

Watershed Report Card

Middle Maitland River Sub-Basin



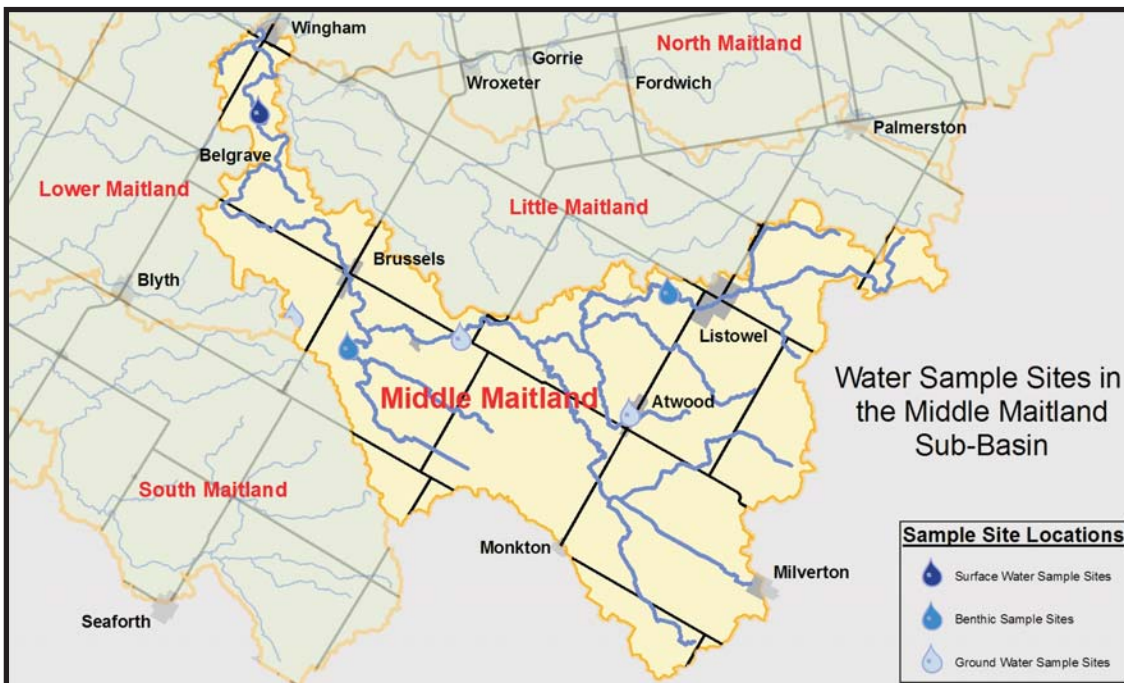
This report describes the conditions of the river and forests in the Middle Maitland River watershed. It is one component of the Maitland Valley Conservation Authority's (MVCA) overall watershed report card that assesses surface and groundwater quality and forest conditions across the Maitland valley. The Middle Maitland River is one of seven major sub-basins that comprise the Maitland watershed.



WATER QUALITY B

FOREST CONDITIONS C

Basin Ranking **7 out of 7**



Watershed Description

The Middle Maitland River sub-basin is a large watershed containing several meandering branches of the river. Headwater areas are located along the western edge of the Township of Mapleton and the Township of Perth East. The sub-basin encompasses the communities of Listowel, Milverton, Atwood, Newry, Ethel, Cranbrook and Brussels. The MVCA maintains a small recreational dam at the site of the historic Logan Mill in Brusels. From Brussels the Middle Maitland River flows north and meets the Little Maitland River south of Wingham.

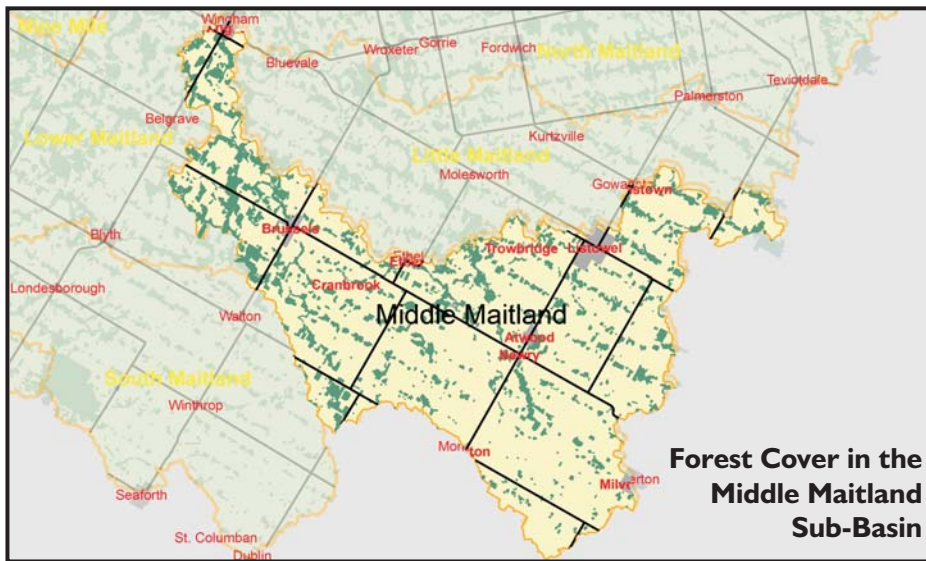
The land in this sub-basin is well suited to agriculture. The eastern section of the sub-basin features clay soils and is very flat with a high drainage density. Tree cover in the southeast is very low. The amount of forest cover does increase in the northwest section of the watershed.

The river is quite shallow and the intense drainage modifications have led to problems with low flows. At times this contributes to water quality problems because contaminants are not effectively diluted and the shallow water becomes warm which lowers the oxygen content.

Surface Water Quality Indicators

Indicator	Result	Grade	Overall MVCA	Overall MVCA
Phosphorus	.0397 mg/L	B	.0317 mg/L	B
Nitrate	6.98 mg/L	B	5.76 mg/L	B
Benthics	6.498	C	5.218	B
E. coli	95.97 cfu/100ml	B	133.1 cfu/100ml	C

Groundwater summary results for the watershed are included in the overall MVCA report card.



Forest Condition Indicators

Indicator	Result	Grade	Overall MVCA	Overall MVCA
Forest Cover	11.25 %	D	16.72 %	C
Forest Interior	1.8 %	D	3.06 %	D
Marginal Land in Production	28.74 %	B	18.39 %	A

Sub-basins are Unique

There are several sub-basin characteristics that have an impact on the health of a given area. These include:

- geology and landform - permeability of the soil, slope, geology below the soil, elevation
- drainage modifications
- land use and land management - activities occurring on the land
- sensitive areas - areas with highly erodable soils, steep slopes, high water tables are more likely to contribute sediments and nutrients to watercourses

There are significant differences between the sub-basins that make up the Maitland watershed. The unique nature of each sub-basin means that comparing report card results is not particularly useful. Instead the focus of the report card process is on monitoring trends over time to determine if conditions within a sub-basin are improving.



Improving Watershed Health

Suggested actions to improve the health of the Middle Maitland watershed:

- Create more natural infrastructure such as forested areas, buffer strips, windbreaks and wetlands to help protect land from the extremes of heat, wind and runoff. Increasing the natural infrastructure in this sub-basin may also help to improve flow rates during dry periods.
- The forest cover in this sub-basin is very low so there is a significant need for more trees to be planted. Given the extent of highly productive farmland in the area it makes sense to focus on creating forest linkages, windbreaks and buffer strips as well as the retirement of marginal land to trees and shrubs or permanent pasture.
- Protect existing forest cover and wetlands.
- Increase residue cover and organic matter on fields.
- Ensure proper storage and applications of manure, fertilizers and pesticides.

More information on activities to improve watershed health are available on the My Land, Our Water website (<http://myland.mvca.on.ca>)



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