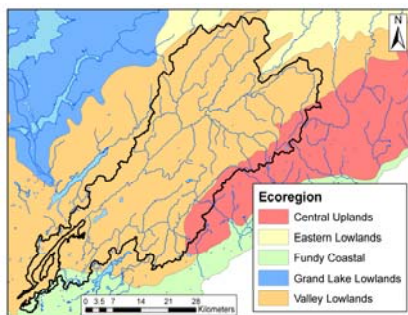


Location

The Kennebecasis River is located in southeastern New Brunswick. The Kennebecasis watershed is made up of several tributaries including the South Branch, Smith's Creek, Trout Creek, Millstream River and Moosehorn Creek and has a total watershed area of 2056 km²



Physical Setting and Climate

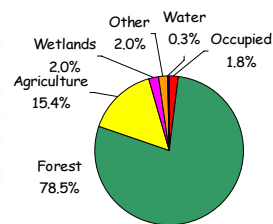
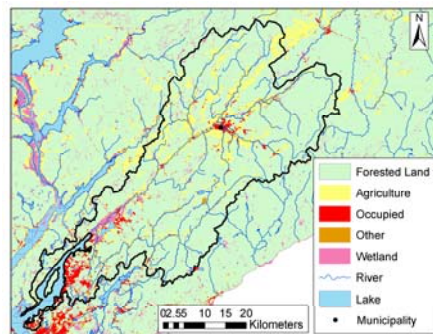


Average summer temperatures range from 16 to 17° C and average winter temperatures range from -5 to -6 ° C. The Kennebecasis watershed receives about 1000 mm of precipitation annually.

Fish Community

In 2000, the Kennebecasis Watershed Restoration Committee (KWRC) reported 24 different species of fish from 13 different families. Some of the more common species found include the Atlantic salmon, rainbow trout & striped bass.

Land Use



Forested land and agriculture are the predominant land uses in the Kennebecasis watershed.

Geology



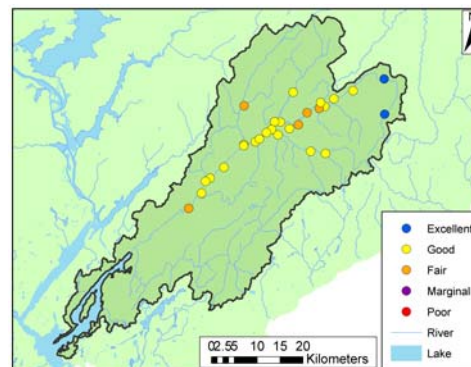
Water Quality Survey (1999-2006)

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: aluminum, ammonia, arsenic, chloride, copper, dissolved oxygen, iron, lead, nickel, nitrate, pH, sulphate, total phosphorus, and zinc.

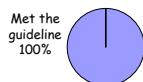
The map (right) depicts the location of the sample sites within the Kennebecasis watershed and indicates the calculated WQI rating for each site.



Key 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.

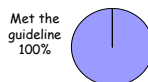
Dissolved Oxygen



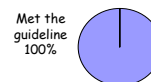
E.coli



Nitrate



pH



Community Involvement

The Kennebecasis Watershed Restoration Committee (KWRC), works in conjunction with the Department of Environment, volunteers, landowners and recreational groups. Their goals are to consider the best interests of the river through strategic habitat restoration, educational and advisory initiatives and promotion of public awareness both for now and in the future.

Like many of the rivers in New Brunswick, the Kennebecasis offers many activities for the outdoor enthusiast including fishing, rowing, canoeing and kayaking.



Summary

- Based on the WQI, 2 sites were found to have excellent water quality, 21 were classified as good and 5 were fair.
- Fair water quality may be due to practices such as the removal of riparian vegetation (which results in increased erosion) as well as nutrient loads from agricultural operations and municipal and non-municipal sewage discharges.
- Of the four key indicators, E. coli did not meet the guideline in 26% of the samples. E. coli levels can act as an indicator of potential water quality problems and were found to be elevated at several sites. Improper storage of organic waste from point and non-point sources may contribute to elevated levels of E. coli in the watershed.

Additional Information

This watershed summary was based on data from the Kennebecasis Watershed Restoration Committee's Water Classification report submitted to the Department of Environment in 2000, as well as water quality data collected by the Department of Environment.

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