

Kettle Creek Source Protection Area

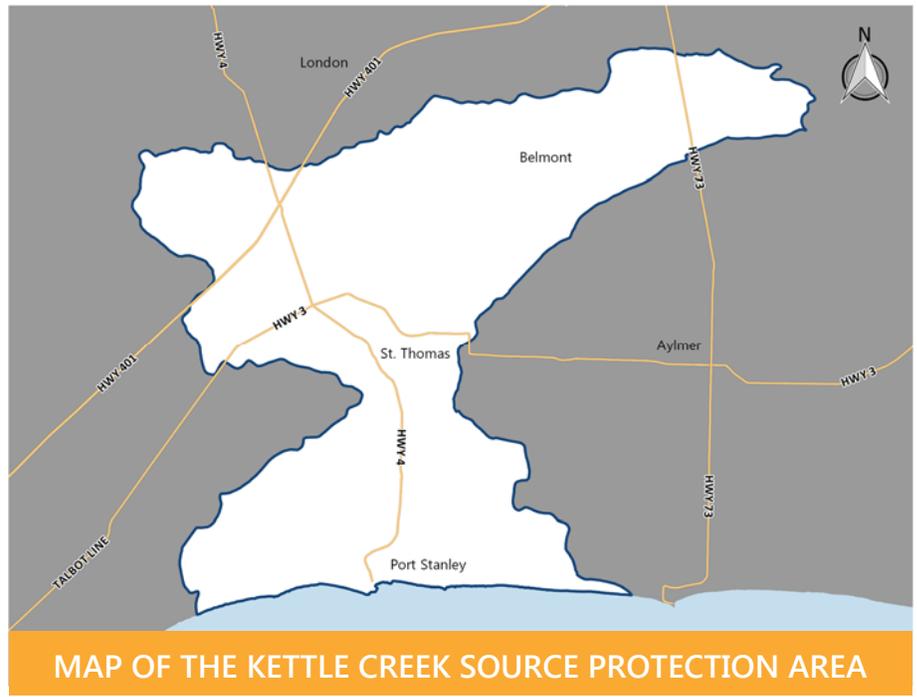
2017 Annual Report



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Kettle Creek Source Protection Area

2017 Annual Report



Kettle Creek's 2017 Annual Report is a reflection of Source Water Protection Program implementation efforts and more broadly, a snapshot of the program's progress in the Kettle Creek watershed .

This is the second Annual Report on the progress of the Source Water Protection Program in the Kettle Creek Source Protection Area.

This report is produced by the Lake Erie Source Protection Region and written for the citizens of the Kettle Creek watershed, the Lake Erie Region Source Protection Committee, and local stakeholders.

The report uses Source Water Protection Program categories developed by the Ministry of the

Environment and Climate Change (MOECC). The categories help tell the story of progress towards full implementation of Source Protection Plans and the protection of municipal drinking water sources.

After the initial year of implementation in 2015, the Source Water Protection Program is moving into a steady state in the Kettle Creek Watershed. The significant Drinking Water Threats identified in the plan have been addressed or eliminated. As of 2017, an outreach and education program is now in place and will continue in the coming years. We acknowledge and recognize the efforts made by our local municipalities,

stakeholders and Source Protection Committee in the development of the Source Protection Plan, implementation of Source Water Protection policies and development of this annual report.

Clean Water Act

The Ontario government passed the *Clean Water Act* in 2006 to implement some of the recommendations of the Walkerton Inquiry. The *Clean Water Act* ensures communities protect their drinking water supplies through prevention - by developing collaborative, watershed-based Source Protection Plans that are locally driven and based on science.

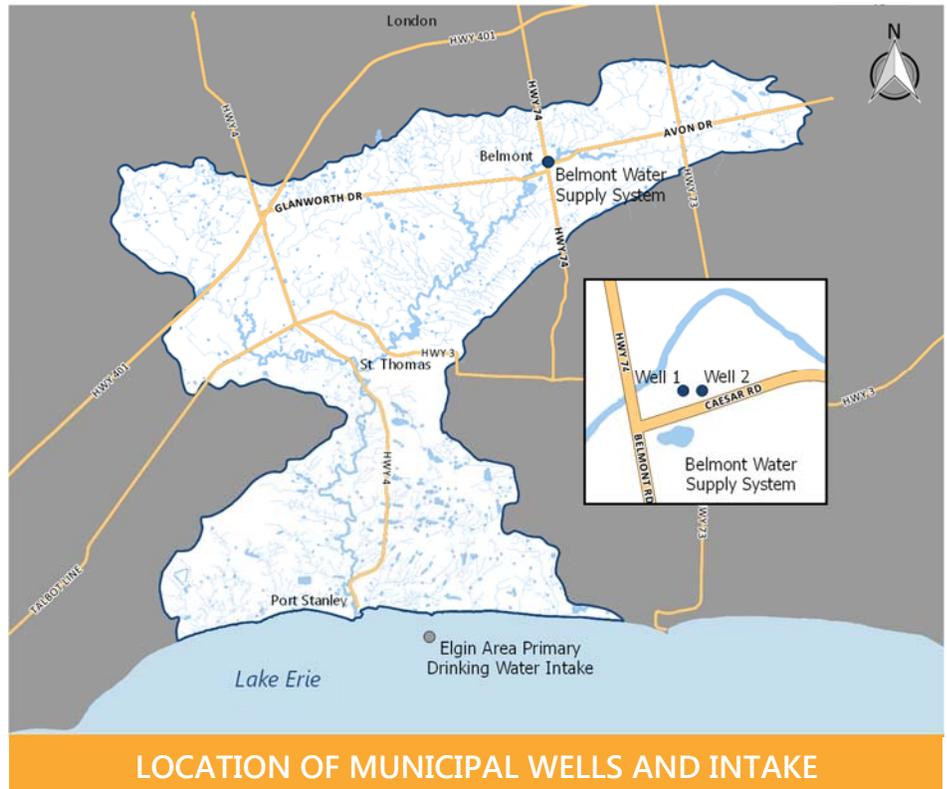
Source Water Protection Program

The *Clean Water Act* led to the creation of the Source Protection Program, establishing Source Protection Regions and Source Protection Areas. Ontario has 19 Source Protection Regions and 38 Source Protection Areas. The Lake Erie Source Protection Region is made up of four watersheds or Source Protection Areas: Grand River, Long Point Region, Catfish Creek and Kettle Creek. Each watershed has its own Source Protection Plan. The Kettle Creek Source Protection Plan (the Plan) was approved on September 11, 2014 and went into effect January 1, 2015.

Kettle Creek Source Protection Area

The Kettle Creek Source Protection Area includes Kettle Creek and its tributaries. They drain 520 square kilometres of agricultural and urban lands before entering Lake Erie at Port Stanley. The area includes parts of Elgin County, Middlesex County, the City of St. Thomas, and City of London.

Two municipal drinking water systems serve the communities of the watershed: a well system in Belmont and the Elgin Area



Primary Water Supply System (EAPWSS) in Port Stanley. The Plan established policies to address significant drinking water threats for both systems.

Only two existing significant drinking water threats (SDWT) were identified in the Kettle Creek Source Protection Area when the Plan took effect. Since that time, both threats have been addressed: one no longer exists and the other was managed through a Risk Management Plan.

Due to the low number of significant threats, many of the policies in the Plan focus on education and outreach efforts and prohibition of future

activities that may become significant drinking water threats.

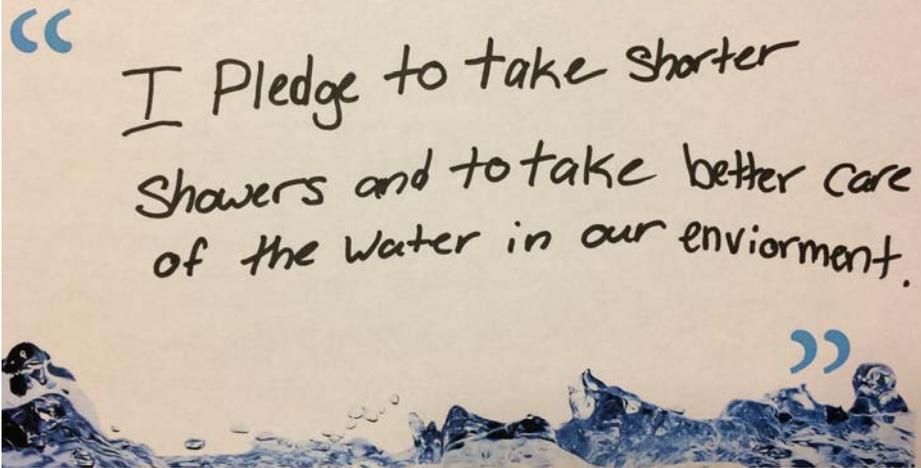
Outcomes documented in this report reflect the limited number of identified threats.

- Population: 52,000
- Size: 520km²
- Drinking Water Systems: 2
- Municipal Wells and Intakes: 2
- SDWTs at Plan Approval: 2
- SDWTs Addressed: 2
- Implementing Bodies: 3*
 - Township of Malahide
 - Municipality of Thames Centre
 - Municipality of Central Elgin

*Elgin County has not been included as it is only responsible for implementing one policy.

KETTLE CREEK QUICK FACTS

#ichoosetapwater



A STUDENT'S PLEDGE

Method of Evaluation

The Source Protection Program's progress in the Kettle Creek Source Protection Area is measured through a Program Assessment – a high-level evaluation tool developed by the MOECC for implementation reporting purposes.

This report showcases a selection of annual reporting results that measure policy implementation efforts made from January 1 to December 31, 2017. The annual reporting results are sorted according to the implementation category or 'outcomes' they best describe, e.g. *Stakeholder Promotion*.

Left: After learning more about source water protection during classroom programming, students were asked to take a water pledge. Many chose to drink tap water and committed to conserving water. Learn more about the #ichoosetapwatercampaign on page 5.

Want More Detail?

The Kettle Creek Annual Progress Report Supplemental Form includes additional reportables and information on implementation progress in the Kettle Creek watershed.

Find out more information about the Source Water Protection Program at sourcewater.ca.

Program Assessment

Measure of the Program's Progress in the Kettle Creek Source Protection Area

Progressing Well

Most of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

Satisfactory

Some of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

Limited Progress Made

A few of the source protection plan policies have been implemented and/or are progressing according to the timelines in the source protection plan.

Outcome: Awareness and Willingness

Description: Implementing bodies are willing to integrate source protection into day-to-day business.

Figure 1. Illustrates the percentage of municipalities integrating source protection into various business processes. *Official Plan (OP) and Zoning By-law (ZBL) policies have been established, however they will not be up for review until 2018, and will be updated at that time.

Figure 1. Percentage of Municipalities Integrating Source Protection into Various Business Processes.

100%	<ul style="list-style-type: none"> • Land use planning and/or s. 59 policy staff trained in source protection • Maps and schedules include vulnerable areas • Complete planning application requirements
100%	<ul style="list-style-type: none"> • Has a public works operation • Sitting/placement of activities are away from vulnerable areas • S. 59 procedures are in place
33%	<ul style="list-style-type: none"> • Land use planning guidance documents updated/produced to include source protection • Applicant planning design and technical guidelines updated/produced for source protection • Planning documents updated
33%	<ul style="list-style-type: none"> • Reduce the number of applicants that need RMO screening • Source protection integrated into other business processes • Official Plan (OP) and Zoning Bylaw (ZBL) strategy/timeline in place*

OUTREACH AND EDUCATION SPOTLIGHT: EMERGENCY RESPONSE



A Boating Accident Protocol was formalized and provided to the Canadian Coast Guard (St. Williams Auxiliary Station). The protocol described the individuals/organizations that must be contacted in the event of a marine spill in the Port Stanley Intake Protection Zone (IPZ). This protocol was presented to the Coast Guard through a presentation on June 8, 2017.

An Emergency Management Plan was also formalized and provided to the Municipality of Central Elgin's Fire Rescue. The protocol described the individuals/organizations that must be contacted in the event of a spill in the Belmont Wellhead Protection Area and the Port Stanley IPZ. It was shared with fire rescue services in Yarmouth, Belmont and Union.

Outcome: Stakeholder Promotion

Description: Methods used to raise awareness and promote source protection.

The following chart details the education and outreach methods used to raise awareness and promote source protection within the watershed. Kettle Creek Conservation Authority (KCCA) works collaboratively with the Municipality of Central Elgin to design an outreach and education program that is delivered throughout the watershed as required. The following summarizes some highlights from the 2017 campaign.

Education and Outreach Methods	
Social Media	Social media content for both Twitter and Facebook was created detailing ways to protect drinking water sources. In 2017 there were 3 Facebook posts with a total of 1,031 impressions and 42 engagements as well as 3 Twitter tweets with a total of 1,828 impressions and 21 engagements.
Website Update	The KCCA website contains a source protection web page which contains information about source protection history and the Plan. Primers, fact sheets and an interactive mapping tool are features.
Youth Outreach	The Source Water Protection Education Program was delivered to three student groups in 2017. The program was part of the #ichoosetapwater campaign, a partnership between Kettle Creek Conservation Authority and St. Thomas Elgin Health. The #ichoosetapwater campaign consisted of a video contest and a reusable water bottle giveaway. After learning more about source water protection and water conservation, students were asked to take a water pledge. Many committed to choosing tap water, conserving water while undertaking daily activities and taking actions to help water quality in the environment.
Newsletters/ Mail-Outs	Content was written and provided for the Central Elgin Buzz, a community bulletin featured in a number of local newspapers throughout June and July. A factsheet about how the public can protect sources of municipal drinking water was mailed out to 2,989 landowners in the Municipality of Central Elgin (Page 7). In addition, marinas in Port Stanley agreed to display the Port Stanley Intake Protection Zone fact sheet in their store and/or club house.
Emergency Plans	An Emergency Management Plan was formalized and provided to the Municipality of Central Elgin's Fire Rescue. The protocol describes individuals/organizations that must be contacted in the event of a spill.
Signage	24 MOECC approved road signs have been installed on municipal roadways throughout the Belmont WHPA and the Port Stanley IPZ. These signs raise awareness about the presence of the drinking water protection zones. In addition, the municipality maintains a sign in Port Stanley at the public boat launch to educate boaters, typically visitors to the area, about the IPZ.

Outcome: Changes in Public and Stakeholder Behaviour

Description: Implementing bodies display positive changes in behaviour as a result of knowledge.

The St. Thomas Elgin Children's Water Festival was held in May 2017 at Pinafore Park in St. Thomas. Over 3,500 grades two to five students attended the Festival and participated in hands-on and interactive activity stations linked to the Ontario Curriculum. The activities taught students about wellhead protection, where their drinking water comes from and proper disposal of hazardous waste.

Ultimately, the goal of the Children's Water Festival is to motivate behavioral changes in students and stress the importance of clean, safe water in their lives and communities.

In addition, the Festival held its first Public Day as part of the City of St. Thomas' Canada Day celebrations to further promote the messages of water conservation and protection. The Public Day was well attended with over 10,000 adults and children attending.

A local campaign spearheaded by Kettle Creek Conservation Authority and Elgin St. Thomas Public Health promoted the importance of keeping our municipal drinking water safe. The #ichoosetapwater campaign



STUDENT OUTREACH AND EDUCATION

consisted of a video contest and a reusable water bottle giveaway. The contest invited Grades 3 to 7 classes to submit a video highlighting the importance of choosing tap water over bottled water. Classrooms were provided messaging on the importance of keeping municipal drinking water safe to be incorporated into the videos. The winning entry was awarded a cash prize.

In October 2017, KCCA hosted a Lake Erie Student Conference in

Port Stanley for 125 high school students from St. Thomas, Elgin County and London. The Conference featured presentations and hands-on activities that taught students about the importance of Lake Erie as a drinking water source and the lake's current water quality issues.

Additional source water protection programming was conducted in local classrooms throughout the year.

Outcome: Threats Cease To Be

Description: Plan Polices have been implemented to address significant drinking water threats

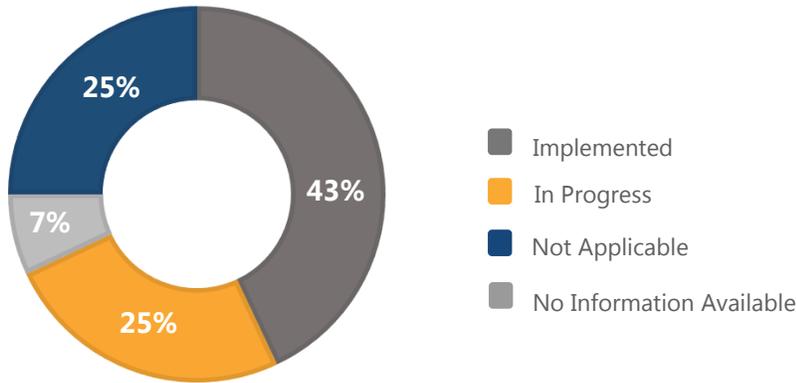


Figure 2. Illustrates the implementation of policies that address drinking water threat activities expressed as a percentage.

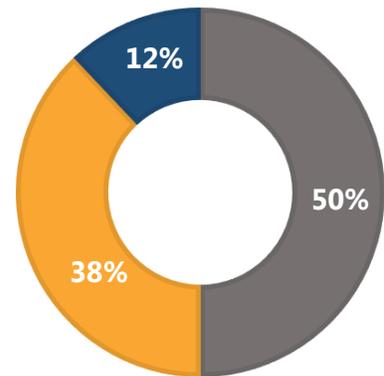


Figure 3. Illustrates the implementation status of policies not directly associated with addressing drinking water threat activities expressed as a percentage.

FACT SHEET AND NEWSLETTER CONTENT

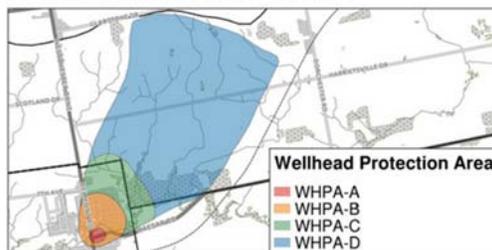
Source Water Protection

Within the Municipality of Central Elgin there are two sources of municipal drinking water: the Elgin Area Primary Water Supply System (EAPWSS) and the Belmont Water Supply System (BWSS). The EAPWSS, located east of Port Stanley, has a treatment capacity of 91 million litres of water per day and serves a population of approximately 112,000 individuals in the cities of London and St. Thomas, the municipalities of Bayham, Central Elgin, and Dutton Dunwich, the townships of Malahide and Southwold, and the town of Aylmer. The BWSS operates two artesian wells that supply 500 cubic metres of water per day to 1,900 individuals within the village of Belmont.

How can you help?

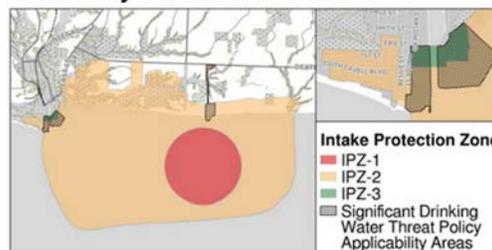
- Do not dispose of chemicals down the drain, toilet, or storm sewer.
- Take care when refueling gas tanks to avoid spilling fuel.
- Clean up pet waste to prevent nutrients and pathogens from entering storm sewers during heavy rains.
- Prevent pollutants from entering runoff by reducing or eliminating the use of fertilizers, sidewalk salts, and by not overwatering your lawn.
- Keep your septic system in proper working order and empty the tank regularly.
- Protect vegetation along the banks of watercourses. This helps improve water quality and reduces erosion.
- Protect and maintain your private well. Wells provide pathways for contaminants to enter the groundwater system.
- Dispose of hazardous waste and pharmaceuticals properly. Take unused products to your local hazardous waste facility and return unused pharmaceuticals to your pharmacy.
- For more information, please visit the Lake Erie Source Protection Region's website at www.sourcewater.ca.

Belmont Wellhead Protection Area



WHPA-A represents a 100 metre radius around the wellheads. WHPA-B, WHPA-C, and WHPA-D represent a 2-year time of travel, 5-year time of travel, and 25-year time of travel, respectively. This means that it would take a contaminant 2-years, 5-years, or 25-years to reach the wellhead.

Port Stanley Intake Protection Zone



IPZ-1 represents a 1 kilometre radius around the intake pipe. IPZ-2 represents a 2-hour time of travel to the intake pipe. This means that it would take 2-hours for a contaminant to reach the intake pipe from anywhere within IPZ-2. IPZ-3 is an event based area in the event of a fertilizer or fuel spill in large quantities.



The Corporation of the Municipality of
Central Elgin

CE BUZZ

Trails Master Plan

The Municipality of Central Elgin has completed a study to develop a comprehensive trails strategy. The strategy is a long-term plan designed to provide recreational opportunities for a range of users, identify a flexible blueprint and guide for future planning, and provide guidance on the design of trail facilities and other amenities.

The plan is available for review until June 30th at the Municipality of Central Elgin and the St. Thomas Public Library. For more information, please visit our website, or contact Lloyd Perrin at lperrin@centralelgin.org or 519631-4860 ext. 277.

Photo contest

Show us what you love about Port Stanley's Harbour by submitting a picture of the Harbour for the chance to win one of the following prizes:

- Lunch for two with Mayor David Marr
- Brunch for two at The Windjammer Inn
- Two tickets to the Port Stanley Festival Theatre
- A gift certificate to the Village Square Coffee House
- A gift certificate to GT's on the Beach

For more information, please see our website, or contact Shelly Steffler at ssteffler@centralelgin.org, or 519-631-4860, ext. 239.

Source Water Protection Reminder

Did you know that there are two sources of municipal drinking water within the Municipality of Central Elgin: the Elgin Area Primary Water Supply System (EAPWSS) and the Belmont Water Supply System (BWSS)? The EAPWSS, located east of Port Stanley, has a treatment capacity of 91 million litres of water per day and serves a population of approximately 112,000 individuals. The BWSS operates two artesian wells that supply 500 cubic metres of water per day to 1,900 individuals within the village of Belmont.

To learn more about protecting your drinking water source, please visit www.sourcewater.ca and/or www.kettlecreekconservation.on.ca.

www.centralelgin.org

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Kettle Creek Source Protection Area

Lake Erie Region Source Protection Area

c/o Grand River Conservation Authority
400 Clyde Rd, Cambridge ON, N1R 5W6