

Essex Region Source Protection Area 2020 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 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)
- Lakeshore (Belle River) Intake (Lake St. Clair)
- Windsor (A.H) Weeks Intake (Detroit River)
- Amherstburg Intake (Detroit River)
- Harrow - Colchester Intake (Lake Erie)
- Union Intake (Lake Erie)
- Wheatley Intake (Lake Erie)
- 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, 2020, highlighting actions between January 1, 2020 and December 31, 2020.

SIGNIFICANT DRINKING WATER THREATS

Activities carried out in vulnerable areas on the land can pose threats to sources of municipal drinking water. The most prominent threat to municipal drinking water within the modeled Event Based Areas is the handling and storage of above grade liquid fuel. 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 IPZ-1, Windsor IPZ-1, Windsor IPZ-2 or Amherstburg IPZ-1. The land portion of these areas, however, are 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.

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 to assist in the process and are provided as a resource to landowners and business operators during the completion of the RMP. The following risk management measures are typically included in RMPs: documentation of regular fuel tank inspections, an updated spill prevention and containment

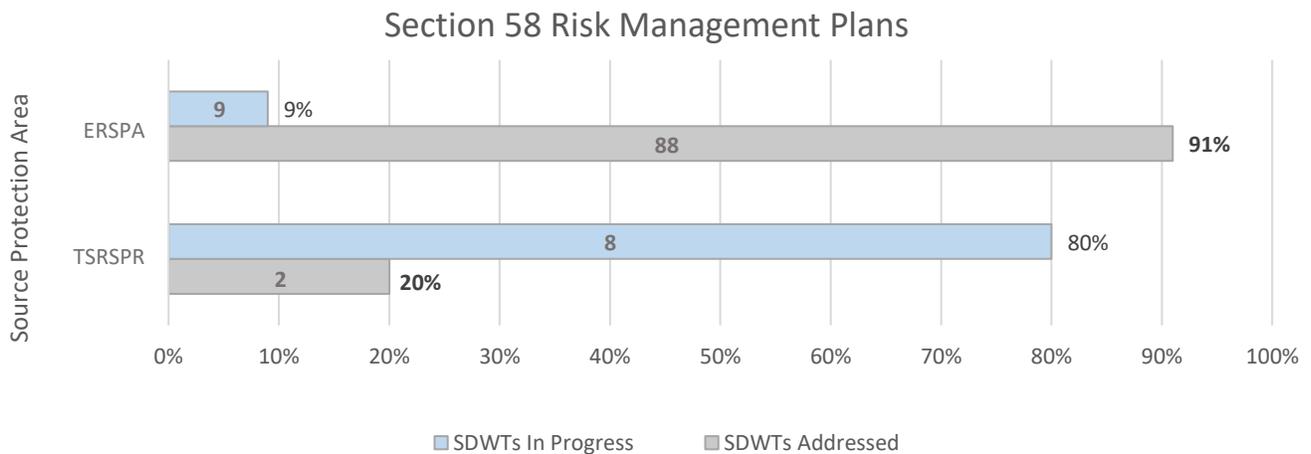
plan, spill emergency response plan and training for staff, and documentation that fuel storage tanks adhere to applicable fuel regulations and remain safe for refuelling and storage.

The person engaged in the activity is responsible for maintaining RMMs 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 can be amended at any time following the effective to date to accurately reflect any changes on the site or to the SDWT activity.

EXISTING ENUMERATED SIGNIFICANT DRINKING WATER THREAT ACTIVITIES

There were 384 potential SDWTS identified in the ERSOA Source Protection Plan and 33 potential SDWTS identified in the TSRSPR Source Protection Plan (e.g. contain a volume of fuel capable of meeting the circumstances to be considered a SDWT). As of January 2019, threat verification inspections were completed for all of the identified potential existing SDWTS in both the ERSOA and TSRSPR to determine whether the fuel tanks installed on site met 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 294 of these properties in the ERSOA and 23 properties in the TSRSPR did not meet the criteria to be a SDWT. Staff identified 98 existing SDWTS in the ERSOA and 10 existing SDWTS in the TSRSPR that require a RMP. Of these, RMPs have been established for 88 SDWT activities in the ERSOA and 2 SDWT activities in the TSRSPR. The percentage of the overall progress made toward addressing existing SDWTS is 91% in the ERSOA and 20% within the TSRSPR, as depicted in the following chart.



Percentage of Existing SDWTS Managed with a Risk Management Plan

There are 9 outstanding *existing* properties identified within the ERSOA and 8 outstanding *existing* properties identified within the TSRSPR that require the completion of a RMP. The RMO/I will continue to work towards resolving these outstanding properties in 2021 as elaborated below; these RMPs are currently being negotiated or remain in progress.

Crude oil and brine extraction and storage operations

In 2020, the RMO/I contacted the Ministry of Natural Resources and Forestry (MNRF) regarding nine of the outstanding 17 properties that remain in progress. The RMO/I identified these properties as crude oil and brine extraction and storage operations. Two of these properties are located within the ERPSA and seven are in the TSRSPR.

Specific information regarding storage tank contents, capacities, applicable regulations, and licensee contact information has been compiled with the assistance of MNRF Staff within the Petroleum Operations Department. The information provided to the RMO/I on September 30, 2020 confirmed that the properties will require a Risk Management Plan due to the volume, contents and location of the tanks. These properties are regulated by the [Oil, Gas and Salt Resources Act \(OGSRA\)](#) and are required to follow the [Oil, Gas and Salt Resources of Ontario Provincial Operating Standards V 2.0](#) (Standards). As such, it is anticipated that petroleum operations (persons engaged in the activity) will likely only need to provide documentation of their existing RMMs as proof that they are implemented on site and that tanks adhere to applicable storage and containment regulations set out in the Standards. This information will ultimately be taken into consideration during the negotiation and completion of the Risk Management Plans.

The RMO/I will proceed with addressing the petroleum operations in 2021 by engaging the operators in Source Water Protection and will initiate the Risk Management Plan process. The property's Risk Management Plans will include minimal requirements to manage the SDWT activities identified (e.g. storage of crude oil) and will take into consideration the existing RMMs already implemented on site as part of their existing regulatory operating Standards. There are requirements relevant to the storage tanks and the handling and storage of the contents in Sections 5, 6 and 13 of the Standards. Section 5.6 outlines requirements for storage tanks, and subsections 5.6.2 and 5.6.3 specifically govern the construction, installation and maintenance of storage tanks, etc. There are examination classes that require different Examiner qualifications as set out in [Section 23 of O. Reg. 245/97](#). The Technical Standards & Safety Authority (TSSA) may also have a legislative role under the Technical Standards and Safety Act for these storage tanks.

Greenhouse cannabis operations

The RMO/I has experienced challenges in implementing Part IV polices at eight existing properties (7 in the ERSPA, 1 in the TSRSPR) resulting in delays with establishing Risk Management Plans. The remaining properties in question are identified as smaller scale 'greenhouse cannabis operations' and are located within the Municipality of Leamington, Chatham Kent and the Town of Kingsville. Following the completion of threat verification and on site inspections, it has been determined that empty and unused fuel oil storage tanks remain installed on site and meet the circumstances to be considered a SDWT. The Risk Management Services office considers unused and or empty fuel storage tanks as a potential threat given that the tank is still installed (e.g. all associated piping is connected) and could contain a volume of fuel that would pose a threat to sources of drinking water in the future. The delays in the establishment of RMPs for these locations are mainly due to ongoing safety concerns and the lack of primary contacts and returned communication. Please refer to the attached 'ERSPA – Notice of issues with implementing Section 58 policy' letter addressed to MECP on January 21, 2021 for more information.

The RMO/I has met with the MECP to discuss options for issuing RMPs by Order and has been in communication with the affected municipalities to determine the best path forward. As of 1 March, 2021, the RMO/I confirms that at least one property has been addressed with the establishment of a RMP for an unused fuel oil tank and another RMP is underway. To date, no Orders have been carried out. Staff will assess the progress and efforts on addressing the remaining properties in the Spring of 2021. At that time, staff will consider setting in motion alternative regulatory measures beyond voluntary negotiation of a RMP to ensure compliance with Part IV policies in the ERSPA Source Protection Plan and TSRSPR Source Protection Plan. If agreement to an RMP cannot be reached voluntarily, the intent of the RMO/I will be to establish a RMP for the SDWT activity identified on the property, by Order, under section 58 (10) of the *Clean Water Act*, 2006. The RMO/I continues to make progress on these sites and expects to have all RMPs established by fall, 2021.

The RMO/I will continue to work with the remaining 17 existing properties outlined in the tables below to ensure SDWT activities are addressed and managed with the completion of a RMP.

Essex Region Source Protection Area (ERSPA)							
		2016	2017	2018	2019	2020	Total
#RMPs Established	Existing Threats (AR threats + threats identified after the SPP took effect)	-	1	13	34	40	88
Total Existing Threats Addressed		88					
#RMPs in Progress	Cannabis Properties	-	-	-	-	7	7
	Petroleum Well (Crude Oil/ Brine) Properties	-	-	-	-	2	2
Total Number of Existing Threats Remaining		9					
Total Number of Orders Issued		-					

Thames Sydenham and Region Source Protection Region (TSRSPR)							
		2016	2017	2018	2019	2020	Total
#RMPs Established	Existing Threats (AR threats + threats identified after the SPP took effect)	-			1	1	2
Total Existing Threats Addressed		2					
#RMPs in Progress	Cannabis Properties	-	-	-	-	1	1
	Petroleum Well (Crude Oil/ Brine) Properties	-	-	-	-	7	7
Total Number of Existing Threats Remaining		8					
Total Number of Orders Issued		-					

Essex Region Source Protection Area (ERSPA)										
	Amherstburg	Essex	Kingsville	Lakeshore	LaSalle	Leamington	Pelee	Tecumseh	Windsor	Total
Total Identified threats in the AR	16	31	93	29	3	164	3	12	33	384
No RMP required (AR)	16	28	61	26	3	121	1	10	29	295
RMPs Required (AR)	-	3	32	3	-	44	2	2	4	90
Total threats identified after the AR through field verification (AR +)	-	-	6	-	-	2	-	-	-	8
RMPs established (AR +)	-	3	35	3	-	39	2	2	4	88
RMPs established (s.59)	-	-	1	-	-	7	-	-	-	8
Total RMPs established		3	36	3		46	2	2	4	96
Total threats remaining (AR)	-	-	3	-	-	6	-	-	-	9
Cannabis Properties	-	-	3	-	-	4	-	-	-	7
Petroleum Well (Crude Oil/ Brine) Properties	-	-	-	-	-	2	-	-	-	2
Number of Orders Issued Under Part IV of the CWA	-	-	-	-	-	-	-	-	-	-

Thames Sydenham and Region Source Protection Region (ERSPR)				
	Lakeshore	Leamington	Chatham Kent	Total
Total Identified threats in the AR	6	9	18	33
No RMP required (AR)	5	5	13	23
RMPs Required (AR)	1	4	5	10
Total threats identified after the AR through field verification (AR +)	-	-	-	-
RMPs established (AR +)	1	1	-	2
RMPs established (s.59)	-	1	-	1
Total RMPs established	1	2	-	3
Total threats remaining (AR)	-	1	5	8
Cannabis Properties	-	-	1	1
Petroleum Well (Crude Oil/ Brine) Properties	-	3	4	7
Number of Orders Issued Under Part IV of the CWA	-	-	-	-

Essex Region Source Protection Area (ERSPA)

Additional Part IV Reportables under Section 81 of the Clean Water Act (ERSPA)	2016	2017	2018	2019	2020
RMPs established for existing threats (s.58)	0	1	13	34	40
RMPs established for new threats (s.59)	4	0	1	1	2
Total RMPs agreed to or established	4	1	14	35	42
S. 59 notices issued for activities to which neither S. 57 nor S.58 policies applied	14	2	1	3	5
S. 59 notices issued for activities to which a S.58 policy applied	4	0	1	1	2
Total S. 59 notices issued	18	2	2	4	7
Inspections* carried out for activities that are prohibited under S. 57	0	0	0	0	0
Inspections* carried out for activities that require a RMP under S. 58	14	32	47	63	32
Inspections* carried out for activities that were determined not to require a RMP under S.58	55	160	82	7	3
Total number of inspections	69	192	129	70	35
Notices issued where there were cases of contraventions and/or non-compliance with S.57	0	0	0	0	0
Notices issued where there were cases of contraventions and/or non-compliance S.58	0	0	0	0	0
Orders issued for contraventions and/or non-compliance found with S. 57	0	0	0	0	0
Orders issued for contraventions and/or non-compliance found with S.58	0	0	0	0	0
Total number of notices and/or orders issued under Part IV of the CWA	0	0	0	0	0
Number of Risk Assessments submitted under S.60	0	0	0	0	0
Number of times the RMO caused a thing to be done under S. 64	0	0	0	0	0
Number of prosecutions made under S.106	0	0	0	0	0
RMPs refused to be established	0	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 AND THE WRITTEN DIRECTION (SECTION 59, PART IV POLICIES)

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.

As of December 31, 2020, there has been a total of 33 Section 59 applications received for new potential fuel threats in the Event Based Area as outlined in the following tables. Of these, there were 9 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 to date. 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.

Essex Region Source Protection Area (ERSPA)						
	2016	2017	2018	2019	2020	Total
s. 59 Application Site Visits	4	0	1	1	3	9
s. 59 Applications where s.57 or s. 58 Did Not Apply	14	2	1	3	5	25
s. 59 Applications where s. 57 Applied (Prohibition)	0	0	0	0	0	0
s. 59 Applications where s. 58 Applied (RMP)	4	0	1	1	2	8
Total No. of s.59 Applications	18	2	2	4	7	33
Total Threats Addressed	8					

Southernmost Portion of the Thames Sydenham & Region Source Protection Region (TSRSPR)						
	2016	2017	2018	2019	2020	Total
s. 59 Application Site Visits	1	0	0	0	0	1
s. 59 Applications where s.57 or s. 58 Did Not Apply	1	0	0	0	0	1
s. 59 Applications where s. 57 Applied (Prohibition)	0	0	0	0	0	0
s. 59 Applications where s. 58 Applied (RMP)	1	0	0	0	0	1
Total No. of s.59 Applications	2	0	0	0	0	2
Total Threats Addressed	1					

MUNICIPAL INTEGRATION

The RMO issued a written direction in 2016, with a second version issued in 2018. The written direction expedites 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.

Training for municipal planning and building staff is provided annually, or as needed. Training includes 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. The RMO met with two municipalities that requested refresher training in 2018 and five municipalities in 2019. The responses in the 2020 reporting regarding the incorporation of these documents varied among municipalities and most have requested refreshing training to occur in 2021 for new staff.

COVID-19

ERCA staff moved to a work from home model in March 2020, with some staff returning to the office part time in the summer months. Beginning in December 2020, staff have once again been largely working from home. As with all organizations, this required some changes to our policies and practices, but we are pleased to report that we did not experience any major delays as a result of Covid-19. Our staff communicate either electronically or by phone with landowners or property managers to establish RMPs. Any on-site visits are completed following ERCA's internal policies as well as those of the property being visited.

MOVING FORWARD IN 2021

Continuing actions and next steps for Risk Management Services in 2021 include:

- Review Section 59 Applications submitted by proponents as a result of incoming municipal building and planning applications for new developments
- Deliver municipal training sessions on Section 59 processes and Source Protection Plan policies
- Respond to requests from developers, consultants and municipal staff during pre-planning for sites identified through Section 59 processes
- Conduct compliance monitoring and inspections with established Risk Management Plans to ensure compliance with Section 58 policies set out in the Source Protection Plans
- Address the remaining 17 existing properties within the ERSPA and TSRPR to ensure SDWT activities are managed accordingly with the completion of a RMP
- 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
- Complete windshield surveys while in the field to identify additional SDWT activities not captured through Section 59 processes. The ESRI Collector app was put together to support the inventory of confirmed SDWTs and will also be used while in the field for tracking and collecting information for any new threats