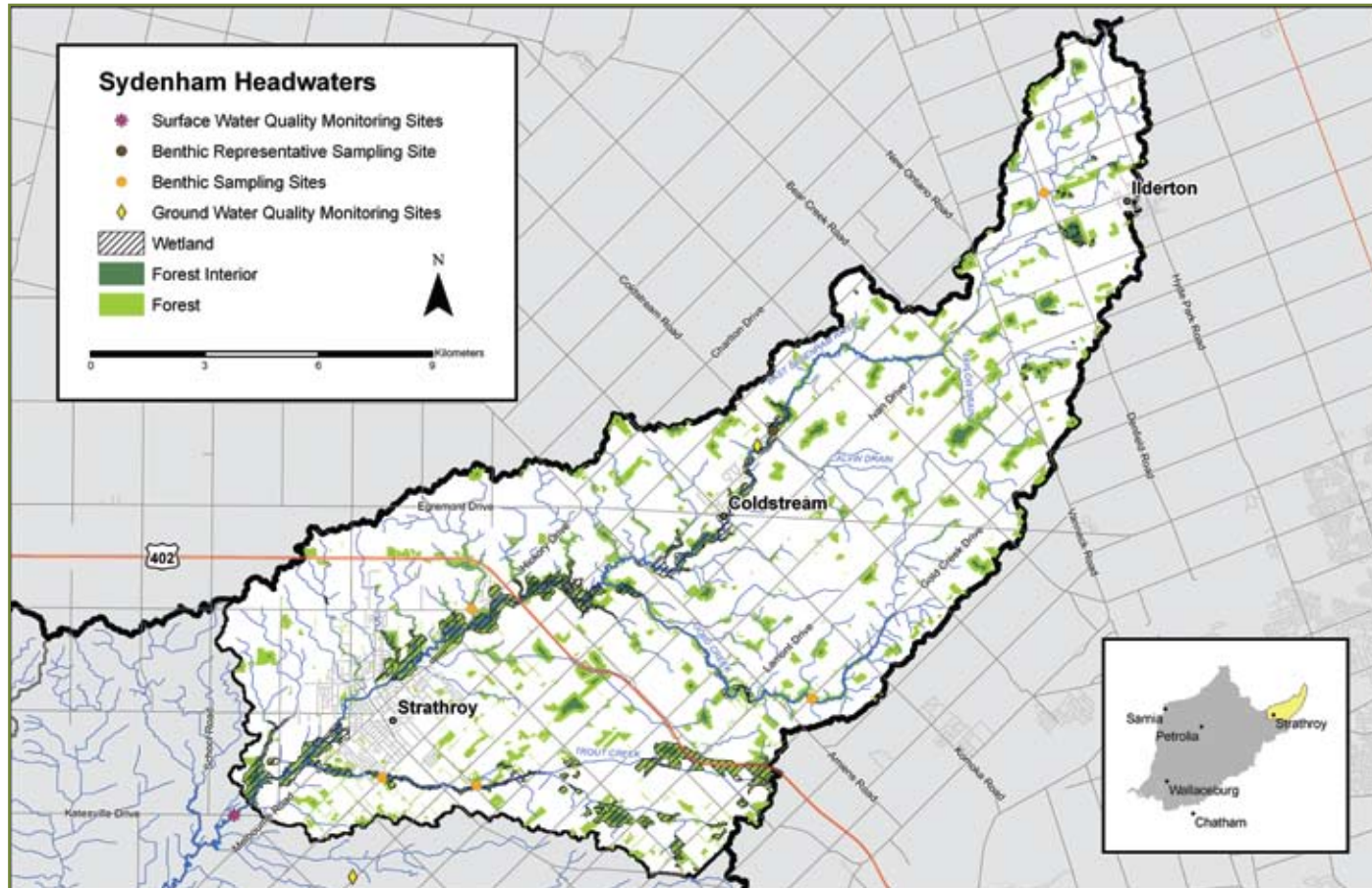




Sydenham Headwaters

Watershed Report Card



This report card summarizes water quality and forest conditions for the Sydenham Headwaters watershed within the St. Clair Region Conservation Authority jurisdiction. 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.

Grades:
Forest Conditions - D
Surface Water Quality - B

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. Further information, including methodology, comparisons to the other 13 St. Clair Region watersheds, and references are also found in the report.





Sydenham Headwaters

Watershed Features

| | |
|---|---|
| Area | 224 sq km or 55 330 acres or 86 square miles |
| Municipalities | Middlesex Centre, Strathroy-Caradoc, Adelaide-Metcalf |
| First Nations | none |
| Watercourses | East Sydenham River (in part), Taylor Drain, Colvin Creek, Gold Creek, Trout Creek |
| Land Use | 81% agriculture; 11% woodlot; 7% urban/industrial; 1% other (OMAFRA 1983) |
| Geology | 44% sand plains; 29% till plains; 24% till moraines, 2% spillways, 1% clay plains (GIS derived from physiographic maps) (Chapman and Putnam 1984) |
| Soils | 41% silt and clay; 20% sand loam; 15% loam; 11% bottomland; 9% silt and clay loam; 3% not mapped; 1% fine sand |
| Streamside Cover | 34% of the 15 metre area on both sides of open stream is vegetated (SOLRIS Woodlands OMNR 2005, SCRCA 2007) |
| Wetlands | 4.1% (SOLRIS Wetlands OMNR 2005) |
| Groundwater | Extensive shallow (overburden) aquifers are found in this watershed and most of the area has groundwater wells, including very shallow sandpoint wells. Groundwater is generally good quality for drinking but some wells have elevated iron and manganese and all the aquifers are vulnerable to influence from surface land uses. The Caradoc Sand Plain Aquifer has experienced elevated nitrates from both agricultural and urban land uses. Strathroy has recently connected to a Lake Huron water supply but Poplar Hill, Mount Brydges and Coldstream are still supplied by municipal groundwater. |
| Natural Areas | Provincially Significant Wetlands: Sydenham River Wetlands (in part), Komoka/South Strathroy Creek Wetlands (in part), South Ilderton Heronry Wetlands, Telfer Woods and Wetland Locally Significant Wetlands: Gold Creek Wetland Significant Natural Areas: Coldstream Woodlot, Vanneck Woods, Ivan Woods, Caradoc North Woods |
| Fishes | Warm water fish community with 41 species including Northern Pike, Largemouth Bass, Smallmouth Bass, Rock Bass and sunfish. Some coldwater tributaries with Rainbow Trout. Potential habitat for fish species at risk. |
| Waste Water Treatment Plants | Strathroy Lagoons |
| Species at Risk Sources: NHIC, 2007; SCRCA, 2007 | Vegetation: Green Dragon, False Hop Sedge, American Chestnut, Blue Ash, Willow Aster, Drooping Trillium, Butternut Reptiles: Spiny Softshell Turtle, Blanding's Turtle, Eastern Hognose Snake Birds: Yellow-breasted Chat Fishes: Greenside Darter Mussels: None known at this time Mammals: None known at this time |



Sydenham Headwaters

Forest Condition and Water Quality

Indicator and Description

| FOREST CONDITIONS | Sydenham Headwaters Result Grade | SCRCA Area Result Grade |
|--|----------------------------------|-------------------------|
| <p>Forest Cover is the percentage of the watershed that is forested. Environment Canada recommends 30% of a watershed should be in forest cover.</p> | 13.9% C | 11.5% D |
| <p>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.</p> | 1.3% F | 1.8% D |
| SURFACE WATER QUALITY | Sydenham Headwaters Result Grade | SCRCA Area Result Grade |
| <p>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.</p> | 0.09 mg/l B | 0.14 mg/l C |
| <p>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.</p> | 297 cfu C | 181 cfu C |
| <p>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).</p> | 5.6 FBI B | 6.1 FBI C |

Data collected 2001 - 2005, printed 2008



Sydenham Headwaters

Local Solutions



Local Solutions to Improve Forest Conditions:

- Increase forest interior by “bulking up” woodlands to make them larger and rounder
- Conserve woodlands through designations in Official Plans, supporting the Woodlands Conservation Bylaw and providing incentives and education for landowners
- Encourage woodlot owners to prepare and to follow Woodlot Management Plans

Thumbs Up!

- Lyle and Catherine Harrison for donating an eight hectare woodland for public conservation as the Harrison Woodland
- Landowners who fenced their livestock away from the watercourse
- Caradoc Township for roadside tree plantings - ten miles of trees per year for ten years
- All those landowners who have Environmental Farm Plans
- Enviro-Friends of Coldstream for encouraging public appreciation of Coldstream Conservation Area

Local Solutions to Improve Water Quality:

- If you use fertilizers and pesticides use them wisely, and dispose of household hazardous waste, fertilizers and pesticides properly
- Encourage municipalities to manage stormwater runoff from existing urban development, and to implement stormwater planning and monitoring for new developments
- Encourage streamside buffers along at least one side of all watercourses, especially municipal drains



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