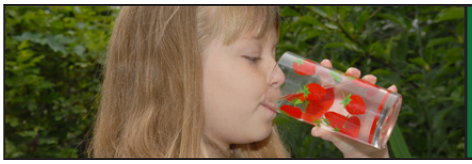
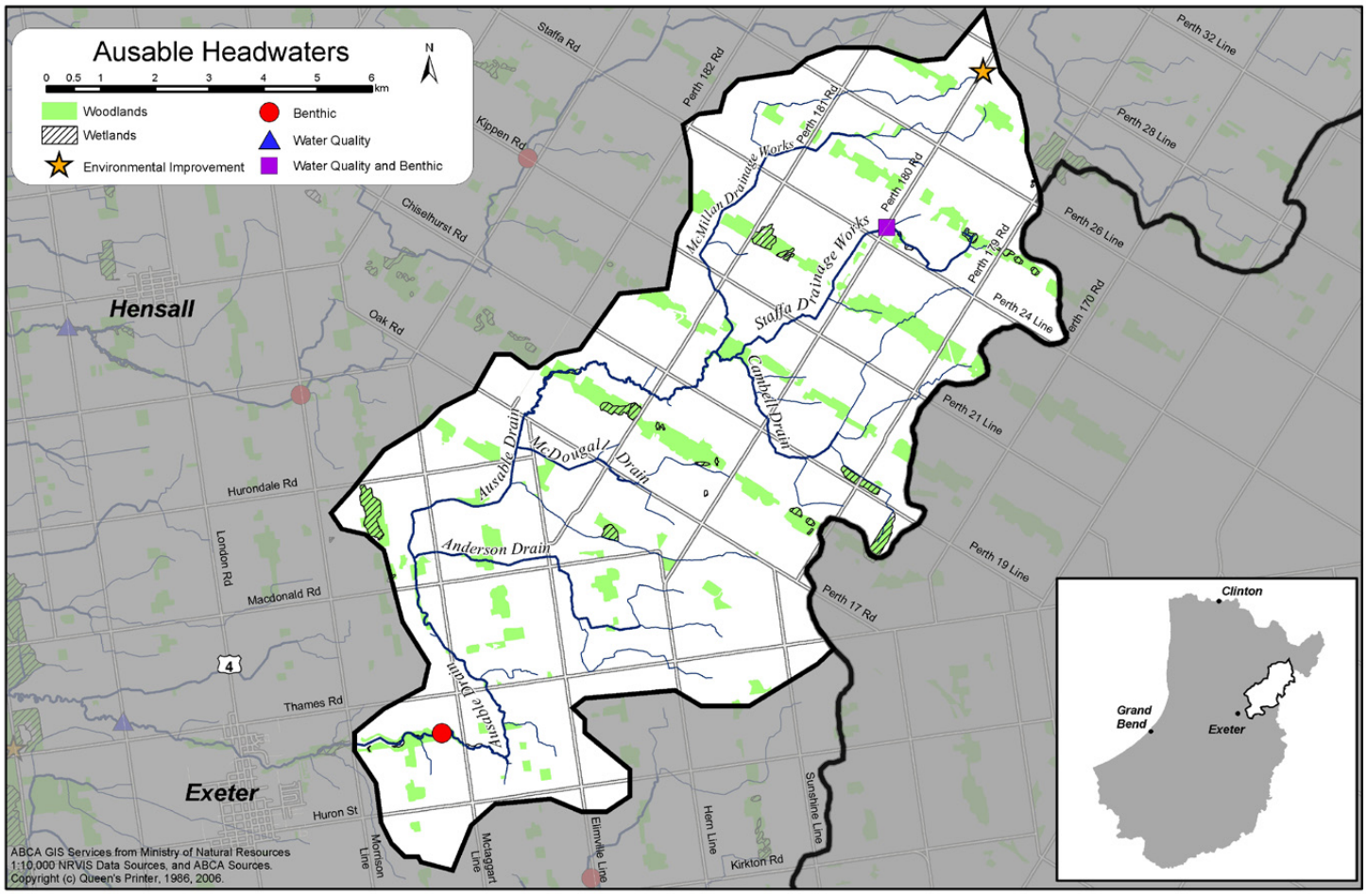


# Ausable Headwaters Watershed Report Card

## Grades:

| | |
|---|---|
| Forest Conditions | **D** |
| Surface Water Quality | **B** |

This report card summarizes water quality and forestry information for the Ausable Headwaters 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 Ausable Headwaters Watershed

**Enhance:** Enhance surface water quality that may influence local groundwater drinking sources.

# Ausable Headwaters Watershed Features

**Area:** 102 km$^2$ **Municipalities:** West Perth, South Huron

| | |
|---|---|
| **Geology** | 54% Till Plains (Undrumlinized); 24% Till Moraines; 19% Spillways; 3% Kame Moraines (GIS derived with physiographic maps) (Chapman and Putnam 1984) |
| **Soils** | 77% Clay Loam; 10% Silt Loam; 7% Bottomland; 3% Loam; 2% Sandy Loam; 1% Organic (County Soils Map 1951-1991) |
| **Land Use** | **89% agriculture; 9% woodlot; 1% urban; 1% other (OMAFRA 1983)** |
| **Streamside Cover** | 21% 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: 20% (ABCA 2005) |
| **Natural Areas** | Staffa Kame Complex Earth Science (Area of Natural and Scientific Interest); Hibbert Swamp, Sink Hole Forest Swamp (Locally Significant Wetland); Hibbert Environmentally Significant Areas 4 to 9; Usborne Environmentally Significant Areas 1 to 3; Morrison Dam Conservation Area, Hibbert Source Management 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 this reach of the 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. An interesting geological feature of this area is the development of sinkholes, wherein surface waters are drained directly in to the bedrock aquifers, without having filtered through the overlying glacial sediment. |
| **Fishes** | Warm water fishery in the main channel; baitfish in tributaries |

## Species at Risk

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

(SOURCE: Natural Heritage Information Centre, 2006)

| | |
|---|---|
| **Vegetation:** | None identified at this time. |
| **Reptiles:** | None identified at this time. |
| **Birds:** | None identified at this time. |
| **Fishes:** | None identified at this time. |
| **Mussels:** | None identified at this time. |
| **Mammals:** | None identified at this time. |

**Wastewater Treatment Plants** None in area.

# Ausable Headwaters
## Forest Cover, Surface Water Quality

| | Indicator and Description | Ausable Headwaters Result | Ausable Headwaters Grade | Ausable Bayfield Area Result | Ausable Bayfield Area 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. | 9.0% | D | 12.6% | C |
| Forest Conditions | **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. | 0.9% | F | 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**. | 0.03 | A | 0.08 | B |
| Water Quality | **E. coli** (*Escherichia coli)* 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. | 623 | C | 233 | C |
| Water Quality | **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)**. | 5.6 | 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. |

# Ausable Headwaters
## Next Steps and Local Successes

## To improve forest conditions ...

- Windbreaks are needed in the former Usborne Township. Treed fencerows keep top soil on your farm.
- Protect rear of lot woodlot corridors and wetlands.
- Investigate linkages between Ausable Headwaters and remnant woodlots in Hibbert Environmentally Sensitive Areas (ESAs).
- Cold water streams can be enhanced with streamside plantings.

## To improve water quality ...

- Sinkhole Area Well Care:
    - Have your well inspected and upgraded where necessary.
    - Test your well water for coliforms in every season and keep a record of the results.
    - Do not store fuel, pesticides, or other toxic material near your well.
    - Ensure that abandoned wells are properly capped.
    - Use water conservation – install water efficient toilets and shower heads, restrict use of water for showers, lawn watering and car washing.
    - Attend public meetings to help develop groundwater protection strategies.
    - Reduce contamination of municipal drains that flow into sinkholes.
- Investigate the potential groundwater effects of large greenhouse operations.
- 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).
- 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.

## Other recommendations

- Maintain larger drains by spot clean out only.
- 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!

Staff and students at Usborne Central School have:

- attended Camp Sylvan for generations;
- have a Green Club; and
- studied the local environment in their Curriculum.

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