

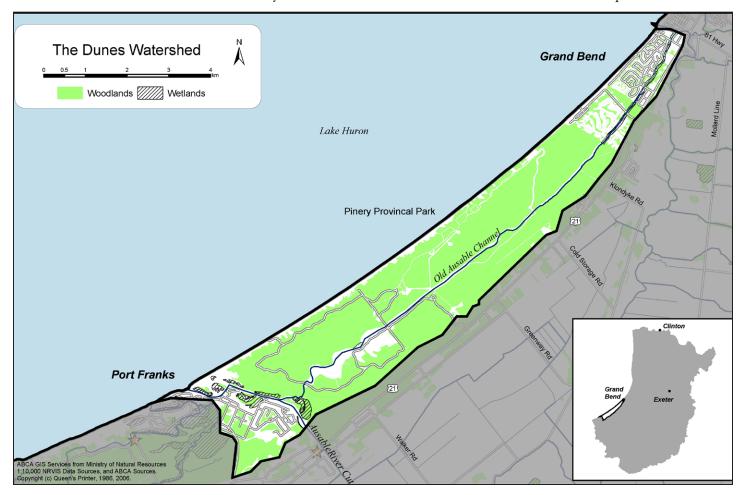
## Dunes Watershed Report Card

### Grades:

Forest Conditions

Surface Water N/A

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

Protect:

Develop Management Strategy to ensure long-term protection of unique resources.



### Dunes Watershed Features



Municipalities: Lambton Shores  $27 \, \text{km}^2$ Area:

Geology 73% Sand Plains; 13% Peat and Muck; 5% Bevelled Till Plains; 5% Clay Plains

(GIS derived with physiographic maps) (Chapman and Putnam 1984)

Soils 95% Sand; 4% Sandy Loam; 1% Organic (County Soils Maps 1951-1991)

Land Use 

Streamside Cover

32% of the 15 metre area on both sides of open streams is vegetated (OMNR 1986, ABCA

Wetlands Existing: 2% (OMNR 2003, ABCA 2004); Potential: 3% (ABCA 2005)

Natural Areas Pinery Provincial Park Earth and Life Science (Area of Natural and Scientific Interest);

Port Franks Wetlands (Provincially Significant Wetland); Bosanquet Environmentally

Significant Areas 2 and 6

Both shallow (Pinery Aquifer) and bedrock aquifers are found in this watershed. The Groundwater

Pinery aquifer is the most common source of drinking water, and is located within the large deposit of recently deposited sand dunes near the shore of Lake Huron. This important source of drinking water has been sampled and is known to have elevated levels of nitrates, as well as occurrences of E. coli. This aquifer is also an important source of water for the Old Ausable River Channel, as well as the former Lakes Smith and Burwell. The Bedrock aquifer is known to have elevated levels of sulphates and hardness, making it aesthetically unattractive as a potable water source. A thick sequence, underlying the sandy dune deposits, comprised of mostly fine-grained glacial

sediment separates the shallow aguifer from the bedrock aguifer in this area.

**Fishes** Warm water fishery in pond-like ecosystem; important 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: Bluehearts, Green Dragon, Dense Blazing Star, etc.

Insects: Karner Blue, Frosted Elfin, etc.

Reptiles: Blue Racer, Eastern Hog-nosed Snake, Five-lined Skink, Spotted Turtle, etc.

Cerulean Warbler, Prothonotary Warbler, Red Headed Woodpecker, Birds:

Northern Bobwhite, etc.

Fishes: Lake Chubsucker, Pugnose Shiner, Grass Pickerel

Mussels: None identified at this time. Mammals: Southern Flying Squirrel

Wastewater Treatment Plants None in area.

# **Dunes**Forest Cover, Surface Water Quality

Indicator and Description		Dunes		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.	69.0%	A	12.6%	С
	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.	32.3%	A	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.	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).	N/A	N/A	5.6	С

Grade	Explanation	
A	Indicates excellent ecosystem conditions and protection may be required. Some	
	areas may require enhancement.	
В	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.	



# **Dunes**Next Steps and Local Successes



### To improve forest conditions ...

• Subdivision associations need long-term woodlot management strategies. Currently there may be too many older trees per acre. When old trees die, younger medium-sized trees will be needed to maintain the forest health.

- Invasive species such as Phragmites grasses need to the controlled.
- Private landowners should consider Carolinian plant species for landscaping.
- Local agencies should provide native species for landscaping.

### To improve water quality ...

- There are no water quality data for this watershed. Environmental agencies should coordinate a solution to this lack of information.
- Fix faulty septic systems and establish a septic maintenance plan.

### Other recommendations

- Link the natural areas of the Ausable Gorge with The Pinery Provincial Park and Port Franks.
- Summarize biological information to determine critical habitat for two fish species at risk, Lake Chubsucker and Pugnose Shiner.
- Management of the tow line along the Old Ausable Channel is an issue that needs to be addressed in a strategy being developed for this area.
- 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 (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 Greater Grand Bend Community Foundation has recently contributed to a long term management strategy for the Old Ausable Channel.

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