

Saugeen Conservation

WATERSHED Report Card 2013

Based on 2007-2011 data



Saugeen Conservation has prepared this report card as a summary on the state of our forests, wetlands, surface water, and ground water resources.



Where Are We?



We are one of 36 Conservation Authorities across Ontario under the umbrella organization of Conservation Ontario.

What Does This Report Card Measure?



Surface Water Quality



Forest Conditions



Groundwater Quality



Wetland Conditions

Why Measure?

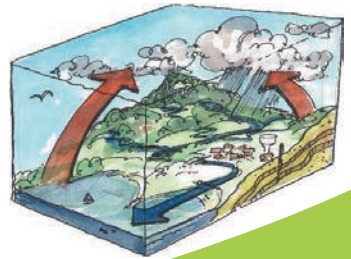
Measuring helps us better understand our watershed. It helps us to focus our efforts where they are needed most and track progress. It also helps us to identify healthy and ecologically important areas that require protection or enhancement.

What is a Watershed?

A watershed is an area of land drained by a river or stream.

Similar to the branch of a tree, creeks empty into streams, which then empty into larger streams, eventually forming one main trunk.

Within this system, everything is connected to everything else. In other words, actions which take place at the top of the system can and do affect those downstream.



Grading

A Excellent

B Good

C Fair

D Poor

F Very Poor

The standards used in this report card were developed by Conservation Authorities to ensure consistent reporting across the Province of Ontario and are intended to provide watershed residents with information to protect, enhance and improve the precious resources that surround us.

What We've Done 2007-2011

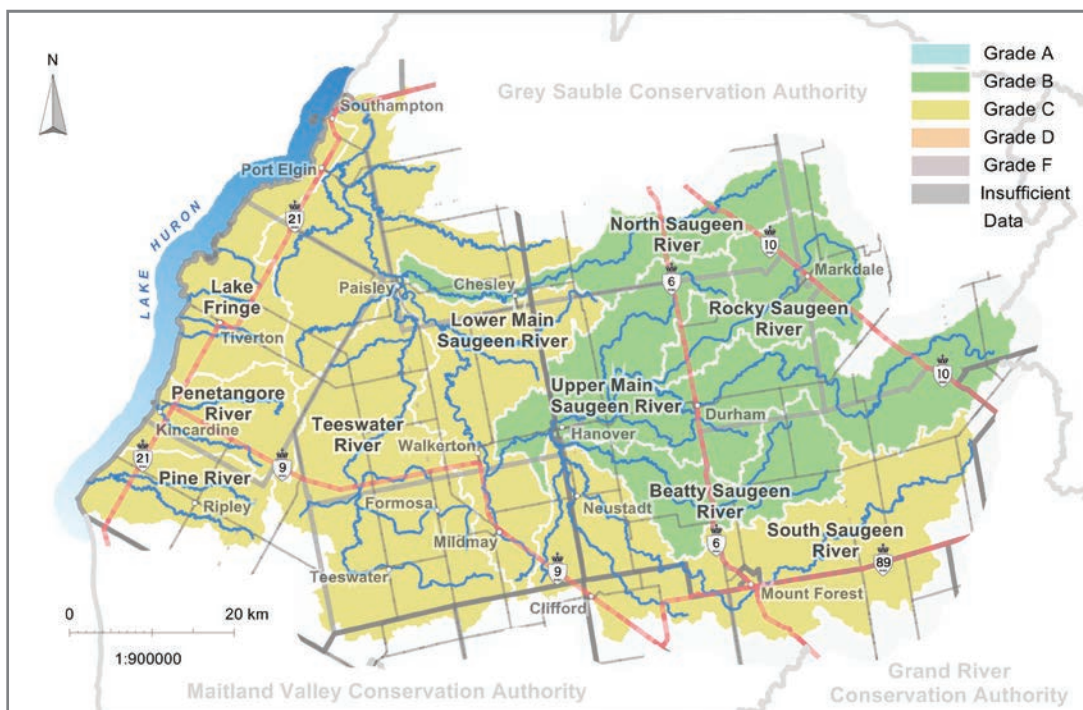
- Managed 21,000 acres/8,498 hectares of forest
- Planted 761,800 trees through the Grey Bruce Forestry Service
- Worked with over 30 partners on environmental programs and projects
- Controlled and maintained 19 flood and erosion control structures
- Protected over 21,000 acres/8,498 hectares of significant natural areas
- Provided over 4,000 acres/ 1,619 hectares of conservation lands for public use
- Sold 39,312 trees and shrubs to local residents at the Annual Arbour Day Tree Sale
- Provided ongoing advice and technical assistance to hundreds of watershed residents
- Collected surface water samples at 29 sites across the watershed as part of the Provincial Water Quality Monitoring Network and Saugeen Conservation's Water Quality Monitoring Network
- Collected and identified 87 benthic macroinvertebrate samples as part of the Ontario Benthos Biomonitoring Network
- Monitored groundwater quality and levels in 23 wells across the watershed under the Provincial Groundwater Monitoring Network
- Collected various parameters (stream flow, water level, precipitation, and/or temperature) at 27 gauge stations as part of the Flood Forecasting and Warning and Low Water Response programs
- Maintained over 50 kms of trails for the health and well-being of users, contributing approximately \$500,000 into the local economy (Tourism Regional Economic Impact Model)
- Kept people away from waterways and waterways away from people by reviewing 783 permit applications under Ontario Regulation 169/06 and 1,948 Planning Act applications and related proposals
- Worked together with 15 member municipalities to ensure priority concerns regarding local watershed health are being addressed
- Participated in and/or coordinated over 24 seminars, workshops and other educational awareness functions
- Taught over 10,000 children each year about the value of our natural environment through Saugeen Conservation education programs
- Provided over 50 presentations to local groups, municipalities and organizations about what the conservation authority is doing
- Completed 94 Managed Tax Incentive Plans for landowners who own 9.9 acres/4 hectares or more of forest land
- Worked together with 6 tourism agencies to promote natural areas and opportunities while contributing to the local economy





Surface Water Quality

All living organisms require clean, safe water. Many factors influence water quality. For the purpose of the watershed report cards, surface water was graded on the three indicators of phosphorus (found in soaps, detergents, fertilizers and waste), *E. coli* (bacteria found in human and animal waste), and benthic macroinvertebrates (stream bugs that live in the sediment of a waterbody whose presence or absence indicates the quality of the water).



The Saugeen River watershed, on average, scores fairly well with regard to surface water quality in most of its sub-watersheds. Four of the watersheds score a 'B' grade, with the remaining six, scoring a 'C'. The Pine River and the Lake Fringe watersheds both improved from 'D' to 'C' grades. In general, water quality improves upstream, away from highly agricultural areas.

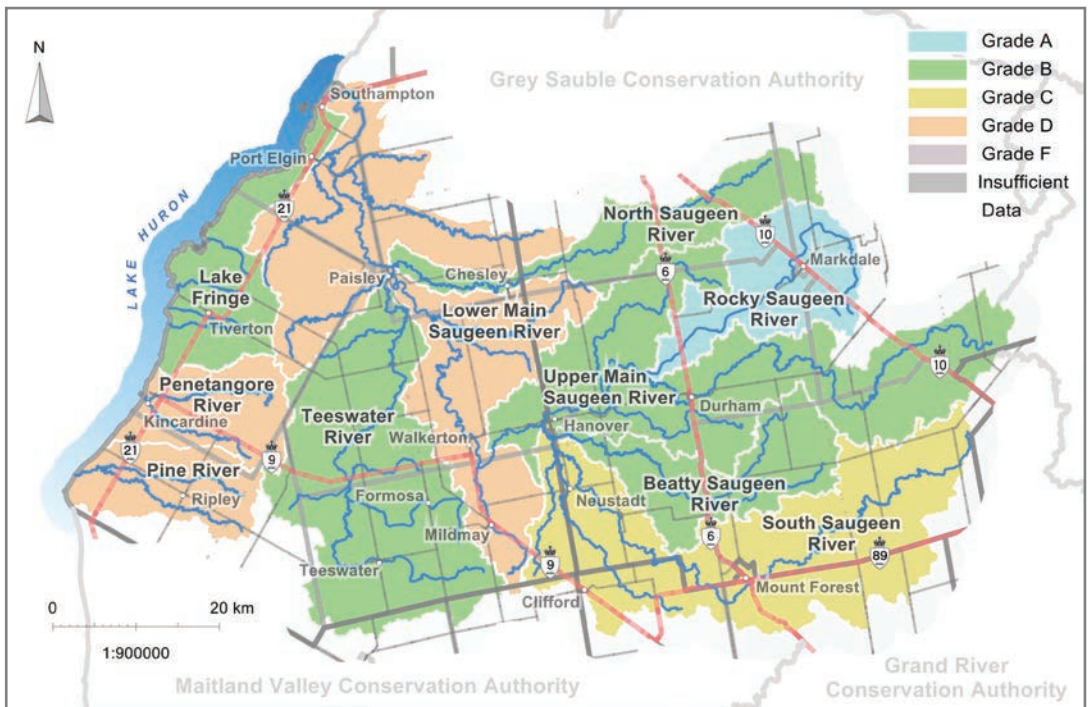
Unfortunately, the grades for benthic invertebrates dropped in all watersheds except the Lake Fringe. These lower grades are a serious concern as they can be seen as an early indication of water quality deterioration.





Forest Conditions

Forest conditions were graded based on the indicators of % Forest Cover, % Forest Interior (the portion of a woodlot left when a 100 metre wide strip is removed from the forest edge), and % Riparian Cover (forested area within 30 metres of a watercourse on both sides). Forest cover can sustain native plants and animals, while forest interior provides habitat for bird species to breed successfully. Riparian cover provides river bank stability, shading, food sources, habitat, and filters impurities.



Forest conditions score 'A' and 'B' grades in the eastern part of the watershed, as well as along the Lake Fringe and the Teeswater River Watersheds. Conditions in the Lower Main Saugeen River and the North Saugeen River Watersheds both declined due to a decrease in riparian cover. The remainder of the subwatershed grades remained fairly steady since the last report cards.

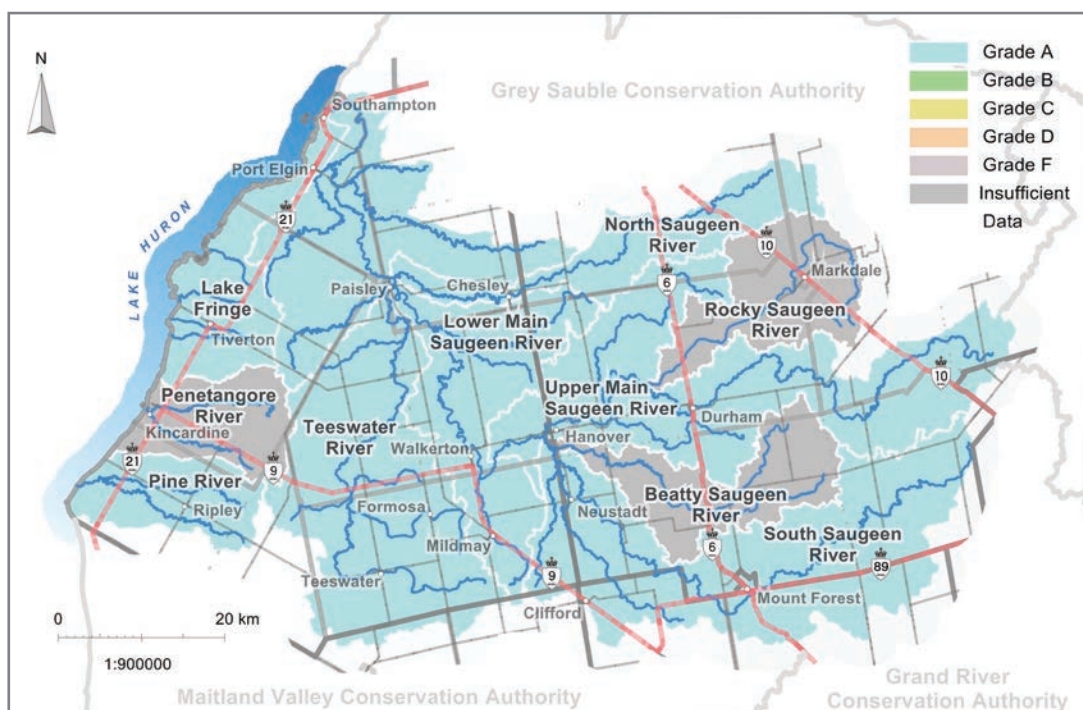
Forest conditions are poorest in the watersheds where agriculture is predominant and only small woodlots remain. Efforts to plant trees should be a priority in these areas. Additional tree planting throughout the watershed jurisdiction would be advantageous as well, as it would help to improve existing grades.





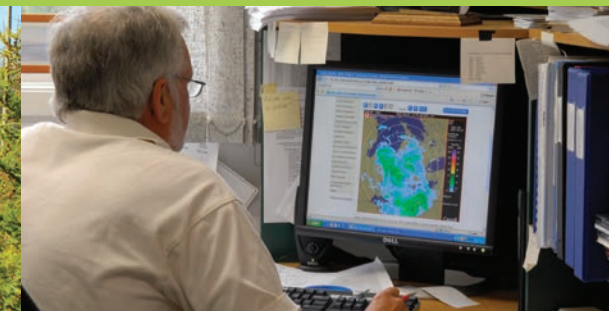
Groundwater Quality

Groundwater is the water found below the earth's surface in the loose soil, sand, or gravel material or the solid rock formations called bedrock. Groundwater and/or well water has a variety of uses including drinking water. Groundwater quality is graded on two parameters; chloride (found in road salts, industrial discharges or landfill leachate) and nitrite+nitrate (found as a result of decaying plant or animal material, fertilizers, sewage, or it can be naturally occurring).



The SVCA groundwater monitoring wells have excellent water quality. All of the subwatersheds with monitoring wells scored an 'A' grade. Average nitrate and chloride concentrations over the five year period were below the drinking water standards in all of the wells. There are no monitoring wells in the Penetangore, Beatty, or Rocky Saugeen River Watersheds.

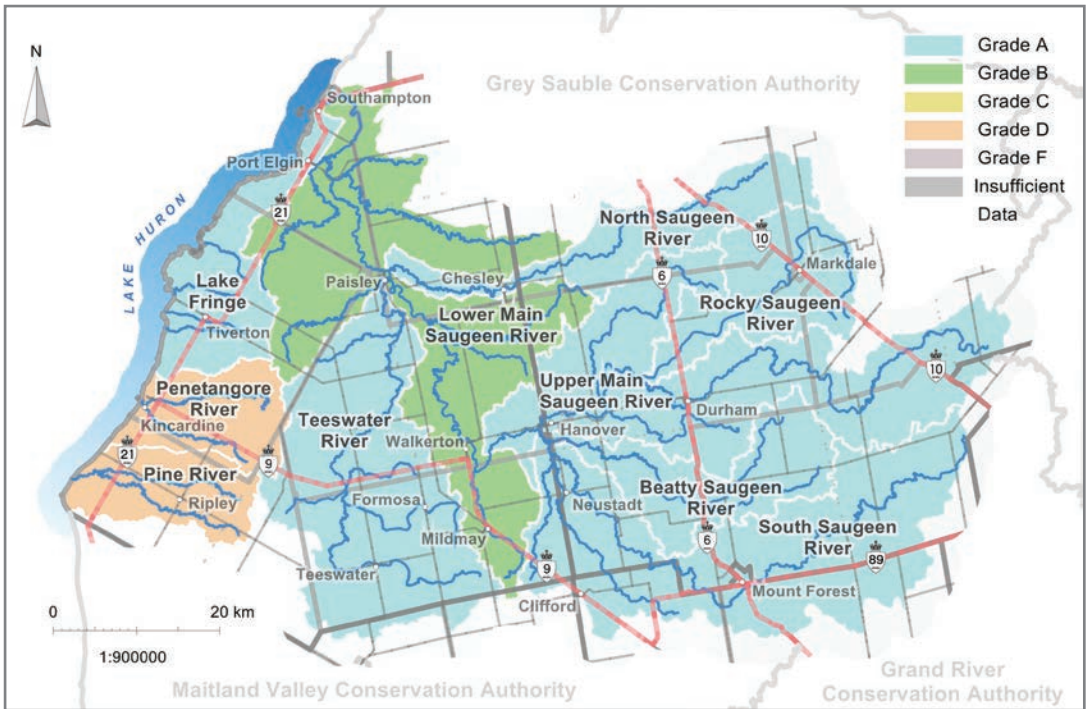
Note: Groundwater aquifers do not conform to watershed boundaries but rather flow in an east to west direction. Different types of aquifers exist throughout the region and the quality of your well water may vary from that of the SVCA groundwater monitoring wells.





Wetland Conditions

Wetlands play an important role in an ecosystem. Wetlands help to store water during runoff events reducing flooding and providing flow during dry periods. Wetlands also help to reduce nutrients, filter groundwater, and provide diverse habitats. Wetland conditions are graded based on the percentage of the watershed that is wetland.



The majority of the subwatersheds score an 'A' for wetland conditions. It is important that existing wetlands be protected to maintain these grades. The Teeswater River Watershed and the headwater areas, such as the Upper Main Saugeen Watershed, have a high percentage of wetland cover.

The Lower Main Saugeen watershed scored a 'B', while the Pine and Penetangore watersheds scored 'D' grades. Agriculture is the predominant land use in these watersheds, where wetlands have been removed and/or drained. Habitat improvements such as restoring drained wetlands would help to improve wetland conditions.



What You Can Do

Be a Watershed Steward!

- Plant trees and native plants
- Conserve water
- Reduce, reuse, recycle
- Maintain septic systems and wells
- Dispose of refuse and hazardous waste properly
- Conserve and protect important features on your property, such as wetlands, woodlands or meadows
- Eliminate the use of fertilizers and pesticides
- Naturalize a section of your property
- Participate with local clean-ups
- Wash your car on the lawn instead of the driveway so soap does not flow directly into storm drains and local waterways
- Maintain a gravel driveway where impurities can be filtered through a gravel substrate
- Keep shorelines naturalized
- Naturalize areas that are too wet to plant
- Be a responsible pet owner by picking up after them
- Use environmentally friendly cleaners
- Start a compost
- As a farmer implement Best Management Practices
- Give to organizations like your local conservation authority where funds are directed to environmental improvements

Note: For individual report cards for the 10 subwatersheds as well as Background Information and "Suggestions for a Healthy Watershed" please see www.svca.on.ca



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