

# St. Clair Region

## **WATERSHED**

Report Card 2018



The St. Clair Region Conservation Authority 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?

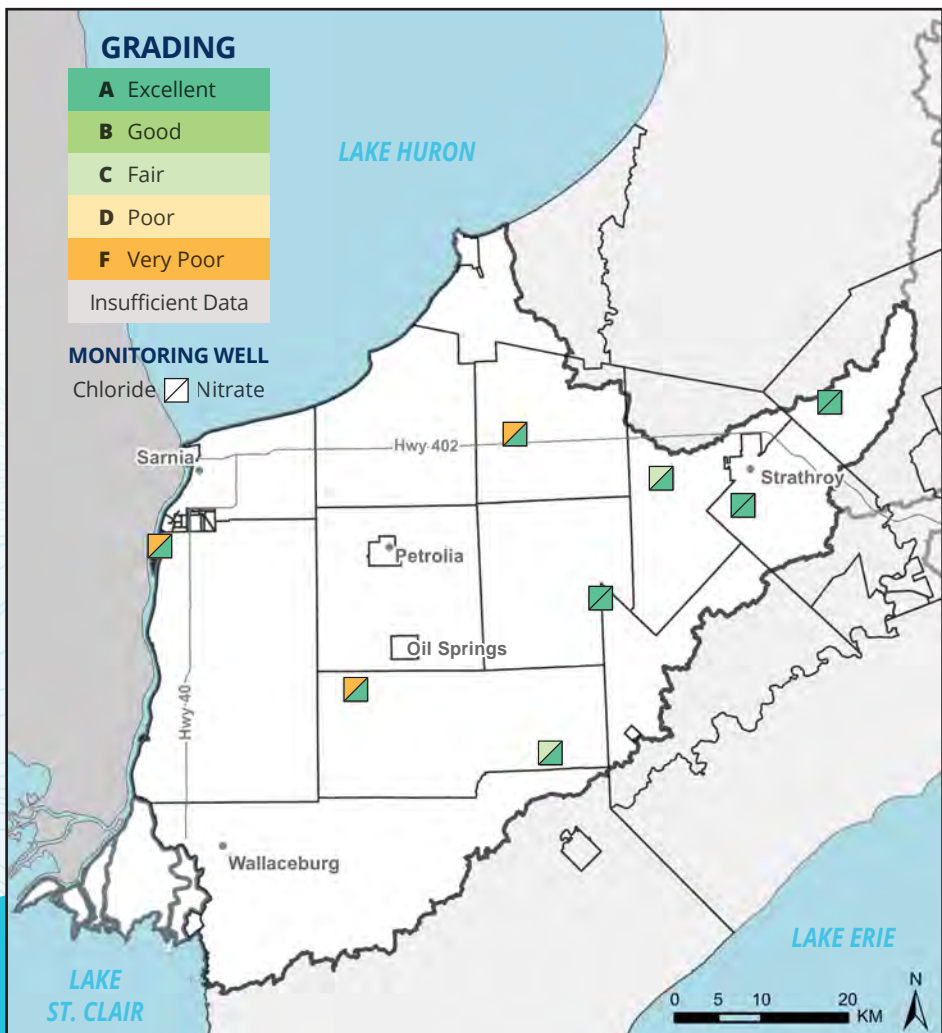
Ontario's Conservation Authorities report on watershed conditions every five years. The watershed report cards use Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.

# GROUNDWATER QUALITY

Concentrations of nitrate and chloride were measured at eight Ministry of the Environment and Climate Change monitoring wells. Note that the boundaries of surface water and groundwater watersheds are not the same and that the quality of your well water may vary from that of the monitoring wells.

## What Did we Find?

- Nitrate concentrations are better than the drinking water guidelines for all wells (A grade).
- Concentrations of chloride approach or exceed the drinking water guidelines at some wells, resulting in a poorer grade (less than A grade). This could be due to naturally-occurring or human influences.







# SURFACE WATER QUALITY

Surface water quality was evaluated using three indicators: concentrations of phosphorus (nutrient) and *Escherichia coli* (bacteria) as well as the composition of benthic macroinvertebrate communities (benthos). Benthos are small aquatic animals that live at the bottom of watercourses, the type and number of these animals are measures of water quality.

## What Did we Find?

- Grades vary between C and D, with mostly D grades.
- The surface water quality in each subwatershed is influenced by the land use. Protection and enhancement of wetlands, forests, and riparian buffers can help to improve water quality.





# FOREST CONDITIONS

*Geographic Information Systems (GIS) technology was used to assess forest conditions in the watershed. The three indicators included per cent forest cover, forest interior, and riparian cover (forest cover within 30 m of a watercourse).*

## What Did we Find?

- Grades range from C to F, with mostly D grades.
- A lack of forest interior is a concern throughout the watershed. In many areas only small, fragmented woodlots exist that do not provide undisturbed areas for wildlife.
- Forests grow slowly but environmental benefits begin as soon as trees are planted. Changes in forest cover are noticeable after a five-year period.



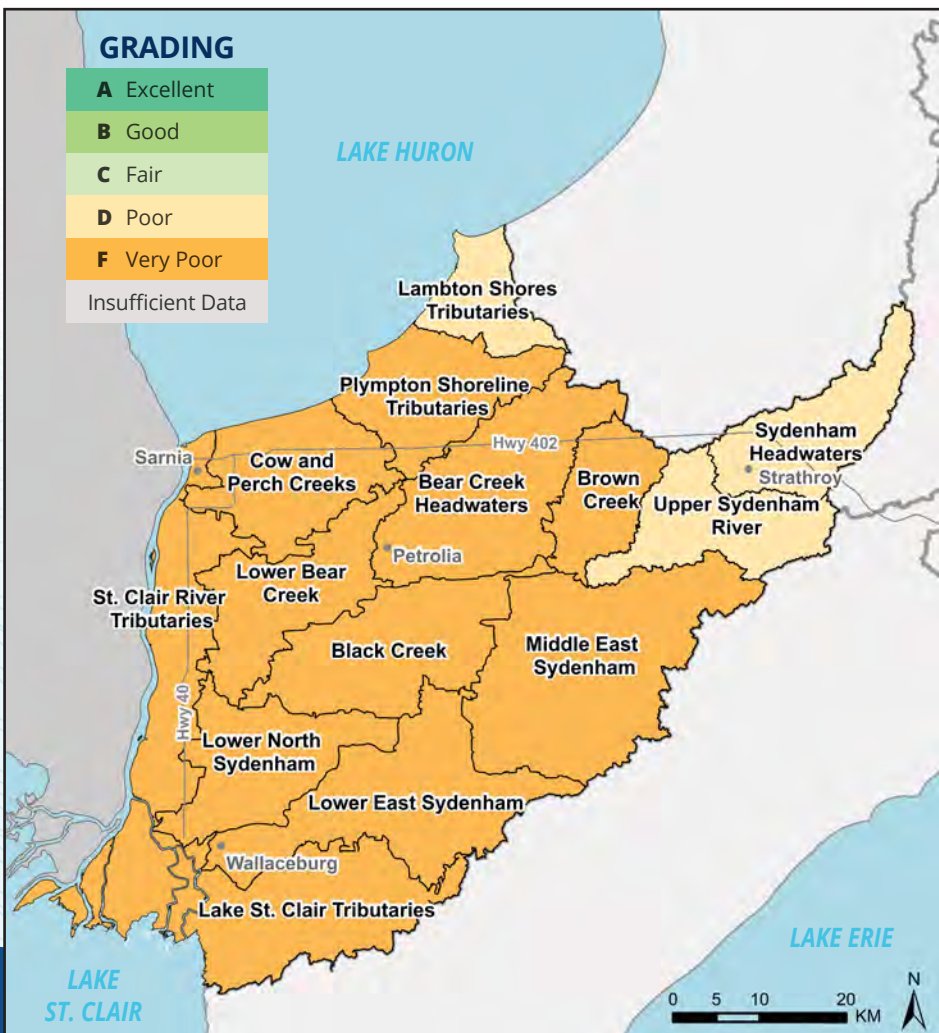
# WETLAND COVER

Wetland conditions were graded based on the percentage of area that is identified as wetland using GIS technology.

## What Did we Find?

- Grades vary from D to F, with mostly F grades.
- Only 1.1% of the St. Clair Region watershed is covered by wetlands. Wetlands reduce flooding and filter water. For a healthy watershed, Environment Canada recommends a minimum of 10% wetland cover.
- More wetlands are needed in strategic locations across subwatersheds. The Authority works with local landowners to create and restore wetland areas.

For more details about the information found in these maps, visit [scrca.on.ca/wrc](http://scrca.on.ca/wrc) or contact us. You can find our contact information on the back panel.



\*Wetland cover calculations do not include First Nations land



# WHAT IS OUR WATERSHED'S KEY ISSUE?



## **Non-point source pollution:**

- Comes from many sources
- Occurs when rain or snowmelt runs off fields, streets, or backyards
- Carries soil particles and pollutants to water bodies and groundwater

## **What actions could you take to reduce non-point source pollution?**

- Conserve and connect existing woodlands
- Create natural landscapes to filter stormwater
- Reduce the amount of impervious surfaces and consider gravel or new permeable pavement options
- Control soil erosion through the use of grassed waterways, berms, cover crops, and crop residue
- Apply nutrients at rates and times that optimize crop uptake
- Dispose of chemicals properly through household hazardous waste days or drop-off locations
- See the back panel for more actions to reduce non-point source pollution

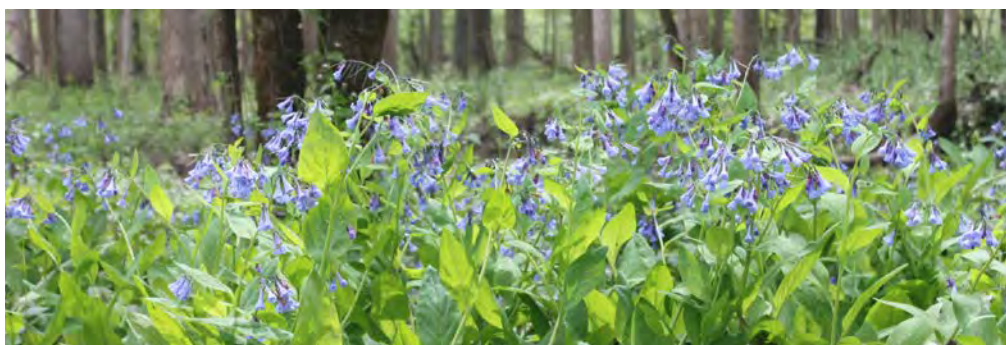
## **What local actions have been taken?**

- Public outreach events are held every year to increase awareness
- On average, 80,000 trees are planted and over 10 acres of wetland are restored in our region each year
- More than 850 landowner stewardship projects valued at over \$2.7 million have been completed through our Healthy Watersheds Program

# HOW CAN WE ENHANCE THE WATERSHED?

## What Can You Do?

- Plant native trees, shrubs, and wildflowers
- Retire and naturalize unproductive farmland
- Create wetlands to maintain water balance during wet and dry periods
- Reduce the amount of household chemicals you use and store, such as antifreeze, paint, lawn chemicals, detergents, and cleaners
- Inspect and pump out your septic system every three to five years
- Restrict livestock from waterways
- Ensure manure storage facilities are adequate
- Decommission unused wells to prevent groundwater contamination



## What Can Your Community Do?

- Support ongoing improvements to municipal infrastructure
- Direct development away from areas of environmental significance
- Protect and enhance natural features including wetlands and woodlots
- Support local initiatives to monitor water quality and quantity
- Minimize use of road salt, which eventually washes into nearby waterways, can infiltrate groundwater, and increase chloride levels
- Take actions to reduce carbon emissions

*Do you have questions not answered by this summary document? Visit [scrca.on.ca/wrc](https://www.scrca.on.ca/wrc) for the full report or contact us for more information:*



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