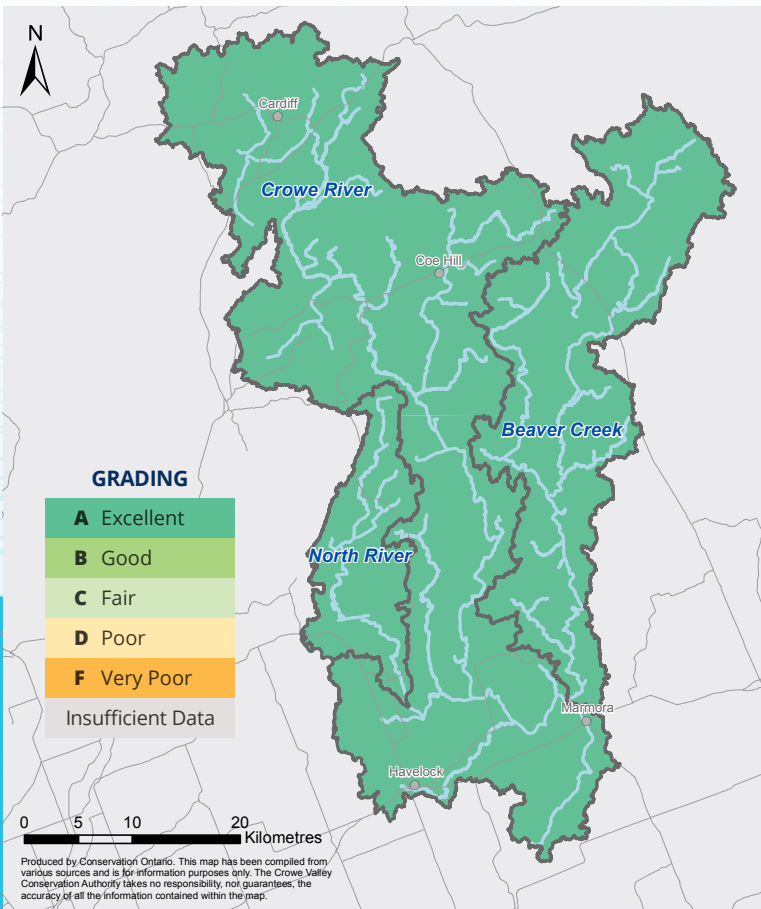
Surface water quality grades are determined by looking at chemical (phosphorus) and biological indicators (benthic invertebrates).

Phosphorus is a nutrient that can trigger rapid growth of aquatic plants and cause algal blooms that deplete oxygen levels in water. It is found in urban and agricultural runoff such as fertilizers, sewage, and detergents.

Benthic invertebrates are tiny aquatic organisms that live in stream beds that are sensitive to pollution and changes to their environment. By monitoring the species present and their numbers, we can determine the general health of a water body and identify pollution sources.

What Did we Find?

- The watershed achieved a Grade A for surface water quality.
- The North River subwatershed sampling site near Round Lake showed a Grade B score in 2015.
- Results are based on phosphorus and benthic invertebrate data only, as *E. coli* is not currently analyzed as part of our monitoring program.



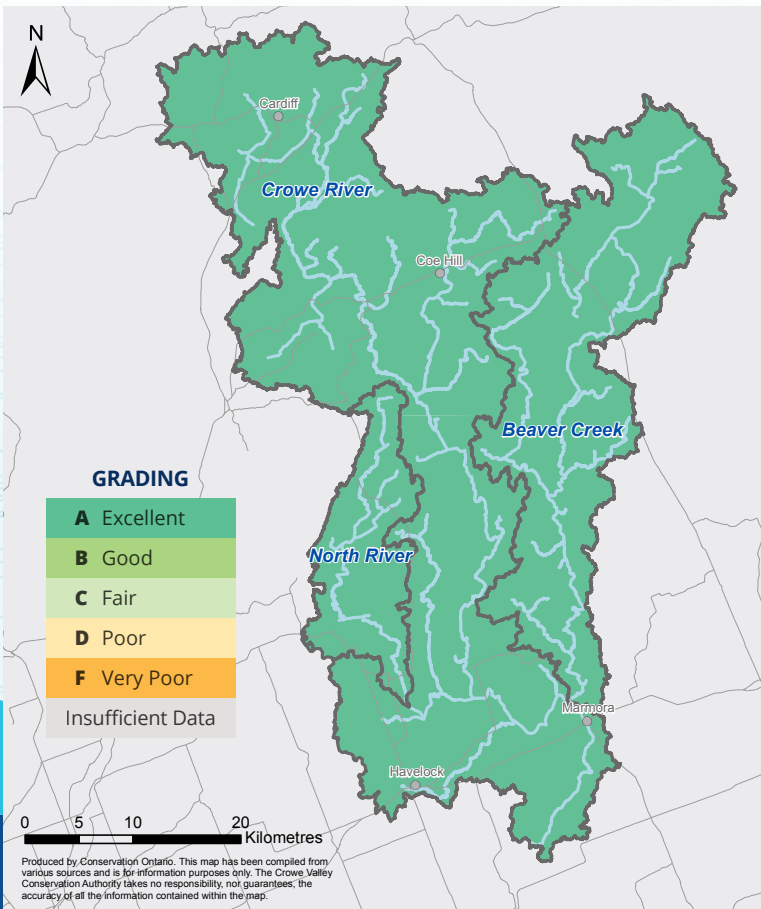
FOREST CONDITIONS

Forest conditions are assessed using digital mapping data to measure forest cover, forest interior, and forested riparian cover percentages. Environment Canada recommends a minimum of 30% forest cover, 10% forest interior, and 50% forested riparian zone.

Forest cover is measured to help determine habitat availability for wildlife. Forest interior is measured to assess habitat quality and the extent of landscape fragmentation. Forested riparian zone refers to the vegetation found within 30 meters along all open watercourses.

What Did we Find?

- The CVCA scored a Grade A because of the significantly high percentage of forested areas within the watershed.
- Only a handful of wetlands have been scored in the CVCA watershed. However there are numerous wetlands that have not been scored. Further monitoring will identify significant wetlands that will be important to protect for the benefit of the CVCA and the province.



WATERSHED MANAGEMENT SERVICES

Dams are structures to help control water levels and flow in the CVCA watershed. They are essential to control and minimize the impacts of flooding, maintain levels for summer recreation activities and storing water for commercial use.

The Crowe Valley Conservation Authority (CVCA) operates fifteen water control structures located across the Crowe Valley watershed to manage water levels and flow.

Having many lakes and rivers in the watershed being used for recreational purposes poses many challenges to reach its summer and winter water level targets when managing the water system. By managing and operating dams throughout the watershed 365 days a year, the CVCA actively manages the watershed to balance human needs with environmental concerns.

The CVCA operates the majority of the water control structures while some are operated on behalf of the Ministry of Natural Resources and Forestry through agreements. The CVCA also manages one hydroelectric generating station located in Marmora on the Crowe River.

