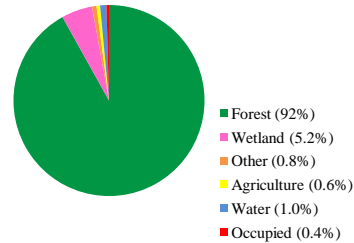
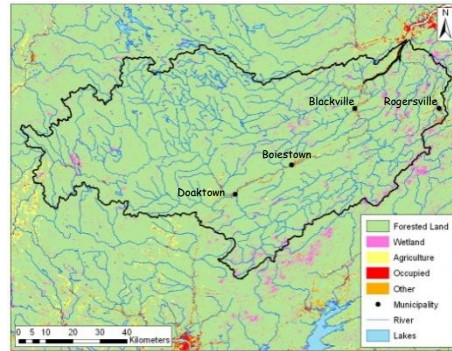


## Location

Southwest Miramichi River is the southern branch of the Miramichi River. This area covers about 7,700 km<sup>2</sup>, and includes main tributaries such as the Renous, Taxis, Cains, Bartholomew and Barnaby Rivers. This sub-watershed also includes villages of Blackville, Doaktown, Boiestown and Rogersville.

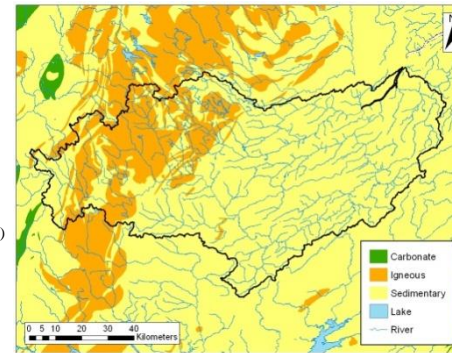


## Land Use

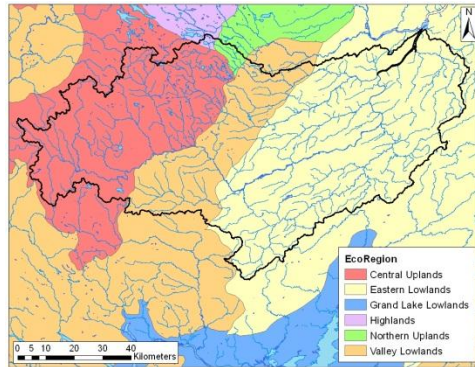


Forestry is the predominant land use on the Southwest Miramichi river basin (DNR data).

## Geology



## Physical Setting and Climate



The village of Doaktown, located in the center of the Southwest Miramichi watershed, has an average summer temperature of 16.5°C and average winter temperature of -7.1°C. It also receives an average annual precipitation of 1100 mm (data online from Environment Canada).

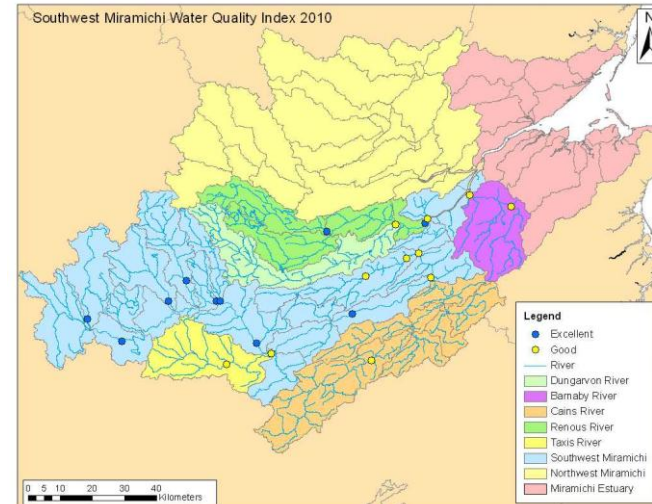
## Water Quality Survey (2010)

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 Southwest Miramichi watershed and indicates the calculated WQI rating for each site.

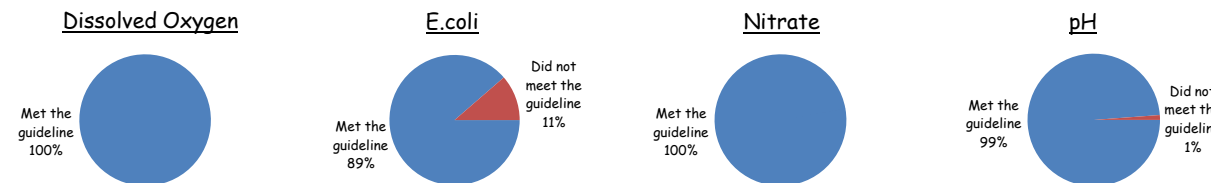


## Fish Community

In the Southwest Miramichi watershed there are approximately 29 fish species. These species include: Atlantic salmon, banded killifish, yellow perch, White sucker, Blacknose dace, Brook trout, brown bullhead, striped bass, rainbow smelt, mummichog, lake chub, golden shinner, American eel and American shad (data provided by Department of Natural Resources (DNR)).

## 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 included in the Miramichi River watershed, making MREAC's focus diverse, ranging from water quality to species at risk to coastal erosion.



## Summary

- Based on the WQI, 10 sites were excellent and 11 sites were good.
- Of the four key indicators, E. coli did not meet the guideline in 11% of the samples and pH did not meet the guideline in 1% of the samples. Elevated E.coli concentrations occurred after a heavy rain event and could be due to storm runoff from areas impacted by human activities. Subsequent E.coli samples were collected during dry weather and were found to be below the recreational guideline.

## Additional Information

This watershed summary was based on data collected by the Miramichi River Environmental Assessment Committee, J.D. Irving, Limited and the Department of Environment.

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