

Picton's Drinking Water System

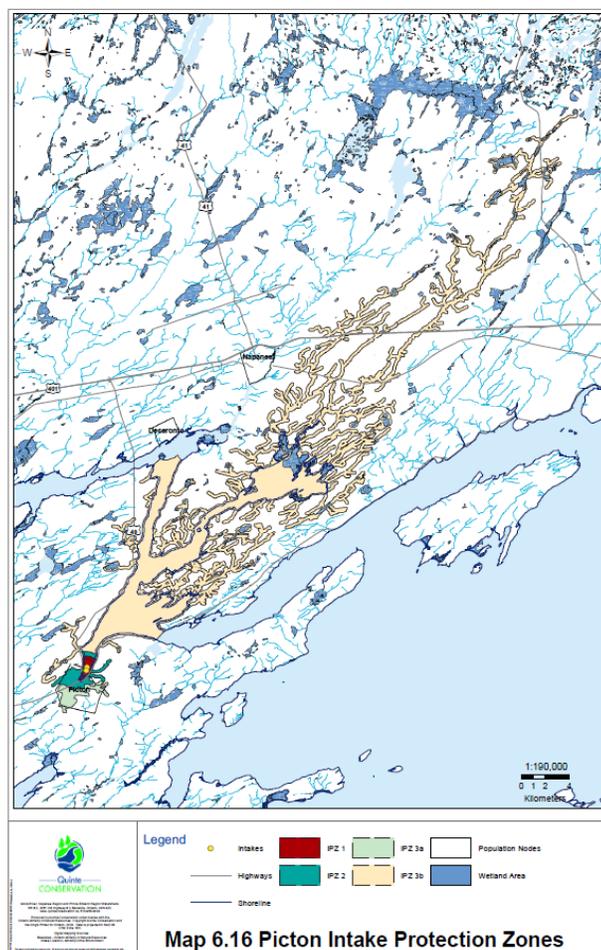
The Town of Picton is located on the east side of Prince Edward County. The land uses around the municipal intake are a mixture of residential, agricultural and some commercial, industrial, and institutional. Picton obtains their drinking water from Picton Bay, which is part of the Bay of Quinte on Lake Ontario. The Picton Drinking Water System serves approximately 6,000 people in Picton and over 600 people in Bloomfield. The system uses one of two intake pipes in Picton Bay to pump water into the treatment facility. The main intake is south of the backup intake pipe and both pipes are shallowly located (3.3 metres from the water's surface). Picton's municipal drinking water system and sewage treatment plant have been updated to allow for growth of the town and improved processing.

Picton's Vulnerable Areas

Using science, the Assessment Report has delineated zones to show which areas near the municipal intake are the most vulnerable to pollution and contamination. These zones are called Intake Protection Zones (IPZs) and include the water and land where activities could affect the quality and quantity of water flowing towards the intake. The location and size of an IPZ is determined by the direction of flow and the speed/rate it moves. In Picton, there are three IPZs:

- **IPZ 1:** this zone is the closest to the intake. This is the zone of highest concern because contaminants can reach the intake quickly with little or no dilution.
- **IPZ 2:** typically this zone is calculated based on how far water can travel to the intake within two hours or less. However, due to the intake's location the IPZ 2 is calculated for a four hour time of travel.
- **IPZ 3:** this zone is the total area of drainage that contributes to the intake.
 - **IPZ 3a:** the area of land that drains through urban Picton
 - **IPZ 3b:** the total contributing area

The IPZ 3 for Picton includes portions of the Marsh Creek drainage system, Bay of Quinte, Hay Bay and tributaries within the Cataraqui Region Source Protection Area. The IPZ 3 is a very extensive area, and was split into IPZ 3a and 3b.



Vulnerability Scores

Vulnerability scores help to quantify how vulnerable the drinking water source is to contamination. Scores are calculated based on the characteristics of the intake and the IPZs around the intake, taking into account how contaminants might move through zones.

An area with a higher vulnerability score is more likely to allow contaminants from that area to reach the intake. The vulnerability scores range from 2 (lowest) to 10 (highest). The vulnerability scores for the Picton Drinking Water System are:

- **IPZ 1** = 10
- **IPZ 2** = 9
- **IPZ 3a** = 8
- **IPZ 3b** = 6

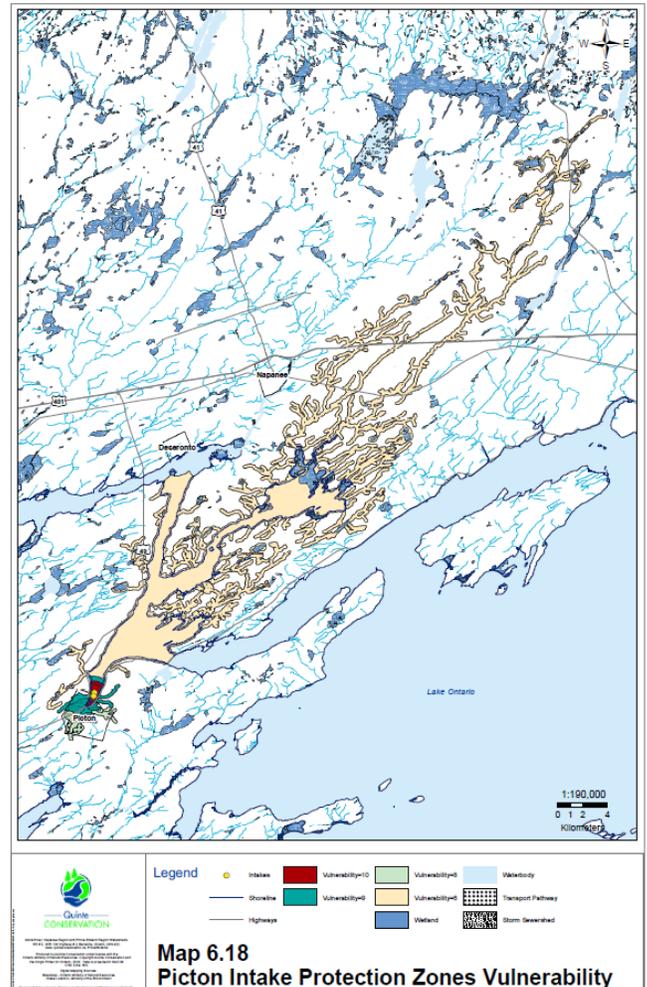
Drinking Water Issues

Drinking water issues are chemicals or bacteria found in untreated water that exceeds the provincial allowable values. A four-step screening process confirmed that no issues in the raw water exist for the Picton Drinking Water System.

Drinking Water Threats

Drinking water threats are based on 22 categories prescribed by the Ministry of the Environment, Conservation and Parks. Threats were identified in Picton’s IPZs. Some of the threat types that are, or could be occurring include:

- Septic systems or municipal sewage systems.
- Municipal stormwater ponds.
- Application, handling and storage of agricultural source material, pesticides, fertilizers, and road salt.
- Waste disposal sites.
- Land use for livestock grazing/pasturing land and outdoor confinement areas or a farm animal yard.
- Handling and storage of fuel.



The Quinte Source Protection Plan

The Quinte Source Protection Plan has over 80 policies to protect and maintain clean and plentiful drinking water sources. The policies address drinking water threats that were identified in the science-based Assessment Report. Each policy was developed by the Quinte Source Protection Committee in consultation with communities and stakeholders.

The Quinte Source Protection Plan came into effect January 1, 2015 and has undergone amendments in 2019, 2023, and 2024.