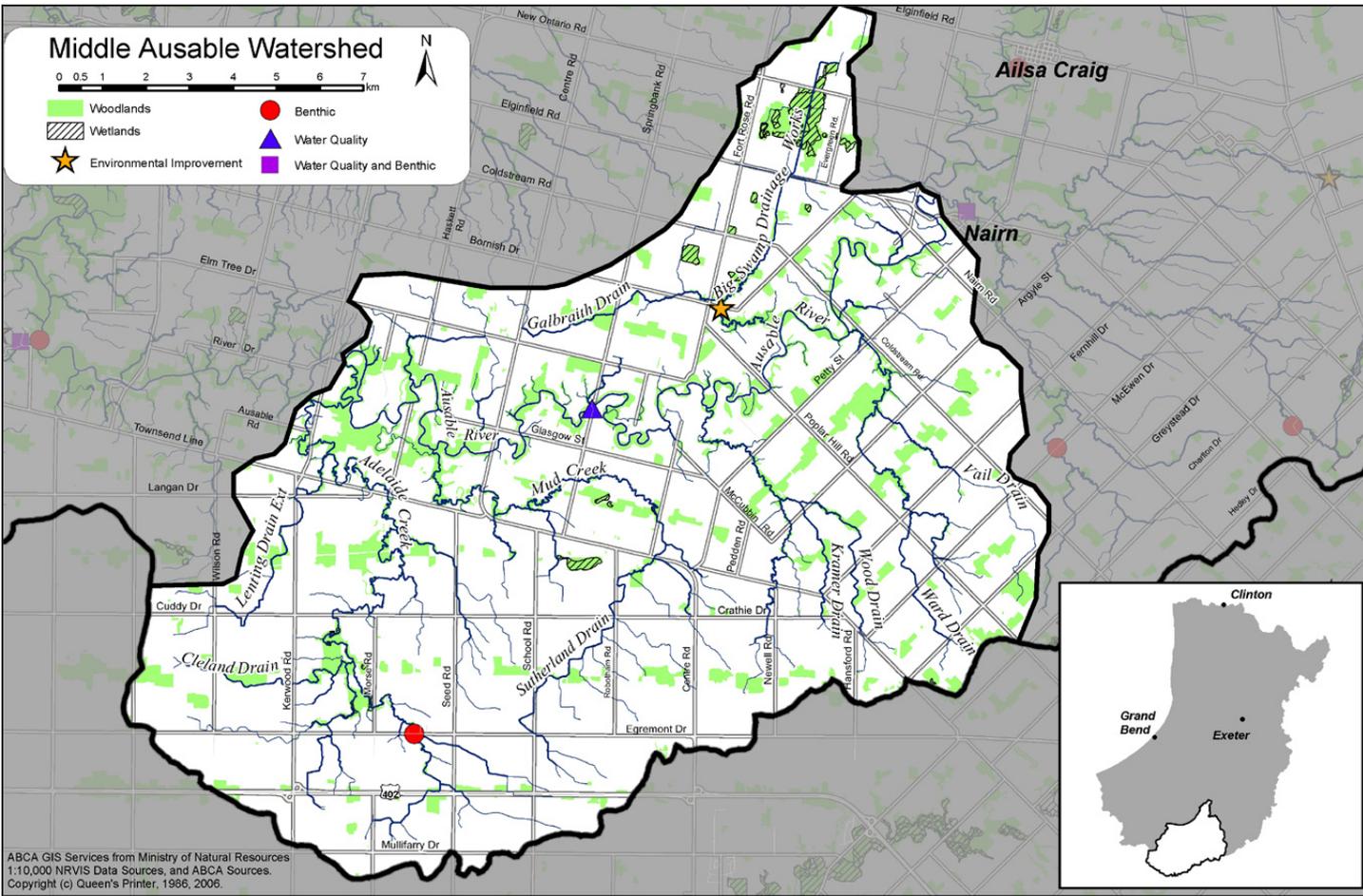




Middle Ausable Watershed Report Card

Grades:	
Forest Conditions	D
Surface Water Quality	C

This report card summarizes water quality and forestry information for the Middle Ausable watershed (*the highlighted area on the map below*). This map also shows water quality stations and 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 Middle Ausable Watershed

Improve: Consider soil conservation practices on intensively cropped lands.



Middle Ausable Watershed Features



Area: 232 km² **Municipalities:** Adelaide Metcalfe, North Middlesex, Middlesex Centre

Geology 38% Clay Plains; 32% Till Plains (Undrumlined); 21% Till Moraines; 3% Sand Plains; 3% Bevelled Till Plains; 2% Beaches and Shorecliffs; 1% Water (GIS derived with physiographic maps) (Chapman and Putnam 1984)

Soils 59% Silty Clay Loam; 14% Loam: 11% Silty Loam; 10% Sandy Loam; 5% Silty Clay; 1% Clay (County Soils Maps 1951-1991)

Land Use 85% agriculture; 12% woodlot; <1% urban; 2% other (OMAFRA 1983)

Streamside Cover 34% 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: 15% (ABCA 2005)

Natural Areas Big Swamp (Provincially Significant Wetland); Adelaide Environmentally Significant Areas 2 and 3; East William Environmentally Significant Areas 1 to 3; West William Environmentally Significant Area 4

Groundwater Bedrock aquifers are the only significant source of groundwater in this watershed. Although minor, less extensive shallow aquifers are possibly the source of drinking water for dug or bored wells in the area, the bedrock aquifer is the most common source of drinking water, and is part of a large aquifer system in southwestern Ontario. The bedrock aquifer in this area is known to have elevated levels of sulphate and hardness. A thick sequence of mostly fine-grained glacial sediment separates the small streams and gullies from the bedrock aquifer in this area.

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:** Broad Beech Fern
- Reptiles:** Eastern Spiny Softshell, Northern Map Turtle.
- Birds:** Loggerhead Shrike
- Fishes:** None identified at this time.
- Mussels:** Northern Riffleshell, Snuffbox, Kidneyshell, Mapleleaf, Wavy-rayed Lampmussel, Rainbow
- Mammals:** None identified at this time.

Wastewater Treatment Plants None in area.



Middle Ausable Forest Cover, Surface Water Quality

	Indicator and Description	Middle 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.	12.2%	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.	1.6%	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 .	0.09	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.	138	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) .	9.4	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.



Middle Ausable Next Steps and Local Successes



To improve forest conditions ...

- Reforest less agriculturally productive land in the Ausable River Valley and extend forest along fencerows.
- Keep livestock from grazing in woodlots.

To improve water quality ...

- Protect all wetlands.
- Rain events frequently result in the loss of topsoil on contoured lands with the intensive cultivation of corn and beans. Grants for conservation tillage equipment may be available; contact the ABCA.
- The health of the main channel of the Ausable River is linked to the ecological integrity of smaller tributaries. Beneficial Management Practices in these areas include protecting existing small wetlands, establishing grasses, shrubs and trees on both sides of municipal drains and enhancing closed drains with grassed waterways.
- 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

- The ABCA should work with the St. Clair Region Conservation Authority so that conservation practices are better advertised and will possibly be more readily applied.
- 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).

- 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).



- 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.
- A detailed investigation into the walleye distribution and abundance would provide insight into the status of walleye in the Ausable River.

Thumbs up!

The Ausable River Recovery Team, made up of representatives from universities and provincial and federal agencies, has worked to summarize environmental information and organize grants for landowners to do agricultural beneficial management practices. *This is just one example in the watershed – give us a call and tell us about your project.*



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