

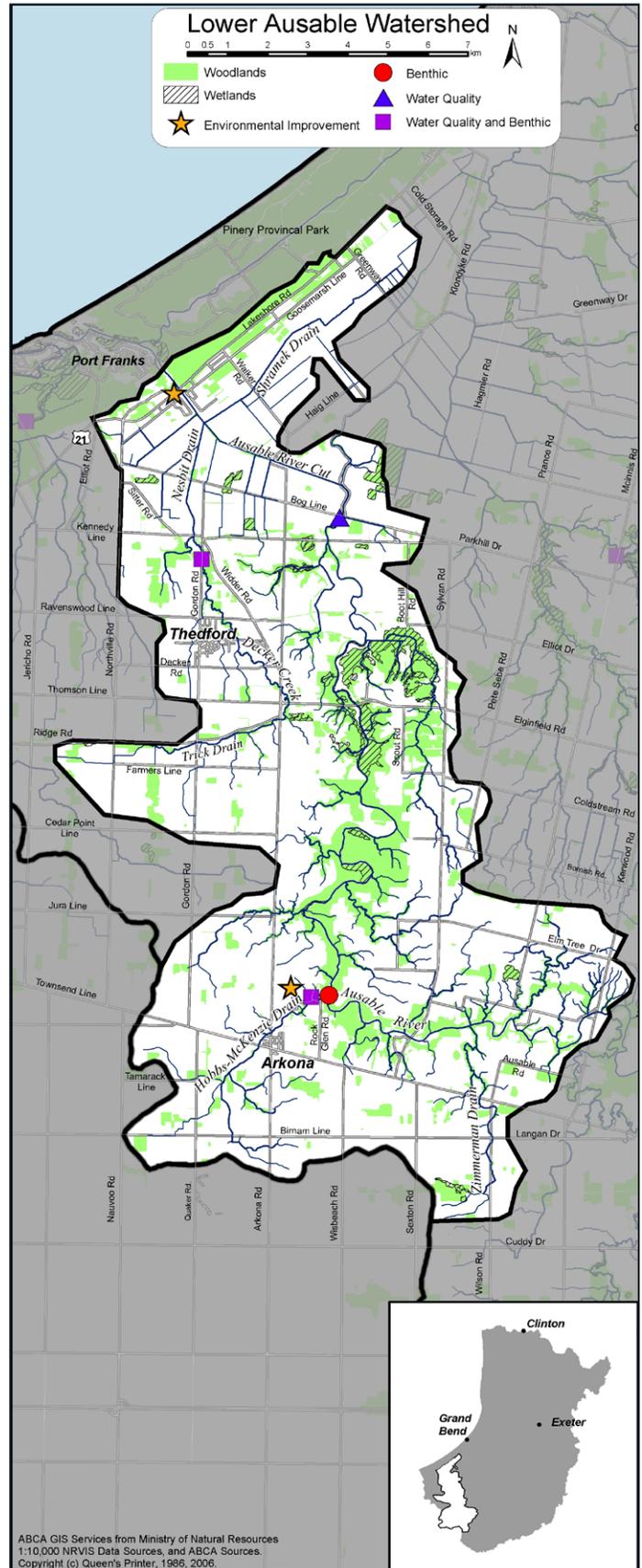


Lower Ausable Watershed Report Card

Grades:

Forest Conditions	C
Surface Water Quality	C

This report card summarizes water quality and forestry information for the Lower Ausable watershed (*the highlighted area on the map below*). This map also shows water quality stations and example environmental improvement locations. For consistency across watersheds, Conservation Ontario has recommended the use of specific water quality and forestry indicators that are described in the following tables. 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 Ausable Bayfield Conservation Authority Watershed Report Card** available at: www.abca.on.ca. Further information, including methodology, comparisons to the other 15 Ausable Bayfield watersheds and references are also found in the report.



Priority Strategy for Lower Ausable Watershed

Enhance:

Expand natural areas in Ausable River Valley to Dunes and Parkhill Reservoir.



Lower Ausable Watershed Features



Area: 174 km²

Municipalities: Adelaide Metcalfe, Lambton Shores North Middlesex, Warwick

Geology 32% Till Moraines; 19% Bevelled Till Plains; 19% Till Plains (Undrumlinized); 10% Sand Plains; 8% Peat and Muck; 7% Clay Plains; 4% Beaches and Shorecliffs; 1% Water (GIS derived with physiographic maps) (Chapman and Putnam 1984)

Soils 47% Clay; 18% Silty Clay Loam; 14% Sandy Loam; 12% Loam; 4% Bottomland; 2% Sand; 2% Silty Loam; 1% Organic (County Soils Maps 1951-1991)

Land Use 76% agriculture; 18% woodlot; 3% urban; 3% other (OMAFRA 1983)

Streamside Cover 42% of the 15 metre area on both sides of open streams is vegetated (OMNR 1986, ABCA 1999)

Wetlands Existing: 2% (OMNR 2003, ABCA 2004); Potential: 20% (ABCA 2005)

Natural Areas Ausable River Valley Life, Thedford Brickyard Earth Science (Area of Natural and Scientific Interest); Thedford Swamp (Provincially Significant Wetland); Adelaide Environmentally Significant Area 1; Bosanquet Environmentally Significant Areas 3 and 4; McGillivray Environmentally Significant Area 2; West William Environmentally Significant Areas 3, 4 and 6; Thedford Conservation Area, Rock Glen Conservation Area, Doherty Tract, Mystery Falls, Joany's Woods Management Area, Sadler/Brebner Tracts

Groundwater Both shallow (former glacial Lakes Warren, Algonquin and Nippissing Shoreline aquifers) 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 shallow aquifers are possibly the source of drinking water for dug or bored wells in the area and are also a source of the flow in the Lower Ausable River. The Bedrock aquifer is known to have elevated levels of sulphates and hardness, making it usable, yet aesthetically unattractive as a potable water source. Very little information exists on water quality within the shallow aquifers.

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)

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

Vegetation: False Rue-anemone, Green Dragon, Riddell's Goldenrod, Tuberos Indian-plantain , Golden Seal

Reptiles: Blue Racer, Eastern Hog-nosed Snake, Queen Snake, Eastern Spiny Softshell, Northern Map Turtle, Milksnake

Birds: Cerulean Warbler, Louisiana Waterthrush

Fishes: None identified at this time.

Mussels: Northern Riffleshell, Snuffbox, Kidneyshell

Mammals: None identified at this time.

Wastewater Treatment Plants

Arkona, Thedford



Lower Ausable Forest Cover, Surface Water Quality

	Indicator and Description	Lower Ausable		Ausable Bayfield Area	
		Result	Grade	Result	Grade
Forest Conditions	Forest Cover is the percentage of the watershed that is forested. Environment Canada recommends 30% of a watershed should be in forest cover.	18.0%	C	12.6%	C
	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.	3.3%	D	2.8%	D
Water Quality	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 .	0.07	B	0.08	B
	E. coli (<i>Escherichia coli</i>) 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 100 cfu (colony forming units)/ 100 mL in recreational waters.	264	C	233	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) .	5.5	C	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.



Lower Ausable Next Steps and Local Successes



To improve forest conditions ...

- ATV use inhibits the uptake of beneficial management practices such as planting streamside grasses, shrubs and trees near Arkona. Please use ATVs on trails designated for this use.
- Link the natural areas of the Ausable Gorge with The Pinery Provincial Park and Port Franks.

To improve water quality ...

- Encourage uptake of agricultural beneficial management practices (BMPs) near Arkona.
- Wake from small boats traveling up the Ausable Cut is contributing to shoreline erosion.
- Protect all wetlands.
- 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.
- Lake Smith Marsh Complex:
 - Restore marsh in less viable agricultural areas.
 - Use BMPs for crop irrigation to minimize water use.
 - Encourage agricultural practices that maintain and regain good soil structure.
 - Use water structures to raise water levels in the winter to reduce soil erosion from wind.
 - Investigate and remediate fish barriers.

- 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!

Private landowners have a good conservation ethic about the Ausable River and have worked to protect provincially significant environmental areas in this valley and have helped researchers conduct surveys on difficult-to-access lands.

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



Ausable Bayfield Conservation Authority

71108 Morrison Line, RR 3 Exeter, ON N0M 1S5

E-mail: info@abca.on.ca

Web site: www.abca.on.ca

Phone (519) 235-2610, 1-888-286-2610