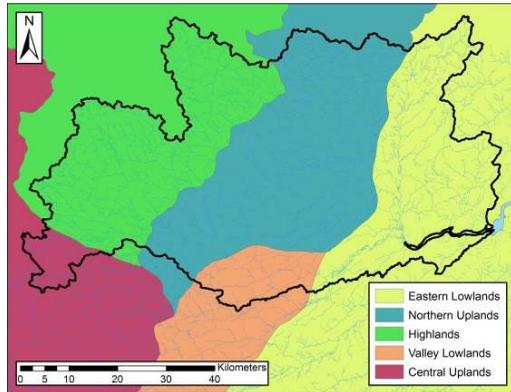


## Location

The Northwest Miramichi watershed lies in the northwest portion of the Miramichi drainage basin. This section drains into the Miramichi River, which in turn drains into the Gulf of St. Lawrence. The area is approximately 3800 km<sup>2</sup> and includes the North Pole Stream, Little Southwest Miramichi River, Northwest Miramichi River, Tomogonops River, Northwest Millstream, Big Sevogle River, Mullin Stream, and Little Sevogle River sub-drainage basins.



## Physical Setting and Climate

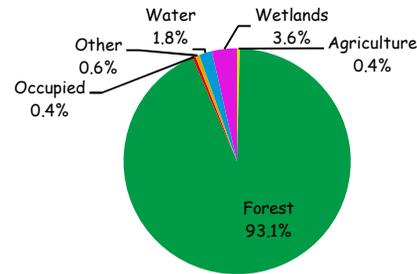
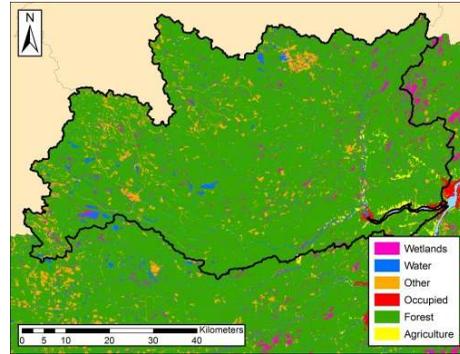


The Northwest Miramichi watershed has an average summer temperature of 18.9°C, and an average winter temperature of -11.8°C. The average annual precipitation is 1,153.6 mm (Environment Canada, 2013).

## Fish Community

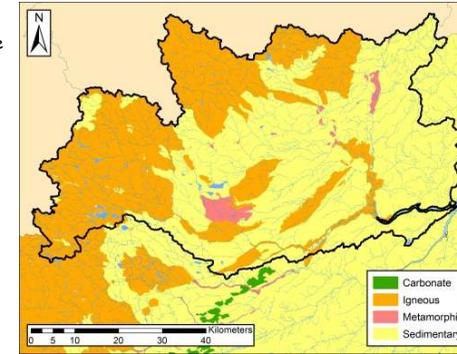
The Northwest Miramichi watershed provides habitat for approximately 29 different species of fish (NBDNR, 2011), and being part of the Miramichi drainage basin, it is also considered to be one of the most important wild Atlantic salmon habitats in the world.

## Land Use



Forestry is the predominant land use within the Northwest Miramichi watershed.

## Geology



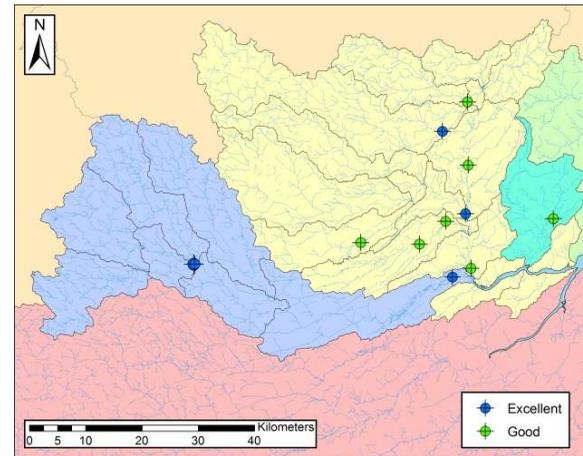
## Water Quality Survey (2012)

The Water Quality Index (WQI) is a tool that allows water to be classified into different categories based on the CCME Guidelines for Freshwater Aquatic Life. The index is a number between 0 and 100, with zero representing poor water quality and 100 representing excellent water quality. The categories for the index are as follows:

Excellent: 95-100      Marginal: 45-64  
 Good: 80-94          Poor: 0-44  
 Fair: 65-79

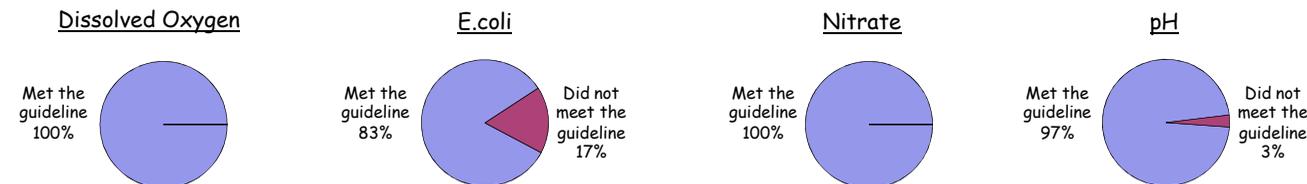
The following parameters are included in the Water Quality Index: ammonia, arsenic, chloride, copper, dissolved oxygen, iron, nitrate, pH, total phosphorus, turbidity, and zinc.

The map (right) depicts the location of the sample sites within the Northwest Miramichi watershed and indicates the calculated WQI rating for each site.



## Key Indicators (based on the total number of samples that exceeded guidelines for these indicators)

In addition to using the CCME Water Quality Index, four key indicators of water quality were evaluated against available guidelines. E. coli is compared to recreational use guidelines, while the other indicators are compared with freshwater aquatic life guidelines.



## Community Involvement

The Miramichi River Environmental Assessment Committee (MREAC) was formed in 1989 and is dedicated to the continual improvement of the environmental quality of the Miramichi River ecosystem. Coastal, estuarine, and freshwater environments are all intricate parts of the Miramichi drainage basin, making MREAC's focus very diverse ranging from water quality to coastal erosion.



North Pole Stream

## Summary

- Based on the WQI the 12 sites within the Northwest Miramichi watershed ranged from "Good" to "Excellent", with the majority of the sites in the "Good" category.
- Of the four key indicators, pH did not meet the guideline in 3% of the samples, and E. coli did not meet the guideline in 17% of the samples. It is believed that the E. coli concentrations may have been elevated due to the amount of precipitation and subsequent runoff into the rivers at the time of sampling. Both dissolved oxygen and nitrate met the guideline in all the samples analyzed.

## Additional Information

The Northwest Miramichi watershed summary was based on data collected by the Miramichi River Environmental Assessment Committee (MREAC) and the New Brunswick Department of Environment and Local Government (DELG).

For additional information concerning this watershed please contact DELG, Environmental Evaluation and Reporting Branch at (506) 457- 4844.

Photos and maps by: MREAC, DELG