

Lower Maitland River Sub-basin WATERSHED Report Card 2013



This report describes the conditions of the river, forests and wetlands in the Lower Maitland River watershed. It is one component of the Maitland Valley Conservation Authority's (MVCA) overall watershed report card that assesses the state of surface water, groundwater, forests and wetlands. The Lower Maitland River is one of seven major sub-basins that comprise the Maitland watershed.

Watershed Description

The Lower Maitland River sub-basin stretches from Wingham in the north to Goderich where the river outlets into Lake Huron. There are several significant tributaries of the Lower Maitland River. A branch flows from the Clinton area and joins the main branch north of Holmesville. In addition, Sharpes Creek and the Blyth Brook empty into the Lower Maitland River. Both of these tributaries are cold water streams that support good fish populations. The Wyoming moraine, a significant groundwater recharge resource, extends through this sub-basin.

The Saratoga Swamp complex is located in the Lower Maitland River sub-basin. It is a designated Area of Natural and Scientific Interest with a variety of vegetation types including deciduous swamp and extensive areas of red and silver maple forests.

The Lower Maitland River hosts runs of migratory trout and salmon, which spawn both in the main river and in tributary streams as far as 75 km up-river.

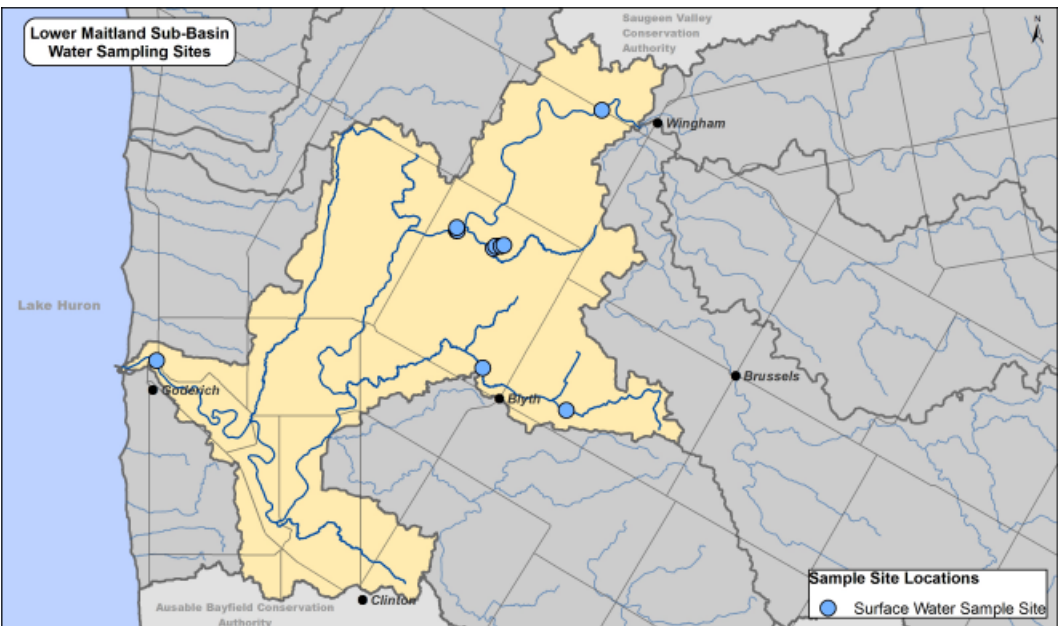
This sub-basin is a complex ecosystem that provides habitat for a number of Species at Risk including the Queensnake, Wavy-rayed Lampmussel and Butternut tree. The steep slopes of the river valley, particularly from Auburn to Goderich, are well vegetated and provide important wildlife habitat. Some of the Eastern White Cedar trees that cling to the exposed limestone cliffs in the lower river valley are more than 300 years old. The Eastern White Cedar cliff communities are probably the only old growth forest that remains in the Lower Maitland Valley.

The Lower Maitland valley is also home to a number of species typically found in the more southern Carolinian Zone. Some of these species include Bitternut Hickory, Sycamore, Summer Grape and Green Dragon.

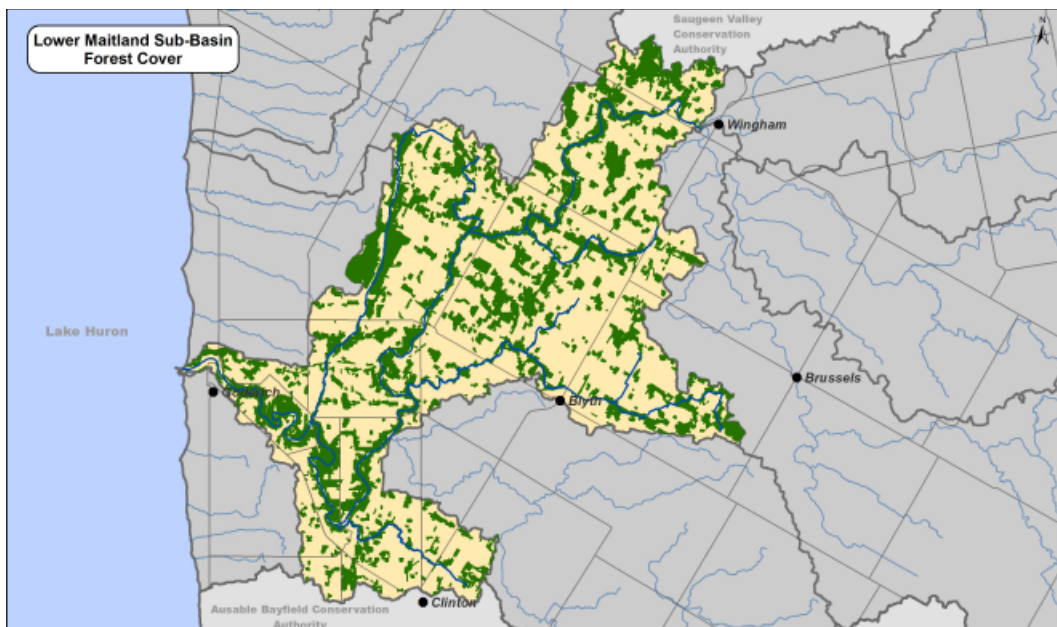
Water Quality Results

Surface Water Indicators	Lower Maitland 2007-2011 Results	Lower Maitland Grade 2007-2011	Overall MVCA Grade 2007-2011
Phosphorus	0.0163 mg/L	A	B
Benthics	4.69	B	B
E.coli	41.577 cfu/100ml	B	C

Note - There are no groundwater sampling sites located in the Lower Maitland River watershed.



Forest and Wetland Results



Forest Condition Indicators	Lower Maitland 2007-2011 Results	Lower Maitland Grades 2007-2011	Overall MVCA Grades 2007-2011
Forest Cover	26.95 %	B	C
Forest Interior	6.20 %	C	D
Riparian Cover	45.82 %	B	C

Wetland Indicator	Lower Maitland Grade 2007-2011	Overall MVCA Grade 2007-2011
% of area identified as wetland	B	C

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 soil, elevation
- Drainage modifications
- Land use/land management - activities occurring on the land
- Sensitive areas - areas with highly erodible 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 MVCA's report card process is on monitoring trends over time to determine if conditions within the sub-basin are improving

Improving Watershed Health

The health of the Lower Maitland watershed will be improved by:

- Creating more natural infrastructure such as forested areas, buffer strips, windbreaks and wetlands to help protect the landscape from the extremes of heat, wind and runoff.
- Maintaining vegetation along the river banks and working to keep the valley ecosystem intact.
- The retirement of marginal land to trees and shrubs or permanent pasture to help to protect water and soil resources in the sub-basin.
- Protecting Species at Risk habitat.
- Protect existing forest cover and wetlands.
- Increasing residue cover and organic matter on fields. Ensure proper storage and applications of manure, fertilizers and pesticides. Incorporating rural stormwater management in farm planning.

Notes on Report Card Scores

Due to financial and staffing constraints comprehensive sampling is not done for every indicator in every sub-basin. In some cases only base information is collected. As a result the indicators and grades generalize watershed conditions. Local conditions may be worse or better than the grades suggest. There are some regional concerns that are not factored into the report card including:

- High nitrate and nitrite levels in surface water
- Algal fouling of beaches
- Poorly managed forests
- Soil erosion

The report card information gives us a glimpse of current watershed conditions. The real value of the report cards will come in the future as we look for trends in indicator scores. This information will help the MVCA to target services in priority areas and be more proactive in addressing emerging trends. The next edition of the report card will cover the period from 2012 to 2016 and it will be released in 2017.

More information on the report card sampling and data analysis is available on the MVCA website



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