



Drinking Water Source Protection

Ontario's Clean Water Act helps protect drinking water from source to tap by preventing contaminants from entering sources of drinking water like lakes, rivers and aquifers. Scientific studies were completed in 26 communities across our region to determine the local drinking water source. These studies also identify the activities that could adversely impact the quality of the drinking water source. The technical studies can be found in the comprehensive *Assessment Report*.

Embrun / Marionville

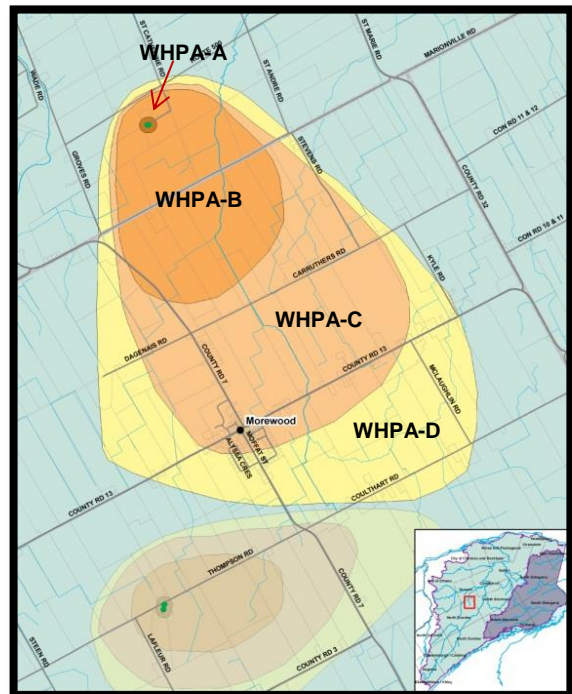
The villages of Embrun, Marionville and Russell are approximately 50 km southeast of Ottawa, in the Township of Russell. The production wells are owned and operated by the Township of Russell and supply about 6,423 persons in Embrun, 3,718 persons in the village of Russell and 341 persons in the community of Marionville for a total service population of 10,482 persons through a water distribution network. The well field is located approximately 3 km east of Marionville.



Embrun Drinking Water System

What is a Wellhead Protection Area?

A wellhead protection area (WHPA) is the area around a well where land use activities have the potential to affect the quality of water that flows into the well. The size and shape of a WHPA is determined by the amount of water being pumped and the direction and speed at which the groundwater travels through the aquifer to get to the well.



Embrun Wellhead Protection Areas (WHPAs)

WHPA-A: 100 metre radius around the well. Contaminants could easily get into the drinking water.

WHPA-B: Contaminated groundwater would take less than 2 years to reach the well.

WHPA-C: Contaminated groundwater would take between 2 and 5 years to reach the well.

WHPA-D: Contaminated groundwater would take between 5 and 25 years to reach the well.

Vulnerability Scores

Vulnerability scores are used to indicate how at risk the drinking water source is to contamination. High scores mean that a contaminant could quickly get into the drinking water supply. Each WHPA has been assigned one or more vulnerability score(s) based on the characteristics of the ground overlying the aquifer. The higher the vulnerability score, the higher the concern for possible source water contamination, with a score of 10 being the highest. The following table summarizes the vulnerability scores and amount of land included in each WHPA.

Vulnerable Area	Land Area by Vulnerability Score (ha)				
	10	8	6	4	2
WHPA-A	3.5				
WHPA-B	336.4	79.7	0		
WHPA-C		777.3	21.5		0
WHPA-D			0	705.2	42.8

Existing Water Quality

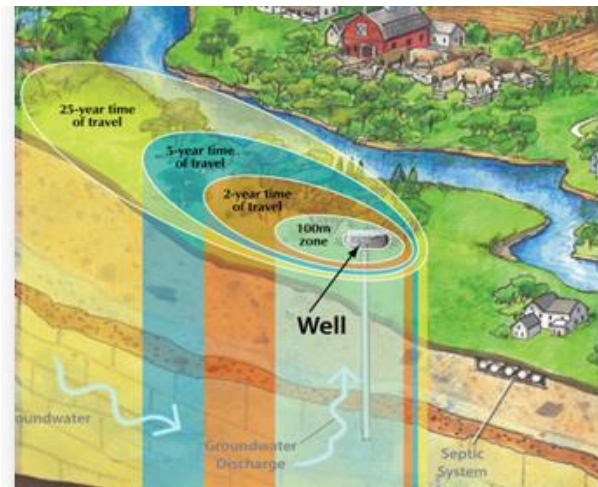
A review of water quality data gathered from regular testing at the Embrun/Marionville wells suggest that there are no current issues that adversely impact this drinking water source.

Drinking Water Threats

There are certain activities which have been identified by the province as threats to drinking water sources. An activity may be considered a significant threat based on various circumstances: proximity to the well, vulnerability of the IPZ and the nature of the activity.

The following table lists the significant threat activities that pose a risk to the drinking water source in this area.

Drinking Water Threat
Waste Disposal Sites
Sewage Works
Agricultural Activities
Pesticides
Salt and Snow
Fuel
Chemicals



What is Next?

The Raisin-South Nation Source Protection Committee has completed its Source Protection Plan in consultation with local municipalities and stakeholders. This committee is made up of community members representing the public, farmers, industry, business and local municipalities.

The Source Protection Plan identifies ways to protect the quality and quantity of municipal drinking water sources in this part of eastern Ontario. The Plan addresses existing threats to drinking water and contains policies to prevent future risks.

The South Nation and Raisin Region Conservation Authorities will continue to work with municipalities and property owners to ensure local drinking water is safe.