

# Essex Region Source Protection Area 2019 Risk Management Official 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. Based on some of the recommendations of the Walkerton Inquiry, the *Clean Water Act, 2006* is part of the Ontario government’s commitment to protecting municipal drinking water systems from contamination and overuse, now and into the future. The *Clean Water Act* led to the implementation of Source Protection Plans (SPPs) across Ontario following an extensive process that included the development of science-based watershed assessments, broad public input, and collaboration with stakeholders. 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, to ensure that [Significant Drinking Water Threat \(SDWT\) activities](#) identified in vulnerable areas of surface water intakes will not pose a risk to source water. Part IV policies must be implemented by a specially trained and certified Risk Management Official and/or Risk Management Inspector (RMO/I). The municipalities in the Essex Region and the Municipality of Chatham-Kent have delegated their obligations under Part IV of the *Clean Water Act* to the Essex Region Conservation Authority (ERCA). The RMO/I is responsible for providing Part IV services on behalf of the municipalities in the Essex Region Source Protection Area (ERSPA), and the southernmost portion of the Thames-Sydenham and Region Source Protection Region (TSRSPR). The terms of the first agreement with the municipalities expired on September 30, 2018. All of the municipalities extended this agreement to December 31, 2021.

There are eight municipal surface water intake systems serving the municipalities in the ERSPA and the southernmost portion of the TSRSPR that have vulnerable areas where Part IV policies apply:

Stoney Point Intake (Lake St. Clair)	Harrow - Colchester Intake (Lake Erie)
Lakeshore (Belle River) Intake (Lake St. Clair)	Union Intake (Lake Erie)
Windsor (A.H) Weeks Intake (Detroit River)	Wheatley Intake (Lake Erie)
Amherstburg Intake (Detroit River)	Pelee Island (Lake Erie)

This annual progress report was developed to detail the progress made by the RMO/I toward the implementation of Part IV policies in the Source Protection Plans for municipal drinking water intake systems within the ERSPA and portions of the TSRSPR, as required annually by the *Clean Water Act* and its regulations. The report includes actions taken by the RMO/I between October 1, 2015 and December 31, 2019, highlighting actions between January 1, 2019 and December 31, 2019.

## **SIGNIFICANT DRINKING WATER THREATS**

Activities carried out in vulnerable areas on the land can pose threats to sources of drinking water. Using the event based approach to model fuel spills during the development of the SPPs, an extensive vulnerable area (Event Based Area) was established where the above grade handling and storage of fuel could be considered a Significant Drinking Water Threat (SDWT) in both the ERSPA and TSRSPR. There are additional SDWT activities that would pose a risk to source water if located within Lakeshore's IPZ-1, Windsor IPZ-1, Windsor IPZ-2 and Amherstburg IPZ-1. The land portion of these areas, however, are typically small and/or dominated by residential or municipal land uses where the identified activities are not likely to exist. SDWTs can be prohibited or managed through a variety of policies including those written under Part IV of the *Clean Water Act*.

## **PART IV POLICIES, CLEAN WATER ACT**

Policies written under Part IV of the *Clean Water Act* can be used to prohibit (Section 57) or manage (Section 58) activities identified as SDWTs. These policies apply to both existing and future (new) SDWTs located within vulnerable areas identified as Intake Protections Zones (IPZs) or Event Based Areas (EBA). Policies written using restricted land uses (Section 59) 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. In the Essex Region Source Protection Area, activities are only prohibited if they are not known to occur in identified vulnerable areas and are not likely to occur in the future. Most of the policies written to address identified and future SDWTs in the SPPs use Section 58, which requires the development of a Risk Management Plan (RMP) to minimize the risks to sources of municipal drinking water.

## **RISK MANAGEMENT PLANS (SECTION 58, PART IV POLICIES)**

[Risk Management Plans \(RMPs\)](#) are agreements between the RMO/ I and the person engaged in the activity to prescribe how a SDWT activity is managed on a specific property. The person engaged in the activity will typically be the landowner or business operator representing the site on behalf of the landowner who will work together with the RMO/I to determine the appropriate risk management measures (RMMs) to manage the threat. RMPs outline all of the existing RMMs, as well as those that are required to address any small gaps to prevent fuel spills and contain one should it occur. RMPs may be straightforward in circumstances where persons are already implementing RMMs to manage a SDWT activity. They are meant to be flexible and allow the activity to continue to occur, provided that RMMs agreed upon are followed.

## EXISTING ENUMERATED THREATS AND THREAT VERIFICATION INSPECTIONS

There were 384 potential SDWTS identified in the Essex Region SPP and 33 potential SDWTS identified in the Thames-Sydenham and Region SPP (i.e. tanks that could contain a volume of fuel capable of meeting the circumstances to be considered a SDWT). Letters were sent to property owners in 2016 – 2018 with known or potential SDWT activities requiring RMPs. As of January 2019, threat verification inspections were completed for all of the identified potential SDWTS in both the ERSPA and TSRSPR to determine whether the fuel tanks meet the criteria to be considered a SDWT (e.g. capacity, location in relation to the Event Based Area and contents of the fuel tanks).

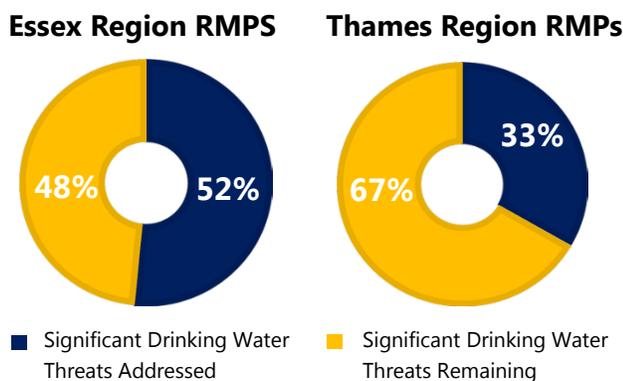
Threat verification inspections confirmed that 295 of these sites did not have tanks that met the criteria to be a SDWT. There are 92 existing SDWTS in the ERSPA and 3 existing SDWTS in the TSRSPR that require a RMP. Of these, RMPs have been established for 48 SDWTS in the ERSPA and 1 SDWT in the TSRSPR.

Some properties remain under further investigation in the ERSPA (2) and TSRSPR (8) that are identified as 'stand alone oil pumping stations' regulated by MNRF. We have not yet confirmed if the activity is considered a SDWT or whether a RMP will be necessary as we are awaiting feedback from MNRF.

A total of six additional properties were identified (one in Leamington and five in Kingsville) through field verification by the RMO/I in 2019 that require a RMP. The property identified in Leamington was addressed with a RMP in 2019 and the additional Kingsville RMPs are currently being negotiated or remain in-progress.

All of the confirmed existing SDWTS must be addressed with the establishment of RMPs by October 1, 2020 (within five years of the SPPs taking effect).

**Figure 1:** illustrates the *confirmed SDWT activities* (the handling and storage of fuel) that have been addressed with RMPs. RMPs have been established for 48 (ERSPA) and 1 (TSRSPR) SDWT(s). A total of 44 (ERSPA) and 2 (TSRSPR) SDWTS remain outstanding; these RMPs are currently being negotiated or remain in-progress.



A breakdown of the work completed by the RMO/I within each municipality is detailed between 2016-2019 in Table 1a and 1b. Table 1c outlines additional information required and provided by the RMO/I annually under S.81 of the *Clean Water Act* to the Source Protection Authority.

### Essex Region Source Protection Area (ERSPA)

**Table 1a** – Enumerated Threats. The summary table details all actions taken from **2016 - 2019** by the RMO/I for each municipality in the ERSPA.

	Amherstburg	Essex	Kingsville	LaSalle	Pelee	Tecumseh	Windsor	Lakeshore	Leamington	Total
Total Identified threats in the AR	16	31	93	3	3	12	33	29	164	384
No RMP required	16	28	62	3	1	10	29	26	120	295
RMPs established	-	2	16	-	2	1	2	3	22	48
<sup>1</sup> Further investigation required	-	-	-	-	-	-	-	-	2	2
RMPs in progress (from original count of SDWTs ID'd in AR)	-	1	15	-	-	1	2	-	20	39
<b><sup>2</sup>Total threats addressed</b>	<b>16</b>	<b>30</b>	<b>78</b>	<b>3</b>	<b>3</b>	<b>11</b>	<b>31</b>	<b>29</b>	<b>142</b>	<b>343</b>
<sup>3</sup> Total threats remaining	-	1	15	-	-	1	2	-	22	<u>41</u>
NEW* additional SDWTs Identified through field verification in 2019	-	-	5	-	-	-	-	-	1	6
RMPs established	-	-	-	-	-	-	-	-	1	1
RMPs in progress	-	-	5	-	-	-	-	-	-	5
<sup>2</sup> Total threats addressed	-	-	-	-	-	-	-	-	1	1
<b>Total threats remaining</b>	<b>-</b>	<b>1</b>	<b>20</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>22</b>	<b><u>46</u></b>

### Thames Sydenham & Region Source Protection Region (TSRSPR)

**Table 1b** – Enumerated Threats. The summary table details all actions taken from **2016 - 2019** by the RMO/I for each municipality in portions of the TSRSPR.

	Lakeshore	Leamington	Chatham-Kent	Total
Total Identified threats in the AR	6	9	18	33
No RMP required	5	5	12	22
RMP established	-	1	-	1
<sup>1</sup> Further investigation required	-	3	5	8
RMPs in progress	1	-	1	2
<b><sup>2</sup>Total threats addressed</b>	<b>6</b>	<b>5</b>	<b>12</b>	<b>20</b>
<b>Total threats remaining</b>	<b>-</b>	<b>4</b>	<b>6</b>	<b><u>10</u></b>

<sup>1</sup>Sites identified as 'resource extraction stations' requiring further investigation (e.g. oil pumping stations, volumes associated with storage tanks, contents etc.)

<sup>2</sup>Threats that have been addressed include those where either no RMP is required or a RMP has been established

<sup>3</sup>Remaining threats are those that have a RMP in progress, or require further investigation

### Essex Region Source Protection Area (ERSPA)

**Table 1c** – Outlines additional information required and provided by the RMO/I annually under S.81 of the *Clean Water Act* to the Essex Region Source Protection Authority

Reportable	2016	2017	2018	2019
RMPs established for existing threats (s.58)	0	1	13	34
RMPs established for new threats (s.59)	4	0	1	1
<b>Total RMPs agreed to or established</b>	<b>4</b>	<b>1</b>	<b>14</b>	<b>35</b>
S. 59 notices issued for activities to which neither S. 57 nor S.58 policies applied	14	2	1	3
S. 59 notices issued for activities to which a S.58 policy applied	4	0	1	1
<b>Total S. 59 notices issued</b>	<b>18</b>	<b>2</b>	<b>2</b>	<b>4</b>
Inspections* carried out for activities that are prohibited under S. 57	0	0	0	0
Inspections* carried out for activities that require a RMP under S. 58	14	32	47	63
Inspections* carried out for activities that were determined not to require a RMP under S.58	55	160	82	7
<b>Total number of inspections</b>	<b>69</b>	<b>192</b>	<b>129</b>	<b>70</b>
Notices issued where there were cases of contraventions and/or non-compliance with S.57	0	0	0	0
Notices issued where there were cases of contraventions and/or non-compliance S.58	0	0	0	0
Orders issued for contraventions and/or non-compliance found with S. 57	0	0	0	0
Orders issued for contraventions and/or non-compliance found with S.58	0	0	0	0
<b>Total number of notices and/or orders issued under Part IV of the CWA</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Number of Risk Assessments submitted under S.60	0	0	0	0
Number of times the RMO caused a thing to be done under S. 64	0	0	0	0
Number of prosecutions made under S.106	0	0	0	0
RMPs refused to be established	0	0	0	0

\*meaning a physical presence on the site, including follow-up site visits, e.g., threats verification visit, including drive-bys, if applicable. Phone calls and emails are not considered inspections.

## RESTRICTED LAND USES (SECTION 59, PART IV POLICIES) AND THE WRITTEN DIRECTION

Section 59 (Restricted Land Use) policies serve as a screening process to identify new potential SDWTs through incoming municipal building and planning applications before they are established. When municipal staff confirm that a planning or building application for a new development is proposed within a vulnerable area, and that the proposed development includes a potential SDWT, proponents are notified that they must complete and submit a [Section 59 Application](#) to the RMO/I for review. Building or planning applications cannot proceed until the application has demonstrated that a SDWT activity will not pose a risk to our drinking water sources (e.g. RMP established) and a written notice to proceed from the RMO/I has been issued.

To date, there have been 28 Section 59 applications received for new potential fuel threats in the Event Based Area (see Table 2a and 2b). Of these, there were seven instances where an application met the criteria to be considered a SDWT, triggering the need for a RMP. In these cases, the process for developing a RMP was expedited and a notice to proceed was issued once the RMP was finalized and agreed to. 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.

<b>Essex Region Source Protection Area (ERSPA)</b>					
<b>Table 2a</b> – Summary of all actions taken by the RMO/I in 2016 - 2019 as a result of the Section 59 (Restricted Land Use) screening process for the Event Based Area (EBA).					
	2016	2017	2018	2019	Total
s. 59 Application Site Visits	4	0	1	1	6
s. 59 Applications where s. 57 or s. 58 Did Not Apply	14	2	1	3	20
s. 59 Applications where s. 57 Applied (Prohibition)	0	0	0	0	0
s. 59 Applications where s. 58 Applied (RMP)	4	0	1	1	6
Total No. of s. 59 Applications	18	2	2	4	26

<b>Thames Sydenham &amp; Region Source Protection Region (TSRSPR)</b>					
<b>Table 2b</b> – Summary of all actions taken by the RMO/I in 2016 - 2019 as a result of the Section 59 (Restricted Land Use) screening process for the Event Based Area (EBA).					
	2016	2017	2018	2019	Total
s. 59 Application Site Visits	1	0	0	0	1
s. 59 Applications where s. 57 or s. 58 Did Not Apply	1	0	0	0	1
s. 59 Applications where s. 57 Applied (Prohibition)	0	0	0	0	0
s. 59 Applications where s. 58 Applied (RMP)	1	0	0	0	1
Total No. of s. 59 Applications	2	0	0	0	2

## **NEGOTIATING RISK MANAGEMENT PLANS (SECTION 58)**

The RMO/I completes threat verification inspections to determine if there is a SDWT on a property. A landowner may also be referred to the RMO/I by municipal planning and building staff through the Section 59 process. If the RMO/I determines that the activity does not meet the criteria to be considered a SDWT, no further action is necessary and a letter is issued to that effect. The RMO/I will contact a landowner directly if a RMP is required for the activity and will initiate the process of establishing a RMP by issuing a Notice and scheduling a site visit.

RMPs require the completion of regular fuel tank inspections on-site, a spill prevention and containment plan (more substantial spill response equipment), a spill emergency response plan, spill response training for staff, and documentation as proof that the fuel storage tank(s) adhere to applicable fuel regulations (i.e. fuel oil distributor inspection completed by a certified technician) to ensure tanks are operating under TSSA requirements and remain safe for operation.

The RMO/I has made significant progress negotiating RMPs and assisting landowners in an effort to establish RMPs and implement risk management measures. The RMO/I provides guidance and assistance in the development of RMPs through site visits, emails, phone calls and additional meetings. Resources and templates were developed by Risk Management staff and provided to make the RMP process less onerous for landowner and business operators.

The process for establishing a RMP continues until the RMO/I and landowner are satisfied with the completion of the risk management measures, and the supporting documentation is submitted directly to the RMO/I. The RMP comes into effect on the date the RMP is agreed to and signed by the person engaged in the activity and the RMO/I. Following the completion of the RMP, the RMO/I will issue a Notice that the RMP had been established.

The person engaged in the activity is responsible for maintaining the risk management measures on-site. The RMO/I monitors the implementation of RMPs once they are established and conducts compliance inspections on an annual basis, or as needed. RMPs may be amended at any time following the effective to date to accurately reflect any changes on the site or to the SDWT activity.

## **MUNICIPAL INTEGRATION**

In the Spring of 2016, The RMO issued a written direction to assist municipalities in expediting the Section 59 screening process for proposed developments in the Event Based Area, which all municipalities have incorporated into the planning process. In 2017, the RMO provided a "Building Information Sheet" for municipalities to incorporate into the building permit process, and the written direction was updated in 2018.

The Essex Region RMO/I and Source Water Protection Project Manager meet with municipal planning and building staff annually, or as needed. In these meetings, we discuss SPP policies in general, the Section 59 screening process to identify future (new) SDWTs, the issued Written Direction, and possible scenarios for when a property might require a RMP. These meetings help us to ensure that

municipalities are integrating Source Water policies in their planning and building processes, and allow us to address any questions or concerns. The RMO met with two municipalities that requested refresher training in 2018 and five municipalities in 2019. The responses in the 2019 reporting regarding the incorporation of these documents varied among municipalities and most have requested refreshing training to occur in 2020 for new staff.

### **RISK MANAGEMENT PLANS FOR FUEL OIL TANKS THAT ARE NO LONGER IN USE**

RMPs are being completed for properties seeking to decommission, remove and/or replace existing storage tanks at greenhouse facilities within the towns of Leamington and Kingsville. In 2019, four RMPs were no longer required for greenhouse operations that decommissioned and removed existing unused fuel storage tanks. Of these, two replaced large fuel oil tanks with new double walled tanks with capacities below the specified risk threshold (e.g. fuel tank <15, 000 L). Six RMPs were agreed to/ established with greenhouse operations planning to decommission, remove or downsize larger capacities of fuel storage remaining on their property (e.g. fuel recently removed from tank(s), no longer used, local technicians were contacted to provide decommissioning services). It is anticipated that this number will continue to increase since the majority of properties affected by SPP policies are greenhouse facilities that are contracted into uninterruptable natural gas supplies to supply fuel to boiler systems. It is common for greenhouses to install large volumes fuel oil storage to serve as back up to the natural gas supply when the demand is high during the coldest part of the year. It is generally only for a few hours per heating season, during the coldest weather snaps, that a facility would need to make a switch to fuel oil to power boiler systems. Some facilities have indicated they are looking into alternative heating sources other than oil, however, it is generally too expensive to replace an existing fuel tank with a new system. While some facilities are seeking to decommission their older tanks or downsize, the majority of sites where fuel tanks capable of exceeding the capacity considered a SWDT will remain on-site for heating needs and insurance purposes.

### **CHALLENGES FACED AND NEXT STEPS FOR PART IV IMPLEMENTATION**

There are 10 properties identified as 'stand alone oil pumping stations' regulated by MNRF with large storage tank(s) on site that are associated with the operations. These properties remain under investigation. The MNRF was contacted by the RMO/I in 2019 to determine the exact specifics of the storage tanks on these properties (e.g. applicable storage regulations associated with the operation, the volume associated with each storage tank on-site, company contact information). Further investigation for these sites are to continue into 2020.

There are several greenhouse properties confirmed by the RMO/I that were recently sold and converted into private cannabis operations within the towns of Leamington and Kingsville. These sites are now fenced in with barbed wire and it takes a significant amount of time to contact and schedule site visits with landowners. In some cases, the landowner lives outside of the country and on-site personnel speak very limited English. As a result, it has been challenging to find accurate contact information for some of these properties. The majority of these sites have been contacted and are currently being addressed by the RMO/I and the landowner since there is an existing fuel storage tank installed on-site (unused). The

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 and do not always return the effort of communication. The RMO/I has conducted drive by site visits while in the field to connect with new landowners and provide resources and communication on Source Water Protection policies that apply to their fuel oil storage tank that remains on their property as a threat. It has taken more time to address these locations and the RMO/I will be actively working towards completing these sites.

## **MOVING FORWARD IN 2020**

Continuing actions and next steps for Risk Management Services in 2020 include:

- Municipal training sessions on Section 59 processes and Source Protection Plan policies
- Review Section 59 Applications submitted by proponents as a result of incoming municipal building and planning applications for new developments
- Respond to requests from developers, consultants and municipal staff during pre-planning for sites identified through Section 59 processes; ensure RMPs are established in a timely fashion
- Work with MNRF on standalone oil pumping stations as a potential SDWT
- Continue working with local businesses and landowners on negotiating and establishing Risk Management Plans; continue to assist and provide guidance to those affected by Part IV policies
- Conduct compliance monitoring and inspections with established Risk Management Plans to ensure compliance with Section 58 policies set out in the Source Protection Plans
- Complete field surveys to identify additional SDWT not captured in the Assessment Report or through Section 59 processes
- Issue orders to complete RMPs starting in May 2020