



Marmora and Lake

The Marmora and Lake municipal drinking water system is one of 53 systems in the Trent Conservation Coalition Source Protection Region and it was examined as part of the studies completed for the Drinking Water Source Protection program. The system is located in the Crowe Valley Source Protection Area and is owned by the Municipality of Marmora and Lake. The areas around the intake, the intake protection zones, are the vulnerable areas around the system where activities have the potential to be significant threats to the drinking water source. The Trent Source Protection Plan contains policies to manage or eliminate the significant threats that have been identified for the Marmora and Lake municipal drinking water system. Policies also apply to activities that would be significant threats if they were carried out in the future. This Factsheet provides a summary of Source Protection planning and the existing significant threats for the Marmora and Lake system.

| System Summary | |
|---------------------|------------------------------------|
| Water Source | Surface Water Intake (Crowe River) |
| Operating Authority | Municipality of Marmora and Lake |
| SDWA Classification | Large Municipal residential |
| Serviced Population | ~1,300 |

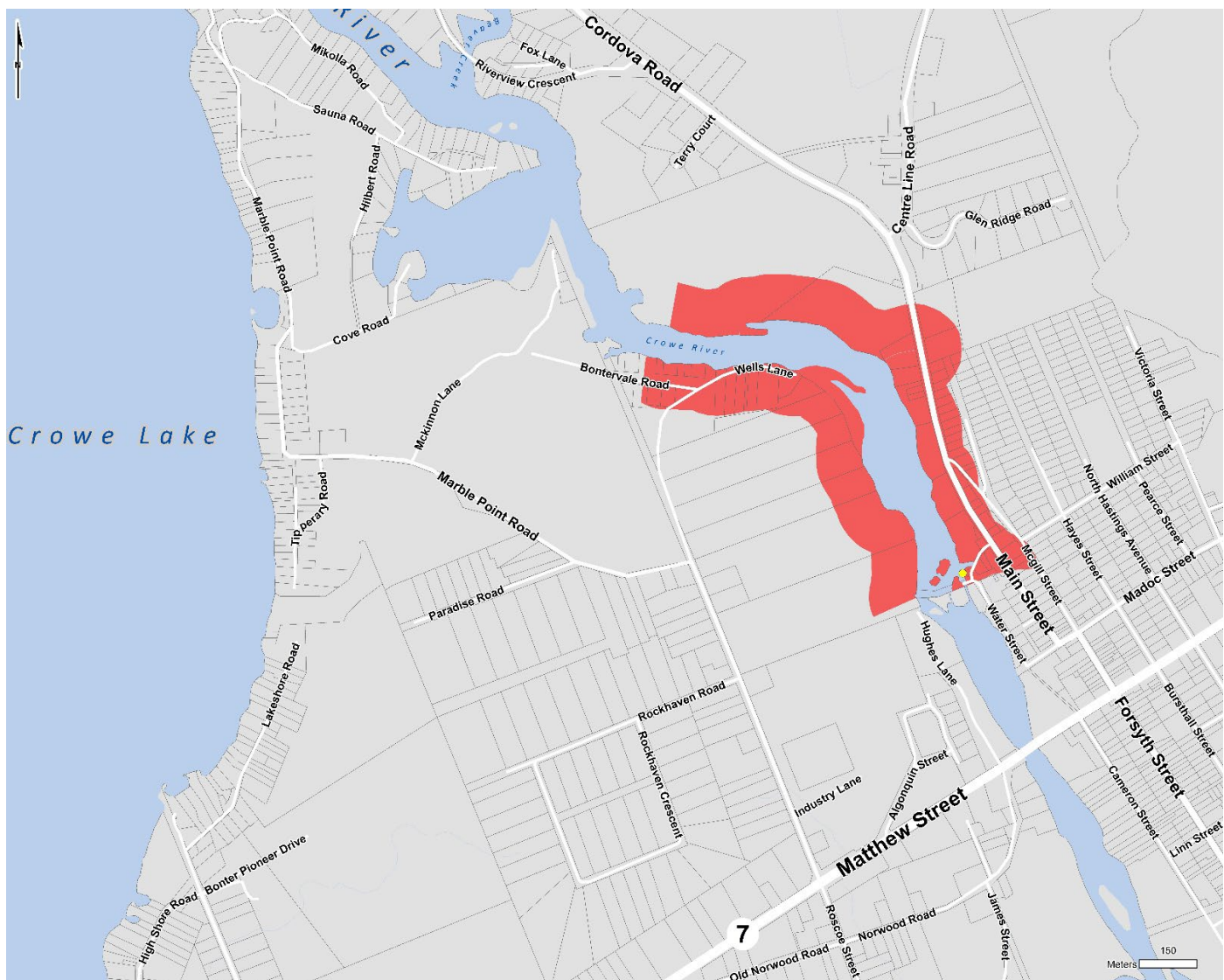
Areas Where Policies Apply

| Activity | | Areas Where Policies Apply |
|----------------------------------|---|----------------------------|
| Sewage Systems | Septic System | IPZ-1 |
| | Other Sewage Systems | IPZ-1 |
| Agricultural Source Material | Application | IPZ-1 |
| | Storage | IPZ-1 |
| Non-Agricultural Source Material | Application (meat plant or sewage material) | IPZ-1 |
| | Handling & Storage (meat plant material) | IPZ-1 |
| Commercial Fertilizer | Application | |
| | Handling & Storage | IPZ-1 |
| Pesticide | Application | IPZ-1 |
| | Handling & Storage | IPZ-1 |

| Activity | | Areas Where Policies Apply |
|--|----------------------|----------------------------|
| Road Salt | Application | |
| | Handling & Storage | IPZ-1 |
| Fuel | Handling & Storage | IPZ-1 |
| DNAPL | Handling & Storage | IPZ-1 |
| Organic Solvents | Handling & Storage | IPZ-1 |
| Aircraft De-Icing | Management of Runoff | IPZ-1 |
| Livestock Grazing or Pasturing, Outdoor Confinement, or Farm Animal Yard | | IPZ-1 |
| Waste Disposal Sites (within the meaning of Part V of the EPA) | | IPZ-1 |
| Snow Storage | | IPZ-1 |

Legend

The map shows the areas where activities can be significant drinking water threats and Source Protection Plan policies could apply.



Intake Protection Zones

Intake protection zones (IPZ) are vulnerable areas defined around surface water intakes. Vulnerable areas were delineated as part of the Assessment Report (2011).

- **IPZ-1** is the area closest to the intake and is of highest concern because contaminants entering this zone may reach the intake quickly with little or no dilution. It is defined as an area extending up to one kilometer from the intake.
- **IPZ-2** is a secondary protection zone upstream of the IPZ-1. It is defined as an area where water could reach the intake within a two hour period of time.
- **IPZ-3** is the total drainage area upstream of the IPZ- 2 that contributes water to the intake.

Significant Drinking Water Threats

An activity is considered a significant drinking water threat if it is undertaken in a vulnerable area under circumstances that pose a significant risk to the water source. These circumstances can be searched at www.swpip.ca to determine if they are significant drinking water threats. Significant drinking water threats are addressed by policies in the Source Protection Plan.

For the Marmora and Lake drinking water system, the vulnerable area where activities could be significant drinking water threats are the Intake Protection Zone 1.

Identifying Drinking Water Threats

Drinking water threats were initially assessed in 2009- 2010 during the preparation of the Assessment Report. A verification of these threats was carried out in summer/fall 2013 to confirm the findings of the initial assessment and to obtain more specific information about the circumstances of the identified activities. The threat verification identified activities taking place at the time of the assessment and activities that take place seasonally, rotationally, or occasionally as part of regular operations on the property (e.g. application of manure). These activities are considered existing threats. Activities that begin to occur after the Source Protection Plan comes into effect are considered future threats

| Potential Drinking Water Threats for the Marmora System | Learn More |
|---|--|
| Sewage Systems | Sewage System Fact Sheet |
| Agricultural Activities | Agricultural Activities Fact Sheet |
| Non-Agricultural Source Material | info@trentsourceprotection.on.ca |
| Commercial Fertilizer Handling & Storage | info@trentsourceprotection.on.ca |
| Pesticide | Pesticide Fact Sheet |
| Road Salt | info@trentsourceprotection.on.ca |
| Fuel | Fuel Fact Sheet |
| DNAPL | DNAPL Fact Sheet |

| Potential Drinking Water Threats for the Marmora System | Learn More |
|---|--|
| | |
| Organic Solvents | info@trentsourceprotection.on.ca |
| Waste Disposal Sites | info@trentsourceprotection.on.ca |
| Snow Storage | info@trentsourceprotection.on.ca |

Source Protection Plan

Source protection policies make use of a variety of approaches such as education and outreach, land use planning, inspections, and monitoring. For some activities, policies require landowners to work with a Risk Management Official (RMO) to identify and implement measures to be more protective of drinking water. For activities already managed through existing tools, such as Environmental Compliance Approvals or Nutrient Management Plans, policies call for a review of these documents to ensure drinking water is addressed. In a limited number of cases, policies prohibit new activities from being started. Education and outreach to landowners will be a key component in the successful protection of our drinking water.

Fun Facts

- Annual average pumping rate is 627 cubic metres per day.
- There is one intake, sitting approximately 2.9 metres below the surface of the Crowe River.

You can check your property to find out if you are in a vulnerable zone and what Source Protection Plan policies apply by viewing our [Interactive Source Protection Map](#) and inputting your address.

For more information about the Clean Water Act or drinking water source protection:

Visit our website at www.trentsourceprotection.on.ca or Lower Trent Conservation, at (613) 394-3915 ext. 246

Or contact the Crowe Valley Source Protection Lead, liam.baileymcdade@crowevalley.com, (613) 472-3137

RMO: Amy Dickens, Quinte Conservation, adickens@quinteconservation.ca, (613) 968-3434



Ontario

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