

Essex Region Source Protection Area 2021 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 do 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). This agreement began in 2015 and is renewed on a three-year cycle. The terms of the current agreement expire on December 31, 2024.

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, 2021, highlighting actions between January 1, 2021 and December 31, 2021.

SIGNIFICANT DRINKING WATER THREATS

Activities carried out in vulnerable areas on the land can pose threats to sources of municipal drinking water. The above grade handling and storage of large volumes of liquid fuel was determined to be a Significant Drinking Water Threat (SDWT) in both the ERSPA and TSRSPR. 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 this activity is considered to be a SDWT. There are additional SDWT activities identified within Lakeshore IPZ-1, Windsor IPZ-1, Windsor IPZ-2 and Amherstburg IPZ-1. The land portion of these areas, however, are small and/or predominantly residential or municipal land use 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, typically the landowner or business operator, to prescribe how a SDWT activity is managed on a specific property using appropriate risk management measures (RMMs) to manage the threat. RMPs outline existing RMMs, and identify additional RMMs that are required 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. RMPs 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 and are provided to the proponent during the negotiation 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. 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.

The total number of Risk Management Plans established for existing and future (new) significant drinking water threats, the number of Orders issued and the number of outstanding existing SDWTs in each municipality in the ERSPA and TSRSPR are reported in Table 1a and Table 1b. Table 2 provides a detailed annual accounting of the activities the RMO/I is required to report to the MECP in compliance with Section 81 of the *Clean Water Act* for the ERSPA. The RMO/I provides responses to the TSRSPR for inclusion in their report to the MECP

EXISTING ENUMERATED SIGNIFICANT DRINKING WATER THREAT ACTIVITIES

There were 384 potential SDWTS identified in the ERSPA Source Protection Plan and 33 potential SDWTs identified in the TSRSPR Source Protection Plan when the Plans were written. As of January 2019, threat verification inspections were completed for all of the identified potential existing SDWTS in both the ERSPA 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). These threat verification inspections and windshield surveys confirmed that there were 96 existing SDWTs in the ERSPA and 10 existing SDWTs in the TSRSPR that required a RMP. The remainder were determined not to be SDWTs. Of the existing threats, RMPs have been established for 94 SDWT activities in the ERSPA and 3 SDWT activities in the TSRSPR. The 2 outstanding *existing* properties identified within the ERSPA and 7 outstanding *existing* properties identified within the TSRSPR are all crude oil and brine operations. These RMPs are currently being negotiated or remain in progress.

Crude oil and brine extraction and storage operations

The Risk Management Official is working closely with the one corporation, Lagasco, who oversee the crude oil and brine operations on all 9 remaining locations in both the Essex Region and Thames Sydenham and Region that require the completion of a RMP. The company received the S. 58 Applies Notices on April 16, 2021 and communication has been ongoing. While these RMPs are nearing completion, the RMO/I may have to contemplate issuing Orders to have the RMPs signed and implemented in due course. These properties are also 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).

Greenhouse cannabis operations

The Risk Management Official had previously identified challenges with several small-scale cannabis greenhouse operations on properties where SDWTs were confirmed to exist. Despite numerous attempts at contact, no response to requests to establish a RMP were received. Risk management staff felt that they were at an impasse with these properties due to unsafe site conditions and a lack of returned communication from landowner and onsite operators in response to numerous phone calls,

section 58 notices, and risk management plan guidance documents provided by the Risk Management Official/Inspector.

Risk management staff met with staff from MECP Source Protection Branch via Microsoft Teams on February 17, 2021 for Part IV Enforcement support and to consider options on moving forward with these properties. All properties were previously determined to have a large fuel tank on site meeting the criteria to be a significant drinking water threat.

Risk management staff carried out drive by site visits to monitor and further investigate these properties throughout the spring of 2021. Staff determined that due to the current status of the sites and likelihood of completing a successfully negotiated agreement to a risk management plan, that it would be necessary for the Risk Management Official to establish the risk management plans by Order under s. 58 (10) of the *Clean Water Act*, 2006. A Notice of Intent to establish a risk management plan under Section 58 (7) was delivered to each of the sites by April 2021. Following a period of 120 days of no returned communication, the RMO formally proceeded with the ordered risk management plan under s. 58 (10) of the *Clean Water Act*, 2006.

In response to the Risk Management Official's Order, one property voluntarily established a risk management plan with the effective date of October 19, 2021, replacing the previously ordered risk management plan that took effect on August 23, 2021. The other 4 properties remain under the ordered risk management plan and the significant drinking water threat activities identified are considered managed and addressed. Risk Management staff will depend on annual compliance schedules to ensure compliance with the ordered risk management plans.

The risk management plans for these locations address empty fuel oil tanks that are no longer used by operations on site. The RMPs indicate that there is to be a plan in place to decommission and/or remove the tanks from the property in the future (e.g. tank is not being used and is empty, there are no plans to refuel the tank, there are plans to decommission the tank and there are no plans to install additional fuel storage, etc.). The risk management plans include a provision that the property must notify the Risk Management Services Office immediately if those plans change. The RMPs specify that the storage tank identified will not be refueled prior to the implementation of additional required risk management measures such as a emergency response plan, employee training, a required fuel oil tank inspection completed by a local TSSA certified technician and preventative actions taken as required following the inspection, etc.

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 drinking water sources (e.g. RMP established) and a written notice to proceed from the RMO/I has been issued.

As of December 31, 2021, the RMO has received 45 applications in the ERSPA and 3 applications in the TSRSPR through Section 59 screening for new potential fuel threats in the Event Based Area. Of these, there were 16 instances in the ERSPA and 2 instances in the TSRSPR 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. In 2021, eight RMPs in the ERSPA and one RMP in the TSRSPR were established through the s.59 screening process. To date, all of the RMPs established for new fuel tanks have been for greenhouse construction. 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.

COMPLIANCE MONITORING

The RMO has begun working on simple compliance forms that will be sent to individuals with an existing Risk Management Plan. This will be self assessment that will allow the RMO to ensure that all documents are up to date and that properties with significant drinking water threat activities continue to implement appropriate Risk Management Measures. The forms have been completed with an anticipated start date for the compliance phase in April 2022.

MUNICIPAL INTEGRATION

The Risk Management Official provided refresher training to Planning and Building staff from several municipalities in 2021 at their request. Chatham-Kent, the Town of Essex, Kingsville, LaSalle, Leamington and Tecumseh all received training in the spring. In these municipalities, the handling and storage of fuel in the Event Based Area is the only identified significant drinking water threat. The Written Direction for Policy 32 written under s.59 (Restricted Land Use) was provided to all municipalities in 2016 and updated in 2018.

There are several additional s.57 and s.58 policies that apply to Windsor IPZ-1, Windsor IPZ-2, Lakeshore IPZ-1 and Amherstburg IPZ-1, which are accompanied by Policy 33 written under s.59 (Restricted Land Use). Implementation of this policy without an accompanying Written Direction should have resulted in the receipt of s.59 screening applications for all non-residential proposals under specific sections of the Planning Act and Building Code Act in these areas; however, none have been received to date. The Risk Management Official has now created a Written Direction for Lakeshore and Amherstburg to address implementation of Policy 32 and Policy 33 in Lakeshore IPZ-1 and Amherstburg IPZ-1. In addition, the RMO completed a screening exercise to confirm that none of the identified significant drinking water threat activities were occurring in these areas. Planning and Building staff from Lakeshore and Amherstburg received training on this new Written Direction in

October 2021. There are some vacant properties in Amherstburg IPZ-1 that the RMO is monitoring as development of these properties and/or changing land use has been observed without notice to the RMO. To date, no significant drinking water threat activities have occurred, the RMO remains in contact with the municipality and the MECP regarding these properties.

The RMO is working on updating the Written Direction and screening for potential existing threats for the City of Windsor, which includes the larger area of Windsor IPZ-2. This work is anticipated to be completed early in 2022 with training delivered shortly thereafter.

COVID-19

ERCA staff moved to a work from home model in March 2020, with some staff returning to the office part time at different points during the Covid-19 pandemic. 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 2022

Continuing actions and next steps for Risk Management Services in 2022 include:

- Introduce formal compliance procedures with established risk management plans to ensure compliance with Section 58 policies set out in the Source Protection Plans
- Address the remaining 9 existing properties within the ERSPA and TSRPR to ensure SDWT activities are managed accordingly with the completion of a risk management plan
- Review Section 59 Applications circulated to riskmanagement@erca.org 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 on an as need basis
- Respond to requests from developers, consultants and municipal staff during pre-planning for sites identified through Section 59 processes
- 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

Table 1a – Total number of Risk Management Plans established for existing and future (new) significant drinking water threats in each municipality in the ERSPA. The table also includes the number of Orders issued and the number of outstanding existing SDWTs.

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	62	26	3	121	1	10	29	296
RMPs Required (AR)	-	3	31	3	-	43	2	2	4	88
Total threats identified after the AR through field verification (AR +)	-	-	6	-	-	2	-	-	-	8
RMPs established (AR +)	-	3	37	3	-	43	2	2	4	94
RMPs established (s.59)	-	-	2	-	-	14	-	-	-	16
Total RMPs established		3	39	3		57	2	2	4	110
Number of Orders Issued Under Part IV of the CWA	-	-	3	-	-	1	-	-	-	4
Total existing threats remaining										
Petroleum Well (Crude Oil/ Brine) Properties	-	-	-	-	-	2	-	-	-	2

Table 1b – Total number of Risk Management Plans established for existing and future (new) significant drinking water threats in each municipality in the TRSPR. The table also includes the number of outstanding existing SDWTs. No Orders have been issued to date.

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	1	3
RMPs established (s.59)	-	2	-	2
Total RMPs established	1	3	1	5
Total existing threats remaining				
Petroleum Well (Crude Oil/ Brine) Properties	-	3	4	7

Table 2 – Detailed activity report for the ERSPA provided by the RMO/I to the MECP to comply with Section 81 of the *Clean Water Act*. The RMO/I provides responses to TSRSPR for inclusion in their report to the MECP. The table includes the total number of RMPs established, number of s.59 notices, and number of inspections carried out to fulfill the various duties of the RMO/I.

Essex Region Source Protection Area (ERSPA)						
Additional Part IV Reportables under Section 81 of the <i>Clean Water Act</i> (ERSPA)	2016	2017	2018	2019	2020	2021
RMPs established for existing threats (s.58)	0	1	14	34	38	7
RMPs established for new threats (s.59)	4	0	1	1	2	8
Total RMPs agreed to or established	4	1	15	35	40	8
s.59 Applications Received	18	2	2	4	7	12
S. 59 notices issued for activities to which neither S. 57 nor S.58 policies applied	14	2	1	3	5	4
S. 59 notices issued for activities to which a S.58 policy applied	4	0	1	1	2	8
Total S. 59 notices issued	18	2	2	4	7	12
Inspections* carried out for activities that are prohibited under S. 57	0	0	0	0	0	0
Inspections* carried out for activities that require a RMP under S. 58	14	32	47	63	32	0
Inspections* carried out for activities that were determined not to require a RMP under S.58	55	160	82	7	3	0
Total number of inspections	69	192	129	70	35	0
Notices issued where there were cases of contraventions and/or non-compliance with S.57	0	0	0	0	0	0
Notices issued where there were cases of contraventions and/or non-compliance S.58	0	0	0	0	0	0
Orders issued for contraventions and/or non-compliance found with S. 57	0	0	0	0	0	0
Orders issued for contraventions and/or non-compliance found with S.58	0	0	0	0	0	0
Total number of notices and/or orders issued under Part IV of the CWA	0	0	0	0	0	0
Number of Risk Assessments submitted under S.60	0	0	0	0	0	0
Number of times the RMO caused a thing to be done under S. 64	0	0	0	0	0	0
Number of prosecutions made under S.106	0	0	0	0	0	0
RMPs refused to be established	0	0	0	0	0	0

*Inspections imply that the RMO/I had 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 to be an inspection

