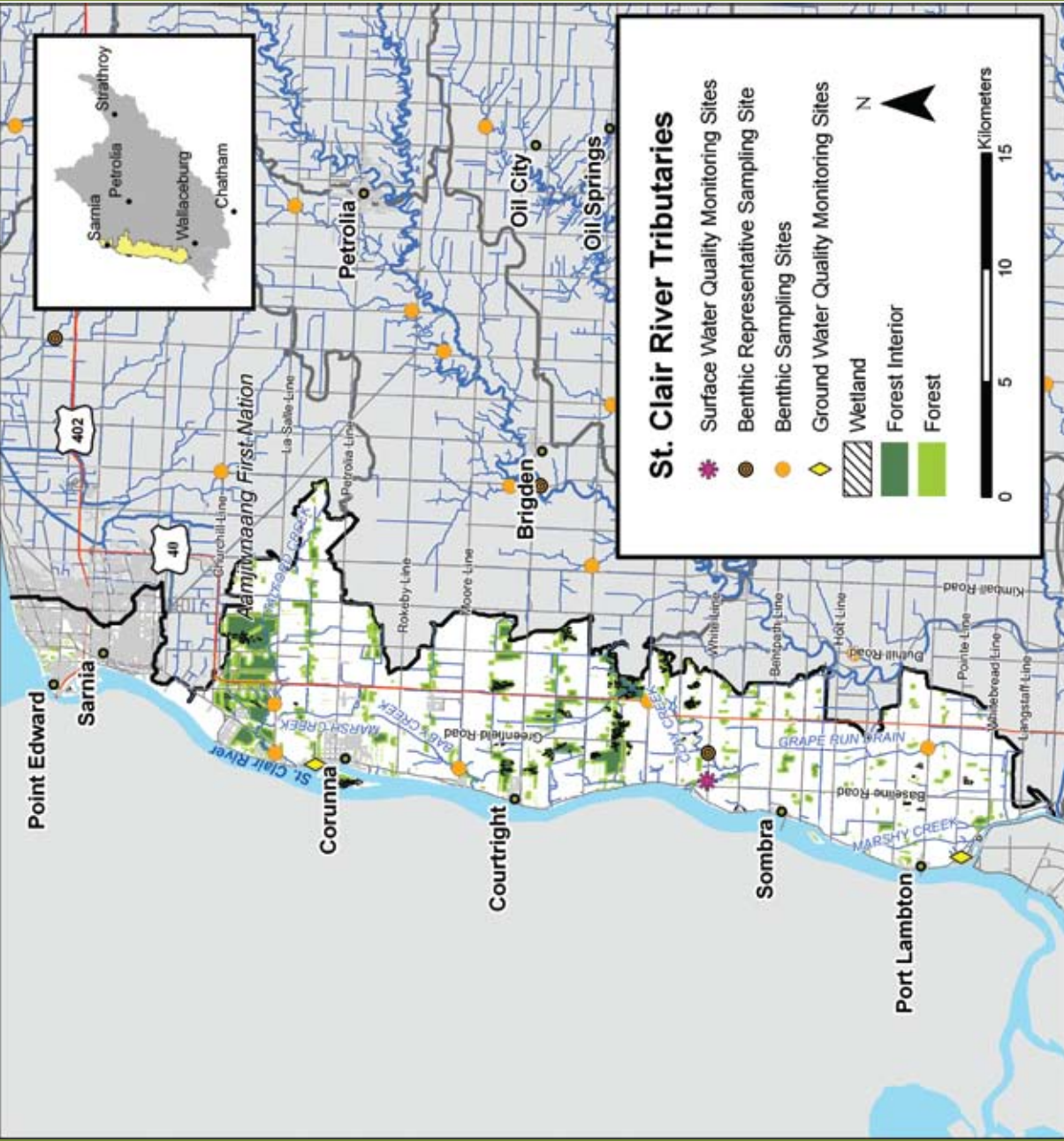


# St. Clair River Tributaries Watershed Report Card



This report card summarizes water quality and forest conditions for these watersheds within the St. Clair Region. The summary is intended to provide landowners, groups, municipalities and agencies with information to protect, enhance and improve natural features of the watershed. The ongoing monitoring will be reported on a five-year cycle which will help local people manage their natural features.

This report card is part of a larger report entitled The St. Clair Region Conservation Authority Watershed Report Card available at: [www.scrca.on.ca](http://www.scrca.on.ca). Further information, including methodology, comparisons to the other 13 St. Clair Region watersheds, and references are also found in the report.

**Grades:**  
**Forest Conditions - C**  
**Surface Water Quality - D**





# St. Clair River Tributaries

## Watershed Features

<b>Area</b>	262 sq km or 64 840 acres or 101 square miles
<b>Municipalities</b>	St. Clair, Sarnia, Chatham-Kent, Point Edward
<b>First Nations</b>	Aamjiwnaang First Nation
<b>Watercourses</b>	Talfourd Creek, Marsh Creek, Baby Creek, BOWENS Creek, Clay Creek, Marshy Creek, Grape Run Drain
<b>Land Use</b>	68% agriculture; 23% urban/industrial; 9% woodlot (OMAFRA 1983)
<b>Geology</b>	65% bevelled till plains; 28% clay plains; 6% sand plains; 1% beaches and shorecliffs (GIS derived from physiographic maps)(Chapman and Putnam 1984)
<b>Soils</b>	80% silt and clay; 7% loam; 5% silt and clay loams; 4% not mapped; 3% sand loams; 1% bottom land and beach
<b>Streamside Cover</b>	20% of the 15 metre area on both sides of open streams is vegetated (SOLRIS Woodlands OMNR 2005, SCRCA 2007)
<b>Wetlands</b>	1% (SOLRIS Wetlands OMNR 2005)
<b>Groundwater</b>	There is a deep bedrock aquifer between Sombra and Port Lambton, created from rainfall that occurred thousands of years ago. The groundwater has methane and hydrogen sulfide and is brackish with a high sodium and chloride content. Most residents are supplied with municipal piped water from Lake Huron, St. Clair River or the Chenal Ecarte.
<b>Natural Areas</b>	<b>Provincially Significant Wetlands:</b> Stag Island Natural Area and Wetland, Marshy Creek Marsh <b>Significant Natural Areas:</b> Aamjiwnaang First Nation, Sassafras Woods, Sombra Sycamore Woods, Upland Plover Woods, Spice Bush Woods, Fertilizer Plant Woods, Bickford Oak Woods (Clay Creek Woods), Indian Pipe Woods, Payne Woods, Hydro Plant Woods, Dow Wetlands
<b>Fishes</b>	Warm water fish communities with 24 species including Northern Pike, Largemouth Bass and sunfish. Important habitat for fish species at risk.
<b>Waste Water Treatment Plants</b>	Point Edward WWTP; Sarnia WWTP; Corunna WWTP; Courtright WWTP; Sombra Lagoons; Port Lambton Lagoons
<b>Species at Risk</b> Sources: NHIC, 2007; SCRCA, 2007	<b>Vegetation:</b> Colicroot, American Columbo, Blue Ash, Swamp Rosemallow, Butternut, Dense Blazingstar, Shumard Oak, Prairie Rose, Willow Aster <b>Reptiles:</b> Spiny Softshell Turtle, Eastern Foxsnake, Eastern Hognose Snake, Butler's Gartersnake <b>Birds:</b> Northern Bobwhite, Least Bittern <b>Fishes:</b> Bigmouth Buffalo, Spotted Sucker, Channel Darter <b>Mussels:</b> None known at this time <b>Mammals:</b> None known at this time



# St. Clair River Tributaries

Forest Condition and Water Quality

## Indicator and Description

### FOREST CONDITIONS

St. Clair River  
Tributaries  
Result Grade

SCRCA Area  
Result Grade

Forest Cover is the percentage of the watershed that is forested. Environment Canada recommends 30% of a watershed should be in forest cover.

**14.9% C**

**11.5% D**

Forest Interior is the area inside a woodlot that some bird species need for breeding. Environment Canada recommends 10% of a watershed should be in forest cover that is at least 100 m from the forest edge.

**3.7% C**

**1.8% D**

### SURFACE WATER QUALITY

St. Clair River  
Tributaries  
Result Grade

SCRCA Area  
Result Grade

Total Phosphorus is an element that enhances plant growth and contributes to excess algae and low oxygen in streams and lakes. The Ministry of the Environment has established an environmental health objective concentration of 0.03 mg/L.

**0.18 mg/1 D**

**0.14 mg/1 C**

E. coli (Escherichia coli) are bacteria found in human and animal waste. Their presence in water indicates the potential for water to have other disease-causing organisms. The Ministry of Health has established a guideline of 100 cfu (colony forming units)/100 mL in recreational waters.

**No Data**

**181 cfu C**

Benthic Invertebrates are small animals without backbones that live in stream or lake sediments. The Family Biotic Index (FBI) summarizes the information about the numbers and types of these animals in a sediment sample. FBI values provide stream health information and values range from 1 (healthy) to 10 (degraded).

**7.0 FBI D**

**6.1 FBI C**

Data collected 2001 - 2005, printed 2008



# St. Clair River Tributaries

## Local Solutions



### Local Solutions to Improve Forest Conditions:

- To improve the health of individual woodlots, woodlot owners should prepare and follow Forest Management Plans
- Naturalize urban areas
- Encourage industry to protect and enhance natural features

### Local Solutions to Improve Water Quality:

- Separate the combined sewer outfalls in urban areas
- Work with industry to implement agricultural Best Management Practices on their properties, addressing fertilizer and pesticide use and sediment and erosion control
- Maintain, repair or replace septic systems

### Thumbs Up!

- Dow Chemical for development of Dow Wetlands, planting 32 hectares of trees and shrubs and developing Forest Management Plans for existing woodlands
- Terra Industries for 20 hectare naturalization project adjacent to the St. Clair River
- ICI Canada for creating 20 hectare wetland including buffer of trees and shrubs
- City of Sarnia for continuing to separate combined sewer outfalls
- Lambton County for naturalizing 26 hectares of land near Bowen's Creek with trees
- Dow Chemical for purchasing seven hectares of farmland along the river and donating the land to Chatham-Kent, so that Ducks Unlimited Canada could develop the Roberta Stewart Wetland
- All those landowners who have Environmental Farm Plans



St. Clair Region Conservation Authority  
 205 Mill Pond Crescent, Strathroy ON N7G 3P9  
 E-mail: [scrca@scrca.on.ca](mailto:scrca@scrca.on.ca)  
 Web site: [www.scrca.on.ca](http://www.scrca.on.ca)  
 Phone (519) 245-3710