



**Grand River Conservation Authority  
Agenda - Source Protection Authority Meeting**

**PUBLIC**

Friday, November 22, 2019  
Immediately following the General Membership  
Auditorium

Grand River Conservation Authority  
400 Clyde Road, Box 729  
Cambridge, ON N1R 5W6

---

**Pages**

1. **Call to Order**

2. **Certification of Quorum**

3. **Chair's Remarks**

4. **Review of Agenda**

THAT the agenda for the Source Protection Authority Meeting be approved as circulated.

5. **Declarations of Pecuniary Interest**

6. **Minutes of the Previous Meetings**

THAT the minutes of the Source Protection Authority Meeting of October 25, 2019 be approved as circulated.

7. **Business Arising from Previous Minutes**

8. **Hearing of Delegations**

9. **Presentations**

<b>10.</b>	<b>Correspondence</b>	
a.	LERSPC - Workplan for for Comprehensive Review and Update of the Grand River Source Protection Plan	5
	<p>THAT Correspondence from the Lake Erie Source Protection Committee regarding the workplan for comprehensive review and update of the Grand River Source Protection Plan be received as information.</p>	
<b>11.</b>	<b>1st and 2nd Reading of By-Laws</b>	
<b>12.</b>	<b>Reports</b>	
a.	SPA-11-19-01 - Submission of the Section 36 Grand River Workplan	77
	<p>WHEREAS the Grand River Source Protection Authority is satisfied that the Workplan for Comprehensive Review and Update of the Grand River Source Protection Plan meets the requirements of the November 2015 <i>Clean Water Act, 2006</i> Section 36 order from the Minister;</p> <p>NOW THEREFORE BE IT RESOLVED THAT Lake Erie Region staff be directed to submit the Workplan for Comprehensive Review and Update of the Grand River Source Protection Plan to the Ministry of the Environment, Conservation and Parks along with any comments from the Grand River Source Protection Authority.</p>	
b.	SPA-11-19-02 - Source Protection Committee Representative Appointments	93
	<p>THAT the Grand River Source Protection Authority re-appoint Lloyd Perrin as a municipal representative on the Lake Erie Region Source Protection Committee for a four-year term, as recommended by the Lake Erie Source Protection Region Management Committee;</p> <p>THAT the Grand River Source Protection Authority re-appoint Jim Kirchin as a public interest representative on the Lake Erie Region Source Protection Committee for a four-year term, as recommended by the Lake Erie Source Protection Region Management Committee;</p> <p>AND THAT the Grand River Source Protection Authority re-appoint Alan Dale as a public interest representative on the Lake Erie Region Source Protection Committee for a four-year term, as recommended by the Lake Erie Source Protection Region Management Committee.</p>	
<b>13.</b>	<b>Committee of the Whole</b>	
<b>14.</b>	<b>General Business</b>	
<b>15.</b>	<b>3rd Reading of By-Laws</b>	
<b>16.</b>	<b>Other Business</b>	

17. **Closed Meeting**

18. **Next Meeting**

At the Call of the Chair

19. **Adjourn**

**Regrets only to:**

Office of the Chief Administrative Officer, Phone: 519-621-2763 ext. 2200

THAT the Source Protection Authority Meeting be adjourned.

October 25, 2019

Helen Jowett, Chair  
Grand River Conservation Authority  
400 Clyde Rd  
Cambridge, ON N1R 5W6

Dear Ms. Jowett:

On October 3, 2019, the Lake Erie Region Source Protection Committee passed the following resolution:

*THAT the Lake Erie Region Source Protection Committee direct staff to finalize the Workplan for Comprehensive Review and Update of the Grand River Source Protection Plan and release to the Grand River Source Protection Authority for submission to the Ministry of the Environment, Conservation and Parks;*

At the time of approval for the Grand River Source Protection Plan on November 26, 2015, the Minister specified the timeline and process for the comprehensive review and update of the assessment report and source protection plan under Section 36 of the *Clean Water Act, 2006*.

Specifically, the approval letter tasked the lead source protection authority (Grand River SPA) to develop a workplan for the assessment report and plan in consultation with the Source Protection Committee, participating municipalities of the Grand River Source Protection Area and the Ministry, as part of the review process. The Section 36 Grand River Workplan (workplan) sets out what aspects of the assessment report and plan should be reviewed. The workplan is due for submission to the Ministry by November 30, 2019.

The workplan development process was initiated in November 2018 with the release of municipal worksheets developed by Lake Erie Region staff. The worksheets captured municipal information that was used to help determine the scope of assessment report and source protection plan updates that would be addressed through the workplan. One-on-one teleconferences were held with municipalities that identified potential items for inclusion in the workplan following submission of their worksheets.

The following are examples of proposed tasks that have been included in the workplan:

1. Results of environmental monitoring programs  
Example: review of monitoring data to evaluate existing or the potential for Issues identified at municipal drinking water wells
2. Growth and infrastructure changes  
Example: new drinking water supply well(s) to be brought online

3. Policy effectiveness  
Example: revise policies related to the application of salt to improve salt management practices
4. Implementation challenges  
Example: review prescribed instrument policies related to the Nutrient Management Act, to identify policy gaps
5. Technical rule changes  
Example: review and consider Phase II Technical Rule changes for incorporation into the assessment report and source protection plans
6. Other local considerations  
Example: update WHPA delineations, vulnerability scoring, mapping, threats and issues assessment and uncertainty analysis

The draft workplan was sent to the Ministry for their preliminary review and presented to the Lake Erie Region Source Protection Committee as part of the consultation process. All comments have been considered and incorporated, where applicable, in the draft workplan (see attached).

The Source Protection Authority is now tasked with considering the workplan and submitting it to the ministry.

Informed by the workplan, the Ministry will issue a Section 36 order that will detail the review of the Grand River Source Protection Plan. Implementation of the Section 36 order will depend upon available funding.

If you have any questions regarding this letter, or the workplan, please contact Ilona Feldmann at 519-621-2763 ext. 2318 or ifeldmann@grandriver.ca.

Sincerely,



Martin Keller, M. Sc.  
Source Protection Program Manager, Lake Erie Source Protection Region

cc:  
Samantha Lawson, CAO, Grand River Conservation Authority



LAKE ERIE  
SOURCE PROTECTION  
REGION



# Draft Workplan

## Comprehensive Review & Update of the Grand River Source Protection Plan

Per Clean Water Act (2006) - Section 36

November 22, 2019

Prepared By

Grand River Source Protection Authority

400 Clyde Road, Cambridge, Ontario

This project has received funding support from the Government of Ontario.



## Executive Summary

Section 36 (S. 36) of the *Clean Water Act, 2006* is intended to ensure that assessment reports (ARs) and source protection plans (SPPs) undergo a comprehensive review and update on a periodic basis.

An order was issued under S. 36 of the *Clean Water Act, 2006* to the Grand River Source Protection Authority (SPA) by the Minister of the Environment and Climate Change on November 4, 2015. The Grand River SPA is the lead SPA for the Lake Erie Region Source Protection Region (SPR), which also includes the Kettle Creek SPA, Catfish Creek SPA and Long Point Region SPA.

The S. 36 order issued by the Minister specified that the lead SPA prepare and submit a workplan to the Ministry of the Environment and Climate Change (MOECC), now Ministry of the Environment, Conservation and Parks (MECP) by November 30, 2019. The order required that the workplan include detailed steps for the comprehensive review and update of the AR and SPP, and be developed in consultation with the Lake Erie Region Source Protection Committee (SPC), participating municipalities of the Grand River Source Protection Area, the Grand River Source Protection Authority, and the MECP.

The Grand River watershed covers an area of approximately 6,800 km<sup>2</sup> in south central Ontario, and contains thirty-nine upper-, lower- and single-tier municipalities, and two First Nations communities. The watershed contributes about 10 percent of the drainage to Lake Erie. The length of the Grand River itself is 300 kilometres, while the average width of the watershed is 36 kilometres. The population of the Grand River Source Protection Area is approximately 994,000 people. The municipal population projection estimates the population to reach 1,185,204 in 2026 and 1,618,930 in 2056. The central portion of the watershed is the most densely populated area with the Cities of Waterloo, Kitchener, Cambridge, Guelph and Brantford being the largest urban centres. The remaining areas in watershed are mainly rural agricultural and, as such, have lower population density. Approximately 82 percent of the population of the Grand River watershed relies on groundwater for their drinking water supply. Agriculture, industry, and commercial production of bottled water for export also rely on groundwater sources in the Grand River region.

The Grand River SPP was approved by the Minister on November 26, 2015, with an effective date of July 1, 2016. The first annual progress report was prepared and submitted to the MECP in June 2019. Source Protection Plans are developed under Ontario's *Clean Water Act, 2006*. This legislation was passed in response to Justice O'Conner's inquiry and recommendations stemming out of the water contamination tragedy that occurred in Walkerton, Ontario, in May 2000.

This document provides a workplan proposal for a comprehensive review of and update to the Grand River SPP and the related AR, in accordance with the S. 36 Order. A preliminary analysis was conducted based on the factors specified in the December 2016 Ministry's bulletin, also utilizing guidance provided in the Ministry's support information bulletins of October 2017 and March 2018.

The required consultation on the workplan was undertaken per the S. 36 order. The Grand River Source Protection Authority led the development of the workplan on consultation with the Lake Erie Region Implementation Working Group, County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County, the MECP, and the Lake Erie Region Source Protection Committee (SPC).

The proposed review and updates to the AR and SPP will represent current and future status of the local scientific information and policy implementation, as it relates to ensuring the protection of municipal drinking water sources per the Clean Water Act, 2006. All technical work outlined in the workplan will meet the requirements of the Director's Technical Rules that are in effect at the time the updated AR and SPP are finalized for submission to the Ministry. The proposed review and updates or "tasks" contained in this workplan are summarized in Tables 1a to 1e and 2 below.

Completion of the proposed tasks is dependent upon available funding. A S.36 update of the Grand River AR and SPP will follow completion of the proposed tasks. Although included in the S.36 workplan, some tasks that are time sensitive, e.g., infrastructure changes such as the addition of a new municipal drinking water well, may be pulled out of the workplan and incorporated into the AR and SPP through a separate S.34 update.

The overall timeline for completion of all of the proposed tasks is by November 2024 or three years after the release of the Phase II Technical Rules or climate change guidance documents. The Lake Erie Region SPC will complete the proposed changes with support from the Grand River SPA, and in consultation with the municipalities in the Grand River watershed, and other applicable implementing bodies. Consultation may also take place with persons engaged in significant drinking water threat activities, if they are affected by the changes.

The Grand River SPA acknowledges the efforts and support of County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County, Lake Erie Region SPC, and the MECP in the preparation of this workplan. The MECP is also thanked for their continued support through capacity funding under the Ontario Drinking Water Source Protection program.

**Table 1a: Municipal Proposed Review and Tasks – Environmental Monitoring**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
1	Wellington County	Wellington County will review environmental monitoring data to evaluate potential or existing Issues identified at municipal drinking water wells. This review may result in an update to content and mapping in the AR and SPP.  The County may consider increased water quality monitoring (sodium and chloride) at municipal wells to aid in the review and evaluation of Issues.	AR and SPP	Completion of technical work: Wellington County  Update of AR and SPP: Lake Erie Source Protection Region	Review: November 2024
2	Wellington County	The current intrinsic vulnerability layer used for Wellington County is raster data. GRCA will aid Wellington County in smoothing (vector data) the intrinsic vulnerability GIS layer.  Updates to the vulnerability layer for the Township of Centre Wellington and Guelph/Eramosa areas will be completed as part of the current Section 34 update. However, the intrinsic vulnerability for the remaining areas within Wellington County will be updated as part of the Section 36 update.	AR and SPP	Completion of technical work: Lake Erie Source Protection Region and Wellington County  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
3	The City of Guelph	The City of Guelph is in the process of installing Sentry Wells to obtain a better understanding of contaminant fate and transport for multiple sources of Trichloroethylene (TCE) in the area. Analysis of TCE data as part of this study may be used to redefine the TCE Issue Contributing Area for the City’s municipal supply wells.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
4	The City of Guelph	In the City of Guelph, several changes to the landscape have occurred since the delineation of the Nitrate Issue Contributing Area (ICA). The current ICA extends into the County of Wellington. The City will undertake a study to use new information on land use activities (specifically in the Carter Wellfield area) to potentially redefine the Nitrate ICA.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
5	The City of Guelph	The Clair Maltby Secondary Plan may drive changes to the Guelph-Guelph/Eramosa (GGET) Tier 3 water budget model. As part of the Clair Maltby secondary plan a three-year baseline monitoring study has been undertaken, with continued monitoring to occur during development of the area. The focus of the study is on shallow groundwater features, which may provide valuable data that can be used to update data gaps in the GGET Tier 3 model. If the GGET Tier 3 model is updated, mapping and content in the AR and SPP will be revised.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
6	The City of Guelph	<p>The City of Guelph retained a consultant to evaluate the use of the MECP’s draft “Alternative Approach” method. The primary objective of this study is to undertake an assessment of the risk to municipal drinking water systems from the application of road salt, based on scope of work as outlined in the updated draft “Alternative Approach” (MOECC, March 2017). The City of Guelph will review the results of the draft Alternative Approach Study and assess the need to update the sodium and chloride triggers for an “Issue”.</p> <p>Additionally, the City will consider the outcome of the Phase II technical rules updates which are intending to address the road salt application challenges with the current circumstances.</p> <p>The City continues to monitor sodium and chloride concentrations and will review data on an ongoing basis. This review may result in an update to content and mapping in the AR and SPP.</p>	AR and SPP	<p>Completion of technical work: City of Guelph</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	<p>Technical work: November 2022</p>
7	The Regional Municipality of Waterloo	<p>The Regional Municipality of Waterloo (RMOW) will review results of environmental monitoring programs and assess water quality parameters of concern for potential new and existing Issues. This review may result in an update to content and mapping in the AR and SPP.</p>	AR and SPP	<p>Completion of technical work: Region of Waterloo</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	<p>Technical work: November 2024</p>

**Table 1b: Municipal Proposed Review and Tasks – Growth and Infrastructure**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
8	Dufferin County (The Town of Orangeville)	<p>The Town of Orangeville plans to bring a new water supply well online in the next two years that will be located within Amaranth Township. The new water supply system will require updates to WHPA delineations, vulnerability scoring, and threats within the AR.</p> <p>Incorporate updated water budget and stress assessment (Orangeville) results into Orangeville Water Budget chapter.</p> <p>Mapping and policies in the SPP will be revised accordingly.</p>	AR and SPP	<p>Completion of technical work: Consultant</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2021
9	Wellington County (Township Centre Wellington)	<p>Water Supply Master Plan completed in 2019. Exploratory drilling program started in 2019 and new wells are expected to be tested and, if successful, brought online between 2020 and 2025. The exact number of new wells is unknown at this time.</p> <p>If new wells are brought online updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.</p>	AR and SPP	<p>Completion of technical work: Consultant</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2024 or greater
10	Wellington County (Erin)	<p>An exploratory drilling program for new supply wells is underway in the Town of Erin. At this time, it is likely that the new wells will be located in the CTC Source Protection Region. However, some locations are close to the Grand River Watershed boundary and it is possible the WHPAs may extend into the Lake Erie Source Protection Region. AR and SPP mapping may need to be updated with data provided by CTC.</p>	AR and SPP	<p>Completion of technical work: Consultant</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
11	Wellington County	Wellington County is aware of technical work being completed for new quality and quantity WHPAs for Halton (Acton) that may extend into the County and Grand River Watershed. AR and SPP mapping would be updated with data provided by CTC.	AR and SPP	Completion of technical work: Consultant  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
12	Regional Municipality of Waterloo	The Region of Waterloo will complete technical work to update WHPAs and vulnerability scoring for new wells (Cambridge East, Waterloo and Blair Road). This work may be completed within one to 4 years. Updates may require a Section 34 update if work is complete before Section 36 update.	AR and SPP	Completion of technical work: Region of Waterloo  Update of AR and SPP: Lake Erie Source Protection Region and Region of Waterloo	Technical work: November 2020
13	City of Hamilton	Technical work is being completed for new quality WHPAs for the Freelton supply wells (City of Hamilton) that may extend into Wellington County within the Grand River Watershed. AR and SPP mapping may need to be updated with data provided by Halton Hamilton Source Protection Region.	AR and SPP	Completion of technical work: Consultant  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2020

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
14	City of Brantford	The City of Brantford has recently acquired land from Brant County on the northern and southern borders. The northern side has no municipal servicing, since all properties are on private wells and septic systems and will over time be serviced as needed. However, the southern end is currently serviced by Brant County and the City of Brantford is negotiating an extension of this agreement to 2025. Updates to the serviced areas mapping in the AR will be required.	AR	Update of AR: Lake Erie Source Protection Region	a) agreement extension not approved: November 2020 b) agreement extension approved: November 2024

Table 1c: Municipal Proposed Review and Tasks – Policy Effectiveness

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
15	Wellington County	Wellington County to review all policies included in the five (5) source protection plans covering the County, determine effectiveness and consistency, and propose possible changes (including DNAPL, pipeline threats, NMA PI policies, dual prohibition policies, Nitrate ICA policies, etc.). Updates to policies in SPP may lead to changes in threats numbers in the AR.	AR and SPP	Policy Review: Wellington County Update of AR and SPP: Lake Erie Source Protection Region	Policy Review: November 2024
16	City of Guelph	Optimization of road salt application– update policies to increase frequency in monitoring of chloride and sodium, policies to improve plowing and salting practices, and education and outreach policies.	SPP	Policy Updates: City of Guelph Update to SPP: Lake Erie Source Protection Region	Policy Text: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
17	City of Guelph	City of Guelph would like to enact a bylaw to request information on all geothermal installations within the WHPAs. Geothermal installations may be considered transport pathways. If geothermal installations are found to be transport pathways then vulnerability scoring will be updated in the AR, which could result in additional threats. Additionally, updates to Source Protection Plan mapping may be required.	AR and SPP	Technical Review and Policy: City of Guelph  Update to AR and SPP: Lake Erie Source Protection Region	Policy Update: November 2024
18	Regional Municipality of Waterloo	The City is considering revisions to policy CG-NB-1.13 as the Grand River SPA no longer receives funding from the province for research and monitoring into sources of contaminants for Issues at municipal supply wells. Consider revising text to be directed at the City only.	SPP	Policy Review: Regional Municipality of Waterloo  Update to SPP: Lake Erie Source Protection Region	Policy Review: November 2024
19	City of Hamilton	The City of Hamilton is planning to review all policies to determine effectiveness over time and propose possible changes. For example, review DNAPL policies keeping in mind the option of instituting a limit, E&O and RMP. Updates to policy content in SPP.	SPP	Policy Review: City of Hamilton  Update to SPP: Lake Erie Source Protection Region	Policy Review: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
20	City of Brantford	<p>A newly proposed to eliminate a gap in managing significant drinking water threats from storm water management facilities (SWMFs) that do not require a MECP Environmental Compliance Approval. The policy will ensure that existing and future activities that pose or would pose a significant drinking water threat will be managed by way of a Risk Management Plan (RMP).</p> <p>Addition of new Source Protection Policy: Sewage System or Sewage Works - Combined Sewer Discharge from a Stormwater Outlet to Surface Water. Applicable in IPZ-1 to 3. Updates to policy content in SPP.</p>	SPP	<p>Policy Update: City of Brantford</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2024
21	City of Brantford	<p>Existing and future application of road salt hasn't been previously addressed in Brantford's SPP. IPZ-1 is the only area that has an impervious surface area related to road salt between 8 and 80% and which might pose a SDWT as per Reference #92 and 93 of the Tables of Circumstances. A new policy needs to be created.</p> <p>The handling and storage of fuel activity has been amended in the Tables of Circumstances to include circumstances where this activity may pose a SDWT. Amendments needs to be made to existing fuel storage and a new policy must be created.</p>	SPP	<p>Policy Update: City of Brantford</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2024

**Table 1d: Municipal Proposed Review and Tasks – Implementation Challenges**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
22	City of Guelph	<p>Concerns regarding EPA vs. CWA limitations for condition sites and regulatory gaps as identified by the Environmental Commissioner of Ontario (ECO). Quote from ECO: "The Clean Water Act gives the perception that the law addresses conditions that are drinking water threats, without actually doing so. Source protection committees have no substantial tools at their disposal to protect drinking water sources from historical contamination. Municipalities, which bear the onus of providing safe drinking water to their residents, similarly have no such powers. Municipalities very rarely have the finances to control or remediate contamination themselves, nor do they have any authority to force property owners to remediate. They can only ask the province to act."</p> <p>The Smallfield Wellfield continues to be adversely impacted by TCE based on recent water quality monitoring in the supply well. Additional investigations of privately-owned contaminated sites in area of Smallfield Well are required. The City of Guelph will update conditions site policies to address impacted water quality.</p>	SPP	<p>Policy Updates: City of Guelph</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2024
23	Regional Municipality of Waterloo	<p>Current Section 34 update includes policy revisions to address implementation challenges, including the alignment of storm water management and salt application/storage policies and tools. Policy changes may be considered as part of broader Section 36 work resulting from new WHPA delineations or Tier 3 update.</p>	SPP	<p>Revised Policy: Regional Municipality of Waterloo</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Revised Policy: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
24	City of Hamilton	The City of Hamilton is planning to review all prescribed instrument policy wording to identify gaps (i.e. NMA policies). Updates to policy content in SPP may be required.	SPP	Revised Policy: City of Hamilton  Update to SPP: Lake Erie Source Protection Region	Policy Update: November 2024

**Table 1e: Municipal Proposed Review and Tasks – Other**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
25	Wellington County	Updates to Mapleton and Wellington North WHPAs (quality) should be considered once the Tier 3 modeling and Erin WHPA changes are complete. It is proposed that the Township of Centre Wellington Tier 3 model be extended to include both areas, possibly with new data provided through the proposed OGS Mount Forest - Elmira project and the new WHPAs modeled. Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
26	Wellington County	Consider updating Managed Lands, Livestock Density and Impervious Surfaces with most current aerial photography. Currently based on outdated 2010 data. If completing updates the most up to date aerial photography will be used. Mapping and content in the AR would need to be revised.	AR	Completion of technical work: Lake Erie Source Protection Region and Wellington County  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
27	Regional Municipality of Waterloo	The Region plans to update both the Regional and Cambridge Tier 3 groundwater model. Work would include a stress assessment, climate change assessment (water quantity), and updated mapping (WHPAs and vulnerability). Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Regional Municipality of Waterloo  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
28	Oxford County	Oxford County is planning to update WHPA delineations for wells 1, 2A and 3 (Drumbo water system) and wells 1 and 2 (Plattsville water system). The current WHPA delineations were all completed using the 2001 groundwater model. Given the advancements in modeling (e.g. Tier 3 Water Budget studies), Oxford intends to remodel these WHPAs. Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2022
29	All municipalities	Any identified transport pathways that Lake Erie Region staff become aware of in accordance with section 27 of the General Regulation (287/07) will be considered for inclusion in the AR and SPP. The AR updates may include updated WHPA/IPZ vulnerable area mapping and revised vulnerability scores, which will be used to determine and include identification of areas where an activity is or would be a significant drinking water threat. The SPP policy applicability maps would also be updated to reflect changes to the AR.	AR and SPP	Review of identified potential transport pathways and update of AR and SPP: Lake Erie Source Protection Region	Review of transport pathways: November 2023

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
30	All municipalities	<p>Review and identify where liquid hydrocarbon pipelines are drinking water threats within the watershed.</p> <p>Review assessment report tables that identify drinking water threats in WHPAs and IPZs to ensure the table parameters reflect liquid hydrocarbon pipeline circumstances.</p>	AR and SPP	<p>Review and identification of pipelines: Lake Erie Source Protection Region</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	<p>Review and identification of pipelines and Drinking Water Threat Tables: November 2020</p>
31	All municipalities	<p>Consider reviewing Grand River watershed SGRA mapping to reflect the most up-to-date Tier 3 information.</p>	AR	<p>Review of SGRA mapping: Lake Erie Source Protection Region</p> <p>Update of AR: Lake Erie Source Protection Region</p>	<p>Review of SGRA mapping: November 2020</p>

Table 2: Proposed Review and Tasks – Technical Rule Changes

Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Sewage/septic systems and holding tanks	<p>There are sodium or chloride ICAs in the Region of Waterloo with potential septic systems or holding tanks identified as a contributing activity.</p> <p>The Region of Waterloo will review the sodium and chloride ICAs for potential septic systems or holding tanks as a contributing activity and remove them as per the updated circumstances 695-718. When updating the Assessment Report, references to septic system discharges related to a sodium or chloride ICAs will be removed.</p>	Region of Waterloo	AR	<p>Completion of review: Region of Waterloo</p> <p>Update of AR: Lake Erie Source Protection Region</p>	Review: November 2024
Changes to above grade fuel handling and storage in a WHPA-E or IPZ	<p>All applicable municipalities within the Grand River SPA will review fuel storage activities, including on site diesel tanks for standby power at the water treatment plants, gas stations, and heating fuel tanks in consideration of the changes to the provincial threats tables and circumstances.</p> <p>Review assessment report tables that identify drinking water threats in WHPAs and IPZs to ensure the table parameters reflect handling and storage of fuel circumstances.</p>	All applicable municipalities	AR and SPP	<p>Completion of review: All applicable municipalities</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Review: November 2024

Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Phase II Rules Project	<p>Through the preliminary analysis, anticipated changes resulting from the MECP’s Phase II Rule Project have been identified that will likely need to be reflected on when updating the AR and SPP. The complete list of changes to the rules has not been identified to this point, nor has the timeline for completion of the Project.</p> <p>Lake Erie Region staff will work closely with municipalities and the Source Protection Committee to ensure that the new rules are reviewed and considered for incorporation in the AR and SPP once they are finalized and become available.</p>	All municipalities	AR and SPP	Review of Phase II Rules Project: Lake Erie Source Protection Region	Review: Within two years from the time the Phase II Rules Project becomes available
Climate Change	<p>Conservation Ontario’s toll/guidance for incorporating climate change into water quality risk assessments may result in changes to the assessment that could be considered in updates to the AR and SPP.</p> <p>Lake Erie Region staff will work closely with municipalities and the Source Protection Committee to ensure that the tool/guidance is reviewed and considered for incorporation in the AR and SPP if and when it is finalized and become available.</p>	All municipalities	AR and SPP	Review of tool/guidance: Lake Erie Source Protection Region	Review: Within two years from the time the tool/guidance becomes available

## Table of Contents

1. Introduction .....	1-1
1.1 Grand River Source Protection Area.....	1-1
1.2 Source Protection Plan Implementation - Highlights .....	1-2
1.3 Annual Progress Report - Highlights.....	1-2
2. Workplan Development.....	2-1
2.1 Preliminary Analysis.....	2-1
2.2 Workplan Consultation.....	2-30
3. Proposed Review and Updates.....	3-1

## 1. Introduction

Ontario's *Clean Water Act, 2006* helps protect sources of municipal drinking water systems in order to protect human health and the environment. The Act was created in response to the "Report of the Walkerton Inquiry - by Justice Dennis R. O'Connor", which was released in 2002. The inquiry was called in response to *E. coli* bacteria contamination of the municipal drinking water system in Walkerton, Ontario in May of 2000. This contamination was the cause of seven deaths and thousands of residents becoming ill. Justice O'Connor emphasized that protecting drinking water at the source is the first step in a multi-barrier approach and an important part of ensuring the health of people, ecosystems, and economies. "We should never be complacent about drinking water safety" - Justice Dennis R. O'Connor.

The Clean Water Act ensures communities protect their drinking water supplies through prevention - by developing collaborative, watershed-based source protection plans (SPPs) that are locally driven and based on science.

The Act established source protection areas and source protection regions. It also created a local multi-stakeholder source protection committee for each region. These committees identify significant existing and future risks to municipal drinking water sources and develop plans to address these risks.

Assessment reports (ARs) and SPPs must be comprehensively reviewed and updated per section 36 (S. 36) of the Act to ensure sustained protection of the municipal drinking water sources and for the SPPs to stay current. Together with the approval of the Grand River SPP on November 26, 2015, a S. 36 order was issued to the Grand River Source Protection Authority (SPA) from the Minister of the Ministry of Environment and Climate Change (MOECC), now Ministry of the Environment, Conservation and Parks (MECP). The Grand River SPA (lead) is one of four SPAs in the Lake Erie Source Protection Region (SPR), which also includes the Kettle Creek SPA, Catfish Creek SPA and Long Point Region SPA.

The S. 36 order issued by the Minister specified that the lead SPA prepare and submit a workplan to the MECP by November 30, 2019. The order required that the workplan include detailed steps for the review and update of the Source Protection Plan (SPP) and be developed in consultation with the Lake Erie Region Source Protection Committee (SPC), participating municipalities of the source protection authority, and the MECP. The order also required that the information gained from implementing the SPP and from the first annual progress report be taken into consideration in preparation of the workplan.

### 1.1 Grand River Source Protection Area

The Grand River watershed covers an area of approximately 6,800 square kilometres in south-central Ontario. The major tributaries of the Grand River include: the Conestogo and Nith, draining the western half of the watershed; and the Speed, which drains the north-east. Several smaller tributaries drain the southern half of the watershed. The largest of these include the Fairchild, Whitemans and McKenzie creeks. The Grand River Source Protection Area has a population of approximately 994,000 people living within 39 upper-, lower- and single-tier

municipalities and two First Nations bands. Residents in the Grand River watershed receive drinking water supplies from both private and municipal supplies. 50 municipal systems and one First Nation system provide water to 865,538 residents in the watershed, which represents approximately 87 percent of the 2016 watershed population. The SPP established policies to address significant drinking water threats for all 50 municipal systems within the Grand River watershed.

## 1.2 Source Protection Plan Implementation - Highlights

The Grand River SPP was approved by the Minister on November 26, 2015, with an effective date of July 1, 2016. Source Protection Plan policy implementation is underway, with policies being implemented by different implementing bodies. The experience gained from implementing the SPP to date is considered in this workplan.

## 1.3 Annual Progress Report - Highlights

The first annual progress report was prepared and submitted to the MECP in June 2019. 7449 significant drinking water threats were identified in the Grand River Source Protection Area when the Plan took effect. The percentage of overall progress made in addressing threats is 19%. Additionally, 1320 threats have been removed through field verification. The percentage of overall progress made is likely a reflection of the progress for municipalities that have a large number of significant threats. For these municipalities, implementation may be phased over many years given the large number of properties and limited staff resources. Some municipalities have opted to prioritize properties and activities with the highest potential impact.

Ninety-six percent of legally binding applicable plan policies that address significant drinking water threats are implemented or in progress, while four percent of the policies, no progress was made.

## 2. Workplan Development

The Grand River SPA has followed the guidance provided in Ministry bulletins in developing the S. 36 workplan. In December 2016, the Ministry produced a bulletin, “Overview of Requirements for Assessment Report and Source Protection Plan Amendments under S. 36 of the *Clean Water Act*”. The bulletin indicates that the S. 36 updates are intended to “build in new information that advances the understanding of risks to sources of drinking water and incorporates local growth”. The three supplemental information bulletins listed below were also used to develop this S. 36 workplan.

- Municipal Engagement (October 2017)
- Prohibition of Agricultural Policies Outside of WHPA-A or IPZ-1 (March 2018)
- Updates to Director’s Technical Rules (2017) and Tables of Drinking Water Threats (2017/2018).

The three main components of the S. 36 process that lead to workplan submission by source protection authorities are:

- Preliminary analysis including review factors and considerations
- Consultation for stakeholder engagement
- Workplan.

The Grand River Source Protection Authority led the development of the workplan in consultation with the Lake Erie Region Implementation Working Group, County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County, the MECP, and the Lake Erie Region Source Protection Committee (SPC). The results of the evaluation of the nine factors specified in the December 2016 Ministry bulletin are described in detail below in **Tables 1 – 18** and presented according to municipality.

### 2.1 Preliminary Analysis

A preliminary analysis of the AR and SPP was conducted considering the nine factors specified in the December 2016 Ministry bulletin:

- Results of environmental monitoring programs
- Growth and infrastructure changes
- Council resolutions
- Policy effectiveness
- Implementation challenges
- Technical rule changes
- Impacts of prohibition policies on the agricultural community
- Specific directions in some source protection plan approval letters
- Other local considerations.

The evaluation of each of these factors is considered below.

Table 1: Preliminary Analysis – Township of Southgate (County of Grey)

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require the County of Grey to establish or conduct an environmental monitoring program.	No
Council resolutions	There are no outstanding municipal council resolutions to add drinking water systems in the Grand River Source Protection.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.  Surveys for DNAPLS & Organic Solvents are being conducted in the expanded WHPA-B of the new Dundalk Well D5.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the County of Grey portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the County.	No
Other considerations	No other considerations identified at this time.	No

Table 2: Preliminary Analysis – Township of Melancthon (Town of Shelburne)

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	At Shelburne wells PW7 and PW8 located in Melancthon, no exceedances were noted; further, no organic parameter exceedances were observed through the recent Drinking Water Systems (DWS) Ontario Regulation 170/03 annual reports.	No
Growth and infrastructure changes	There are no growth or infrastructure changes expected in the Municipality in the near future.	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	Although the DNAPL future prohibition policy results in implementation challenges, there are no SDWT in Shelburne that are within the Grand River Source Protection Area and therefore, no policy application.	No
Agricultural Prohibition Policies Outside of WHPA-A	There is no evidence of negative impacts on agricultural operations, no agricultural land has been taken out of farming, and only minimal evidence of improvement to water quality in the affected systems. As a result, a revision of agricultural prohibition policies as part of this plan amendment is not required at this time.	No
Specific directions in the SPP approval letter	Not applicable to the Township.	No
Other considerations	No other considerations identified at this time.	No

**Table 3: Preliminary Analysis – Dufferin County (Amaranth)**

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require the Amaranth to establish or conduct an environmental monitoring program.	No
Growth and infrastructure changes	<p>There are no growth or infrastructure changes expected in the Municipality in the near future.</p> <p>The Town of Orangeville plans to bring a new water supply well online in the next two years that will be located within Amaranth. A public consultation event is expected to be held in the fall or winter of 2019 to present the recommended solution(s) for this project.</p> <p>An update to the Tier 3 Water Budget and Stress Assessment in Orangeville will be necessary with the new well supply.</p>	Yes
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the Amaranth portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the County.	No

<b>Factor</b>	<b>Preliminary Analysis</b>	<b>Task to be Included in S.36 Update? Y/N</b>
Other considerations	No other considerations identified at this time.	No

Table 4: Preliminary Analysis – Dufferin County (Grand Valley)

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require the Grand Valley to establish or conduct an environmental monitoring program.	No
Growth and infrastructure changes	The Town of Grand Valley has installed a test well which has the potential to become a production well in the future. There is no set timeline to bring this well online; however, the well could come online within the next five years to service population growth.	No
Council resolutions	A municipal council resolution has been passed to construct a new well in the Grand River Source Protection Area.	No
Policy effectiveness	Issues related to determining if various propriety products included the specified DNAPLs noted as significant threats. Waiting on further clarification from the province on solvent DNAPL definitions and circumstances.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the Grand Valley portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the County.	No
Other considerations	No other considerations identified at this time.	No

**Table 5: Preliminary Analysis – Dufferin County (East Garafraxa)**

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require the East Garafraxa to establish or conduct an environmental monitoring program.	No
Growth and infrastructure changes	There are no growth or infrastructure changes expected in the Municipality in the near future.	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the East Garafraxa portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the County.	No
Other considerations	No other considerations identified at this time.	No

**Table 6: Preliminary Analysis – Dufferin County (Orangeville)**

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	Sodium and Chloride trends at Orangeville Wells 6 and 11 have shown similar increasing trends as in the past. Additionally, Chloride concentrations at Orangeville Wells 9A and 9B consistently exceed the ODWQS aesthetic objective of 250 mg/L. Chloride concentrations at Orangeville Well 10 show a stabilizing trend.	No
Growth and infrastructure changes	Orangeville plans to bring a new water supply well online in the next two years that will be located within Amaranth.  Orangeville will retain professional services to update vulnerable area and scores mapping for the assessment report.	Yes
Council resolutions	There have been no new municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the Orangeville portion of the River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the County.	No
Other considerations	No other considerations identified at this time.	No

Table 7: Preliminary Analysis – Wellington County

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	<p>The Grand River Source Protection Plan does not require Wellington County to establish or conduct an environmental monitoring program; however, water quality monitoring has been conducted to further assess water quality parameters of concern in Township of Centre Wellington and Guelph/Eramosa Township.</p> <p>Sodium and chloride monitoring has increased, specifically at Rockwood wells 1 and 2). In addition to those wells, the County is continuing increased monitoring at E3 in Elora, F1 in Fergus, F6 in Fergus and F7 in Fergus (increased the monitoring at these wells since 2014) for sodium and chloride.</p>	No
	<p>Water quantity policy development for Guelph-Guelph/Eramosa WHPA-Q and IPZ-Q will have monitoring and collection of data requirements for the County.</p>	Yes
	<p>Wellington County will review for new and existing conditions as part of WHPA delineations (Guelph/Eramosa Township and Centre Wellington)</p>	Yes
	<p>Wellington County will review environmental monitoring data associated with possible or existing Issues at municipal supply wells.</p>	Yes
	<p>Current intrinsic vulnerability layer used for Wellington County is raster data. GRCA will support Wellington County in smoothing (vector data) the intrinsic vulnerability GIS layer.</p>	Yes
Growth and infrastructure changes	<p>Township Centre Wellington Water Supply Master Plan completed in 2019. Exploratory drilling program started in 2019 and new wells are expected to be tested and, if successful, brought online between 2020 and 2025.</p>	Yes
Growth and infrastructure changes	<p>An exploratory drilling program in Erin is underway. At this time, it is likely that the new wells will be located in the CTC Source Protection Region. However, some locations are close to the Grand River Watershed boundary and it is possible the WHPAs may extend into the Lake Erie Source Protection Region.</p>	Yes
	<p>Puslinch has undertaken a feasibility study for water and wastewater municipal servicing in the industrial area. No decision to proceed has been made at this time.</p>	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
	New wells may be required for servicing / licensing reasons, however, these projects are not in the planning stage at this time (Guelph/Eramosa, Mapleton, Wellington North).	No
	Wellington County is aware of technical work being completed for new quality and quantity WHPAs for Halton (Acton) that may extend into the County and Grand River Watershed.	Yes
	Wellington County is aware of technical work being completed for new quality WHPAs for Hamilton (Freelton) that may extend into the County and Grand River Watershed.	Yes
	Wellington County is aware of new technical work being undertaken by Waterloo for Cambridge East water quality WHPAs. Revised WHPAs may extend into Wellington County.	Yes
	Wellington County is aware that the City of Guelph is planning to install new supply wells. The new wells may be located in Wellington County. Upon completion of the City of Guelph Master Water Supply Plan in September 2020, the need for new water supply locations will be evaluated. Timelines are uncertain for the new water supply for the City of Guelph.	No
Council resolutions	<p>There are a number of non-municipal, residential systems in the County. To date, there have been no Council resolutions to include these in Source Protection Plans. However, certain non-municipal systems are included in the County Official Plan.</p> <p>No internal discussions have occurred yet about including these systems in Source Protection Plans (SPP). It is expected that there will be internal discussions about these systems in the OP as it is an incomplete list and that will then lead to discussions on the OP or SPP as the appropriate policy instruments for protection.</p>	No
Policy effectiveness	Wellington County to review all policies included in the five (5) source protection plans covering the County, and determine effectiveness and consistency, among the lower-tier municipalities and propose possible changes (including DNAPL, pipeline threats, NMA PI policies, dual prohibition policies, Nitrate ICA policies, etc.). Updates to policies in SPP may lead to changes in threats numbers in the AR.	Yes
Implementation challenges	Wellington County is reviewing all source protection plan policies to address implementation challenges that have been identified.	Yes

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within Wellington County.	No
Specific directions in the SPP approval letter	The Centre Wellington Tier 3 Water Budget Study, which began in 2016, is in the process of concluding with the recent completion of the draft Risk Assessment report. A Risk Management Measures and Evaluation Process (RMMEP) commenced in summer 2019 to better understand the drivers of the significant risk level. Water quantity policy development will begin following the completion of the RMMEP. Inclusion of the water quantity policies in the Grand River Source Protection Plan will be undertaken through a S.34 plan update.	No
	The GGET Tier 3 technical study, RMMEP and TMS are complete. The GGET Project Team is currently drafting water quantity policies. Inclusion of the water quantity policies in the Grand River Source Protection Plan will be undertaken through a S.34 plan update.	No
Other considerations	If Technical Rules are changed, Wellington County municipalities will want to update the impervious surface calculations / threat analysis for road salt application / storage.	Yes
	Updates to Mapleton and Wellington North WHPAs (quality) are planned once the Tier 3 modeling and Erin WHPA changes are complete.	Yes
	Consider updating Managed Lands, Livestock Density and Impervious Surfaces with most current aerial photography. Currently based on outdated 2010 data.	Yes

**Table 8: Preliminary Analysis – City of Guelph**

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The City will analyze Trichloroethylene (TCE) data as part of the Sentry Well Study and may redefine the TCE Issue Contributing Area.	Yes
	The City of Guelph will re-evaluate the Nitrate ICA delineation as landscapes have changed within the City.	Yes
	The Clair Maltby Secondary Plan may drive changes to the Guelph-Guelph/Eramosa (GGET) Tier 3 water budget model. The focus of the study is on shallow groundwater features which may provide valuable data that can be used to update data gaps in the GGET Tier 3 model.	Yes
	The City of Guelph retained a consultant to evaluate the use of the MECP’s draft “Alternative Approach” method. The primary objective of this study is to undertake an assessment of the risk to municipal drinking water systems from the application of road salt, based on scope of work as outlined in the updated draft “Alternative Approach” (MOECC, March 2017). The City of Guelph will review the results of the draft Alternative Approach Study and assess the need to update the sodium and chloride triggers for an “Issue”. Additionally, the City will consider the outcome of the Phase II technical rules updates which are intending to address the road salt application challenges with the current circumstances. The City continues to monitor sodium and chloride concentrations and will review data on an ongoing basis.	Yes
Growth and infrastructure changes	<p>City of Guelph will be undertaking an update of the Water Supply Master Plan. The City can assess impacts of the WSMP Update on Assessment Report and Source Protection policies following completion.</p> <p>The Guelph South Water Supply Master Plan update is scheduled for 2019-2020. Updates will increase allocated water supply rates from 2031 used in the current Assessment Report to 2041. This may impact the defined areas for WHPA, threats assessments, water quantity, etc. Projected population growth will require additional, new wells to meet provincial growth targets. New wells may be located within the City or Wellington County.</p>	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	The City will evaluate policies to optimize the application of road salt.	Yes
	City would like to enact a bylaw to request information on all geothermal installations within the WHPAs.	Yes
	The City is considering revisions to policy CG-NB-1.13 as the Grand River SPA no longer receives funding from the province for research and monitoring into sources of contaminants for Issues at municipal supply wells. Consider revising text to be directed at the City only.	Yes
Implementation challenges	Concerns regarding EPA vs. CWA limitations for condition sites and regulatory gaps as identified by the Environmental Commissioner. The Smallfield Wellfield continues to be adversely impacted by TCE based on recent water quality monitoring in the supply well. Additional investigations of privately-owned contaminated sites in area of Smallfield Well are required. The City of Guelph will update conditions site policies to address impacted water quality.	Yes
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the City of Guelph.	No
Specific directions in the SPP approval letter	The GGET Tier 3 technical study, RMMEP and TMS are complete. The GGET Project Team is currently drafting water quantity policies. Inclusion of the water quantity policies in the Grand River Source Protection Plan will be undertaken through a S.34 plan update.	No
Other considerations	No other considerations identified at this time.	No

Table 9: Preliminary Analysis – Regional Municipality of Waterloo

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	Regional Municipality of Waterloo (RMOW) will review results of environmental monitoring programs and assess water quality parameters of concern for potential new and existing Issues.	Yes
Growth and infrastructure changes	The Region will complete technical work to update WHPAs and vulnerability scoring for new wells (Cambridge East, Waterloo and Blair Road).	Yes
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Policy effectiveness may be evaluated as part of broader S.36 work resulting from new WHPA delineations or Tier 3 update.	Yes
Implementation challenges	Current Section 34 update includes policy revisions to address implementation challenges, including the alignment of storm water management and salt application/storage policies and tools. Policy changes may be considered as part of broader Section 36 work resulting from new WHPA delineations or Tier 3 update.	Yes
Agricultural Prohibition Policies Outside of WHPA-A	Current policies include only prohibition to temporary field storage of nutrients outside of WHPA-A; Region staff are not aware of implementation challenges or negative impacts to the farming community related to these policies. Should Region staff become aware the policies will be assessed.	No
Specific directions in the SPP approval letter	The Region of Waterloo Tier 3 study was completed in September 2014. The risk level assigned to the vulnerable areas for water quantity is low; therefore no Risk Management Measures Evaluation Process is needed and no water quantity policies were developed.	No
	The GGET Tier 3 technical study, RMMEP and TMS are complete. The GGET Project Team is currently drafting water quantity policies. Inclusion of the water quantity policies in the Grand River Source Protection Plan will be undertaken through a S.34 plan update.	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Other considerations	The Region plans to update both the Regional and Cambridge Tier 3 models.	Yes

Table 10: Preliminary Analysis – Perth East

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require Perth East to establish or conduct an environmental monitoring program.	No
Growth and infrastructure changes	There are no growth or infrastructure changes expected in the Municipality in the near future.	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the Perth East portion of the Grand River Source Protection Area.	No

<b>Factor</b>	<b>Preliminary Analysis</b>	<b>Task to be Included in S.36 Update? Y/N</b>
Specific directions in the SPP approval letter	Not applicable to Perth East.	No
Other considerations	No other considerations identified at this time.	No

Table 11: Preliminary Analysis – City of Hamilton

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The City will continue its groundwater monitoring program that includes water level monitoring and water quality sampling from the monitoring well network and municipal wells. Additional raw water sampling is completed at the municipal wells beyond what is required under the Safe Drinking Water Act. Sodium and chloride trends will be closely monitored as they are a concern in the rural areas.	No
Growth and infrastructure changes	The new Lynden municipal well FDF02 should become operational in 2020. Updates have been done under the Grey/Ham/Brant S.34 plan update.	No
Growth and infrastructure changes	Technical work is being completed to update the WHPAs for the Freelon Municipal Well system as result of the PTTW increase for FDF01. The current WHPAs extend slightly into Wellington County within the Grand River Watershed. Revised WHPA may also extend into Wellington County.	Yes
Council resolutions	<p>There are a number of non-municipal, residential systems in the City. To date, there have been no Council resolutions to include these in Source Protection Plans. However, certain year round occupancy non-municipal systems have default agreements with the municipality.</p> <p>Furthermore, there are clusters of private wells or non-municipal systems (i.e. schools, arenas) that are experiencing water quantity or quality issues.</p> <p>The purpose of providing this information is to flag to Lake Erie SPR staff the existence of many non-municipal, residential systems in Hamilton and to promote the discussion on the need to identify policies for low and moderate drinking water threats. Given the vulnerability factor these clusters or systems cannot achieve the threshold for SDWT. Nevertheless the Implementation Working group /&amp; the SPC can choose to look into polices that address low and moderate threats and this would benefit the rural population at large.</p>	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Policy effectiveness	Review all policies to determine effectiveness over time and propose possible changes. For example, review DNAPL policies keeping in mind the option of instituting a limit, E&O and RMP.	Yes
Policy effectiveness	Certain activities are just below the SDWT threshold or they do not occur at the time of the inspection but have occurred in the last 10 years and have the potential to occur again.  Consider policies for managing low and medium threats before the activity becomes a SDWT.	No
Implementation challenges	Review all PI policy wording to identify gaps (i.e. NMA policies).	Yes
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the City of Hamilton portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the City of Hamilton.	No
Other considerations	Consideration of drinking water quality threats in HVAs. Assessment of quality and quantity issues to drinking water resources in the HVA and SGRA.  The SPC can use their knowledge and expertise to provide guidance to the municipalities to assist with the protection of these key hydrologic areas as required under the Provincial Policy Statement.	No

Table 12: Preliminary Analysis – Halton Region

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require Halton Region to establish or conduct an environmental monitoring program.	No
Growth and infrastructure changes	There are no growth or infrastructure changes expected in the Municipality in the near future.	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Based on the application of policies to date, the policies are considered to be effective.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the Halton Region portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	The GGET Tier 3 technical study, RMMEP and TMS are complete. The GGET Project Team is currently drafting water quantity policies. Inclusion of the water quantity policies in the Grand River Source Protection Plan will be undertaken through a S.34 plan update.	No
Other considerations	No other considerations identified at this time.	No

Table 13: Preliminary Analysis – City of Brantford

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	City of Brantford uses an online raw water quality station on the Grand River (upstream of the intake) and online analyzers at the Water Treatment Plant's intake to obtain raw water quality data. Additionally, raw water quality grab samples are periodically tested for water quality parameters not tested by the online analyzers. No trends have been observed from the current water quality data; however, the City will continue to review the raw water quality data.	No
Growth and infrastructure changes	The City of Brantford has recently acquired land from Brant County on the northern and southern borders. Servicing boundaries may change.	Yes
Council resolutions	The boundary adjustment agreement (CS-2016-026) was approved by City of Brantford and Brant County Councils. The boundary adjustment has been completed as part of the Section 34 update.  There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	A policy has been recently proposed to eliminate a gap in managing significant drinking water threats from storm water management facilities (SWMFs) that do not require a MECP Environmental Compliance Approval	Yes
	Addition of new Source Protection Policy for sewage system or sewage works.	Yes
	Policy gaps identified regarding the handling and storage of fuel and the application of road salt.	Yes
Implementation challenges	There are no major implementation challenges at this point. Future policies are fully implemented and integrated in Building/Planning processes under the Planning Act. However, for existing threat verification and inspections, the program is still at its infancy and is being assessed on an annual basis.	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Agricultural Prohibition Policies Outside of WHPA-A	The only prohibitive policy in Brantford SPP focuses on the future storage of ASM in IPZ-2 and IPZ-3 (CB-CW-5.3). There has been no instances of activities that may pose a SDWT from future activities (Planning or Building Permit applications) to date.	No
Specific directions in the SPP approval letter	Not applicable to the City.	No
Other considerations	There are a number of oil pipelines upstream of Brantford's intake that, in the event of a leak or break, may cause significant treatment upsets to the Brantford WTP and downstream DWSs. Those pipelines are located outside Brantford's City boundaries and a discussion on how to properly manage this threat should be initiated and addressed. It is worth noting that a consultant was retained by the City to assess the threat pose by oil pipelines in the Emergency Water Supply study, however, the report is still in draft form.	No

Table 14: Preliminary Analysis – County of Brant

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	<p>The Grand River Source Protection Plan does not require the County of Brant to establish or conduct an environmental monitoring program; however, water quality monitoring has been conducted to further assess the effectiveness of the Issue Contributing Areas (ICAs) established in the County.</p> <p>The chloride concentrations at the Bethel Drinking Water Supply has been increasing since 2013. In 2017, the chloride concentration in two of the four wells was above 50 percent of the Ontario Drinking Water Quality Standard (ODWQS) of 250 mg/L.</p> <p>The nitrate concentrations at the St. George Water Supply has been decreasing since 2008, potentially as a result of Agricultural Best Management Practices. The nitrate ICA is still in place at the St. George overburden wells.</p>	No
Growth and infrastructure changes	<p>New drinking water wells were recently added to the Airport and St. George Drinking Water Supplies and these changes were incorporated into the latest update of the Grand River Source Protection Plan, approved on August 26, 2019.</p> <p>Recent growth has also occurred in relation to development proposals on properties that would receive water services from the Bethel Drinking Water Supply; however, no new drinking water wells have been proposed for this drinking water system.</p>	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified. It is also intended that the County's Official Plan will be updated in the future to conform with policies included within the Grand River Source Protection Plan.	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
	<p>To note, policy BC-CW-7.3 of the Grand River Source Protection Plan, which prohibits the storage of snow in an area greater than 0.01 hectares has been the most frequently implemented policy pertaining to future activities that would pose a significant drinking water threat. Policy BC-CW-7.3 applies within WHPA-A, WHPA- B with a vulnerability score of 10, within and IPZ-2 with a vulnerability score of 9 or within a chloride or nitrate ICA.</p>	<p>No</p>
<p>Implementation challenges</p>	<p>The implementation of municipal and RMO policies are completed/in progress. No implementation challenges at this time.</p> <p>The County's Planning and Building Divisions have established a protocol to successfully conduct Restricted Land Use Screening, as per s. 59 of the Clean Water Act and policy BC-CW-1.3 SPP.</p> <p>In addition, the County has fully established their mandatory septic system maintenance inspection program under policy BC-CW-3.1 of the Plan.</p> <p>Both threat-specific and general Education and Outreach policies have also been implemented as per the County's Education and Outreach Program. Feedback from mail-outs and phone calls as components of this Program has been minimal; however, overall awareness of source protection has increased in the County. This has been apparent while conducting threat verification site visits and phone calls, given that property owners seem more aware of how the WHPA/IPZ and/or ICA boundaries affect the policy requirements for their properties.</p>	<p>No</p>

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Agricultural Prohibition Policies Outside of WHPA-A	<p>The following agricultural activities are prohibited for future proposed activities in the WHPA-B (10) under policy BC-CW-4.3 of the SPP.</p> <ul style="list-style-type: none"> <li>-The storage of agricultural source material</li> <li>-The handling and storage on non-agricultural source material</li> <li>-The handling and storage of pesticide</li> </ul> <p>There has only been one (1) instance when the storage of agricultural source material was proposed within the WHPA-B (10). The property owner chose to establish a Nutrient Management Plan prior to engaging in this activity; therefore, the prohibition policy did not apply. Instead, policy BC-MC-4.6 applied, which required OMAFRA to review the Nutrient Management Plan established for this property. The management of the storage of agricultural source material using a nutrient management plan was determined by the County's RMO to be an effective tool in addressing the significant drinking water threat.</p>	No
Specific directions in the SPP approval letter	The Whitemans Creek Tier 3 Water Budget and Local Area Risk Assessment is complete. Draft water quantity policies for the Bethel WHPA-Q are currently being developed.	No
Other considerations	No other considerations identified at this time.	No

Table 15: Preliminary Analysis – Haldimand County

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	The Grand River Source Protection Plan does not require Haldimand County to establish or conduct an environmental monitoring program.	No
Growth and infrastructure changes	The County is currently updating the Water Supply Master Plan for Caledonia. There is predicted population growth in urban areas.	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	There are no prohibition policies of agricultural activities outside WHPA-A within the Haldimand County portion of the Grand River Source Protection Area.	No
Specific directions in the SPP approval letter	Not applicable to the County.	No
Other considerations	No other considerations identified at this time.	No

Table 16: Preliminary Analysis – Oxford County

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Results of environmental monitoring programs	Oxford County has reviewed the results from their environmental monitoring programs and has identified no emerging trends at this time.	No
Growth and infrastructure changes	The Township of Blandford-Blenheim is expected to grow moderately over the next 30 years, according to Oxford's draft population growth projections. At this time, the growth does not require infrastructure changes to the drinking water systems.	No
Council resolutions	There have been no municipal council resolutions to add new drinking water systems in the Grand River Source Protection Area.	No
Policy effectiveness	Implementation of policies included within the Grand River Source Protection Plan is still in progress. To-date, there have been no policy effectiveness issues or policy gaps identified.	No
Implementation challenges	No implementation challenges at this time.	No
Agricultural Prohibition Policies Outside of WHPA-A	Oxford County prohibits some future agricultural activities in the WHPA B with a vulnerability score of 10. This approach is keeping with Oxford's overall policy approach, which is generally to prohibit new/future significant threats from becoming established where achievable and reasonable. Prohibition was also deemed to be a reasonable approach in Oxford given the limited area affected and opportunities to locate new facilities outside of significant threat areas. Oxford does not prohibit future application of ASM or commercial fertilizer in the WHPA B though, only new storage which are identified through the S.59 process.	No
Specific directions in the SPP approval letter	The Whitemans Creek Tier 3 Water Budget and Local Area Risk Assessment is complete. The Bright WHPA-Q has a low risk level; therefore no water quantity polices were developed.	No

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Other considerations	Oxford County is planning to update WHPA delineations for wells 1, 2A and 3 (Drumbo water system) and wells 1 and 2 (Plattsville water system).	Yes

**Table 17: Preliminary Analysis – Technical Rule Changes**

Rule Change	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Significant Groundwater Recharge Area vulnerability scoring	Addressed through current S.34 plan update.	No
Delineation of Significant Groundwater Recharge Areas	There are no SGRAs in the Grand River Source Protection Area that require removal from the plan as per Rule 45.	No
Sewage/septic systems and holding tanks	<p>There are sodium or chloride ICAs in the Region of Waterloo with potential septic systems or holding tanks as a contributing activity.</p> <p>The Region of Waterloo will review the sodium and chloride ICAs for potential septic systems or holding tanks as a contributing activity and remove those contributing activities where appropriate as per the rule change.</p>	Yes
Changes to above grade fuel handling and storage in a WHPA-E or IPZ	<p>Drinking water threat circumstances associated with the handling and storage of fuel have changed.</p> <p>The Region of Waterloo, the City of Guelph and Haldimand County have IPZs with a vulnerability score of nine or higher where above-grade fuel storage could be a significant activity.</p>	Yes

Removal of the term “dairy producer”	There are no references to “dairy producer” in the Grand River AR and SPP.	No
Great Lakes Intake increased vulnerability scoring through Technical Rule 95.1	Haldimand County has reviewed the Dunnville Intake and came to the conclusion that identified threats can be addressed through existing tools prescribed under the CWA.	No
Replacement of the term “monitoring well” with “monitoring location”	Any reference of the term “monitoring well” within the Grand River AR was replaced with the term “monitoring location: as part of the S.34 plan update	No
Phase II Rules Project	Lake Erie Region staff, in consultation with municipalities and the Source Protection Committee, will review and consider incorporating changes resulting from Phase II Rules into the Source Protection Plan and Assessment Report once they are finalized and become available.	Yes
Climate Change	Conservation Ontario has developed a tool/guidance for incorporating climate change into Source Protection Plan water quality risk assessments. The tool/guidance is currently being reviewed by the province.	Yes

Table 18: Preliminary Analysis – Other Considerations

Factor	Preliminary Analysis	Task to be Included in S.36 Update? Y/N
Other	The identification of any transport pathways are captured through notices submitted to Lake Erie Region staff as per Lake Erie Region's Transport Pathway Guidance. Potential transport pathways will be analyzed, and changes to vulnerability mapping are proposed, where appropriate, for the Assessment Report. There are currently no transport pathway notices under consideration.	Yes
Other	Liquid hydrocarbon pipelines are now a prescribed drinking water threat. The location of these pipelines within the watershed may need to be reviewed. Additionally, the drinking water threat circumstances associated with liquid hydrocarbon pipelines fuel have changed.	Yes

## 2.2 Workplan Consultation

Consultation on the workplan was conducted in a variety of forms. This included emails and teleconferences with staff from County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County, Grand River SPA, the MECP, meetings with the Lake Erie Region Implementation Working Group and a meeting with the SPC.

The purpose of the consultation was to discuss the proposed workplan and receive comments and feedback. **Table 9** outlines the consultation conducted.

**Table 9: Grand River S.36 Workplan Consultation**

No.	Date	Consultation Details
1	November 28, 2018	Lake Erie Region S.36 workplan worksheet released to the Implementation Working Group and local municipalities. Worksheet was provided to capture information that would be used to help determine the scope of AR and SPP updates that would be addressed through the S.36 workplan.
2	February – May 2019	Submission of S.36 municipal workplan worksheets.
3	May 16, 2019	E-mail sent from Lake Erie Region staff to Haldimand County staff to discuss details in the S.36 Haldimand County workplan worksheet.
4	May 21, 2019	E-mail sent from Lake Erie Region staff to Oxford County staff to discuss details in the S.36 Oxford County workplan worksheet.
5	May 29, 2019	A teleconference was held with the Lake Erie Region Project Manager, Program Assistant, Program Hydrogeologist and staff from the City of Brantford to discuss details in the S.36 City of Brantford workplan worksheet.
6	June 6, 2019	A teleconference was held with the Lake Erie Region Project Manager, Program Assistant, Program Hydrogeologist and staff from Wellington County to discuss details in the S.36 Wellington County workplan worksheet.
7	June 14, 2019	A teleconference was held with the Lake Erie Region Project Manager, Program Assistant, Program Hydrogeologist and staff from the City of Guelph to discuss details in the S.36 City of Guelph workplan worksheet.
8	June 14, 2019	A teleconference was held with the Lake Erie Region Project Manager, Program Assistant, Program Hydrogeologist and staff from the Region of Waterloo to discuss details in the S.36 Region of Waterloo workplan worksheet.
9	June 25, 2019	A teleconference was held with the Lake Erie Region Project Manager, Program Assistant, Program Hydrogeologist and staff from the City of Hamilton to discuss details in the S.36 the City of Hamilton workplan worksheet.

No.	Date	Consultation Details
10	July 8, 2019	Draft preliminary analysis and proposed review and tasks tables sent to municipalities for review and comment.
11	July 25, 2019	The Project Manager, Program Assistant and Program Hydrogeologist participated in a teleconference with the MECP to discuss the progress of the workplan.
12	August 28, 2019	Draft workplan shared with the Lake Erie Region Implementation Working Group, County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County and Grand River SPA staff for review and comment.
13	August 30, 2019	Feedback obtained from the Lake Erie Region Implementation Working Group, County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County and Grand River SPA staff on the draft workplan.
14	September 5, 2019	Draft workplan for S. 36 updates provided to the MECP for their review as part of consultation process.
15	October 3, 2019	Draft workplan for S. 36 updates was reviewed and discussed by the SPC.
16	October 8, 2019	Draft workplan for S.36 updates provided to neighbouring Source Protection Regions as part of the consultation process.
17	November 22, 2019	A SPA meeting was held to review and submit the proposed workplan to the MECP.

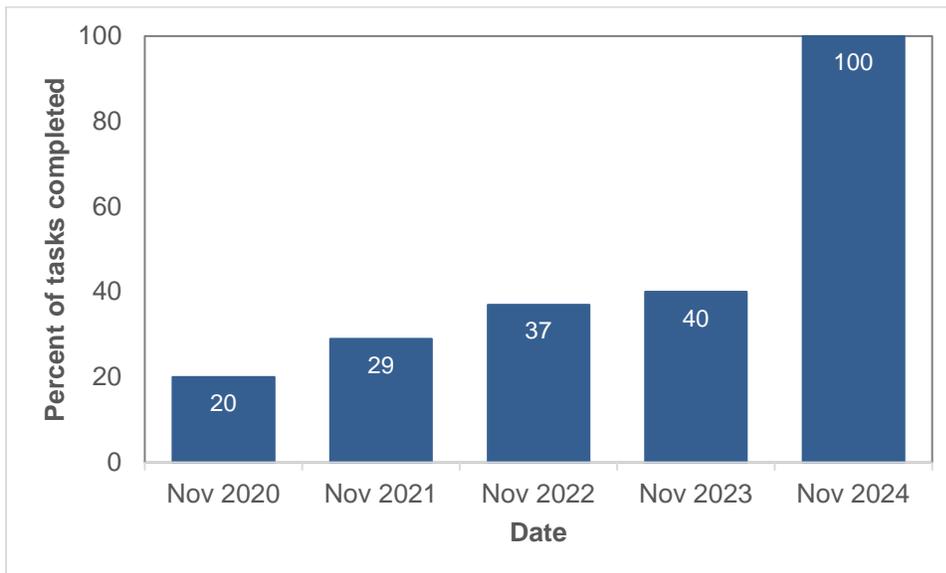
### 3. Proposed Review and Updates

Based on the preliminary analysis, consultations with various stakeholders, and feedback from the MECP on the draft proposal, the Grand River SPA recommends that updates or “tasks” be carried out under S. 36 of the *Clean Water Act, 2006* as described below. Most of the proposed updates result in updates to both the AR and SPP.

Completion of the proposed tasks is dependent upon available funding. A S.36 update of the Grand River AR and SPP will follow completion of the proposed tasks. Although included in the S.36 workplan, some tasks that are time sensitive, e.g., infrastructure changes such as the addition of a new municipal drinking water well, may be pulled out of the workplan and incorporated into the AR and SPP through a S.34 update.

The overall timeline for completion of all of the proposed updates is by November 2024. The Phase II Technical Rules and climate change guidance will be considered if, and when they are released. Submission of the updated Grand River AR and SPP would occur following completion of the technical work.

The Lake Erie Region SPC will complete the proposed changes with support from the Grand River SPA, and in consultation with County of Grey, Dufferin County, Wellington County, the City of Guelph, Halton Region, the Region of Waterloo, Perth County, Oxford County, the City of Hamilton, County of Brant, the City of Brantford, Haldimand County, the MECP, and other applicable implementing bodies. Consultation may also take place with persons engaged in significant drinking water threat activities, if the changes affect persons engaged in existing significant threat activities.



**Figure 1:** Percent of proposed Grand River S.36 tasks completed by November 2024.

Table 10a: Municipal Proposed Review and Tasks – Environmental Monitoring

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
1	Wellington County	Wellington County will review environmental monitoring data to evaluate potential or existing Issues identified at municipal drinking water wells. This review may result in an update to content and mapping in the AR and SPP.  The County may consider increased water quality monitoring (sodium and chloride) at municipal wells to aid in the review and evaluation of Issues.	AR and SPP	Completion of technical work: Wellington County  Update of AR and SPP: Lake Erie Source Protection Region	Review: November 2024
2	Wellington County	The current intrinsic vulnerability layer used for Wellington County is raster data. GRCA will aid Wellington County in smoothing (vector data) the intrinsic vulnerability GIS layer.  Updates to the vulnerability layer for the Township of Centre Wellington and Guelph/Eramosa areas will be completed as part of the current Section 34 update. However, the intrinsic vulnerability for the remaining areas within Wellington County will be updated as part of the Section 36 update.	AR and SPP	Completion of technical work: Lake Erie Source Protection Region and Wellington County  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
3	The City of Guelph	The City of Guelph is in the process of installing Sentry Wells to obtain a better understanding of contaminant fate and transport for multiple sources of Trichloroethylene (TCE) in the area. Analysis of TCE data as part of this study may be used to redefine the TCE Issue Contributing Area for the City's municipal supply wells.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
4	The City of Guelph	In the City of Guelph, several changes to the landscape have occurred since the delineation of the Nitrate Issue Contributing Area (ICA). The current ICA extends into the County of Wellington. The City will undertake a study to use new information on land use activities (specifically in the Carter Wellfield area) to potentially redefine the Nitrate ICA.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
5	The City of Guelph	The Clair Maltby Secondary Plan may drive changes to the Guelph-Guelph/Eramosa (GGET) Tier 3 water budget model. As part of the Clair Maltby secondary plan a three-year baseline monitoring study has been undertaken, with continued monitoring to occur during development of the area. The focus of the study is on shallow groundwater features, which may provide valuable data that can be used to update data gaps in the GGET Tier 3 model. If the GGET Tier 3 model is updated, mapping and content in the AR and SPP will be revised.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
6	The City of Guelph	<p>The City of Guelph retained a consultant to evaluate the use of the MECP’s draft “Alternative Approach” method. The primary objective of this study is to undertake an assessment of the risk to municipal drinking water systems from the application of road salt, based on scope of work as outlined in the updated draft “Alternative Approach” (MOECC, March 2017). The City of Guelph will review the results of the draft Alternative Approach Study and assess the need to update the sodium and chloride triggers for an “Issue”.</p> <p>Additionally, the City will consider the outcome of the Phase II technical rules updates which are intending to address the road salt application challenges with the current circumstances.</p> <p>The City continues to monitor sodium and chloride concentrations and will review data on an ongoing basis. This review may result in an update to content and mapping in the AR and SPP.</p>	AR and SPP	<p>Completion of technical work: City of Guelph</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2022
7	The Regional Municipality of Waterloo	<p>The Regional Municipality of Waterloo (RMOW) will review results of environmental monitoring programs and assess water quality parameters of concern for potential new and existing Issues. This review may result in an update to content and mapping in the AR and SPP.</p>	AR and SPP	<p>Completion of technical work: Region of Waterloo</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2024

Table 10b: Municipal Proposed Review and Tasks – Growth and Infrastructure

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
8	Dufferin County (The Town of Orangeville)	<p>The Town of Orangeville plans to bring a new water supply well online in the next two years that will be located within Amaranth Township. The new water supply system will require updates to WHPA delineations, vulnerability scoring, and threats within the AR.</p> <p>Incorporate updated water budget and stress assessment (Orangeville) results into Orangeville Water Budget chapter.</p> <p>Mapping and policies in the SPP will be revised accordingly.</p>	AR and SPP	<p>Completion of technical work: Consultant</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	<p>Technical work: November 2021</p>
9	Wellington County (Township Centre Wellington)	<p>Water Supply Master Plan completed in 2019. Exploratory drilling program started in 2019 and new wells are expected to be tested and, if successful, brought online between 2020 and 2025. The exact number of new wells is unknown at this time.</p> <p>If new wells are brought online updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.</p>	AR and SPP	<p>Completion of technical work: Consultant</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	<p>Technical work: November 2024 or greater</p>

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
10	Wellington County (Erin)	An exploratory drilling program for new supply wells is underway in the Town of Erin. At this time, it is likely that the new wells will be located in the CTC Source Protection Region. However, some locations are close to the Grand River Watershed boundary and it is possible the WHPAs may extend into the Lake Erie Source Protection Region. AR and SPP mapping may need to be updated with data provided by CTC.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
11	Wellington County	Wellington County is aware of technical work being completed for new quality and quantity WHPAs for Halton (Acton) that may extend into the County and Grand River Watershed. AR and SPP mapping would be updated with data provided by CTC.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
12	Regional Municipality of Waterloo	The Region of Waterloo will complete technical work to update WHPAs and vulnerability scoring for new wells (Cambridge East, Waterloo and Blair Road). New WHPAs may extend into neighbouring municipalities. This work may be completed within one to 4 years. Updates may require a Section 34 update if work is complete before Section 36 update.	AR and SPP	Completion of technical work: Region of Waterloo Update of AR and SPP: Lake Erie Source Protection Region and Region of Waterloo	Technical work: November 2020

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
13	City of Hamilton	Technical work is being completed for new quality WHPAs for the Freerton supply wells (City of Hamilton) that may extend into Wellington County within the Grand River Watershed. AR and SPP mapping may need to be updated with data provided by Halton Hamilton Source Protection Region.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2020
14	City of Brantford	The City of Brantford has recently acquired land from Brant County on the northern and southern borders. The northern side has no municipal servicing, since all properties are on private wells and septic systems and will over time be serviced as needed. However, the southern end is currently serviced by Brant County and the City of Brantford is negotiating an extension of this agreement to 2025. Updates to the serviced areas mapping in the AR will be required.	AR	Update of AR: Lake Erie Source Protection Region	a) agreement extension not approved: November 2020 b) agreement extension approved: November 2024

**Table 10c: Municipal Proposed Review and Tasks – Policy Effectiveness**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
15	Wellington County	Wellington County to review all policies included in the five (5) source protection plans covering the County, determine effectiveness and consistency, and propose possible changes (including DNAPL, pipeline threats, NMA PI policies, dual prohibition policies, Nitrate ICA policies, etc.). Updates to policies in SPP may lead to changes in threats numbers in the AR.	AR and SPP	Policy Review: Wellington County Update of AR and SPP: Lake Erie Source Protection Region	Policy Review: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
16	City of Guelph	Optimization of road salt application– update policies to increase frequency in monitoring of chloride and sodium, policies to improve plowing and salting practices, and education and outreach policies.	SPP	Policy Updates: City of Guelph  Update to SPP: Lake Erie Source Protection Region	Policy Text: November 2024
17	City of Guelph	City of Guelph would like to enact a bylaw to request information on all geothermal installations within the WHPAs. Geothermal installations may be considered transport pathways. If geothermal installations are found to be transport pathways then vulnerability scoring will be updated in the AR, which could result in additional threats. Additionally, updates to Source Protection Plan mapping may be required.	AR and SPP	Technical Review and Policy: City of Guelph  Update to AR and SPP: Lake Erie Source Protection Region	Policy Update: November 2024
18	Regional Municipality of Waterloo	The City is considering revisions to policy CG-NB-1.13 as the Grand River SPA no longer receives funding from the province for research and monitoring into sources of contaminants for Issues at municipal supply wells. Consider revising text to be directed at the City only.	SPP	Policy Review: Regional Municipality of Waterloo  Update to SPP: Lake Erie Source Protection Region	Policy Review: November 2024
19	City of Hamilton	The City of Hamilton is planning to review all policies to determine effectiveness over time and propose possible changes. For example, review DNAPL policies keeping in mind the option of instituting a limit, E&O and RMP. Updates to policy content in SPP.	SPP	Policy Review: City of Hamilton  Update to SPP: Lake Erie Source Protection Region	Policy Review: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
20	City of Brantford	<p>A newly proposed to eliminate a gap in managing significant drinking water threats from storm water management facilities (SWMFs) that do not require a MECP Environmental Compliance Approval. The policy will ensure that existing and future activities that pose or would pose a significant drinking water threat will be managed by way of a Risk Management Plan (RMP).</p> <p>Addition of new Source Protection Policy: Sewage System or Sewage Works - Combined Sewer Discharge from a Stormwater Outlet to Surface Water. Applicable in IPZ-1 to 3. Updates to policy content in SPP.</p>	SPP	<p>Policy Update: City of Brantford</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2024
21	City of Brantford	<p>Existing and future application of road salt hasn't been previously addressed in Brantford's SPP. IPZ-1 is the only area that has an impervious surface area related to road salt between 8 and 80% and which might pose a SDWT as per Reference #92 and 93 of the Tables of Circumstances. A new policy needs to be created.</p> <p>The handling and storage of fuel activity has been amended in the Tables of Circumstances to include circumstances where this activity may pose a SDWT. Amendments needs to be made to existing fuel storage and a new policy must be created.</p>	SPP	<p>Policy Update: City of Brantford</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2024

Table 10d: Municipal Proposed Review and Tasks – Implementation Challenges

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
22	City of Guelph	<p>Concerns regarding EPA vs. CWA limitations for condition sites and regulatory gaps as identified by the Environmental Commissioner of Ontario (ECO). Quote from ECO: "The Clean Water Act gives the perception that the law addresses conditions that are drinking water threats, without actually doing so. Source protection committees have no substantial tools at their disposal to protect drinking water sources from historical contamination. Municipalities, which bear the onus of providing safe drinking water to their residents, similarly have no such powers. Municipalities very rarely have the finances to control or remediate contamination themselves, nor do they have any authority to force property owners to remediate. They can only ask the province to act."</p> <p>The Smallfield Wellfield continues to be adversely impacted by TCE based on recent water quality monitoring in the supply well. Additional investigations of privately-owned contaminated sites in area of Smallfield Well are required. The City of Guelph will update conditions site policies to address impacted water quality.</p>	SPP	<p>Policy Updates: City of Guelph</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
23	Regional Municipality of Waterloo	Current Section 34 update includes policy revisions to address implementation challenges, including the alignment of storm water management and salt application/storage policies and tools. Policy changes may be considered as part of broader Section 36 work resulting from new WHPA delineations or Tier 3 update.	SPP	Revised Policy: Regional Municipality of Waterloo  Update to SPP: Lake Erie Source Protection Region	Revised Policy: November 2024
24	City of Hamilton	The City of Hamilton is planning to review all prescribed instrument policy wording to identify gaps (i.e. NMA policies). Updates to policy content in SPP may be required.	SPP	Revised Policy: City of Hamilton  Update to SPP: Lake Erie Source Protection Region	Policy Update: November 2024

**Table 10e: Municipal Proposed Review and Tasks – Other**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
25	Wellington County	Updates to Mapleton and Wellington North WHPAs (quality) should be considered once the Tier 3 modeling and Erin WHPA changes are complete. It is proposed that the Township of Centre Wellington Tier 3 model be extended to include both areas, possibly with new data provided through the proposed OGS Mount Forest - Elmira project and the new WHPAs modeled. Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
26	Wellington County	Consider updating Managed Lands, Livestock Density and Impervious Surfaces with most current aerial photography. Currently based on outdated 2010 data. If completing updates the most up to date aerial photography will be used. Mapping and content in the AR would need to be revised.	AR	Completion of technical work: Lake Erie Source Protection Region and Wellington County  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
27	Regional Municipality of Waterloo	The Region plans to update both the Regional and Cambridge Tier 3 groundwater model. Work would include a stress assessment, climate change assessment (water quantity), and updated mapping (WHPAs and vulnerability). Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Regional Municipality of Waterloo  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
28	Oxford County	Oxford County is planning to update WHPA delineations for wells 1, 2A and 3 (Drumbo water system) and wells 1 and 2 (Plattsville water system). The current WHPA delineations were all completed using the 2001 groundwater model. Given the advancements in modeling (e.g. Tier 3 Water Budget studies), Oxford intends to remodel these WHPAs. Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2022

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
29	All municipalities	Any identified transport pathways that Lake Erie Region staff become aware of in accordance with section 27 of the General Regulation (287/07) will be considered for inclusion in the AR and SPP. The AR updates may include updated WHPA/IPZ vulnerable area mapping and revised vulnerability scores, which will be used to determine and include identification of areas where an activity is or would be a significant drinking water threat. The SPP policy applicability maps would also be updated to reflect changes to the AR.	AR and SPP	Review of identified potential transport pathways and update of AR and SPP: Lake Erie Source Protection Region	Review of transport pathways: November 2023
30	All municipalities	Review and identify where liquid hydrocarbon pipelines are drinking water threats within the watershed.  Review assessment report tables that identify drinking water threats in WHPAs and IPZs to ensure the table parameters reflect liquid hydrocarbon pipeline circumstances.	AR and SPP	Review and identification of pipelines: Lake Erie Source Protection Region  Update of AR and SPP: Lake Erie Source Protection Region	Review and identification of pipelines and Drinking Water Threat Tables: November 2020
31	All municipalities	Consider reviewing Grand River watershed SGRA mapping to reflect the most up-to-date Tier 3 information.	AR	Review of SGRA mapping: Lake Erie Source Protection Region  Update of AR: Lake Erie Source Protection Region	Review of SGRA mapping: November 2020

Table 10f: Proposed Review and Tasks – Technical Rule Changes

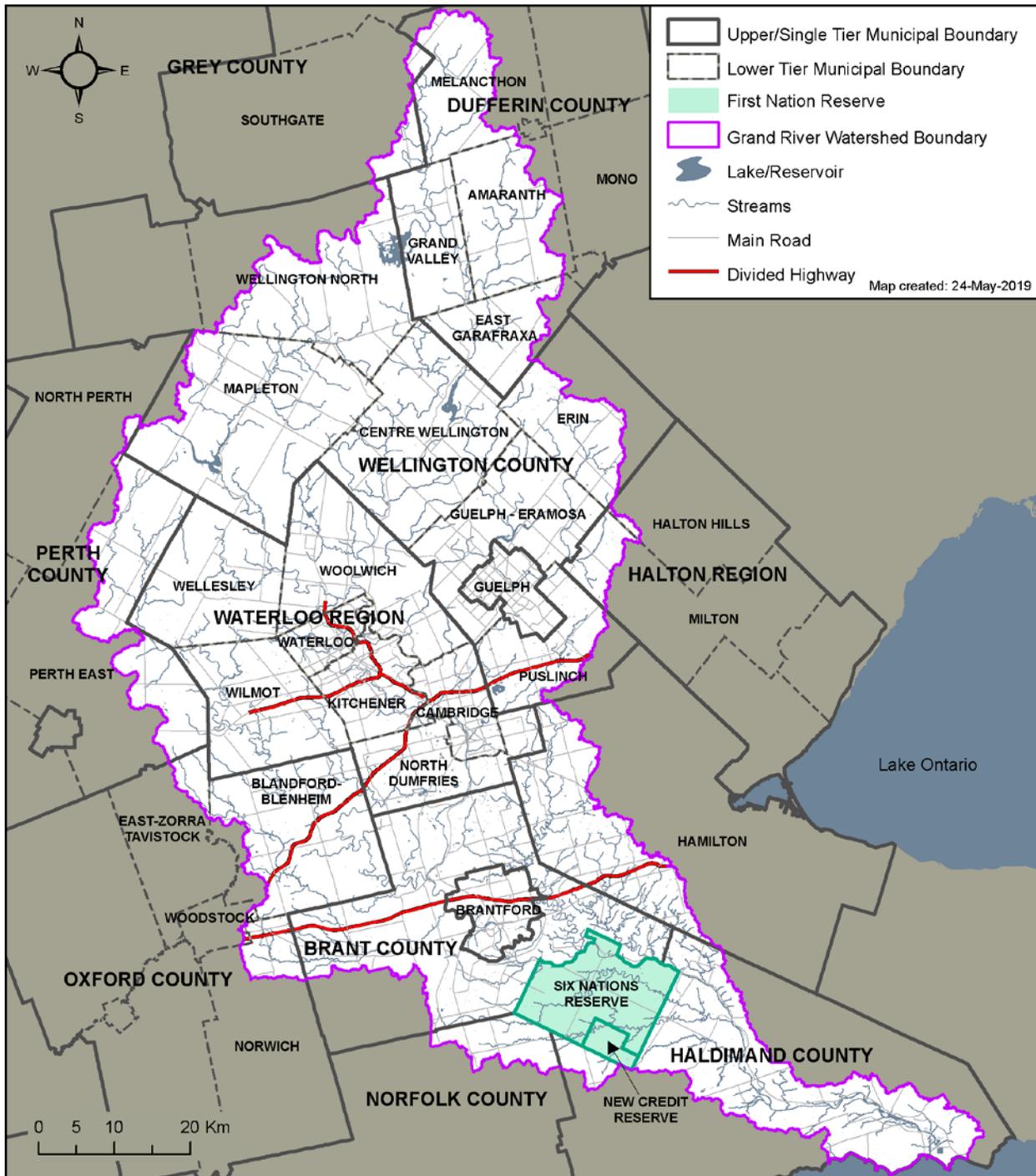
Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Sewage/septic systems and holding tanks	<p>There are sodium or chloride ICAs in the Region of Waterloo with potential septic systems or holding tanks identified as a contributing activity.</p> <p>The Region of Waterloo will review the sodium and chloride ICAs for potential septic systems or holding tanks as a contributing activity and remove them as per the updated circumstances 695-718. When updating the Assessment Report, references to septic system discharges related to a sodium or chloride ICAs will be removed.</p>	Region of Waterloo	AR	<p>Completion of review: Region of Waterloo</p> <p>Update of AR: Lake Erie Source Protection Region</p>	Review: November 2024
Changes to above grade fuel handling and storage in a WHPA-E or IPZ	<p>All applicable municipalities within the Grand River SPA will review fuel storage activities, including on site diesel tanks for standby power at the water treatment plants, gas stations, and heating fuel tanks in consideration of the changes to the provincial threats tables and circumstances.</p> <p>Review assessment report tables that identify drinking water threats in WHPAs and IPZs to ensure the table parameters reflect handling and storage of fuel circumstances.</p>	All applicable municipalities	AR and SPP	<p>Completion of review: All applicable municipalities</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Review: November 2024

Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Phase II Rules Project	<p>Through the preliminary analysis, anticipated changes resulting from the MECP’s Phase II Rule Project have been identified that will likely need to be reflected on when updating the AR and SPP. The complete list of changes to the rules has not been identified to this point, nor has the timeline for completion of the Project.</p> <p>Lake Erie Region staff will work closely with municipalities and the Source Protection Committee to ensure that the new rules are reviewed and considered for incorporation in the AR and SPP once they are finalized and become available.</p>	All municipalities	AR and SPP	Review of Phase II Rules Project: Lake Erie Source Protection Region	Review: Within two years from the time the Phase II Rules Project becomes available
Climate Change	<p>Conservation Ontario’s toll/guidance for incorporating climate change into water quality risk assessments may result in changes to the assessment that could be considered in updates to the AR and SPP.</p> <p>Lake Erie Region staff will work closely with municipalities and the Source Protection Committee to ensure that the tool/guidance is reviewed and considered for incorporation in the AR and SPP if and when it is finalized and become available.</p>	All municipalities	AR and SPP	Review of tool/guidance: Lake Erie Source Protection Region	Review: Within two years from the time the tool/guidance becomes available

**Appendix A:**  
**2015 Approval Letter from the Minister of the Environment and  
Climate Change**

**Appendix B:  
Grand River Watershed Boundary**

**Map: Grand River Watershed**



# Grand River Source Protection Authority

**Report number:** SPA-11-19-01

**Date:** November 22, 2019

**To:** Members of the Grand River Source Protection Authority

**Subject:** Submission of the Section 36 Grand River Workplan

---

## **Recommendation:**

WHEREAS the Grand River Source Protection Authority is satisfied that the Workplan for Comprehensive Review and Update of the Grand River Source Protection Plan meets the requirements of the November 2015 *Clean Water Act, 2006* Section 36 order from the Minister;

NOW THEREFORE BE IT RESOLVED THAT Lake Erie Region staff be directed to submit the Workplan for Comprehensive Review and Update of the Grand River Source Protection Plan to the Ministry of the Environment, Conservation and Parks along with any comments from the Grand River Source Protection Authority.

## **Report:**

At the time of approval for each Lake Erie Region Source Protection Plan, the Minister specified the timeline and process for the comprehensive review and update of the respective Assessment Report and Source Protection Plan under Section 36 of the *Clean Water Act, 2006*. Specifically, the approval letters tasked the lead source protection authority (Grand River Source Protection Authority) to develop a workplan for each assessment report and plan in consultation with the Source Protection Committee, other Source Protection Authorities, municipalities and the Ministry of the Environment, Conservation and Parks (MECP) as part of the review process. The workplan sets out what aspects of the assessment report and plan should be reviewed.

The development process for the Section 36 Grand River Workplan (workplan) was initiated in the fall 2018 with the release of municipal worksheets developed by Lake Erie Region staff. The worksheets captured municipal information that was used to help determine the scope of assessment report and source protection plan updates that would be addressed through the workplan. One-on-one teleconferences were held with municipalities that identified potential items for inclusion in the workplan following submission of their worksheets.

The following are a few examples of proposed items that have been included in the workplan:

1. Growth and infrastructure changes  
Example: new drinking water supply well(s) to be brought online
2. Technical rule changes  
Example: review and consider Phase II Technical Rule changes for incorporation into the assessment report and source protection plans

3. Other local considerations

Example: update Wellhead Protection Area (WHPA) delineations, vulnerability scoring, mapping, threats and issues assessment and uncertainty analysis

A more extensive summary of the proposed items and updates included in the workplan, with associated timelines, is provided in **Tables 1a-e** and **Table 2**. An early draft copy of the workplan was sent to MECP staff for their preliminary review. Comments received have been considered and incorporated, where applicable (the workplan in its entirety is provided in Correspondence)

The workplan was presented to the Lake Erie Region Source Protection Committee on October 3, 2019 and the following resolution was passed:

*THAT the Lake Erie Region Source Protection Committee direct staff to finalize the Workplan for Comprehensive Review and Update of the Grand River Source Protection Plan and release to the Grand River Source Protection Authority for submission to the Ministry of the Environment, Conservation and Parks.*

The Source Protection Authority is now tasked with considering the workplan and subsequently directing Lake Erie Region staff to submit it to the MECP by November 30, 2019.

Informed by the workplan, the MECP will issue a Section 36 order that will detail the review of the Grand River Source Protection Plan. Provided that provincial funding is available, the Grand River Source Protection Authority will complete the proposed review and update to the Grand River Source Protection Plan with support from the Lake Erie Region Source Protection Committee, and in consultation with the MECP and other applicable implementing bodies.

**Prepared by:**

Ilona Feldmann  
Source Protection Program Assistant

**Approved by:**

Martin Keller  
Source Protection Program Manager

**Table 1a – Municipal Proposed Review Tasks – Environmental Monitoring – Grand River**

<b>Update</b>	<b>Municipality</b>	<b>Description of Proposed Review and Task</b>	<b>Applicable Document</b>	<b>Task Completed by</b>	<b>Timeline for Completion</b>
1	Wellington County	<p>Wellington County will review environmental monitoring data to evaluate potential or existing Issues identified at municipal drinking water wells. This review may result in an update to content and mapping in the AR and SPP.</p> <p>The County may consider increased water quality monitoring at municipal wells to aid in the review and evaluation of Issues.</p>	AR and SPP	<p>Completion of technical work: Wellington County</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Review: November 2024
2	Wellington County	<p>The current intrinsic vulnerability layer used for Wellington County is raster data. GRCA will aid Wellington County in smoothing (vector data) the intrinsic vulnerability GIS layer.</p> <p>Updates to the vulnerability layer for the Township of Centre Wellington and Guelph/Eramosa areas will be completed as part of the current Section 34 update. However, the intrinsic vulnerability for the remaining areas within Wellington County will be updated as part of the Section 36 update.</p>	AR and SPP	<p>Completion of technical work: Lake Erie Source Protection Region and Wellington County</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2024
3	The City of Guelph	<p>The City of Guelph is in the process of installing Sentry Wells to obtain a better understanding of contaminant fate and transport for multiple sources of Trichloroethylene (TCE) in the area. Analysis of TCE data as part of this study may be used to redefine the TCE Issue Contributing Area for the City’s municipal supply wells.</p>	AR and SPP	<p>Completion of technical work: City of Guelph</p> <p>Update of AR and SPP: Lake Erie Source Protection Region</p>	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
4	The City of Guelph	In the City of Guelph, several changes to the landscape have occurred since the delineation of the Nitrate Issue Contributing Area (ICA). The current ICA extends into the County of Wellington. The City will undertake a study to use new information on land use activities (specifically in the Carter Wellfield area) to potentially redefine the Nitrate ICA.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
5	The City of Guelph	The Clair Maltby Secondary Plan may drive changes to the Guelph-Guelph/Eramosa (GGET) Tier 3 water budget model. As part of the Clair Maltby secondary plan a three-year baseline monitoring study has been undertaken, with continued monitoring to occur during development of the area. The focus of the study is on shallow groundwater features, which may provide valuable data that can be used to update data gaps in the GGET Tier 3 model. If the GGET Tier 3 model is updated, mapping and content in the AR and SPP will be revised.	AR and SPP	Completion of technical work: City of Guelph  Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
6	The City of Guelph	The City of Guelph retained a consultant to evaluate the use of the MOECC's "Alternative Approach" method. The primary objective of this study is to undertake an assessment of the risk to municipal drinking water systems from the application of road salt, based on scope of work as outlined in the updated "Alternative Approach" (MOECC, March 2017). The City of Guelph will review the results of the Alternative Approach Study and assess the need to update the sodium and chloride triggers for an "Issue". The City continues to monitor sodium and chloride concentrations and will review data on an ongoing basis. This review may result in an update to content and mapping in the AR and SPP.	AR and SPP	Completion of technical work: City of Guelph Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2022
7	The Regional Municipality of Waterloo	The Regional Municipality of Waterloo (RMOW) will review results of environmental monitoring programs and assess water quality parameters of concern for potential new and existing Issues. This review may result in an update to content and mapping in the AR and SPP.	AR and SPP	Completion of technical work: Region of Waterloo Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

**Table 1b – Municipal Proposed Review Tasks – Growth and Infrastructure – Grand River**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
--------	--------------	-----------------------------------------	---------------------	-------------------	-------------------------

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
8	Dufferin County (The Town of Orangeville)	The Town of Orangeville plans to bring a new water supply well online in the next two years that will be located within Amaranth Township. The new water supply system will require updates to WHPA delineations, vulnerability scoring, and threats within the AR. Mapping in the SPP will be revised accordingly.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2021
9	Wellington County (Township Centre Wellington)	Water Supply Master Plan completed in 2019. Exploratory drilling program started in 2019 and new wells are expected to be tested and, if successful, brought online between 2020 and 2025. The exact number of new wells is unknown at this time. If new wells are brought online updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024 or greater
10	Wellington County (Erin)	An exploratory drilling program for new supply wells is underway in the Town of Erin. At this time, it is likely that the new wells will be located in the CTC Source Protection Region. However, some locations are close to the Grand River Watershed boundary and it is possible the WHPAs may extend into the Lake Erie Source Protection Region. AR and SPP mapping may need to be updated with data provided by CTC.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
11	Wellington County	Wellington County is aware of technical work being completed for new quality and quantity WHPAs for Halton (Acton) that may extend into the County and Grand River Watershed. AR and SPP mapping would be updated with data provided by CTC.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
12	Regional Municipality of Waterloo	The Region of Waterloo will complete technical work to update WHPAs and vulnerability scoring for new wells (Cambridge East, Waterloo and Blair Road). This work may be completed within one to 4 years. Updates may require a Section 34 update if work is complete before Section 36 update.	AR and SPP	Completion of technical work: Region of Waterloo Update of AR and SPP: Lake Erie Source Protection Region and Region of Waterloo	Technical work: November 2020
13	City of Hamilton	Technical work is being completed for new quality WHPAs for the Freelon supply wells (City of Hamilton) that may extend into Wellington County within the Grand River Watershed. AR and SPP mapping may need to be updated with data provided by Halton Hamilton Source Protection Region.	AR and SPP	Completion of technical work: Consultant Update of AR and SPP: Lake Erie Source Protection Region	Technical work: November 2020

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
14	City of Brantford	The City of Brantford has recently acquired land from Brant County on the northern and southern borders. The northern side has no municipal servicing, since all properties are on private wells and septic systems and will over time be serviced as needed. However, the southern end is currently serviced by Brant County and the City of Brantford is negotiating an extension of this agreement to 2025. Updates to the serviced areas mapping in the AR will be required.	AR	Update of AR: Lake Erie Source Protection Region	a) agreement extension not approved: November 2020 b) agreement extension approved: November 2024

**Table 1c – Municipal Proposed Review Tasks – Policy Effectiveness – Grand River**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
15	Wellington County	Wellington County to review all policies included in the five (5) source protection plans covering the County, determine effectiveness and consistency, and propose possible changes (including DNAPL, pipeline threats, NMA PI policies, dual prohibition policies, Nitrate ICA policies, etc.). Updates to policies in SPP may lead to changes in threats numbers in the AR.	AR and SPP	Policy Review: Wellington County Update of AR and SPP: Lake Erie Source Protection Region	Policy Review: November 2024
16	City of Guelph	Optimization of road salt application– update policies to increase frequency in monitoring of chloride and sodium, policies to improve plowing and salting practices, and education and outreach policies.	SPP	Policy Updates: City of Guelph Update to SPP: Lake Erie Source Protection Region	Policy Text: November 2022

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
17	City of Guelph	City of Guelph would like to enact a bylaw to request information on all geothermal installations within the WHPAs. Geothermal installations may be considered transport pathways. If geothermal installations are found to be transport pathways then vulnerability scoring will be updated in the AR, which could result in additional threats. Additionally, updates to Source Protection Plan mapping may be required.	AR and SPP	Technical Review and Policy: City of Guelph Update to AR and SPP: Lake Erie Source Protection Region	Policy Update: November 2021
18	Regional Municipality of Waterloo	The City is considering revisions to policy CG-NB-1.13 as the Grand River SPA no longer receives funding from the province for research and monitoring into sources of contaminants for Issues at municipal supply wells. Consider revising text to be directed at the City only.	SPP	Policy Review: Regional Municipality of Waterloo Update to SPP: Lake Erie Source Protection Region	Policy Review: November 2024
19	City of Hamilton	The City of Hamilton is planning to review all policies to determine effectiveness over time and propose possible changes. For example, review DNAPL policies keeping in mind the option of instituting a limit, E&O and RMP. Updates to policy content in SPP.	SPP	Policy Review: City of Hamilton Update to SPP: Lake Erie Source Protection Region	Policy Review: November 2024
20	City of Brantford	The City of Brantford recently proposed a policy to eliminate a gap in managing significant drinking water threats from storm water management facilities (SWMFs) that do not require a MECP Environmental Compliance Approval. The policy will ensure that existing and/or future activities that pose or would pose a significant drinking water threat will be managed through a Risk Management Plan (RMP). Updates to policy content in SPP.	SPP	Policy Update: City of Brantford Update to SPP: Lake Erie Source Protection Region	Policy Update: November 2020

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
21	City of Brantford	<p>A newly proposed to eliminate a gap in managing significant drinking water threats from storm water management facilities (SWMFs) that do not require a MECP Environmental Compliance Approval. The policy will ensure that existing and future activities that pose or would pose a significant drinking water threat will be managed by way of a Risk Management Plan (RMP).</p> <p>Addition of new Source Protection Policy: Sewage System or Sewage Works - Combined Sewer Discharge from a Stormwater Outlet to Surface Water. Applicable in IPZ-1 to 3. Updates to policy content in SPP.</p>	SPP	<p>Policy Update: City of Brantford</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2020
22	City of Brantford	<p>Existing and future application of road salt hasn't been previously addressed in Brantford's SPP. IPZ-1 is the only area that has an impervious surface area related to road salt between 8 and 80% and which might pose a SDWT as per Reference #92 and 93 of the Tables of Circumstances. A new policy needs to be created.</p> <p>The handling and storage of fuel activity has been amended in the Tables of Circumstances to include circumstances where this activity may pose a SDWT. Amendments needs to be made to existing fuel storage and a new policy must be created.</p>	SPP	<p>Policy Update: City of Brantford</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	Policy Update: November 2020

**Table 1d – Municipal Proposed Review Tasks – Implementation Challenges – Grand River**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
23	City of Guelph	<p>Concerns regarding EPA vs. CWA limitations for condition sites and regulatory gaps as identified by the Environmental Commissioner of Ontario (ECO). Quote from ECO: "The Clean Water Act gives the perception that the law addresses conditions that are drinking water threats, without actually doing so. Source protection committees have no substantial tools at their disposal to protect drinking water sources from historical contamination. Municipalities, which bear the onus of providing safe drinking water to their residents, similarly have no such powers. Municipalities very rarely have the finances to control or remediate contamination themselves, nor do they have any authority to force property owners to remediate. They can only ask the province to act."</p> <p>The Smallfield Wellfield continues to be adversely impacted by TCE based on recent water quality monitoring in the supply well. Additional investigations of privately-owned contaminated sites in area of Smallfield Well are required. The City of Guelph will update conditions site policies to encourage MECP actions on Conditions sites.</p>	SPP	<p>Policy Updates: City of Guelph</p> <p>Update to SPP: Lake Erie Source Protection Region</p>	<p>Policy Update: November 2024</p>

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
24	Regional Municipality of Waterloo	Current Section 34 update includes policy revisions to address implementation challenges, including the alignment of storm water management and salt application/storage policies and tools. Policy changes may be considered as part of broader Section 36 work resulting from new WHPA delineations or Tier 3 update.	SPP	Revised Policy: Regional Municipality of Waterloo  Update to SPP: Lake Erie Source Protection Region	Revised Policy: November 2024
25	City of Hamilton	The City of Hamilton is planning to review all prescribed instrument policy wording to identify gaps (i.e. NMA policies). Updates to policy content in SPP may be required.	SPP	Revised Policy: City of Hamilton  Update to SPP: Lake Erie Source Protection Region	Policy Update: November 2024

**Table 1e – Municipal Proposed Review Tasks – Other – Grand River**

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
26	Wellington County	Updates to Mapleton and Wellington North WHPAs (quality) should be considered once the Tier 3 modeling and Erin WHPA changes are complete. It is proposed that the Township of Centre Wellington Tier 3 model be extended to include both areas, possibly with new data provided through the proposed OGS Mount Forest - Elmira project and the new WHPAs modeled.  Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
27	Wellington County	Consider updating Managed Lands, Livestock Density and Impervious Surfaces with most current aerial photography. Currently based on outdated 2010 data. If completing updates the most up to date aerial photography will be used. Mapping and content in the AR would need to be revised.	AR	Completion of technical work: Lake Erie Source Protection Region and Wellington County  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
28	Regional Municipality of Waterloo	The Region plans to update both the Regional and Cambridge Tier 3 groundwater model. Work would include a stress assessment, climate change assessment (water quantity), and updated mapping (WHPAs and vulnerability). Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Regional Municipality of Waterloo  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2024
2	Oxford County	Oxford County is planning to update WHPA delineations for wells 1, 2A and 3 (Drumbo water system) and wells 1 and 2 (Plattsville water system). The current WHPA delineations were all completed using the 2001 groundwater model. Given the advancements in modeling (e.g. Tier 3 Water Budget studies), Oxford intends to remodel these WHPAs. Updates to WHPA delineations, vulnerability scoring, and threats within the AR will be required along with updates to SPP mapping.	AR and SPP	Completion of technical work: Consultant  Update to AR and SPP: Lake Erie Source Protection Region	Technical work: November 2022

Update	Municipality	Description of Proposed Review and Task	Applicable Document	Task Completed by	Timeline for Completion
30	All municipalities	Any identified transport pathways that Lake Erie Region staff become aware of in accordance with section 27 of the General Regulation (287/07) will be considered for inclusion in the AR and SPP. The AR updates may include updated WHPA/IPZ vulnerable area mapping and revised vulnerability scores, which will be used to determine and include identification of areas where an activity is or would be a significant drinking water threat. The SPP policy applicability maps would also be updated to reflect changes to the AR.	AR and SPP	Review of identified potential transport pathways and update of AR and SPP: Lake Erie Source Protection Region	Review of transport pathways: November 2023

**Table 2 – Proposed Review Tasks – Technical Rule Changes – Grand River**

Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Sewage/septic systems and holding tanks	<p>There are sodium or chloride ICAs in the Region of Waterloo with potential septic systems or holding tanks as a contributing activity.</p> <p>The Region of Waterloo will review the sodium and chloride ICAs for potential septic systems or holding tanks as a contributing activity.</p>	Region of Waterloo	AR	<p>Completion of review: Region of Waterloo</p> <p>Update of AR: Lake Erie Source Protection Region</p>	Review: November 2024

Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Changes to above grade fuel handling and storage in a WHPA-E or IPZ	<p>Intake Protection Zones (IPZs) in the Region of Waterloo, the County of Wellington (City of Guelph Eramosa River intake) and Haldimand County have vulnerability scores of nine or higher where above-grade fuel storage could be a significant threat.</p> <p>The Region of Waterloo, City of Guelph, Wellington County, and Haldimand County will review fuel storage activities, including on site diesel tanks for standby power at the water treatment plants, gas stations, and heating fuel tanks in consideration of the changes to the provincial threats tables and circumstances.</p>	Region of Waterloo, City of Guelph/Wellington County, Haldimand County	AR	<p>Completion of review: Region of Waterloo, City of Guelph, Wellington County, Haldimand County</p> <p>Update of AR: Lake Erie Source Protection Region</p>	Review: November 2024
Phase II Rules Project	<p>Through the preliminary analysis, anticipated changes resulting from the MECP's Phase II Rule Project have been identified that will likely need to be reflected on when updating the AR and SPP. The complete list of changes to the rules has not been identified to this point, nor has the timeline for completion of the Project.</p> <p>Lake Erie Region staff will work closely with municipalities and the Source Protection Committee to ensure that the new rules are reviewed and considered for incorporation in the AR and SPP once they are finalized and become available.</p>	All municipalities	AR and SPP	Review of Phase II Rules Project: Lake Erie Source Protection Region	Review: Within two years from the time the Phase II Rules Project becomes available

Rule Change	Considerations	Applicable Municipality	Applicable Document	Task Completed by	Timeline for Completion of Task
Climate Change	<p>Conservation Ontario's toll/guidance for incorporating climate change into water quality risk assessments may result in changes to the assessment that could be considered in updates to the AR and SPP.</p> <p>Lake Erie Region staff will work closely with municipalities and the Source Protection Committee to ensure that the tool/guidance is reviewed and considered for incorporation in the AR and SPP if and when it is finalized and become available.</p>	All municipalities	AR and SPP	Review of tool/guidance: Lake Erie Source Protection Region	Review: Within two years from the time the tool/guidance becomes available

# Grand River Source Protection Authority

**Report number:** SPA-11-19-02

**Date:** November 22, 2019

**To:** Members of the Grand River Source Protection Authority

**Subject:** Source Protection Committee Representative Appointments

---

## **Recommendation:**

THAT the Grand River Source Protection Authority re-appoint Lloyd Perrin as a municipal representative on the Lake Erie Region Source Protection Committee for a four-year term, as recommended by the Lake Erie Source Protection Region Management Committee;

THAT the Grand River Source Protection Authority re-appoint Jim Kirchin as a public interest representative on the Lake Erie Region Source Protection Committee for a four-year term, as recommended by the Lake Erie Source Protection Region Management Committee;

AND THAT the Grand River Source Protection Authority re-appoint Alan Dale as a public interest representative on the Lake Erie Region Source Protection Committee for a four-year term, as recommended by the Lake Erie Source Protection Region Management Committee.

## **Report:**

The *Clean Water Act, 2006* requires the lead Source Protection Authority to appoint the members of the Source Protection Committee. For the Lake Erie Source Protection Region, the Grand River Source Protection Authority is the Lead Authority, and as such, is responsible for the appointment of the Source Protection Committee members. The Lake Erie Region Source Protection Committee is currently comprised of 24 members, seven of whom represent the 51 upper, lower and single-tier municipalities in the Lake Erie Source Protection Region and seven of whom represent the public interest (O. Reg. 288/07 s.2). Lloyd Perrin's municipal seat and Alan Dale's and Jim Kirchin's public interest seats expired this fall leaving three vacancies on the committee.

In July 2019, the process to jointly nominate a municipal representative for group #7 (County of Elgin, Township of Malahide, Municipality of Bayham, Town of Aylmer, Municipality of Central Elgin, Township of Southwold, City of St. Thomas, Middlesex County, Township of Thames Centre, Township of Middlesex Centre and the City of London), was initiated. All municipalities have jointly nominated L. Perrin for another term on the committee. The lead Source Protection Authority must appoint the nomination jointly submitted by the municipalities in the group as per O. Reg. 288/07 s.3 (3).

Lake Erie Region staff reached out to A. Dale and J. Kirchin prior to the expiry of their terms to gauge their interest in remaining on the Source Protection Committee. Both members expressed that they would like to remain on the committee for another term. The vacancies were advertised on Lake Erie Region's website in accordance with O.

Reg. 288/07 s.4. Advertisement began on October 7 and ended on November 6, 2019.  
No applications were received.

The Lake Erie Region Management Committee by consensus recommended that the Grand River Source Protection Authority re-appoint L. Perrin as the municipal representative for group #7, and A. Dale and J. Kirchin as public interest representatives to the Source Protection Committee for four-year terms of appointment.

**Prepared by:**

Ilona Feldmann  
Source Protection Program Assistant

**Approved by:**

Martin Keller  
Source Protection Program Manager