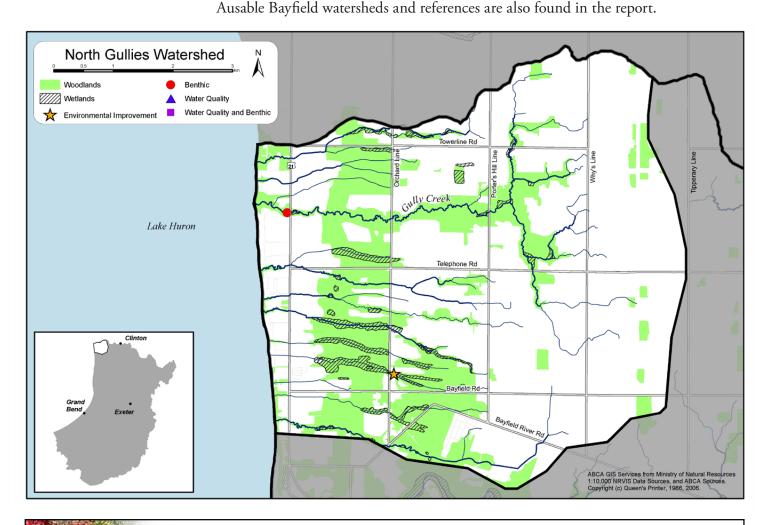


This report card summarizes water quality and forestry information for the North Gullies watershed (*the highlighted area on the map below*). This map also shows water quality stations and environmental improvement locations. For consistency across watersheds, Conservation Ontario has recommended the 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



#### Priority Strategy for North Gullies Watershed

Protect:

Maintain and expand existing forests.



**North Gullies** Watershed Features



Area:	40 km <sup>2</sup> Municipalities: Central Huron			
Geology	57% Till Moraines; 25% Bevelled Till Plains; 12% Sand Plains; 5% Beaches and Shorecliffs; 1% Water; 57% Till Moraines; 25% Bevelled Till Plains; 12% Sand Plains; 5% Beaches and Shorecliffs; 1% Water (GIS derived with physiographic maps) (Chapman and Putnam 1984)			
Soils	52% Clay Loam; 20% Sandy Loam; 16% Loam; 7% Silty Loam; 5% Bottomland (County Soils Maps 1951-1991)			
Land Use	67% agriculture; 28% woodlot; 1% urban; 4% other (OMAFRA 1983)			
Streamside Cover	68% 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: 7% (ABCA 2005)			
Natural Areas	Bayfield North (Area of Natural and Significant Interest); Goderich Environmentally Significant Areas 5 to 10			
Groundwater	Both shallow (Former Lake Warren Shoreline 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 Holmesville Aquifer is possibly a very rare source of drinking water for dug or bored wells in the area and is most likely a minor source of the flow for the small streams and gullies that drain into Lake Huron. In this area, only the bedrock aquifer has been sampled and nitrate, chloride concentrations are well below provincial drinking water standards, while levels of fluoride are naturally elevated. A thick sequence of mostly fine-grained glacial sediment separates the small streams and gullies from the bedrock aquifer in this area.			
Fishes	Cold water fishery; important habitat for fish species at risk			
<b>Species at Risk</b> (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: Birds:	None identified at this time.			
Fishes:	None identified at this time. Redside Dace			
Mussels:	None identified at this time.			
Mammals:	None identified at this time.			
We stored on Tu	Nono in area			

Wastewater Treatment Plants

None in area.

# **North Gullies** Forest Cover, Surface Water Quality

Indicator and Description		North Gullies		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.	27.7%	A	12.6%	С
	<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.	9.0%	A	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> .	N/A	N/A	0.08	В
	<b>E. coli</b> ( <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 <b>100 cfu</b> (colony forming units)/ <b>100 mL</b> in recreational waters.	N/A	N/A	233	С
	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).	4.2	A	5.6	С

Crada	Evaluation
Grade	Explanation
А	Indicates excellent ecosystem conditions and protection may be required. Some
	areas may require enhancement.
В	Indicates good ecosystem conditions. Some areas may require enhancement.
С	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.



#### **North Gullies** Next Steps and Local Successes



## To improve forest conditions ...

- Protect existing woodlots and wetlands.
- Increase forest cover in the headwater area of these lakeshore tributaries.

## To improve water quality ...

• Protect all wetlands.

• Identify potential wetland and forest enhancement projects in this watershed.

• Are there people north of Bayfield interested in forming local environmental groups (i.e., Friends of... see www.ontariostreams.on.ca) to improve water quality in these small streams or Lake Huron?

• 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

• Identify barriers to fish migration.

• 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.

• 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!

Landowners have preserved large woodlots along streams.

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



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