



# Upper Ausable Watershed Report Card

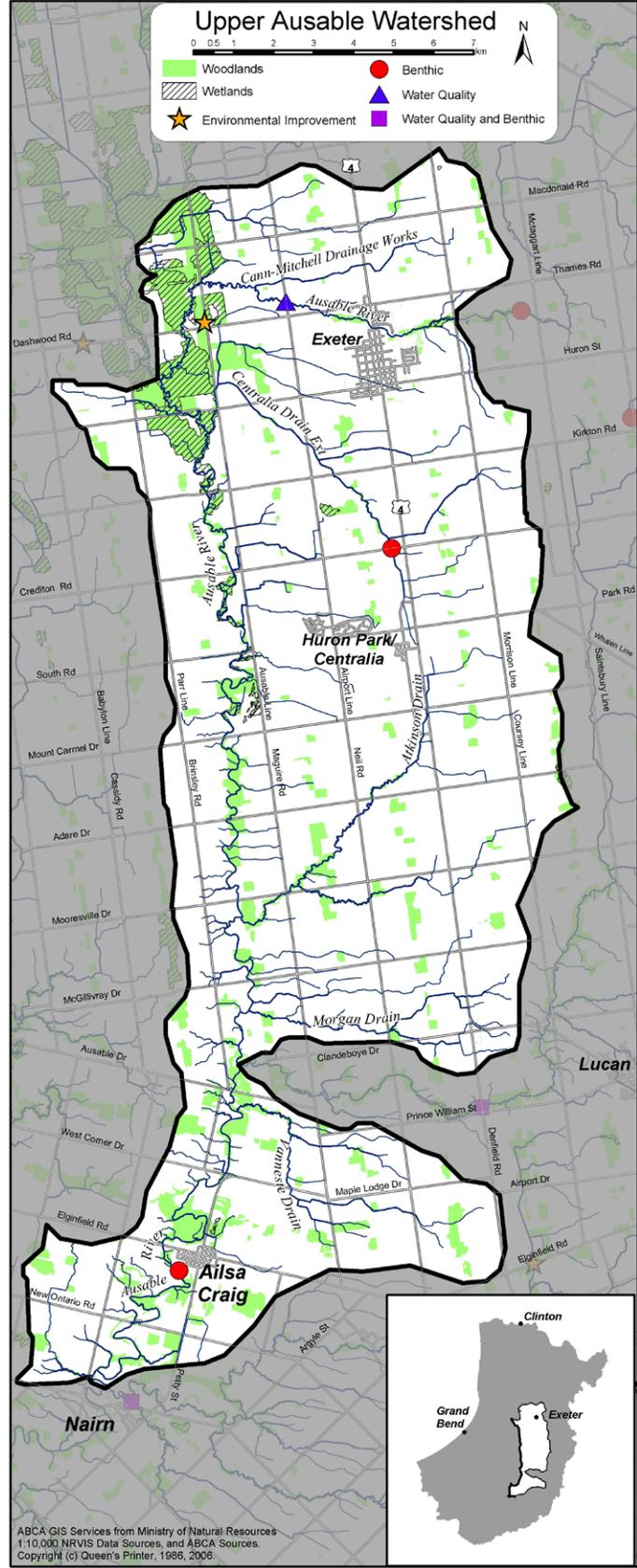
Grades:	
Forest Conditions	<b>D</b>
Surface Water Quality	<b>C</b>

This report card summarizes water quality and forestry information for the Upper Ausable watershed (*the highlighted area on the map at right*). 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](http://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 Upper Ausable Watershed

**Improve:** Consider beneficial management practices for improved water quality in Exeter and area.





# Upper Ausable Watershed Features



**Area:** 253 km<sup>2</sup>      **Municipalities:** Bluewater, South Huron, North Middlesex,

**Geology**      55% Till Plains (Undrumlinized); 25% Till Moraines; 6% Spillways; 6% Sand Plains; 6% Bevelled Till Plains; 2% Beaches and Shorecliffs (GIS derived with physiographic maps) (Champman and Putnam 1984)

**Soils**      40% Clay Loam; 35% Silty Clay Loam; 9% Sandy Loam; 7% Loam; 6% Silty Loam; 2% Bottom Land; 1% Organic (County Soils Maps 1951-1991)

**Land Use**      84% agriculture; 10% woodlot; 4% urban; 2% other (OMAFRA 1983)

**Streamside Cover**      31% of the 15 metre area on both sides of open streams is vegetated (OMNR 1986, ABCA 1999)

**Wetlands**      Existing: 3% (OMNR 2003, ABCA 2004); Potential: 17% (ABCA 2005)

**Natural Areas**      Dashwood Area Earth Science, Centralia Area Earth Science (Area of Natural and Scientific Interest); Hay Swamp (Provincially Significant Wetland); Biddulph 12, MacDonald Marsh Wetland (Locally Significant Wetland); Biddulph 2, Stanley 1 to 3, Osborne 1 and 3, East William 1 Environmentally Significant Areas; Crediton Conservation Area, Johnson Management Area, Devil's Elbow Management Area

**Groundwater**      Several shallow (Wyoming Moraine, Seaforth Moraine and Exeter Aquifers) and bedrock aquifers are found in this watershed. The bedrock aquifer is a common source of drinking water and is part of a large aquifer system in southwestern Ontario. However, poor water quality in the deep bedrock aquifer, particularly high levels of sulphates, has led to the exploitation of the intermediate Exeter Aquifer in this area. The Wyoming and Seaforth Moraine Aquifers are possibly sources of drinking water for dug or bored wells in the area and are also a source of the flow for the main tributary of the Ausable River. The Wyoming Moraine Aquifer is likely the source of the water for the expansive Hay Swamp, which is partially drained by the Ausable River, contributing to base-flow, improved water quality and fisheries therein.

**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)

- Vegetation:**      **Green Dragon, Riddell's Goldenrod**
- Reptiles:**      **None identified at this time.**
- Birds:**      **None identified at this time.**
- Fishes:**      **Eastern Sand Darter, Greenside Darter**
- Mussels:**      **Northern Riffleshell, Snuffbox, Wavy- rayed Lampmussel, Rainbow, Kidneyshell**
- Mammals:**      **None identified at this time.**

**Wastewater Treatment Plants**

Exeter, Ailsa Craig



# Upper Ausable Forest Cover, Surface Water Quality

	Indicator and Description	Upper 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.	<b>10.4%</b>	<b>D</b>	<b>12.6%</b>	<b>C</b>
	<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.	<b>2.2%</b>	<b>D</b>	<b>2.8%</b>	<b>D</b>
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> .	<b>0.16</b>	<b>C</b>	<b>0.08</b>	<b>B</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.	<b>159</b>	<b>C</b>	<b>233</b>	<b>C</b>
	<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> .	<b>4.7</b>	<b>B</b>	<b>5.6</b>	<b>C</b>

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.



# Upper Ausable Next Steps and Local Successes



## To improve forest conditions ...

- Pine plantations in the ABCA managed forests are being converted to native forests.
- Extend the streamside forest upstream of McTaggart Line and downstream of Exeter.

## To improve water quality ...

- Did you know that the storm water drains on your street flow directly into the Ausable River? Please remember to pick up after your pets and if you choose to use fertilizers and pesticides on your lawns and gardens please follow the instructions on the label.
- Continue to support municipal sewage infrastructure in Crediton and Centralia.
- Reduce cattle access in the main Ausable Channel.
- Enhance the habitat features of main Ausable Channel near Kirkton Road.
- 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

- In Hay Swamp:
  - Expand Hay Swamp into lands that are not agriculturally viable.
  - Conduct a pike spawning survey.
  - Recognize that there is healthy beaver activity.
  - Watch for clean-up days.
  - Do not illegally dump garbage.
- Investigate Species at Risk habitat.
- Identify factors that contribute to flood events in the southeast corner of the Town of Exeter.

- A water budget to determine the number of users should be considered during low water conditions.
- 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 South Huron Trail is recognized as a local gem. Have you hiked it lately?

*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](mailto:info@abca.on.ca)

Web site: [www.abca.on.ca](http://www.abca.on.ca)

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