





# Little Ausable Watershed Features



**Area:** 159 km<sup>2</sup>      **Municipalities:** Lucan Biddulph, North Middlesex, Perth South, South Huron

**Geology**      61% Till Plains (Undrumlined); 21% Spillways; 18% Till Moraines (GIS derived with physiographic maps) (Chapman and Putnam 1984)

**Soils**      45% Clay Loam; 17% Silty Loam; 15% Silty Clay Loam; 15% Loam; 5% Sandy Loam; 2% Bottom Land; 1% Organic (County Soils Maps 1951-1991)

**Land Use**      91% agriculture; 6% woodlot; 2% urban; 1% other (OMAFRA 1983)

**Streamside Cover**      17% of the 15 metre area on both sides of open streams is vegetated (OMNR 1986, ABCA 1999)

**Wetlands**      Existing: 1% (OMNR 2003, ABCA 2004); Potential: 18% (ABCA 2005)

**Natural Areas**      Biddulph 12 (Locally Significant Wetland); Biddulph Environmentally Significant Area 2; McGillivray Environmentally Significant Area 12; Usborne Environmentally Significant Areas 4 to 8; Lucan Conservation Area

**Groundwater**      Both shallow (Seaforth Moraine Aquifer) and bedrock aquifers are found in this watershed. The bedrock aquifer is the most common source of drinking water and is part of a large aquifer system in southwestern Ontario. The Seaforth Moraine Aquifer is a known source of drinking water for dug or bored wells in the area and is also the main source of baseflow in the Little Ausable River. Both aquifers have been sampled and nitrate, chloride and fluoride concentrations are well below provincial drinking water standards, although elevated levels of nitrate are common in the Seaforth Moraine aquifer in this area, and high sulphate levels in the bedrock aquifer are common in the western portion of the watershed.

**Fishes**      Warm water fishery in the main channel; baitfish in tributaries. Potential habitat for fish species at risk.

## Species at Risk

(As determined by the Committee on the Status of Endangered Wildlife in Canada )

(SOURCE: Natural Heritage Information Centre, 2006; ABCA 2006)

- Vegetation:** None identified at this time.
- Reptiles:** None identified at this time.
- Birds:** None identified at this time.
- Fishes:** Black Redhorse
- Mussels:** Wavy-rayed Lampmussel, Rainbow
- Mammals:** None identified at this time.

**Wastewater Treatment Plants**      Lucan



# Little Ausable Forest Cover, Surface Water Quality

	Indicator and Description	Little Ausable		Ausable Bayfield Area	
		Result	Grade	Result	Grade
Forest Conditions	<b>Forest Cover</b> is the percentage of the watershed that is forested. Environment Canada recommends <b>30%</b> of a watershed should be in forest cover.	5.9%	D	12.6%	C
	<b>Forest Interior</b> is the area inside a woodlot that some bird species need for breeding. Environment Canada recommends <b>10%</b> of a watershed should be in forest cover that is at least 100 m from the forest edge.	0.3%	F	2.8%	D
Water Quality	<b>Total Phosphorus</b> 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 <b>0.03 mg/L</b> .	0.05	B	0.08	B
	<b>E. coli (<i>Escherichia coli</i>)</b> are bacteria found in human and animal waste. Their presence in water indicates the potential for the water to have other disease-causing organisms. The Ministry of Health has established a guideline of <b>100 cfu</b> (colony forming units)/ <b>100 mL</b> in recreational waters.	77	B	233	C
	<b>Benthic Invertebrates</b> are small animals without backbones that live in stream or lake sediments. The Family Biotic Index ( <b>FBI</b> ) 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 <b>1 (healthy) to 10 (degraded)</b> .	6.6	F	5.6	C

Grade	Explanation
A	Indicates excellent ecosystem conditions and protection may be required. Some areas may require enhancement.
B	Indicates good ecosystem conditions. Some areas may require enhancement.
C	Indicates ecosystem conditions that need to be enhanced.
D	Indicates poor ecosystem conditions that need to be improved.
F	Indicates degraded ecosystem conditions that need considerable improvement.



# Little Ausable Next Steps and Local Successes



## To improve forest conditions ...

- Reforestation efforts are critical in this area. Landowners of less agriculturally productive lands should establish woodlots.
- Maintain streamside trees and shrubs.

- Walk your woodlots and notice the amount of light (more light in the interior of your woodlot may mean dying trees), flush of undergrowth, and unauthorized use (ATV or garbage disposal).

## To improve water quality ...

- Protect all wetlands.
- Restrict livestock access from waterways (Contact ABCA for more information).
- Rehabilitation of areas used for quarrying should be considered.
- Use storm water management plans in developing areas in the Town of Lucan.
- Work with local community groups to determine stream enhancement projects on the Benn Drain.
- Plant windbreaks and practise conservation tillage on erosion-prone soils (Programs available through ABCA).
- Fix faulty septic systems and establish a septic maintenance plan.

- Decommission abandoned wells and upgrade existing wells to prevent groundwater contamination.
- Manure Management:
  - Apply manure at rates and times to optimize crop uptake of nutrients and prevent runoff.
  - Monitor tile outlets for contaminants during and following manure application and implement spill contingency plans if necessary.
  - Ensure manure storage facilities are adequate and properly functioning.
  - Keep records; develop a nutrient management plan (Environmental Farm Plan funding may be available).

## Other recommendations

- Further investigate Species at Risk habitat.
- Maintain drains by brushing or bottom clean out only. Time the maintenance work to occur in the low flow or dry months of the year. Drains with streamside trees, shrubs or grasses need less cleaning out and provide good habitat for fish.
- Continue to support the province's natural heritage policies through local

official plans and zoning by-laws (i.e., storm water management, tree cutting bylaw).

- Complete Environmental Action Plans (Farmers see Environmental Farm Plan; Lakeshore residents see Lakeshore Stewardship Manual). A stewardship manual for rural non-farm landowners should be completed by 2007. Contact the ABCA for more information.



## Thumbs up!

The Township of Lucan-Biddulph has set aside land for regional storm-water retention facilities to reduce the flooding potential in downstream Lucan.

*This is just one example in the watershed – give us a call and tell us about your project.*



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