

Source Water Protection: Port Stanley Intake Protection Zone



Kettle Creek Source Protection Plan

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

While the Belmont Water Supply System has no significant drinking water threats, 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 Elgin Area Primary Water Supply System. 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 Kettle Creek Source

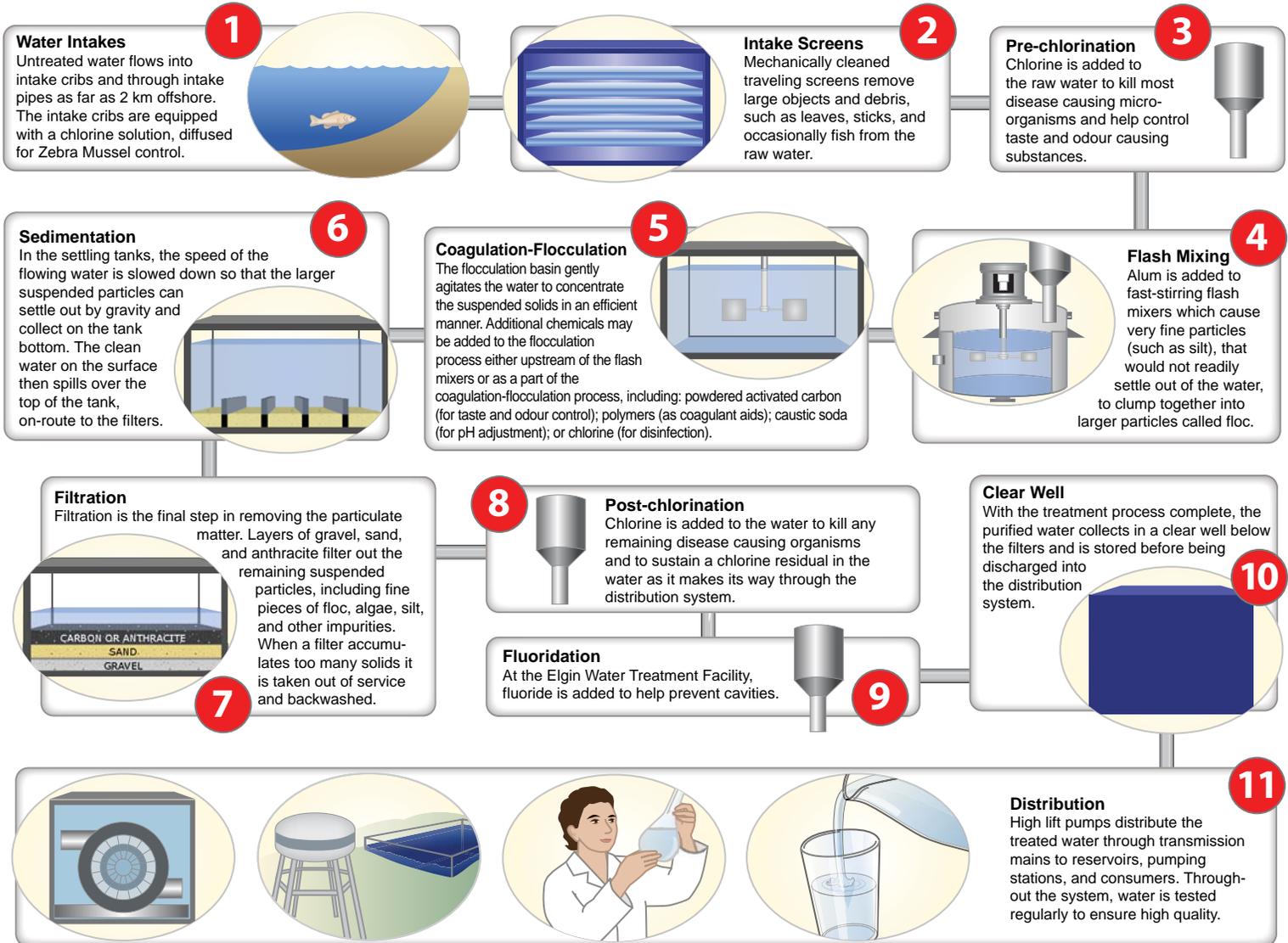
Protection Plan. A range of approaches has been used to address potential threats including outreach and education campaigns, updating municipal documents and, in certain instances, prohibiting activities immediately within the Port Stanley Intake Protection Zone or Belmont Wellhead Protection Area.

If you are planning to undertake any new activities in these areas, please contact the Risk Management Official at the Municipality of Central Elgin by telephone at 519-631-4860 ext. 277. The Risk Management Official reviews all planning permit applications and building permit applications for compliance with the Source Protection Plan. The Risk Management Official should be consulted before beginning any building projects or new activities within the Port Stanley Intake Protection Zone or the Belmont Wellhead Protection Area.

To find out more, please see the Lake Erie Source Protection Region's website www.sourcewater.ca.

Where Does Your Drinking Water Come From?

The Elgin Area Water Treatment Plant (WTP) is located on the north shore of Lake Erie in the Municipality of Central Elgin, five kilometres east of Port Stanley. The Elgin Area WTP 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.



Intake Protection Zones

An intake is the underwater pipe that is used to pump water from a surface water source, such as a lake or large river, before it is treated and distributed as drinking water. An Intake Protection Zone (IPZ) is the area, made up of both water and land, surrounding a surface water intake pipe. Under the *Clean Water Act, 2006*, several Intake Protection Zones have been identified that include IPZ-1 (proximity based), IPZ-2

(time based), and IPZ-3 (event based) for the Elgin Area Water Treatment Plant.

To protect the health of the people who get their drinking water from Lake Erie, it is important to keep pollutants out of the lake. This job starts with protecting the water and land immediately around the Intake Protection Zone.

Port Stanley Intake Protection Zones

IPZ-1

Proximity Based

Intake Protection Zone 1 (IPZ-1) includes the area immediately adjacent to the drinking water intake, generally considered to be the most vulnerable. For the Elgin Area Water Treatment Plant, IPZ-1 is defined as a 1,000 metre radius around the intake pipe.

IPZ-2

Time Based

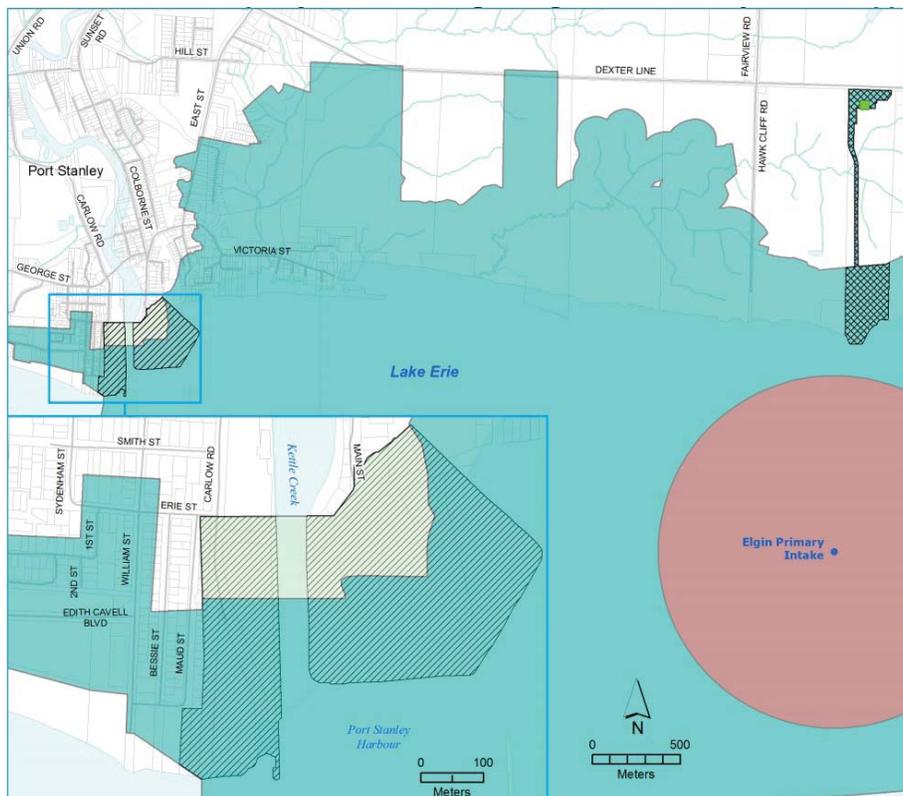
Intake Protection Zone 2 (IPZ-2) is determined by the amount of time it would take material spilled into Kettle Creek or nearby shore areas to flow to the intake pipe. This is called the “time of travel”. In the event of a spill, the operators of the water treatment plant may have to top up their storage reservoirs and close the intake pipe in Lake Erie while the pollutants flow past. In order to provide adequate time for warning and action, IPZ-2 is based on a two-hour time of travel.

IPZ-3

Event Based

Intake Protection Zone 3 (IPZ-3) is the area that extends beyond IPZ-2 and is delineated through modelling. Modelling results for contaminant spills within IPZ-2 found that urea ammonium nitrate fertilizer and diesel fuel could be spilled from the west pier and east harbour land of Port Stanley and the nearshore area adjacent to IPZ-1 reaching the intake during extreme event conditions. This could result in a deterioration of the drinking water source. As a result, the storage of fertilizer (greater than 5000 cubic metres) and fuel (greater than 6,000 litres) are considered significant drinking water threats and are prohibited within the entire IPZ (IPZ-1, IPZ-2, and IPZ-3).

This map illustrates the Port Stanley Intake Protection Zones as well as areas of significant drinking water threats from the handling and storage of commercial fertilizer and fuel.



DRINKING WATER
SOURCE PROTECTION
ACT FOR CLEAN WATER

Significant Drinking Water Threat Policy Applicability Map

Elgin County:
Elgin Area Primary
Water Supply System

- Surface Water Intake
 - Water Treatment Plant
 - Roads
 - Property Boundaries
 - ~ Minor Rivers
 - ~ Lakes / Main Rivers
- Significant Drinking Water Threat Policy Applicability Areas:**
- ▨ The handling and storage of commercial fertilizer.
 - ▩ The handling and storage of fuel.
- Intake Protection Zones:**
- IPZ-1
 - IPZ-2
 - IPZ-3

Lake Erie
Source Protection Region
www.sourcewater.ca
Kettle Creek
Source Protection Area

Ontario



Produced by GRCA on behalf of the Lake Erie Source Protection Committee, January 2, 2014



Best Practices for Boaters

- Look for cleaning products with an EcoLogo™ which identifies products as being certified by Environment Canada's Environmental Choice Program.
- Be sure when painting your boat to use legal bottom paints and biodegradable cleaning agents, and ensure that no paint or cleansers enter the water.
- Avoid overfilling fuel tanks. If you see a leak or spill of any fuel, stop the spill at the source and contact marina staff immediately.
- Keep trash onboard and never throw garbage into the lake. Take advantage of shore-based facilities to recycle plastic, glass, metal, and paper.
- Never discharge sewage into the lake, creek or harbour waters. Nearby pump-out stations and shore-based facilities are available for proper waste disposal.
- Only use holding tank products that are least harmful to the environment. In fact, there are several products available that have been certified with an EcoLogo™.

Best Practices for Home and Farm

Property owners who live in or own land within the Intake Protection Zones can help protect drinking water through the proper handling and storage of chemicals. You can help protect our drinking water supply on your own property by following these guidelines:

Tips for Handling and Storage of Household Chemicals:

- Choose the least dangerous product that will do the job.
- Seal chemicals in their original containers.
- Do not reuse empty containers or repack product in different containers.
- Do not mix chemicals.
- Do not prepare more chemicals than you need for the job.
- Do not pour chemicals down the drain, the toilet, or storm sewers.
- Dispose of household hazardous waste, including fertilizer and pesticide containers, through your municipality's pick-up or drop-off program, or by visiting www.makethedrop.ca for a listing of local businesses that will accept hazardous waste products.

Tips for Handling and Storage of Fuel:

- If you need to transport fuel, use only approved containers certified by the Canadian Standards Association or Underwriters' Laboratories of Canada.
- Containers should never be filled to the top. Gasoline expands in warm temperatures and spillage may occur. Be sure to keep it away from direct sunlight and ignition sources.
- When using a lawn mower or any gasoline-powered tool, always let it cool completely before refilling the tank.
- Gasoline should be used only as a fuel. Never use it as a cleaning solvent.