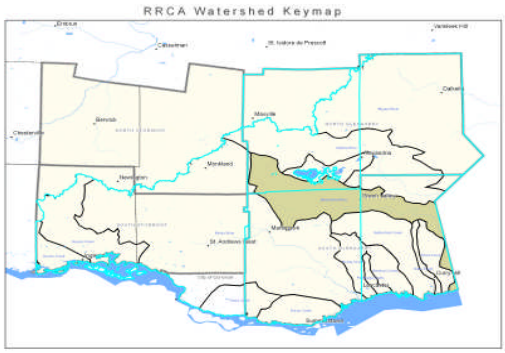
Watershed Beaudette River Report Card

Grades:

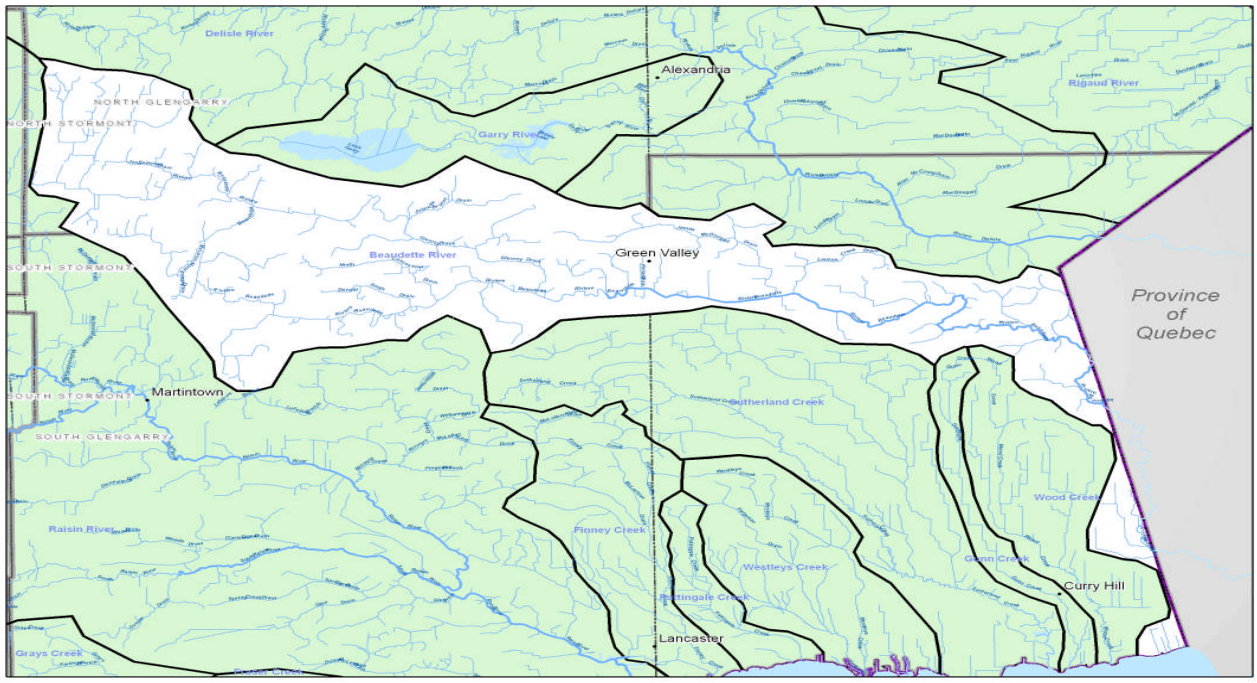
C+ Forest Conditions

C Wetland Conditions

D- Surface Water Quality



This Watershed Report Card outlines the environmental information for the Beaudette River watershed as of 2006. The information provides a description of forest, wetland and water parameters and ideas for local action to assist agency staff, municipalities and interested parties working for the protection of local forest, wetland and water resources.



Municipalities: Municipalities of North and South Glengarry

Watercourses: Beaudette River

Forest Conditions

Grade C+

Overall, forest conditions in the Beaudette River watershed rank a C+ grade. The Remedial Action Plan delisting criteria is 30% forest cover in the Area of Concern tributary watershed to maintain ecosystem function. Based on 1991 data, there is one old growth forest stand comprising of 0.01% of the total sub-watershed, falling short of the Remedial Action Plan Criteria of 5%.

The Remedial Action Plan delisting criteria is 5% forest interior habitat in the Area of Concern tributary watershed. Forest interior habitat consists of forest cover in which the forest extends 200 metres from forest edge and has a minimum core area size of 40 hectares.

Indicators	Beaudette River Results		Raisin Region Watershed Average		Indicator Description
Forest Cover	42%	B	36%	B	**Forest cover is the percentage of the watershed that is forested. It is believed there should be at least 25-30% natural cover to sustain native plants and animals.**
Forest Interior	6%	C	4%	D	**Forest interior refers to the protected area inside a woodlot that some species require to survive. The outer 200 metre perimeter is 'edge' habitat and prone to stresses from predators, alien species and the elements.**

Local Actions Needed for Improvement:

- Protection of all woodlands and Locally Significant Wetlands at the municipal planning level is a very important and effective method of preserving local forest cover.
- Forest interior can be increased by "bulking up" woodlots to make them larger and rounder by planting native trees and shrubs around existing woodlots or allowing the edges to naturalize on their own (eg. Retire land near woodlot edges).
- Connections can be made between woodlots and other habitat types by planting hedgerows or windbreaks along fields, waterways and roads.
- To improve the health of individual woodlots, owners should prepare and follow Woodlot Management Plans.

Wetland Conditions

Grade C

Overall, wetland conditions in the Beaudette River watershed rank a C grade. The Remedial Action Plan delisting criteria is 10% wetland cover in the Area of Concern tributary watershed to maintain ecosystem function.

Wetlands are an important source of habitat for fish and wildlife species. Wetlands serve as flood control areas by holding water and reducing flow. Wetlands act as holding areas for the local water table and play a very important role in water quality improvement.

Indicators	Beaudette River Results		Raisin Region Watershed Average		Indicator Description
Wetland Cover	8%	C	8%	C	**Wetland cover is the percentage of the watershed that is wetland (swamp and/or marsh). It is believed there should be at least 10% natural wetland cover to sustain biodiversity and wetland functioning.**

Local Actions Needed for Improvement:

- Protection of all Provincially and Locally Significant Wetlands at the municipal planning level is a very important and effective method of preserving wetland cover.
- Wetland biodiversity can be increased by planting native trees and shrubs around existing wetlands or allowing the edges to naturalize on their own (eg. Retire land near wetland edges). This will provide essential habitat for many wetland species.
- Connections can be made between wetlands and other habitat types, such as forests, by planting hedgerows or windbreaks along fields, waterways and roads to support the movement of native species.
- To improve the health of individual wetlands (swamp), owners should prepare and follow Woodlot Management Plans and fence out any livestock.
- To create or improve the size of individual wetlands, owners should contact the Conservation Authority for assistance in designing a wetland project.

Surface Water Quality

Grade D-

The Beaudette River sub-watershed ranks a D- with respect to overall water quality based on benthic, phosphorus and bacteria scores.

A Hilsenhoff Index score of higher than 5.00 indicates that organic pollution is likely and water quality deteriorates.

Indicators	Beaudette River Results		Raisin Region Watershed Average		Provincial Guideline	Indicator Description
Benthic Score (FBI)	6.33	F	6.30	F	5.00	**Benthic organisms are the aquatic invertebrates that live in stream sediments and are a good indicator of water quality and stream health. The Hilsenhoff Index assigns a weighting for each taxon of invertebrate based on its tolerance of organic pollution. The sum of the weighted scores gives an indication of the degree of organic pollution in the stream.**
Phosphorus (mg/L)	0.086	C	0.134	D	0.03	**Phosphorus is found in such products as soaps, detergents, fertilizers and pesticides and contributes to excess algae and low oxygen in streams and lakes.**
Bacteria (per 100 ml)	245	F	180	F	100	**E. Coli bacteria are found in human and animal waste and their presence in water indicates fecal contamination. E. Coli bacteria are a strong indicator for the potential to have other disease-causing organisms in the water**

Local Actions Needed for Improvement:

- Plant buffers (grassed or treed) along creeks, rivers and open drains to filter runoff and provide shade.
- Implement protection of identified groundwater infiltration zones and conduct groundwater research and monitoring.
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- Target soil erosion measures to areas of high erodibility.
- Encourage landowners to repair or replace faulty septic systems.
- Encourage agricultural Best Management Practices in the areas of manure storage and spreading, soil conservation practices, fertilizer and pesticide application, milkhouse washwater disposal and cattle access restriction.
- Promote the completion of Environmental Farm Plans and Nutrient Management Plans
- Protection of Provincially and locally significant wetlands in Official Plan

Beaudette River Watershed Features

Area	**15,421 ha**
Land Use	**Overall, agricultural practices are associated with 25-40% of the land use throughout the western portion of the sub-watershed and 46-60% throughout the eastern section.**
Soil Type	**Soil within the Beaudette sub-watershed is divided between loam with good drainage, and clay loams, silt loams, and muck with good to poor drainage.**
Stream Flow	**Beaudette's main drainage basin is situated northeast of Cornwall in an area of 147 km^2. Overall stream length of Beaudette is 241 km; 4 km flow through public lands and 237 km flow through private land. The mean annual discharge of Beaudette River near Glen Nevis is 1.69 m^3/s.**
Fishery Resources	**Warm water fishery community with 23 identified species, none were a species of concern. One cool water site has been identified with Mottled Sculpins observed.**
Woodlot Size	**There are 394 stands with an average size of 16.5 ha; the largest stand is 603.9 ha**
Riparian Forest	**On public lands, 75% of stream lengths have riparian cover and private lands, 35% have riparian cover.**
Rare Species	**Fish – Pugnose shiner, American eel** **Plants – Ram's-Head Lady Slipper**
Significant Natural Sites	**Provincially Significant Wetlands – Apple Hill Swamp, Beaudette River Swamp, East Glenroy Swamp, Schuylers (Schulers) Swamp** **Locally Significant Wetlands - Lauzon Creek Swamp, Concession 1 Bog, Green Valley Swamp, Cp Swamp, Junction Swamp, West Glenroy Swamp, Chapel Road Swamp, Frog Hollow West Swamp, Munroes Mills West Swamp** **ANSI – A portion of the Garry River Wetland falls within the northern portion of this sub-watershed**

RAISIN REGION CONSERVATION AUTHORITY

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