WHO WE ARE AND WHAT WE DO

Our Vision:
A HEALTHY natural environment where communities THRIVE

The Otonabee Region watershed supports a population of over 102,000 with approximately 71% living in the City of Peterborough. Municipalities in the watershed include Asphodel-Norwood, Cavan Monaghan, Douro-Dummer, Otonabee-South Monaghan, Selwyn, Trent Hills, City of Kawartha Lakes and City of Peterborough.

Distinctive natural features include portions of the Kawartha Lakes, Peterborough Drumlin Field and the Oak Ridges Moraine.

Our Mission:
To be a LEADER in the Otonabee Region watershed for the CONSERVATION, PROTECTION and ENHANCEMENT of a healthy, natural environment

Within the physical and economic context of the watershed and in consideration of the social, cultural and economic aspirations of its residents, Otonabee Conservation delivers programs and services that support the sustainability of the environment. We work with our member municipalities, residents and businesses to achieve outcomes that balance the diversity of needs.

What we Do:

- Safeguard people and property from flooding and other natural hazards
- Contribute to the maintenance of a healthy and resilient environment
- Provide recreational opportunities in the natural environment
- Build awareness and understanding of the value of the natural environment

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 things you can do to help enhance the watershed.

At Home and At Play

- Ensure your septic system is properly maintained and inspected
- Use phosphate-free products (i.e. detergents, fertilizers)
- Conserve water by installing low flow taps, shower heads and toilets
- Create a natural vegetated buffer along shorelines to filter runoff and provide habitat
- Participate in a tree planting or community clean-up event
- Get outside and visit a Conservation Area

On the Water and On the Land

- Wash your boat before moving to another lake and don't release live bait
- Avoid fuel spillage and obey speed limits in low wake areas
- Plant native trees, shrubs and wildflowers to enhance wildlife habitat
- Decommission unused wells to protect groundwater

For more information, visit otonabeeconservation.com or contact us:

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The watershed report card is available online and in other formats upon request.

Cover photo courtesy of Parks Canada

Otonabee Region
WATERSHED
Report Card 2018

Watershed Checkup

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

Otonabee CONSERVATION

Conservation ONTARIO Natural Champions

WHERE ARE WE?

What is a Watershed?

A watershed is an area of land drained by a system of wetlands, streams, rivers and lakes. Everything in a watershed is connected. Our actions upstream can affect conditions downstream.

Why Measure?

Measuring increases our understanding of watershed health. We can target our efforts where they are needed most and track progress. We measured:

- Surface Water Quality
- Forest Conditions
- Wetland Cover
- Groundwater Quality

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.

CLIMATE CHANGE AND PUBLIC HEALTH

Climate Change

Climate change introduces stressors on our watershed including drought, flooding, invasive species, and more frequent extreme weather events. The four indicators measured in this watershed report card are affected by climate change impacts in the following ways:

- Surface Water: Increased storm intensity results in flooding and erosion
- Forest Conditions: Long term temperature and precipitation changes may impact biodiversity
- Wetlands: Hydrologic changes put wetlands at risk of drying out or being flooded
- Groundwater: Drought can result in dry wells and low stream flow

Otonabee Conservation's monitoring programs increase our understanding of watershed stressors including climate change. Long term watershed monitoring helps us understand problems, prioritize management actions and track progress.

Public Health

Healthy ecosystems are essential for human health and survival. We all depend on clean air to breathe, clean water to drink, healthy food supplies, green spaces for recreation and contact with nature to enrich our lives. Studies show that we gain physical and mental health benefits from having access to natural areas and biodiversity. Otonabee Conservation's programs support resilient ecosystems and contribute to healthy forests, water and wetlands.

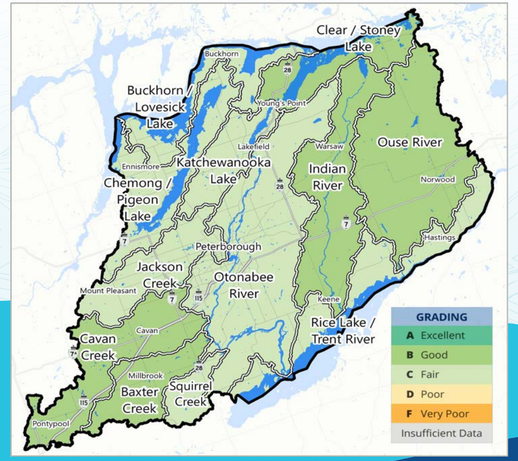
SURFACE WATER QUALITY

Lakes, rivers and wetlands are the circulatory system of a watershed. Surface water quality is a key component of our environment, impacting human health, wildlife habitat and the economy.

Two indicators were used to assess surface water quality: phosphorus and benthic macroinvertebrates (bugs that live in bottom sediments). Phosphorus is a nutrient that occurs naturally in the environment, but at high levels it can trigger algae blooms, choke waterways with plants and deplete oxygen levels. Benthic macroinvertebrates have different tolerances to water quality conditions, making them good indicators of long-term aquatic health. Surface water samples have been collected since 1964 as part of the Provincial Water Quality Monitoring Network (PWQMN).

What Did we Find?

- Grades range from B to C indicating good to fair water quality
- Urbanization appears to have impacted surface water quality as the most developed subwatersheds received a C grade
- Subwatersheds with a B grade are typically less developed and have more natural areas



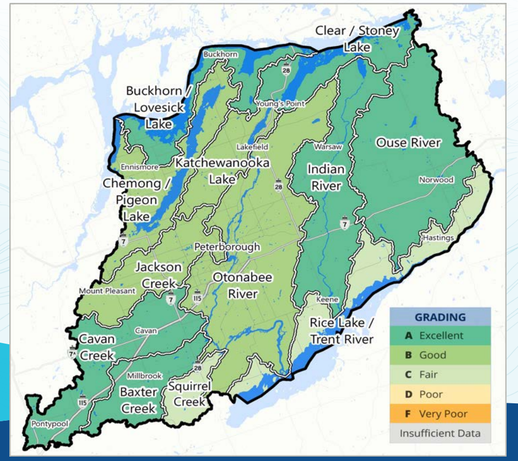
FOREST CONDITIONS

Forests provide many benefits including wildlife habitat, clean air and water, reduced flooding and erosion and outdoor recreation opportunities. Forests make watersheds more resilient to climate change impacts and can be influenced by urbanization, agriculture, and disease.

Three indicators were used to assess forest conditions: forest cover, forest interior and forested riparian (shoreline) cover. Environment Canada recommends a minimum of 30% forest cover to sustain the natural biodiversity and environmental services that forests provide. Forest interior 100m or more from the forest edge shelters sensitive species. Maintaining a minimum of 10% forest interior is recommended. Forested riparian areas keep the water cool, prevent erosion and provide wildlife habitat.

What Did we Find?

- Forest condition grades across the watershed range from A to C indicating excellent to fair conditions
- The Otonabee Region watershed has 42% forest cover, 14% forest interior and 56% forested riparian cover
- Six of the 12 subwatersheds received an A grade



WETLAND COVER AND GROUNDWATER QUALITY

Wetlands

Wetlands contribute to a healthy watershed by providing habitat for birds, amphibians and reptiles, some of which are considered Species at Risk. Environment Canada recommends a minimum 10% wetland cover for a healthy watershed. Wetlands are evaluated by the province and 11% of the Otonabee Region watershed has been evaluated as wetland.

Wetlands are nature's sponges and help reduce flooding by storing water and releasing it slowly during dry periods. Wetland plants also act as filters and can help remove contaminants from water.

Groundwater

Groundwater, which is found in the cracks and spaces in soil, sand and rock, moves very slowly. Approximately 40% of the residents in the Otonabee Region watershed are dependent on groundwater for drinking water. Common groundwater quality indicators include chloride, nitrates and nitrites.

Otonabee Conservation has been a partner in the Provincial Groundwater Monitoring Network (PGMN) since 2002 and collects samples annually from monitoring wells. Available data indicates that levels of chloride, nitrate and nitrite consistently met provincial guidelines from 2012 to 2016.