

2022 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, 2022, highlighting actions between January 1, 2022 and December 31, 2022.

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.

PROHIBITION (SECTION 57, PART IV POLICIES)

The Essex Region Source Protection Plan contains six policies that prohibit specific activities that could be a Significant Drinking Water Threat using s.57 of the *Clean Water Act*. These policies are implemented by Risk Management Officials on behalf of municipalities. The SPC opted to prohibit activities only if they did not currently occur and were highly unlikely to occur in the future. These prohibition policies currently only apply to Lakeshore IPZ-1, Windsor IPZ-1 and Amherstburg IPZ-1 where the designated land use precludes many of these activities from occurring (Table 1). Prohibited activities include the following under specific circumstances as indicated in their relevant policies:

- The application and storage of Agricultural Source Material
- The application and storage of Non-Agricultural Source Material
- The storage of road salt (>5000 tonnes)
- The storage of snow (>1 ha)

Table 1 – Zoning for vulnerable areas in the Essex Region where s.57 prohibition policies apply

Vulnerable Area	Prohibition Policies	Zoning
Lakeshore (Belle River) IPZ-1	ASM, NASM, salt, snow	Commercial
Windsor IPZ-1	ASM, NASM, salt, snow	Residential, commercial, industrial and manufacturing
Windsor IPZ-2	ASM	Residential, commercial, industrial and manufacturing
Amherstburg IPZ-1	ASM, NASM, salt, snow	Residential, Commercial Neighbourhood, Light Industrial, Industrial, and Environmental Protection

These six policies have been considered ‘in progress’ since the Essex Region SPP came into effect as the RMO focussed on addressing existing and new fuel storage tanks. In 2022, the Risk Management Office reviewed these policies and vulnerable areas to address outstanding policy implementation. There is no agriculturally zoned land in any of the subject vulnerable areas, therefore the application and storage of both ASM and NASM as defined in the policies cannot occur as these activities are specified to occur on agricultural land. The Risk Management Official conducted a detailed review of aerial photography in ERCA’s Georcortex and street view imagery from Google to search for potential storage structures for salt. There are no such structures visible in any of the subject vulnerable areas. The City of Windsor provided confirmation of the location of their two large salt domes, which are located outside of all vulnerable areas. The RMO also searched for large areas that could meet the criteria for snow storage at a volume that would be considered a SDWT. There are no areas large enough in either Lakeshore IPZ-1 or Amherstburg IPZ-1. The City of Windsor provided confirmation that their designated excess snow melt facilities are located outside of the subject vulnerable areas.

The RMO is satisfied that there are no existing activities that are prohibited using s.57 polices. Municipalities have received training to screen for potential SDWTs that meet these criteria, and none have been identified since the Plan came into effect in 2015. These policies are now considered to be fully implemented.

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 refueling 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 2a and Table 2b. Table 3 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.

In addition, in 2022, the RMO reviewing zoning in Windsor IPZ-2 where the application and storage of non-agricultural source material (NASM) is considered a SDWT managed by a s.58 policy. As there are no areas zoned for agriculture in Windsor IPZ-2, this activity is not possible and the related policies are considered implemented. There are three Part IV policies that remain in progress. These policies address the storage of hazardous waste and pesticide in Lakeshore, Windsor and Amherstburg IPZ-1 and the application of pesticide in Lakeshore, Windsor and Amherstburg IPZ-1 and Windsor IPZ-2. The RMO has conducted a thorough review of available information and is now working with municipalities to confirm that these activities do not currently exist. The specific pesticides identified are typically only used for agriculture. Importantly, these policies will be updated to align with the 2021 Director Technical Rules.

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. In 2022, it was determined that one of the existing fuel tanks in the TSRSPR did not meet the criteria to be a SDWT, changing the total number of existing SDWTS in the TSRSPR to nine. The remainder were determined not to be SDWTS. As of October 2022, RMPs have been established for all existing SDWTS in both Source Protection Areas.

Crude oil and brine extraction and storage operations

The Risk Management Official worked with the corporation, Lagasco, who oversees the crude oil and brine operations on 8 locations in both the Essex Region and Thames Sydenham and Region that required the completion of a RMP. As noted above, it was our previous understanding that an additional property in the TSRSPR would require a RMP, however it was confirmed during a site visit that the fuel limit did not qualify for requiring an RMP. The company received the Notices of Intent to Establish a Risk Management Plan on April 27, 2022. Although representatives from Lagasco received the Notices and the RMO met with staff during onsite visits, the RMO issued Ordered Risk Management Plans on October 27, 2022, as the owners did not provide a RMP by the deadline provided. 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](#). The RMO will complete a compliance check in the future to ensure Lagasco is complying with the ordered Risk Management Plans.

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, 2022, the RMO has received 54 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 17 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 2022, one RMP in the ERSPA was established through the s.59 screening process. In addition, one RMP was dissolved in the ERSPA, as the location of the proposed drinking water threat (fuel storage) was revised and is to be located out of the vulnerable area. To date, all of the RMPs established for new fuel tanks have been for greenhouse construction and crude oil and brine operations. 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 began working with individuals with existing Risk Management Plans to ensure compliance. A compliance checklist was circulated to all individuals who were issued a s.58 notice to proceed (existing threats) with a Risk Management Plan established. The compliance check is a self-assessment that allows 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 checklist includes the following items: proof of adherence to the applicable fuel regulations (ensuring fuel tanks are certified to obtain fuel and/or installed by a TSSA technician), proof of fuel tank inspections, updates to the spill prevention and containment plan, updates to the spill and emergency response plan, and proof of employee training. All compliance checks completed in 2022 were deemed successful and confirmed that property owners comply with the established Risk Management Plans. All properties remain in good standing. The RMO will continue to complete compliance checks on properties who were issued s.59 Notices to Proceed (new threats), where Risk Management Plans were established, throughout 2023.

MUNICIPAL INTEGRATION

The Risk Management Official provided refresher training to Planning and Building staff for municipalities in 2022 at their request. The Written Direction for the City of Windsor was updated in 2022, and specific training was provided. In addition, [training was recorded](#) that applies to all municipalities and is available on YouTube for new municipal staff or those wishing a refresher.

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 2023

Continuing actions and next steps for Risk Management Services in 2023 include:

- Continue monitoring established risk management plans to ensure compliance
- 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
- Respond to requests from developers, consultants and municipal staff during pre-planning for sites identified through the Section 59 process
- 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 2a – Total number of Risk Management Plans established for existing and future (new) significant drinking water threats in each municipality in the ERSPA since October 1, 2015. 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 Assessment Report (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
Threats identified after the AR through field verification (AR +)	-	-	6	-	-	2	-	-	-	8
RMPs established (AR +)	-	3	37	3	-	45	2	2	4	96
RMPs established (s.59)	-	1	2	-	-	15	-	-	-	18
Total RMPs established		3	39	3		57	2	2	4	114
Number of Orders issued under Part IV of the CWA	-	-	3	-	-	3	-	-	-	6

Table 2b – Total number of Risk Management Plans established for existing and future (new) significant drinking water threats in each municipality in the TSRSPR since December 31, 2015.

Thames Sydenham and Region Source Protection Region (ERSPR)				
	Lakeshore	Leamington	Chatham Kent	Total
Total identified threats in the Assessment Report (AR)	6	9	18	33
No RMP required (AR)	5	6	13	23
RMPs required (AR)	1	3	5	10
Total threats identified after the AR through field verification (AR +)	-	-	-	-
RMPs established (AR)	1	3	5	9
RMPs established (s.59)	-	2	-	2
Total RMPs established	1	9	1	11
Number of Orders issued under Part IV of the CWA	-	3	3	6

Table 3 – 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 TSRSR 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	2022
RMPs established for existing threats (s.58)	0	1	14	34	38	7	2
RMPs established for new threats (s.59)	4	0	1	1	2	8	1
Total RMPs agreed to or established	4	1	15	35	40	15	3
s.59 Applications received	18	2	2	4	7	12	9
s.59 Notices issued for activities to which neither s.57 nor s.58 policies applied	14	2	1	3	5	4	6
s.59 Notices issued for activities to which a s.58 policy applied	4	0	1	1	2	8	1
Total s.59 notices issued	18	2	2	4	7	12	7
Inspections* carried out for activities that are prohibited under s.57	0	0	0	0	0	0	0
Inspections* carried out for activities that require a RMP under s.58	14	32	47	63	32	0	2
Inspections* carried out for activities that were determined not to require a RMP under s.58	55	160	82	7	3	0	1
Total number of inspections	69	192	129	70	35	0	3
Notices issued where there were cases of contraventions and/or non-compliance with s.57	0	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	0
Orders issued for contraventions and/or non-compliance found with s.57	0	0	0	0	0	0	0
Orders issued for contraventions and/or non-compliance found with s.58	0	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	0
Number of Risk Assessments submitted under s.60	0	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	0
Number of prosecutions made under s.106	0	0	0	0	0	0	0
RMPs refused to be established	0	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-by, if applicable. Phone calls and emails are not considered to be an inspection.