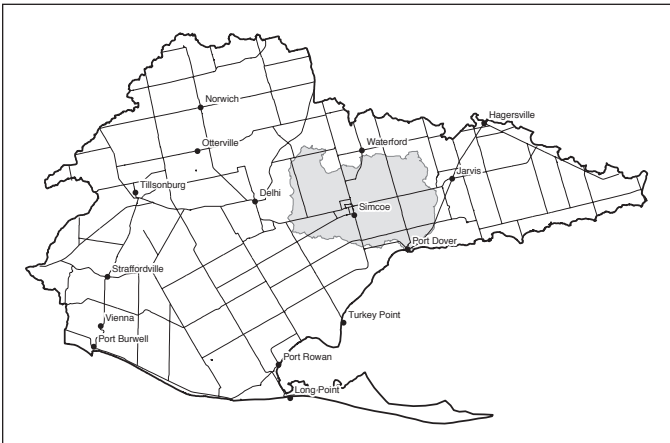


Davis Creek Watershed Report Card



This report card was prepared to provide watershed residents with an overview of the conditions along the Lynn River and its tributaries. It provides information on existing conditions within the Davis Creek watershed, as well as recommended actions for maintaining and improving watershed conditions. This report card was developed from a larger report titled *The Lynn River State of the Watershed (2003)*. Report cards for each of the Lynn River/Black Creek subwatersheds are available from the Long Point Region Conservation Authority.

Grades:

C+ Surface Water Quality

F+ Forest Conditions



Davis Creek Subwatershed Legend

- Water Course
- Surrounding Watershed
- County Road
- Study Subwatershed
- Provincial Road
- Lynn River & Black Creek Watershed



Grade
C+

Surface Water Quality

The Davis Creek subwatershed ranks a C+ with respect to overall water quality. Sites sampled ranged from fair to poor along the length of the watercourse. A moderate abundance of in-stream cover combined with substrate conditions leads to a low Benthic score. Factors such as high water temperature and pollution can have a negative impact on aquatic life in Davis Creek.



Did you know?

Water quality is a report card of how we are treating the land. Whatever we do to the land will be reflected in the quality of our water. If we are cutting down trees, filling in wetlands, paving over natural environments, not maintaining septic systems, improperly storing or applying fertilizers and pesticides... poor water quality will result. Land stewardship is something that everyone can participate in to improve the health of our natural environment.

Indicators	Davis Creek Subwatershed Results		Lynn River Watershed Average		Provincial Guideline	Indicator Description
Benthic ** Score (Hilsonhoff Index)	6.27**	C	5.71**	B	--	Benthic invertebrates are aquatic organisms that live in stream sediments and substrates. They are a good indicator of water quality and stream health. Midges, crayfish and aquatic beetles are just a few examples of such organisms. The Hilsonhoff Index scores each species according to its pollution tolerance.
Phosphorus (mg/L)	0.04*	B	0.036*	B	0.03 (Provincial Objective)	Phosphorus is found in such products as soaps, fertilizers and pesticides, and contributes to excess algae and low oxygen in streams.
AVERAGE GRADE	C+		B			

* 1 year surface water sampling in low flow conditions (2003)

**Based on two years of aquatic benthic sampling (2002 & 2003)

LOCAL ACTIONS NEEDED FOR IMPROVEMENT:

- Encourage Best Management Practices within the agricultural community to help control erosion and prevent sediment from entering waterways. Soil conservation practices such as no-till or minimal till farming, contour plowing and use of cover crops should be considered.
- Continue surface water quality monitoring and expand to include additional parameters.
- Promote decommissioning or bottom draw conversion of existing on-line ponds (ponds directly connected to a stream) to decrease stream temperatures.
- Promote establishing and/or preserving existing riparian buffers. It is important to maintain natural buffers of trees, shrubs, grasses rather than maintaining lawn or crops right up to the water's edge. In addition, by not fertilizing lawns next to streams, potential nutrient loading into a watercourse can be avoided.
- Leave existing natural features such as vegetation, rocks and gravel along shorelines.
- Encourage river clean-up stewardship projects to improve stream habitat.

Grade
F

Forest Conditions

Overall, forest conditions in the Davis Creek subwatershed rank very low with respect to the two indicators surveyed. The amount of forest cover (9.35%) is well below the overall Lynn River watershed average as well as the recommended 25 - 30% natural cover target that has been identified as ideals for Southern Ontario (Carolinian Canada, 2000). Forest interior is extremely low, indicating that most of the woodlots are too small to provide habitat for sensitive species that need large protected forests.

Did you know?

Rivers benefit from having a healthy forest along their banks to provide shade, cover, food and prevent erosion. Leaving an area of trees, grasses, shrubs and even wildflowers along waterways on or adjacent to your property can help improve water quality. These natural areas are known as riparian buffers. Riparian buffers can remove sediment and pollution such as chemicals, fertilizers, pesticides, bacteria and even road salt before they enter a watercourse. Riparian buffers can also control flooding, prevent erosion, improve water clarity, and provide shade and cooler water temperatures for fish and other aquatic life.

Indicators	Davis Creek Subwatershed Results		Lynn River Watershed Average		Indicator Description
Forest Cover	9.35%	D	17.84%	C	Forest cover is the percentage of the watershed that is forested. It is believed that there should be 25 - 30% natural cover in southern Ontario's landscapes to sustain native plants and animals (Carolinian Canada, 2000).
Forest Interior	0.87%	F	3.37%	D	Forest interior refers to the protected core area found inside a woodlot that some wildlife species require to nest and breed successfully. Many bird species whose populations are declining require large forests so they can live within the sheltered interior. Interior is that portion of a woodlot left when a 100 metre strip is removed from the perimeter. The outer 100 metre perimeter of a woodlot is considered 'edge' habitat and prone to high predation, alien species invasion, sun and wind damage.

Information source is from OBM (1975), NTS (1985 - 1990) forestry data and WorldSat International Inc. (2002)

LOCAL ACTIONS NEEDED FOR IMPROVEMENT

- Promote protection, rehabilitation and creation of riparian buffer along streams and rivers. Buffer strips are areas of vegetation adjacent to waterbodies that are planted or left natural for the purpose of stabilizing the shoreline and reducing erosion, which in turn protects fish habitat.
- Encourage protection of existing riparian buffers and forest cover along Davis Creek to filter runoff, create habitat and provide shade. Shade from overhanging vegetation helps cool and stabilize water temperatures.
- Use native plants to create a buffer. Planting a variety of trees, grasses, shrubs and wildflowers helps improve water quality and attracts wildlife.
- Connect fragmented woodlots by planting trees between small forest tracts.
- Promote tree planting on marginal lands and to increase overall forest cover. Marginal lands include steep slopes and low lying areas too wet to farm.





Davis Creek Watershed Features

DRAINAGE AREA:	2,888 ha (7,136 acres)
DAMS:	No dams are recorded in this watershed. The LPRCA decommissioned Sutton Conservation Area dam (Dec. 2004).
WATERCOURSE:	Davis Creek flows into Patterson Creek at Sutton Conservation Area in Simcoe.
FISHERY RESOURCES:	<p>Some fish species are considered good indicators of water quality and/or habitat in watercourses. Trout, and in particular Brook Trout, are indicators of clear, cold, well-oxygenated streams and lakes. Brown and Rainbow Trout can tolerate warmer water temperatures.</p> <p>Although stream temperatures in Davis Creek are sufficient to support trout, presently there are no trout found in this watercourse.</p> <p>White Sucker, Common Carp, Creek Chub, Brook Stickleback, Blackside Darter, Mottled Sculpin, Bluntnose Minnow, Fathead Minnow have been recorded.</p>
LAND USE:	Unclassified 23.37%, Agriculture 64.7%, Urban 2.57%, Wooded 9.35%, Dump/Landfill 0.01%,
FOREST COVER:	270 ha (667 acres)
INTERIOR FOREST:	25 ha (62 acres)
SOIL TYPE:	20% clay/clay till, 3% clay/silty clay, 18% impervious, 37% sand, 18% silt/silty clay, 4% aluvial
NATURAL AREAS:	Wetlands: 26 wetland areas, making up 1 provincially significant wetland complex and 1 locally significant wetland complex



"A Guide to Watershed Reporting" (2003) was referenced to measure and report on a set of standardized environmental indicators in this report card.

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