

ESSEX REGION SOURCE PROTECTION AREA 2018 RISK MANAGEMENT SERVICES ANNUAL PROGRESS REPORT

Prepared by:



PART IV IMPLEMENTATION – RISK MANAGEMENT SERVICES

INTRODUCTION

Source water is the water that we take from lakes or rivers to supply people with drinking water. The *Clean Water Act* is part of the Ontario government's commitment to ensure access to safe drinking water. It requires the development and implementation of local watershed-based Source Protection Plans (SPP) to protect the source water that supplies municipal drinking water systems from contamination and overuse, now and into the future. Following an extensive process that included broad public input, the Essex Region SPP came into effect on October 1, 2015 and the Thames-Sydenham and Region SPP came into effect on December 31, 2015. Both SPPs contain policies written under Part IV of the *Clean Water Act*, which municipalities are required to implement.

In 2015, all municipalities in the Essex Region, and the Municipality of Chatham-Kent, delegated their obligations under Part IV of the *Clean Water Act, 2006*, to the Essex Region Conservation Authority (ERCA). The Risk Management Official/Risk Management Inspector (RMO/I) provides these services on behalf of the municipalities in the Essex Region Source Protection Area (ERSPA), as well as the southernmost portion of the Thames-Sydenham and Region Source Protection Region (TSRSPR), which includes parts of the Town of Lakeshore, the Municipality of Leamington, and the Municipality of Chatham-Kent. The Essex Region Risk Management Office collaborates with the Thames-Sydenham and Region Source Protection Authority to ensure consistent implementation of our similar policies. The terms of the first agreement with the municipalities expired on September 30, 2018. Prior to the termination of the agreement, an amendment was issued to extend the agreement to December 31, 2021. All of the municipalities agreed to this amendment.

In 2018, ERCA employed three individuals certified and appointed as Risk Management Officials/Inspectors (RMO/Is), including the Source Water Project Manager who provides administrative oversight and the Regulations Technician, who is available on an as needed basis only. In February 2018, a new staff member took on the full time role of RMO/I. One Risk Management Assistant continued to assist the Risk Management Services Office in conducting threat verification site visits during 2018, but that position has now expired.

[Amherstburg](#) / [Chatham-Kent](#) / [Essex](#) / [Kingsville](#) / [Lakeshore](#) / [LaSalle](#) / [Leamington](#) / [Pelee Island](#) / [Tecumseh](#) / [Windsor](#)

The following is a summary of progress made toward implementing Part IV policies between October 1, 2015 and December 31, 2018, highlighting actions between January 1, 2018 and December 31, 2018. Please visit our website to see previous annual reports:

<https://essexregionconservation.ca/source-water-protection/resource-library/>

PART IV POLICIES

Policies written under Part IV of the *Clean Water Act* can be used to prohibit (Section 57) or manage (Section 58) activities identified as Significant Drinking Water Threats (SDWTs). These policies apply to both existing and future (new) SDWTs. In the Essex Region SPP, activities are only prohibited (Section 57) if they are not known to occur in identified vulnerable areas and are not likely to occur in the future. The majority of identified SDWTs will be managed with a Risk Management Plan (RMP) (Section 58). Policies written using section 59 of the *Clean Water Act, 2006*, are intended to act as a screening tool by municipal planning and building staff to identify any potential future (new) SDWTs that would be subject to Section 57 or Section 58 policies.

The above grade handling and storage of large volumes of liquid fuel was identified as a Significant Drinking Water Threat (SDWT) in the Essex Region SPP. Using the event based approach to model fuel spills, a large vulnerable area called the Event Based Area (EBA) was established. Fuel threats that fall within these areas that meet the criteria to be considered a SDWT are addressed with Section 58 policies requiring a Risk Management Plan (RMP) to mitigate the potential threat of a fuel spill.

There are additional SDWTs in Lakeshore IPZ-1, Windsor IPZ-1, Windsor IPZ-2 and Amherstburg IPZ-1 for which there are either Section 57 or 58 policies. However, the land portion of these areas are typically small and/or dominated by residential or municipal land uses where the identified activities are not likely to exist.

At the time of implementation, 384 potential fuel SDWTs were identified in the ERSPA EBA and 33 in the TSRSPR EBA, but there were no other existing threats identified in other vulnerable areas.

MUNICIPAL INTEGRATION

The RMO/I meets with municipal planning and building staff annually, or as needed. In these meetings, we discuss Source Water Protection in general, the Section 59 process, the issued written direction, and possible scenarios for when a property might require a Risk Management Plan (RMP). These meetings help us to ensure that municipalities are considering Source Water policies in the planning and building process, and allow us to address any questions or concerns. Due to the increased knowledge of the Source Water Protection Program, RMO/Is are also responding to requests from developers doing pre-planning to ensure they are meeting the requirements of the SPP.

[Amherstburg](#) / [Chatham-Kent](#) / [Essex](#) / [Kingsville](#) / [Lakeshore](#) / [LaSalle](#) / [Leamington](#) / [Pelee Island](#) / [Tecumseh](#) / [Windsor](#)

SECTION 59 POLICIES (FUTURE THREATS)

Section 59 policies came into effect on October 1, 2015 and were a priority for implementation because building permits and approvals under the *Planning Act* and the *Building Code Act* cannot be issued in vulnerable areas until it has been determined that a SDWT will not be created and/or has been managed as part of the proposed works.

In the spring of 2016, the RMO/I issued a written direction to assist municipalities in expediting the Section 59 screening process for proposed projects under the *Planning Act* in the identified Event Based Area (EBA). The written direction was updated in 2018. Through incoming planning and building permit applications, municipal staff screen for new activities that may pose a risk to our sources of drinking water and require a notice from the RMO/I if the property is in a vulnerable area, is non-residential, and the application includes an activity that could be a SDWT (e.g. handling and storage of fuel).

Applications under the *Building Code Act* use a common provincially mandated building permit application form that cannot be altered. In May 2017, the RMO/I provided all municipalities with a "Building Information Sheet" that can be attached to these permit applications to screen the applications as described above. This sheet is meant to accompany the building permit application and does not alter the common application form.

Using the written direction and the Building Information Sheet, the Section 59 screening process has increased in efficiency, with twenty (20) Section 59 Notices being issued in 2016, two (2) Section 59 Notices being issued in 2017 and two (2) Section 59 Notices being issued in 2018 (Table 1a and 1b).

To date, Section 59 applications have only been received for new potential fuel threats in the Event Based Area. There have not been any applications reviewed for the other Part IV policies applicable to Lakeshore IPZ-1, Windsor IPZ-1, Windsor IPZ-2 and Amherstburg IPZ-1. The RMO/I continues to work with municipalities affected by s. 57 Prohibition policies to determine if zoning by-laws can or are already prohibiting these uses. To date, no new applications have been received for any prohibited activities in the ERSPA.

Table 1. Summary of all actions taken by the RMO/I in 2016 - 2018 as a result of the Section 59 (Restricted Land Use) screening process for the Event Based Area (EBA).

Essex Region Source Protection Area (ERSPA)			
Future Threat Activities	2016	2017	2018
s. 59 Application Site Visits	4	0	1
s. 59 Applications where s. 57 or s. 58 Did Not Apply	14	2	1
s. 59 Applications where s. 57 Applied (Prohibition)	0	0	0
s. 59 Applications were s. 58 Applied (RMP)	4	0	1
Total No. of s. 59 Applications	18	2	2
Thames Sydenham and Region Source Protection Region (TSRSPR)			
Future Threat Activities	2016	2017	2018
s. 59 Application Site Visits	1	0	0
s. 59 Applications where s. 57 or s. 58 Did Not Apply	1	0	0
s. 59 Applications where s. 57 Applied (Prohibition)	0	0	0
s. 59 Applications were s. 58 Applied (RMP)	1	0	0
Total No. of s. 59 Applications	2	0	0

SECTION 58 POLICIES (EXISTING THREATS)

During the preparation of the Assessment Report, 384 properties were identified in the ERSPA and 33 properties in the TSRSPR Event Based Areas as potentially containing a volume of fuel that meets the criteria to be considered a SDWT. The policies written to address these existing threats use Section 58 (Risk Management Plans) of the *Clean Water Act*. All identified potential existing threats must be addressed by October 1, 2020 (within five years of the SPPs taking effect). As of December 31, 2018, threat verification inspections have been conducted at 383 of the 384 existing properties identified in the ERSPA and are completed for all 33 of the existing properties identified in the TSRSPR.

Threat verification inspections of the identified potential existing SDWTs have been conducted to collect information about the potential SDWT (e.g. size, location and contents of tanks). The RMO uses this information to determine whether or not these threats meet the criteria to be considered a Significant Drinking Water Threat (i.e. meet the fuel volume thresholds and are located within the Event Based Area). If Risk Management staff determine that the threat does not meet the criteria, no further action is necessary and a letter is issued to that effect. If the threat did meet the criteria, the landowner and/or person engaged in the activity (henceforth

referred to as landowner) is notified in writing that they will require a s. 58 Risk Management Plan (RMP).

Among the inspections completed in the ERSPA; 290 properties do not require a RMP, five (5) require further investigation, and 89 properties require a RMP. Of the 89 properties requiring RMPs, 66 have a RMP in progress and 14 RMPs have been established. Among the inspections completed in the TSRSPR; 22 properties do not require a RMP; eight (8) properties require further investigation, and three (3) properties have a RMP in progress. 'In progress' means the RMP process has begun, or the property was issued a notice but no response was received by Risk Management staff to date **(Table 2a and 2b)**.

NEGOTIATING RISK MANAGEMENT PLANS (SECTION 58)

The RMO/I continues to work with a number of businesses and landowners on negotiating Risk Management Plans (RMPs) to manage fuel threats identified in vulnerable areas throughout the region. A RMP is a document that allows the activity to continue in a way that protects sources of drinking water. RMPs outline all of existing preventative measures, as well as those that are *required* to prevent a fuel spill and contain one should it occur on the property. Site visits are scheduled with the RMO/I and landowner to find solutions that accurately reflect fuel storage on the property (i.e. tanks unused, plans for fuel tank decommissioning, etc.) and to discuss the RMP that is required to manage the threat.

The process for establishing a RMP continues until the RMO/I and landowner are satisfied with the completion of the required risk management measures. Following the completion of the requirements, the RMP is agreed to and comes into effect on the date that it is signed by both parties. A typical RMP incorporates the following required risk management measures to protect our sources of drinking water:

- **Fuel Tank Inspections:** periodic inspections (e.g. daily/weekly/ monthly) that are completed and maintained by on-site staff to ensure equipment is in good condition.
- **Spill Prevention, Containment and Emergency Response Plans:** preparing plans that are implemented on-site for proper containment, emergency response, and spill prevention.
- **Training:** staff to receive training on spill prevention, containment and emergency response plans, fuel tank inspections/ record keeping, standard operating procedures, etc.
- **Documentation for Proof of Adherence to Applicable Regulations:** documentation for fuel tank installation completed by TSSA certified technician, evidence of compliance actions related to fuel regulations to ensure tanks are operating under TSSA requirements and remain safe for operation, etc.

Table 2a - Detailed results of the actions taken by the RMO/I from January 1, 2018 to December 31, 2018 for each municipality with existing threats identified in the ERSPA and TSRSR Assessment Reports.

2018 Risk Management Services Summary (Existing Threats)											
	Amherstburg	Essex	Kingsville	LaSalle	Pelee	Tecumseh	Windsor	Lakeshore	Leamington	Chatham-Kent	Total
Essex Region Source Protection Area (ERSPA)											
Threat verification site visits	6	3	37	0	0	2	9	1	70	-	128
No RMP required	6	1	18	0	0	2	9	1	41	-	78
RMP established	0	0	1	0	1	0	2	2	7	-	13
¹ Further Investigation Required	0	1	0	0	0	0	0	0	3	-	4
RMP in progress	0	1	18	0	0	0	0	0	24	-	43
RMP Required	0	0	0	0	0	0	0	0	2	-	2
Thames-Sydenham and Region Source Protection Region (TSRSR)											
Threat verification site visits	-	-	-	-	-	-	-	3	3	6	11
No RMP required	-	-	-	-	-	-	-	3	0	1	4
RMP established	-	-	-	-	-	-	-	0	0	0	0
¹ Further Investigation Required	-	-	-	-	-	-	-	0	3	5	8
RMP in progress	-	-	-	-	-	-	-	0	0	0	0
RMP Required	-	-	-	-	-	-	-	0	0	0	0

¹Sites identified as 'resource extraction stations' requiring further investigation (e.g. brine **or oil** pumping stations, volumes associated with storage tanks, etc.).

Table 2b - Detailed results of all actions taken by the Risk Management Services Office from January 1st, 2016 to December 31st, 2018 for each municipality with existing threats identified in the ERSOA Assessment Report and the TSRSR Assessment Report.

Risk Management Services Summary (Existing Threats)											
	Amherstburg	Essex	Kingsville	LaSalle	Pelee	Tecumseh	Windsor	Lakeshore	Leamington	Chatham-Kent	Total
Essex Region Source Protection Area (ERSOA)											
Total Identified threats in the AR	16	31	93	3	3	12	33	29	164	-	384
Threat verification site visits	16	31	93	3	3	12	33	29	163	-	383
No RMP required	16	28	62	3	1	10	29	26	115	-	290
RMP established	0	0	1	0	2	0	2	2	7	-	14
¹ Further investigation required	0	1	0	0	0	0	0	0	3	-	4
RMPs in progress	0	2	27	0	0	2	0	0	35	-	66
RMP required	0	0	3	0	0	0	2	1	3	-	9
² Total threats addressed	16	28	63	3	3	10	31	28	122	-	304
³ Total threats remaining	0	3	30	0	0	2	2	1	42	-	80
Thames-Sydenham and Region Source Protection Region (TSRSR)											
Total Identified threats in the AR	-	-	-	-	-	-	-	6	9	18	33
Threat verification site visits	-	-	-	-	-	-	-	6	9	18	33
No RMP required	-	-	-	-	-	-	-	5	5	12	22
RMP established	-	-	-	-	-	-	-	0	0	0	0
¹ Further investigation required	-	-	-	-	-	-	-	0	3	5	8
RMPs in progress	-	-	-	-	-	-	-	1	1	1	3
RMP required	-	-	-	-	-	-	-	0	0	0	0
² Total threats addressed	-	-	-	-	-	-	-	5	5	12	22
³ Total threats remaining	-	-	-	-	-	-	-	1	4	6	11

¹Sites identified as 'resource extraction stations' requiring further investigation (e.g. brine **or oil** pumping stations, volumes associated with storage tanks, etc.).

²Threats that have been addressed include those where either no RMP is required or a RMP has been established.

³Remaining threats are those that have a RMP in progress, require a RMP, or require further investigation.

COMMUNICATION

Risk Management staff are able to provide education and outreach to landowners during site visits. At these site visits, a Source Water Protection package is provided with maps of the property within the Event Based Area, a spill reporting form, and an information sheet for reference that includes local contacts for spill reporting, cleanup, fuel tank inspections, fuel tank maintenance, and fuel tank removal services within the region. The package also contains a sticker that includes the Ministry of Environments Spills Action Center (SAC) number for reporting spills, as well as general information about the Source Water Protection program. Over the past year, these site visits have not only increased landowner awareness, but also improved sources of communication and strengthened relationships with local businesses in an effort to safeguard sources of drinking water. Ongoing follow up and communication between Essex Region's RMO/I and landowners is imperative to ensure that existing properties are on track with the requirements of their RMPs and remain in compliance with Source Water Protection policies.

In October of 2018, the Essex Region Source Protection Authority hosted a second Risk Management Services Workshop in partnership with Ontario Greenhouse Vegetable Growers at their office in Leamington, Ontario. This workshop was developed for a targeted audience of greenhouse operations that require a RMP or have a RMP that remains 'in progress'. Greenhouse operations make up the majority of properties affected by Part IV policies, and often contain fuel storage at their facilities in quantities that meet the specific risk circumstances for being considered a Significant Drinking Water Threat. Through this workshop, the RMO/I discussed Source Water Protection in general and was able to provide additional support, feedback, guidance and information on the requirements of a RMP. A total of 15 operators attended, which has resulted in the establishment of six (6) RMPs and the negotiation of 10 RMPs that remain 'in-progress', which are anticipated to be completed in the Spring of 2019.

CHALLENGES FACED AND NEXT STEPS FOR PART IV IMPLEMENTATION

The TSSA is responsible for the enforcement of the *Technical Standards and Safety Act, 2000* and its related fuel regulations for storage tanks: (1) Ontario Regulation 217/01 (Liquid Fuels) and (2) Ontario Regulation 213/01 (Fuel Oil). Landowners are responsible for ensuring that the fuel tanks on their property are maintained and remain in safe operating condition. It is the landowners responsibility to arrange for comprehensive fuel tank inspections completed by TSSA certified fuel contractors and preventive maintenance actions that must be completed if deficiencies are found. One of the requirements of a RMP to manage fuel storage is proof that the fuel tank is certified for its current use (e.g. 'proof of adherence to applicable regulations'). This documentation is required to ensure that the tank located within the vulnerable area remains certified to obtain fuel and is considered safe for operation.

Obtaining this required documentation is not problematic for new tanks, but has proven to be challenging for existing tanks that no longer have consistent documentation for tank

installation, inspections or evidence of compliance actions related to fuel regulations. Large fuel oil tanks exceeding the capacity of 15,000 L for instance are most often associated with greenhouse operations. Many of these fuel oil tanks are more than 8-15 years old, and documentation specific to tank installation or proof of compliance with fuel oil regulations may no longer exist. Often these tanks are only used for emergencies in the event that the connection with the natural gas supply is lost to the greenhouse facility in the cooler seasons (i.e. the tanks are often empty and unused for more than 5 years).

Risk Management staff have put together a solution to this challenge by creating several different options for landowners to fulfill this requirement. These options are listed in the Risk Management Plan and include:

- (a) **Proof/ certification of installation** by TSSA certified technician/ contractor (*if this documentation is no longer available, typically for fuel tanks that are > 8 to 10 years old, provide documentation for one or more of the following options below*):
- (b) **Proof of an inspection report** completed by TSSA certified technician/ contractor with proof of preventative actions or maintenance completed (if required following inspection);
- (c) **Fuel suppliers 'inspection checklist** (or fuel ticket)' completed prior to refueling the tank(s) to check for leaks, deficiencies, etc. with proof of preventative actions or maintenance completed (if required). Example of an 'fuel supplier inspection checklist' is provided to landowners as a resource;
- (d) **Engineer drawings** with engineer's qualified stamp/ letter of compliance for fuel tanks installed
- (e) **Attestation statement** that tank(s) adheres to applicable regulations
- (f) **Proof that decommissioning has occurred** to the fuel tank/removed from service by a TSSA certified contractor in a manner which prevents or mitigates risks to sources of drinking water (e.g. ensure all oil is removed, disconnect all exposed piping or tubing, and cap or plug piping or tubing as close to the tank as possible, etc.).

The RMO/I themselves are not TSSA certified technicians that can complete an inspection report or compliance check on fuel tanks, but are assisting landowners throughout this process to find an agreeable solution. It is worth noting this challenge because the handling and storage of fuel is considered a Significant Drinking Water Threats in many other Source Protection Regions, where similar issues may arise.

The RMO/I has received a number of 'Fuel Oil Distribution Inspections Reports' for new fuel oil tanks at greenhouse facilities that were flagged through Section 59 screening processes. These inspections are completed by local certified TSSA fuel technicians following the installation of a

fuel oil tank or at the request of the fuel supplier. In 2018, landowners started to request these inspections for older existing fuel tanks to satisfy the requirement in the RMP and to ensure that the tank remains safe for operation, or that preventative maintenance is completed for when there are plans to refuel the tank in the future. There has been a marked increase in the number of inspection reports received by the RMO/I for fuel oil tanks and awareness has certainly grown around TSSA requirements and maintaining fuel storage. In addition, some inspections have resulted in the completion of preventative maintenance to repair any corrections recommended following the inspection.

On December 21, 2018, TSSA's Fuel Safety Program issued a safety advisory (see Appendix A) to all fuel oil distributors (and the affiliate fuel industries) to remind them of their legal obligations as per the *Technical Standards and Safety Act, 2000* and the Ontario Fuel Oil Regulation (O.Reg. 213/01). This safety advisory stems from the most recent report by the Auditor General, which flagged evidence of fuel oil distributors supplying fuel oil to tanks that are in "unacceptable conditions." This advisory serves as a reminder that fuel suppliers all have a duty to ensure that fuel oil is only supplied to equipment that have been inspected and is considered safe for operation. Risk Management staff are anticipating that more fuel oil tank inspections are going to be completed at the request of landowners and/or fuel suppliers and this may expedite the progress towards establishing RMPs to manage Significant Drinking Water Threats.

Additionally, there have been several situations where landowners have sold their property since the approval of the Assessment Report or the property has remained for sale for 2 or more years. It can be challenging to find accurate contact information for the persons engaging in the activity when the property is vacant and it takes a significant amount of time to set up additional site visits (no contact information, company name may not be listed, not yet established on the property, etc.). New landowners are often unfamiliar with the Source Water Protection Program, are wary as to why the RMO/I is contacting them about the fuel storage tank that remains on the property, and do not always return the effort of communication. As a result of this, the RMO/I will be conducting drive by site visits while in the field to ensure that new landowners receive communication about the Source Water Protection policies that apply to them and to address the threat that remains on the property in a timely manner.

MOVING FORWARD IN 2019

Plans for Risk Management Services in 2019 include:

- Continue working with local businesses and landowners on negotiating and establishing Risk Management Plans
- Ongoing review of planning and building permit applications in vulnerable areas
- Continue to educate and provide guidance to landowners affected by Part IV Source Water Protection policies
- Continue working with municipalities to provide guidance and refresher training to planning and building staff on Section 59 processes and Source Water Protection policies
- Finalize compliance inspection protocols for Part IV to ensure compliance with Risk Management Plans and other Part IV policies
- Initiate Risk Management Plan compliance inspections for those that are established
- Commence communication with the existing properties that remain under further investigation (oil pumping stations or 'resource extraction stations')
- Continue to collaborate with Thames-Sydenham and Region Source Protection Authority on similar policies