

Kettle Creek Source Protection Area

Source Protection Plan Primer

This document presents answers to commonly asked questions regarding source protection, and the Kettle Creek Source Protection Plan (KCSPP). For additional resources, or a digital copy of the KCSPP, Assessment Report, and/or Explanatory Document please visit www.sourcewater.ca. A hard copy of these documents can also be viewed at the Kettle Creek Conservation Authority Administrative Centre.

Why were Source Protection Plans created?

In May 2000, water contaminated by *E. coli* bacteria made its way into the municipal water system in Walkerton. Within days, seven people had died and thousands of others became ill from drinking the contaminated water. As a result, the provincial government convened an inquiry, which was led by Justice Dennis O'Connor. These recommendations led to the creation of the *Clean Water Act, 2006* and the development of source protection plans throughout Ontario.

What is the *Clean Water Act, 2006*?

The *Clean Water Act, 2006* is in place to protect existing and future sources of municipal drinking water. The *Clean Water Act, 2006* is a commitment from the Ontario government to ensure the sustainability of clean, safe drinking water for everyone obtaining drinking water from municipal systems in Ontario, and to implement the recommendations made following the Walkerton Inquiry in 2002.

What are the prescribed drinking water threats?

Section 1.1 of Ontario Regulation 287/07, made under the *Clean Water Act, 2006* identifies the following activities as prescribed drinking water threats:

- The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
- The establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage.
- The application of agricultural source material to land.
- The storage of agricultural source material.
- The management of agricultural source material.
- The application of non-agricultural source material to land.
- The handling and storage of non-agricultural source material.
- The application of commercial fertilizer to land.
- The handling and storage of commercial fertilizer.
- The application of pesticide to land.
- The handling and storage of pesticide.

- The application of road salt.
 - The handling and storage of road salt.
 - The storage of snow.
 - The handling and storage of fuel.
 - The handling and storage of dense non-aqueous phase liquid.
 - The handling and storage of an organic solvent.
 - The management of runoff that contains chemicals used in the de-icing of aircraft.
 - The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.
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What is the Kettle Creek Source Protection Plan?

The KCSPP was written for the Kettle Creek Source Protection Area, which is under the jurisdiction of the Kettle Creek Conservation Authority. This region includes three subwatersheds: Dodd Creek, Upper Kettle Creek, and Lower Kettle Creek, which cover an area of 520 square kilometres and is home to approximately 65,000 residents.

The KCSPP establishes policies to appropriately and effectively address significant drinking water threats for the Belmont Water Supply System and the Elgin Area Primary Water Supply System, the only two municipal drinking water sources in the Kettle Creek watershed. The Ministry of the Environment approved the KCSPP on September 11, 2014, and the plan took effect on January 1, 2015.

How was the Kettle Creek Source Protection Plan developed?

The source protection planning process was led by a multi-stakeholder steering committee called the Lake Erie Region Source Protection Committee. The committee was formed in November 2007 and was responsible for directing the development of Assessment Reports and the Source Protection Plans for each of the four Source Protection Areas (Kettle Creek, Catfish Creek, Long Point Region, and Grand River) in the Lake Erie Region.

Consultation with the public and other stakeholders was also key to the development of locally derived Source Protection Plans, and is required under the *Clean Water Act*, 2006 at each stage in the planning process. Broad public consultation was conducted throughout the development of the Source Protection Plans, where key consultation mechanisms included stakeholder workshops, public meetings, and open houses, in which there were opportunities to comment on discussion papers.

What is the Kettle Creek Assessment Report?

The Kettle Creek Assessment Report is a key component of the KCSPP. It summarizes the technical studies undertaken in the Kettle Creek Source Protection Area to identify areas around municipal drinking water sources that are most vulnerable to contamination and overuse.

What is the Kettle Creek Explanatory Document?

The Kettle Creek Explanatory Document provides stakeholders and other interested parties with the intent and rationale behind the policy decisions made in the KCSPP. It also provides information on the context and planning process of the KCSPP.

What are the sources of municipal drinking water in the Kettle Creek watershed?

In the Kettle Creek watershed, municipal drinking water is obtained from both groundwater and surface water sources.

What is the groundwater source of municipal drinking water?

The Municipality of Central Elgin operates two groundwater wells in the village of Belmont. These wells currently supply 500 cubic metres of water per day to approximately 1,900 residents. The Belmont wells are artesian, meaning that the water flows under pressure without pumping. Both wells are about 42 metres deep and studies show that the water is more than 100 years old.

The Belmont municipal wells are fed by groundwater. This groundwater comes from rain or snow that seeps below ground and pools in cracks or spaces in the soil and rock. The level of groundwater, or the water table, rises and falls depending on the season, temperature, amount of rain or snow, and the amount of water withdrawn from the aquifer.

What is the surface water source of municipal drinking water?

The Elgin Area Primary Water Supply System (EAPWSS) is located on the north shore of Lake Erie in the Municipality of Central Elgin, five kilometres east of Port Stanley. The EAPWSS pumps water from Lake Erie through an intake pipe where it is treated before distribution.

The EAPWSS has a treatment capacity of 91 million litres per day and serves a population of approximately 112,000 people in the cities of London and St. Thomas, the Municipality of Bayham, Municipality of Central Elgin, Municipality of Dutton Dunwich, Township of Malahide, Township of Southwold, and the Town of Aylmer.

What are the policies in the Kettle Creek Source Protection Plan?

The KCSPP contains a series of policies that aim to protect municipal sources of drinking water against existing and future drinking water threats. Where necessary, Part IV policies may prohibit, require risk management plans, or restrict land uses for certain activities within the Belmont Wellhead Protection Area and the Port Stanley Intake Protection Zone.

What are the Part IV policies within the Belmont Wellhead Protection Area?

A Wellhead Protection Area (WHPA) has been established surrounding the Belmont wells. A WHPA is the area above and below ground surrounding a well through which contaminants may move toward and reach the well.

Within the Belmont Wellhead Protection Area (WHPA), specifically WHPA-A/B/C, the handling and storage of dense non-aqueous phase liquids (DNAPLs) are prohibited. In addition, the following activities are also prohibited within the Belmont WHPA-A:

- The application of agricultural source material to land.
- The storage of agricultural source material.
- The application of non-agricultural source material to land.

- The handling and storage of non-agricultural source material.
- The handling and storage of commercial fertilizer.
- The application of pesticide to land.
- The handling and storage of pesticide.
- The handling and storage of road salt.
- The storage of snow.
- The handling and storage of fuel.
- The handling and storage of an organic solvent.
- The use of land as livestock grazing or pasturing land, an outdoor confinement area of a farm-animal yard.
- The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act* when a *Prescribed Instrument* is not required.

What are the Part IV Policies within the Port Stanley Intake Protection Zone?

An Intake Protection Zone (IPZ) has been established around the intake of the Elgin Area Primary Water Supply System (EAPWSS). An IPZ is the area of land and water surrounding a surface water intake pipe through which contaminants may move toward and reach the intake.

The handling and storage of commercial fertilizer (greater than 5,000 cubic metres) and fuel (greater than 6,000 litres) are significant risks to the EAPWSS. Therefore, risk management plans have been developed and implemented to ensure these existing activities cease to be significant drinking water threats. Future handling and storage of commercial fertilizer and fuel in large quantities are prohibited according to the policies established by the KCSPP.

How are the policies in the Kettle Creek Source Protection Plan implemented?

The policies in the KCSPP are assigned a legal effect and direct implementing bodies to comply with, conform with, or have regard to these policies. As required by the *Clean Water Act, 2006*, the KCSPP policies must also identify who or what agency will be responsible for implementation and outline the date in which the implementation must take effect.

Many of the policies will be implemented by the municipalities within the Kettle Creek watershed. Other policies will be implemented by the Ministry of Environment and/or the Kettle Creek Conservation Authority.

How are Part IV policies in the Kettle Creek Source Protection Plan implemented?

Part IV of the *Clean Water Act, 2006* provides municipalities with new tools to regulate existing and future activities that are or would be significant drinking water threats. These tools include: prohibition, risk management plans, and restricted land uses.

Part IV policies, in particular, are the responsibility of the municipality where the policies apply. Under the *Clean Water Act, 2006*, municipalities can retain their responsibility or transfer it to another body such as the source protection authority. Within the Kettle Creek Source Protection Area, there are only two municipal drinking water systems and both fall within the boundaries of the Municipality of Central Elgin. Central Elgin has chosen to retain the responsibility of applying Part IV policies.

It is necessary for the body that has Part IV enforcement responsibility to establish a risk management office. Implementation and enforcement of Part IV of the *Clean Water Act*, 2006 is the responsibility of the Risk Management Official (RMO) and Risk Management Inspector (RMI), who have completed the required provincial training. The RMO is responsible for administering Part IV, while the RMI ensures compliance with Part IV policies.

For more information regarding Part IV policies please refer to the Part IV Primer.

Who is the Risk Management Official/Inspector for your area?

The Municipality of Central Elgin provides the risk management services for municipalities with drinking water systems in the Kettle Creek watershed. The Risk Management Official/Inspector is fully certified and carries provincial identification.

The current RMI is Leon Bach, who can be reached at (519) 631-4860 extension 274. The RMO/RMI is Lloyd Perrin, who can be reached at (519) 631-4860 extension 277.

Where can I find out more about the Kettle Creek Source Protection Plan?

For more information on the KCSPP, please visit www.sourcewater.ca or contact Lloyd Perrin, the current RMO, at the Municipality of Central Elgin by phone (519) 631-4860 extension 277.