

# St. Clair Region 2013 Watershed Report Card Summary



The St. Clair Region Conservation Authority has prepared this watershed report card summary on the state of our surface water quality, forest conditions and other watershed features.

Environmental monitoring and reporting helps us to understand our watershed and focus efforts where they are most needed. The St. Clair Region Conservation Authority produced its 2008 Watershed Report Card for the period 2001-2005. This brochure summarizes the watershed report card information for 2006-2010. We will be producing a report card every five years to track environmental change in 14 subwatersheds.

## What is a Watershed?

A watershed is an area of land drained by a river or stream. Watershed health is impacted by actions throughout the area. Actions within a watershed affect those who live downstream.

## Where is the St. Clair Region?

The St. Clair Region Conservation Authority is located in southwestern Ontario and includes the Sydenham River watershed and smaller watersheds draining directly into southern Lake Huron, the St. Clair River and northeastern Lake St. Clair.

The St. Clair Region Conservation Authority is one of 36 Conservation Authorities across Ontario under the umbrella organization of Conservation Ontario.

## 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 reportings across the Province of Ontario and are intended to provide watershed residents with information to protect and enhance the local environment.



205 Mill Pond Cr., Strathroy, ON, N7G 3P9  
stclair@scrca.on.ca  
519 245-3710





## Groundwater

Groundwater is a valuable resource that provides drinking water to many people in Ontario.

While there are no municipal wells that provide drinking water in the SCRC, there are private wells that provide drinking water to rural residents.



## Surface Water Quality

Surface water quality is graded based on three factors:

- Total phosphorus, a nutrient usually from fertilizer and animal waste
- *E. coli* bacteria, which indicate pollution from human and animal waste
- Benthic invertebrates, small aquatic animals that live in the sediment with some species tolerant of organic pollution and some species that need healthy water conditions

### Groundwater Monitoring

The Provincial Groundwater Monitoring Network includes nine wells in the SCRC that are annually tested for a range of chemical parameters. Some parameters are above health related Ontario Drinking Water Standards, including fluoride, boron and selenium. Sodium, iron and manganese levels are above the aesthetic objectives for drinking water. These are considered to be naturally-occurring.

### Facts

- 5,100 private wells are on record
- 20 - 25% of the St. Clair Region is classified as Significant Groundwater Recharge Area and/or Highly Vulnerable Aquifer

What we do in our local watersheds impacts the health of the Great Lakes ecosystem.

- 98% of Ontarians live in the Great Lakes basin
- 9.2 M Canadians get their drinking water from the Great Lakes

Although watershed management and stewardship projects in the St. Clair Region are helping many watercourses, elevated nutrients and sediment continue to be an issue.

High levels of phosphorus in our region may contribute to major algae blooms in the Great Lakes.



### Findings

- Grades were C or D, with nine of the fourteen watersheds at D
  - Since the 2005 report card, three watersheds have improved, nine remained steady and two declined
  - The Sydenham Headwaters and Lower East Sydenham had the best water quality, followed by the Upper Sydenham River, Middle East Sydenham and Brown Creek
- Great Lakes Connection**



## Watershed Features

The St. Clair Region is an intensively farmed and productive portion of southern Ontario. The Sydenham River is the largest watercourse, and has the most freshwater mussel species of any river in Canada.



## Forest Conditions

Forest conditions are graded based on three factors:

- Percentage of forest cover
- Percentage of forest interior – wooded area that is more than 100 metres from a forest's edge
- Percentage of riparian or streamside area within 30 metres of the watercourse that is wooded

### Watershed Features

- 4130 square kilometres (67% Sydenham River watershed; 15% Lake Huron watershed; 12% Lake St. Clair watershed; and 6% St. Clair River watershed)
- 82% agricultural land use; 14% natural vegetation; 10% urban (OMAF inventory 1983)
- Portions of 17 municipalities, 3 counties, and 3 First Nations
- Population of 159,666 (decrease of 2,300 since previous report card)
- 17 wastewater treatment plants or sewage lagoons

### Aquatic Life

- 72 fish species including 5 species at risk
- 31 native freshwater mussel species including 11 species at risk

### Planting Trees

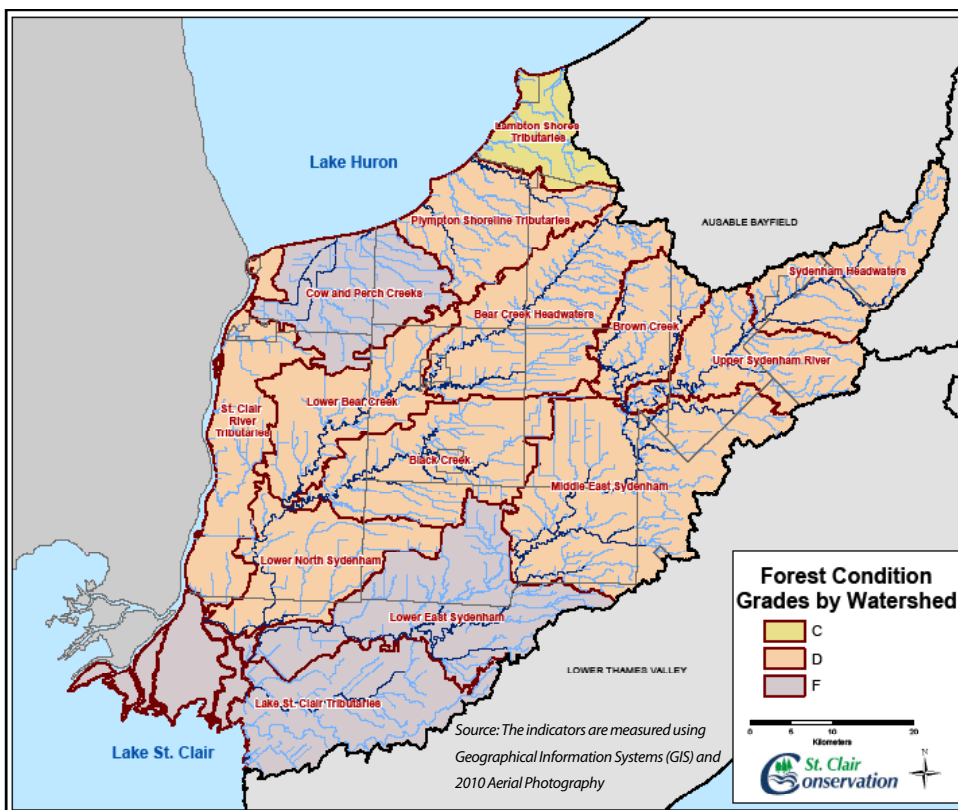
- Reforestation efforts are needed to increase the extent and size of woodlands
- Riparian buffers are needed on all watercourses, especially municipal drains
- Planting trees improves air quality and water quality

### Watercourses

- 6,200 kilometres of watercourses within the St. Clair Region
- 56% channelized, 14% natural, 8% buried, and 22% unclassified

### Wetlands

- 0.9% of the watershed in wetland cover
- Wetlands target for southern Ontario is 10%



### Findings

- Grades range from C to F, with most watersheds receiving a D
- The forest conditions have not improved significantly since the 2006 report cards. Changes in apparent forest cover are considered to be due to improved mapping accuracy.
- Forest cover is 11.4% of the St. Clair Region (D)
- Forest interior is 2% (F)
- 21.2% of the riparian zone is forested (D)

# Thumbs Up!

## Best Management Practices

128 stewardship projects completed by private landowners through the SCRCA (2006-2010). Projects include wetland restoration, streambank stabilization and riparian buffer planting.

## Volunteers for Conservation

12 community-based groups continuing to implement conservation projects with SCRCA support, in their local watersheds



## Tree Planting

221,000 trees and shrubs planted by SCRCA in 293 projects (2006-2010)

275,000 trees planted for Memorial Forest Program (1988 - 2012)



# Local Actions for Improvement

Individuals, groups and agencies can improve watershed health:

## Surface water quality improvements

### Nutrient Management:

- Use cover crops to hold soil on the fields
- Economize use of fertilizers
- Implement good manure storage

### Sediment control:

- Stabilize watercourses to filter runoff and reduce erosion
- Plant, protect, or enhance buffers along drains and streams to keep nutrients on the land, shade the water, and stabilize banks

## Manage urban stormwater by increasing natural vegetation

- Naturalize public parks and open spaces
- Limit, slow down, and filter storm runoff

## Forest Cover Improvements

- Allow natural regeneration beside woodlots
- Plant native trees and shrubs around existing woodlots
- Connect woodlots by planting corridors, windbreaks, and buffers along fields and watercourses
- Plant native species for landscaping

