



Subject: Source Protection Plan Pre-Consultation, Section 36 Updates

Deadline for Comments: October 4, 2021

Send comments to email: sourceprotection@hrca.on.ca

On behalf of the Source Protection Committee for the Halton-Hamilton Source Protection Region, it is my pleasure to provide **proposed updates to the assessment reports and source protection plan** that result from a review carried out under section 36 of the *Clean Water Act, 2006*. These proposed updates are being provided as part of the **pre-consultation** process required by Regulation 287/07 of the Act, where the Committee must consult with bodies responsible for the implementation of source protection plan policies, before a public consultation period.

Ontario's *Clean Water Act, 2006* provides for a community initiative where municipalities, residents, business owners, provincial agencies, conservation authorities and others work together to protect existing and future municipal drinking water sources. Under the Act, Conservation Halton and the Hamilton Conservation Authority together form the Halton-Hamilton Source Protection Region that supports the multi-stakeholder Committee.

Source Protection Region staff have been leading comprehensive updates to the science and policies over the past two years, working closely with the Committee, municipalities and others. The proposed updates to the source protection plan and assessment reports include:

- Updated drinking water vulnerable areas, vulnerability scores and potential significant threats.
- Updated policy format and updated and new policies of the source protection plan.

See further below for a summary of the proposed updates. Comments received as part of the pre-consultation process will be reviewed by the Source Protection Region staff and the Committee, and possible changes made to the assessment reports and source protection plan policies prior to public consultation.

Clean and tracked-changes versions of the proposed updated source protection plan, explanatory document and assessment reports are available at: <https://bit.ly/38BmKA6>

These documents are for pre-consultation only and not for public sharing.

Source Protection Region staff are available for virtual meetings during the pre-consultation process if necessary. Should questions arise, please contact **Chitra Gowda, Senior Manager, Watershed Planning and Source Protection** by email at sourceprotection@hrca.on.ca or phone: 905-336-1158 ext. 2237.

Sincerely,

Robert Edmondson, Chair

Source Protection Committee for the Halton-Hamilton Source Protection Region

cc:

- Mary Wooding, Liaison Officer, Ministry of the Environment, Conservation and Parks
- Erin Harkins, Program Analyst, Ministry of the Environment, Conservation and Parks
- Barbara Veale, Director, Planning and Watershed Management, Conservation Halton
- Scott Peck, Deputy Chief Administrative Officer/Director, Watershed Planning & Engineering, Hamilton Conservation Authority.

Date of notice: September 3, 2021

Deadline for comments: October 4, 2021.

Halton-Hamilton Source Protection Region Comprehensive Updates to the Source Protection Plan (including Assessment Reports) Per Section 36 of the Clean Water Act

Background

The Clean Water Act, 2006 enables source protection plans and assessment reports to be revised using one of four methods listed below.

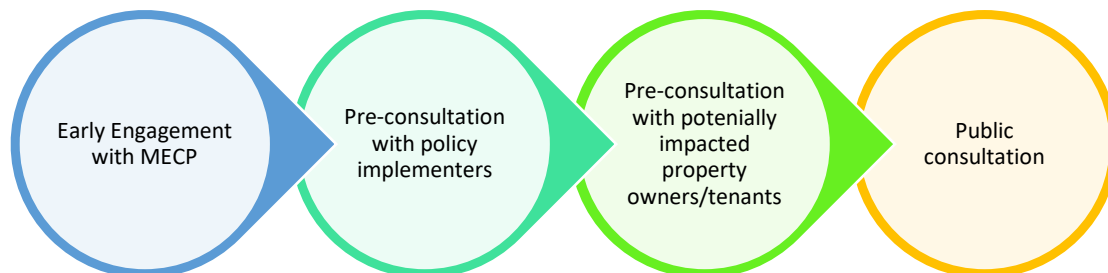
- a locally initiated amendment under section 34;
- a Minister ordered amendment under section 35;
- an update resulting from the review under section 36; or
- an amendment under section 51 of O. Reg. 287/07 for minor/administrative revisions.

Conservation Halton and the Hamilton Region Conservation Authority are the local Source Protection Authorities (SPAs) under the Clean Water Act and are grouped into one source water protection region known as the Halton-Hamilton Source Protection Region (HHSPR).

Upon approval of the first source protection plan for the Halton-Hamilton Source Protection Region (HHSPR) on December 31, 2015, the Minister of the Ministry of the Environment, Conservation and Parks (MECP) issued an order requiring the subsequent submission of a workplan by November 30, 2018 to review source protection plans per Section 36 of the Clean Water Act. These workplans were required across Ontario, leading to the second round of source protection planning across the province.

The HHSPR workplan includes tasks to review both science and policies, to support the continued protection of drinking water sources. It is available at: <https://bit.ly/3k6pyu0>. The HHSPR workplan was reviewed by MECP, resulting in the Minister issuing an amended order in March 2019 pursuant to Section 36 of the Clean Water Act. This amended order specifies the mandatory items from the workplan.

The early engagement and consultation steps are shown below.



The key proposed updates include:

Assessment Reports

- Updated vulnerability scores for the Wellhead Protection Areas of the Campbellville, Kelso, Walkers Line, Carlisle and Greensville municipal drinking water systems (and related background technical studies)
- Updated Wellhead Protection Areas delineation and vulnerability scores for the Freerton municipal drinking water system (and related background technical studies)
- Updated mapping for managed lands, livestock density and impervious surfaces
- Updated potential significant threat activity counts
- Updated Intake Protection Zones and vulnerability scores for the Burlington, Burloak and Oakville municipal drinking water systems and updates scores for the Woodward municipal drinking water system (and related background technical studies)
- Updates to align with the 2017 Technical Rules, including adding the “establishment and operation of a liquid hydrocarbon pipeline” as a prescribed threat (and removed from descriptions as a local threat) and conducting a threats assessment; removal of sodium and chloride references from the circumstances related to on-site sewage systems and holding tanks, etc.

Source Protection Plan

- Updated policy format for the source protection plan.
- Updated and new policies of the source protection plan to address implementation challenges, reflect the updated list of prescribed drinking water threat activities under the *Clean Water Act, 2006*, and address early comments received in July 2021 from the Ministry of the Environment, Conservation and Parks and municipal staff.

The clean and tracked-changes versions of the proposed updated source protection plan, explanatory document and assessment reports are lengthy, large size files and are made available at the large file transfer website indicated on page i. The background technical studies are also available at the same webpage. The documents available at the file transfer website are for pre-consultation purposes only and not for public sharing. Change logs are also provided.

A summary of the key updates are provided in this document, and the relevant changes are highlighted in yellow however other changes may be of interest. Numerous other updates were made to enhance the clarity and content of the assessment reports and source protection plan. These include an updated watershed characterization section in both assessment reports (including land use planning and watershed descriptions, and surface water and groundwater monitoring data trends).

ASSESSMENT REPORTS

CHANGE LOG - Section 36 Updates for the Halton Region Assessment Report

Table 1

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
1	Change to document version number, description, date to reflect a S. 36 update	After the cover page; Appendix A page 335
2	Reference to Technical Rules 2009 updated to Technical Rules 2017	Page 5, 295, bibliography
3	Change MOECC to MECP where appropriate, and Environment Canada to Environment and Climate Change Canada	Throughout
4	Land use section minor updates based on new land use map information	Section 2.2.3, page 44
5	Updated PPS and Greenbelt Plan policy numbers and dates	Section 2.2.1, page 33-34
6	Updated Table 2.1 with the most recent population data	Section 2, page 10
7	Description on Hamilton Harbour Area of Concern is updated	Section 3.11, page 80, Section 4 page 97
8	Permit To Take Water (PTTW) information was updated per S. 36 work	Tables 4.3 and 4.4 pages 105 and 106
9	Updated Surface Water Quantity using most recent data and interpretation	Section 4.2.1 page 89-91
10	Adding charts and editing Surface Water Quality section	Section 4.2.2 page 93-95
11	Minor updates to sections 4.3 Groundwater Monitoring,	Section 4.3 page 104
12	Removal of sodium and chloride references from the circumstances related to on-site sewage systems and holding tanks, per the 2017 Technical Rules	Section 4.3 page ,109 Section 7.1.2 page 248-251
13	Updated section 4.3.2 Water quality, added nitrate and chloride concentration charts (4.4 and 4.5) and edited text	Section 4.3.2 page 109-110
14	Updated section 4.5 text and Table 4.1 using September 2020 PTTW database	Section 4.5 page 115-116
15	Updated Groundwater Levels and Flow - minor addition to groundwater flow characterization	Section 4.3.1 page 108
16	The “establishment and operation of a liquid hydrocarbon pipeline” added as a prescribed threat (and removed as a local threat) per the 2017 Technical Rules. Threats were assessed per the Table of Drinking Water Threats	Section 6.1: 192, 198-199, Section 7.2: 252, 254, 270-272, 279-280, 298
17	Lake Ontario IPZ-2 re-delineation and vulnerability reassessment of IPZ-1 and IPZ-2	Section 6.1: 182 – 191, 195 - 198
18	Technical Study: Lake Ontario intake protection zone re-delineation and vulnerability reassessment	This is a separate technical study

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
19	Transport pathway assessment information updated in Section 6.2	Section 6.2, page 207-208
20	Transport pathways assessment in wellhead protection areas per S. 36 work	Section 6.2.3: 227-230
21	Technical Study: Transport pathways assessment in wellhead protection areas	This is a separate technical study
22	Removal of references to vulnerability scoring in significant groundwater recharge areas (SGRAs), per the 2017 Technical Rules	Section 7.3: Table 7.1 page 267, Section 7.5: page 271, Table 7.5 page 283.
23	Updated Section 7.3 Conditions in terms of criteria (using 2017 Technical Rules), sources of data and conditions assessment results	Section 7.3 page 273-276
24	Table 7.2 updated with the most recent threat count	Section 7.4.1 page 277
25	Table 8.2 updated with the most recent threat count	Section 8.4 page 299
26	Updated Appendix B.1 with the newest data	Appendix B.1 page 348
27	HYDAT Station summary table and hydrographs updated/ replaced with the most current data	Appendix B3 page 350-362
28	Groundwater Quality – PGMN Wells was updated with the most recent available data	Appendix B8 page 397 - 401
29	Groundwater Monitoring Network – PGMN Wells table updated	Appendix B6 page 383
30	Updated Appendix B.4 Surface Water Quality	Appendix B.4, page 363-380
31	Groundwater Level data hydrographs updated up to 2020	Appendix B.7 page 385-395
32	Municipal Raw Water Quality update with the most recent data for Halton Region systems	Appendix B.9 page 402-409

Additional changes to the Halton Region Assessment Report from Early Engagement in summer 2021 with Ministry of the Environment, Conservation and Parks (MECP) and others
Table 2

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
1	Updated threat count for the Freelon municipal system based on County of Wellington and the City of Hamilton staff's verification	Table 7.2 and Table 8.2, page 227 and 239, respectively
2	Corrected Burlington intakes depths to 5 meters from water surface based on Stantec Consulting Ltd. 2008 technical studies and confirmed by Halton Region water treatment plant staff in August 2021	Section 4.5.1 page 117; Table 6.2 page 184 and separate Technical Study
3	Replaced Halton OP write-up with text provided by Halton Region	Section 2.2.1, page 49

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
4	Replaced population distribution and density write-up with text provided by Halton Region	Section 2.2.2, page 50
5	Replaced a paragraph with text provided by Halton Region	Section 2.2.3, page 55
6	Updated estimated number of users in Table 4.2 based on the feedback from Halton Region	Table 4.2, page
7	Minor edits to text based on feedback from Halton Region	Section 4.5.1, page 124
8	Text edits on municipal wastewater treatment plants based on feedback provided by Halton Region	Section 4.6.1, page 127
9	Table 4.5 updates on municipal wastewater treatment plants based on feedback from Halton Region	Table 4.5, page 128
10	Lake Ontario vulnerability reassessment of IPZ-1 and IPZ-2 to address MECP early engagement comments and Technical Study: Lake Ontario intake protection zone re-delineation and vulnerability reassessment	Section 6.1: page 182 – 199, Table 7.2 and separate Technical Study
11	Description on DNAPLs enhanced and list of examples corrected from feedback from Wellington Source Water Protection	Section 7.2.1: page 269
12	Updated general information on biosolids treatment in Halton and Hamilton from feedback from Halton Region and City of Hamilton	Section 7, threat: NASM, page 266

CHANGE LOG - Section 36 Updates for the Hamilton Region Assessment Report

Table 3

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
1	Change to document version number, description, date to reflect a S. 36 update	After the cover page, Appendix A page 199
2	Change MOECC to MECP where appropriate and Environment Canada to Environment and Climate Change Canada	Throughout
3	Reference to Technical Rules 2009 updated to Technical Rules 2017	Section 1.2 page 4, Section 8.2 page 176, bibliography, Appendix A page 193
4	Table 2.1 updated with 2016 Census data	Section 2, page 10
5	Changed PPS and Greenbelt Plan policy numbers and dates	Section 2.2.1 page 29
6	Updated Section 4.2.1 Surface Water Quantity using most recent data and interpretation	Section 4.2.1 page 57-59
7	Adding charts and text to Section 4.2.2 Surface Water Quality	Section 4.2.2 page 60-63
8	Minor updates to Section 4.3 Groundwater Monitoring	Section 4.3 page 71
9	Removal of sodium and chloride references from the circumstances related to on-site sewage systems and holding tanks, per the 2017 Technical Rules	Section 4.3.2 page 74, Section 7.1 page 152
10	Updated section 4.3.2 Groundwater quality, added figures 4.6 and 4.7 and edited text	Section 4.3.2 page 74-75
11	Updated section 4.5 Water Use with the 2020 PTTW data	Section 4.5 page 77
12	The “establishment and operation of a liquid hydrocarbon pipeline” added as a prescribed threat (and removed as a local threat) per the 2017 Technical Rules. Threats were assessed per the Table of Drinking Water Threats	Section 6.1: 130-133; Section 7.2: 153-169, 171
13	Transport pathway assessment information updated in Section 6.2	Section 6.2 page 133
14	Updated Section 7.3 Conditions in terms of criteria (using 2017 Technical Rules) and sources of data	Section 6.3 page 169-170
15	Transport pathways assessment in wellhead protection areas per S. 36 work	Section 6.2.3: 144-146
16	Technical Study: Transport pathways assessment in wellhead protection areas	This is a separate technical study provided.
17	Table 7.1 updated with the most recent threat count	Section 7.4.1 page 221
18	Removal of references to vulnerability scoring in significant groundwater recharge areas (SGRAs), per the 2017 Technical Rules	Section 7.5: Table 7.3 page 172
19	Appendix B.1 edits	Appendix B.1 page 212

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
20	HYDAT station summary table and hydrographs updated with the latest data.	Appendix B.3 page 214-2026
21	PGMN groundwater level hydrographs updated with the most recent available data.	Appendix B.7 page 239-247
22	Groundwater Quality – PGMN Wells updated with the most recent data available.	Appendix B.8 page 248-249
23	Municipal Raw Water Quality updated	Appendix B.9 page 250
24	PWQMN Surface Water Quality table update	Appendix B.4 page 227-236

Additional changes to the Hamilton Region Assessment Report from Early Engagement in summer 2021 with Ministry of the Environment, Conservation and Parks (MECP) and others
Table 4

No.	Nature of the Change (Proposed Amendment)	Sections (page numbers are approximate)
1	Lake Ontario vulnerability reassessment of IPZ-1 and IPZ-2 to address MECP early engagement comments and Technical Study: Lake Ontario intake protection zone re-delineation and vulnerability reassessment	Section 6.1: page 159 – 168; Table 7.3
2	Description on DNAPLs enhanced and list of examples corrected from feedback from Wellington Source Water Protection	Section 7.2: page 214
3	Updated general information on biosolids treatment in Hamilton from feedback from City of Hamilton	Section 7, threat: NASM, page 210

Proposed Updated Wellhead Protection Area (WHPA) Vulnerability Scores

A comprehensive technical study was carried out in 2021 by Conservation Authority staff: Technical Report on the Transport Pathway Assessment for the Halton-Hamilton Source Protection Region, August 30, 2021. A consistent methodology was applied to all WHPA of the source protection region. This led to the identification of a few contaminant transport pathways in some of the WHPAs and the removal of two previously identified transport pathways in one WHPA. Under Ontario's *Clean Water Act, 2006*, a transport pathway to groundwater sources of municipal drinking water is a human-made feature that increases the vulnerability of the sources. Transport pathways bypass the natural protection provided by soil and rock layers and natural processes, resulting in a greater risk of contamination of our water sources. Applicable source protection plan policies would apply.

a) Campbellville drinking water system

In parts of WHPA-B and C, the vulnerability scores were increased as a result of identifying a well transport pathway and delineating an area of influence around it. The Figure 1 shows the updated vulnerability scores (see the Transport Pathway Area of Influence). Based on the land uses, there are **no** policy implications from the identification of transport pathways.

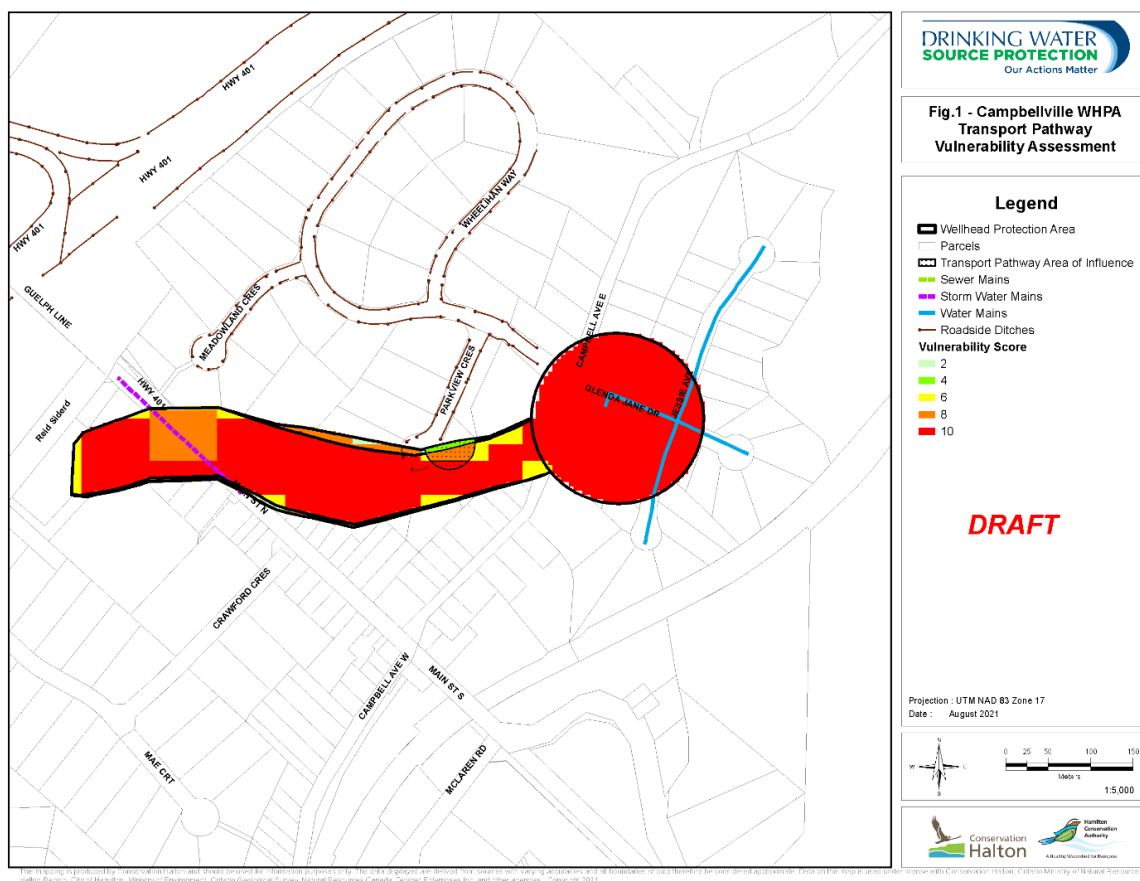


Figure 1: Campbellville Transport Pathway Vulnerability Assessment

b) Kelso drinking water system

In part of WHPA-B, the vulnerability score was increased as a result of identifying a well transport pathway and delineating an area of influence around it. The Figure 2 shows the updated vulnerability scores (see the Transport Pathway Area of Influence). The potential policy implication as a result of technical work is summarized further below in the significant threats counts section.

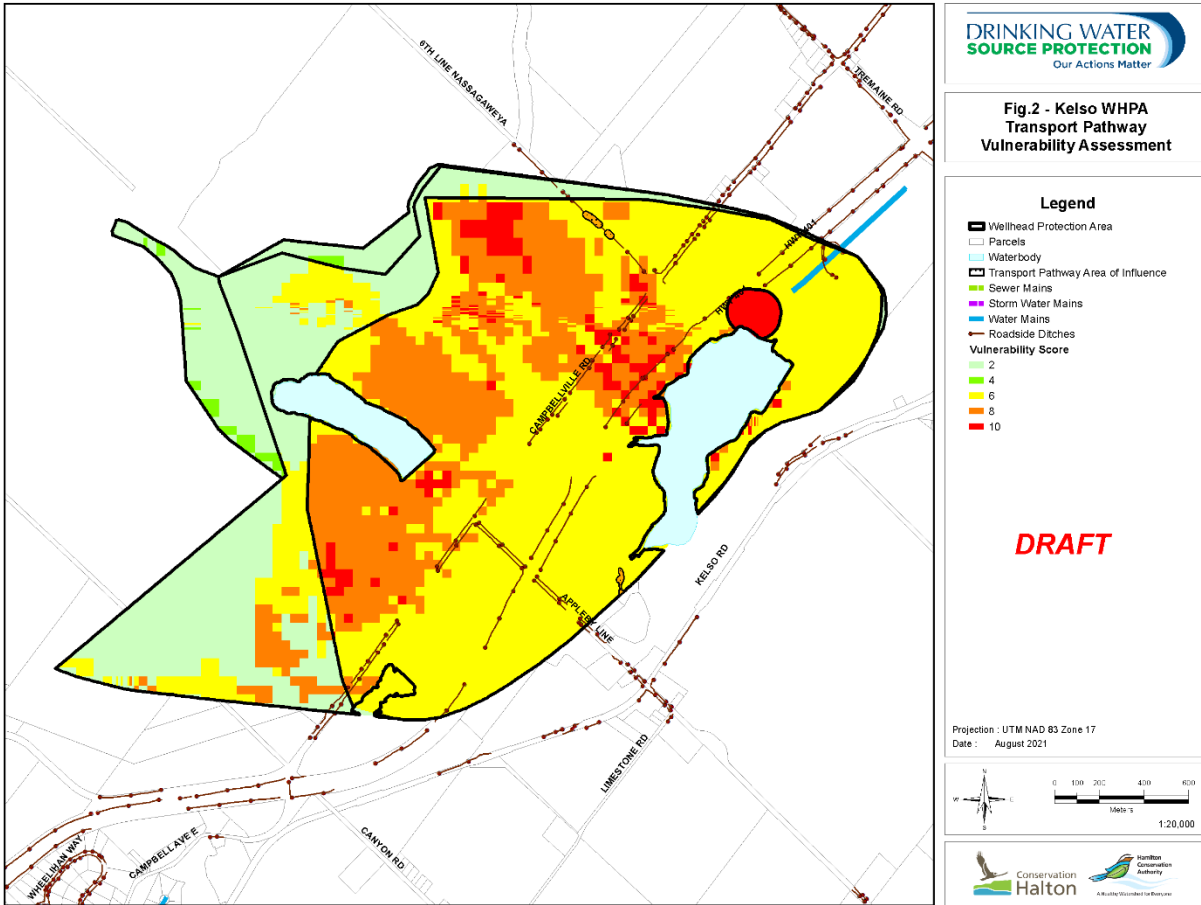


Figure 2: Kelso Transport Pathway Vulnerability Assessment

c) Walkers Line drinking water system

From the transport pathways identification work carried out, vulnerability scores of parts of WHPA-B, C and D were increased. The Figure 3 shows the updated vulnerability scores (see the Transport Pathway Area of Influence). The potential policy implication as a result of technical work is summarized further below in the significant threats counts section.

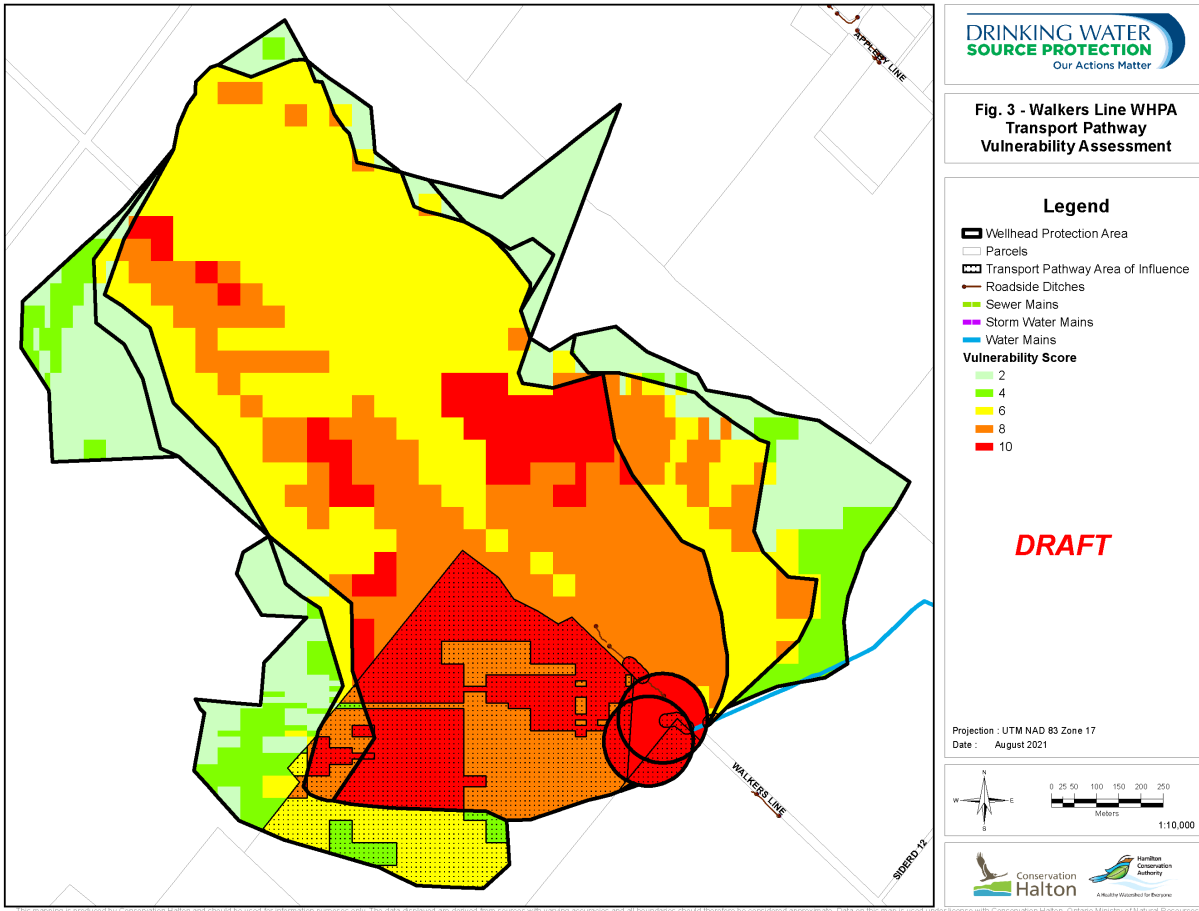


Figure 3: Walkers Line Transport Pathway Vulnerability Assessment

d) Greenville drinking water system

Due to the recent enhanced analysis applying a consistent methodology across all WHPAs of the source protection region, two previously identified wells transport pathways were removed from consideration within the WHPA-B. The vulnerability score in a part of WHPA-B is decreased from 10 to 8 accordingly near Birch Crescent. These wells were previously identified as transport pathways in 2017. Figure 4 shows the updated vulnerability scores. An additional transport pathway was identified in WHPA-A which is already at the highest possible vulnerability score and therefore there are no policy implications within the WHPA-A. The potential policy implication as a result of technical work is summarized further below in the significant threats counts section.

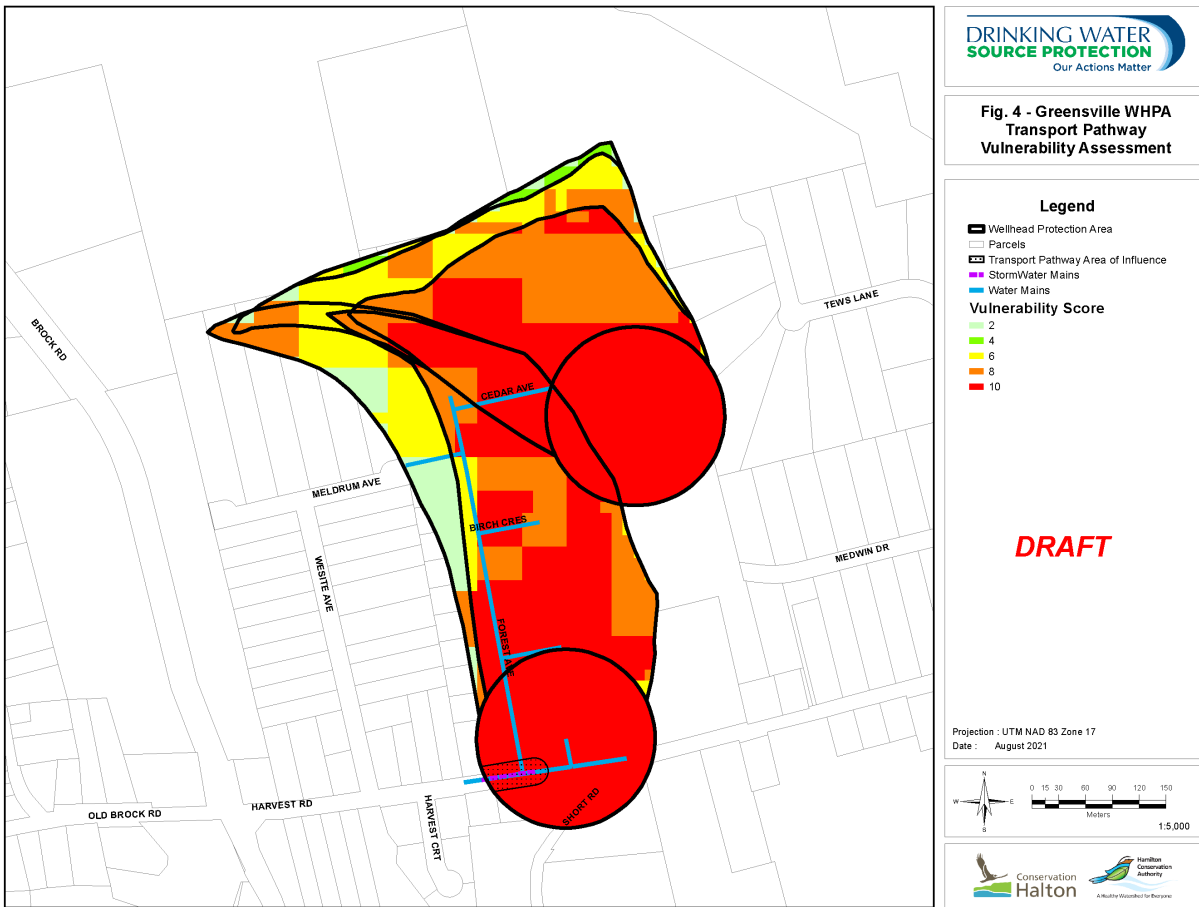


Figure 4: Greenville Transport Pathway Vulnerability Assessment

e) Carlisle drinking water system

The vulnerability score increased in parts of WHPA-B and WHPA-C as a result of the transport pathways analysis. The Figure 5 shows the updated vulnerability scores (see the Transport Pathway Area of Influence). The potential policy implication as a result of technical work is summarized further below in the significant threats counts section.

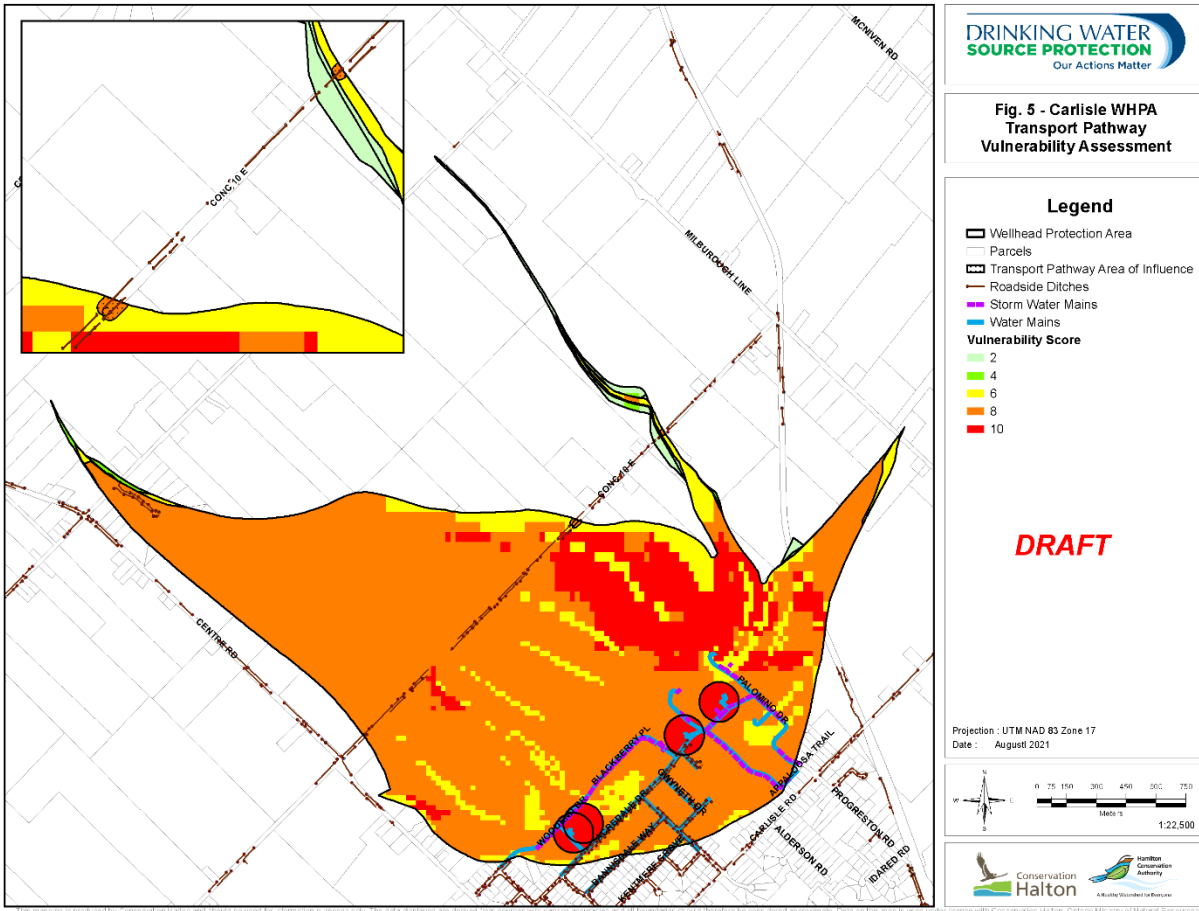


Figure 5: Carlisle Transport Pathway Vulnerability Assessment

f) Freelon drinking water system

The Freelon WHPA was re-delineated and the vulnerability re-assessed as described in the next section. Transport pathways were included in the analysis, applying the same methodology as the other WHPAs.

Proposed Updated Freelon Wellhead Protection Area (WHPA) Delineation and Vulnerability Scores

The Freelon drinking water system is owned by the City of Hamilton and has two wells FDF01 and FDF03. The pumping rate of one of the wells is being increased, to provide operational flexibility and redundancy. The increase is within the amended Permit to Take Water limit. The City of Hamilton retained EarthFx Inc. consulting services to undertake the required WHPA re-delineation technical study.

The draft technical study was commented upon by Halton-Hamilton Source Protection Region staff, MECP and Wellington Source Water Protection during 2020-2021. EarthFx Inc. addressed the comments and finalized the proposed WHPA delineation, which is larger than the current delineation and has a larger area of increased vulnerability scores. In the re-delineated WHPA of well FDF01 (south, smaller WHPA), there are 264 properties, compared to 173 properties from the current approved assessment report. In the re-delineated WHPA of well FDF03, there are 161 properties compared to 145 properties from the current approved assessment report. "Current" refers to the Assessment Reports approved in 2015, and amended in 2017 for edits unrelated to the Freelon WHPA delineation and vulnerability scores.

A number of transport pathways were identified in areas of WHPA-A and WHPA-B of the well FDF01; however, the entire WHPA-A and most of these areas in the WHPA-B have a maximum vulnerability score of 10 with no possibility of further increase. Vulnerability in a few small areas with medium vulnerability was increased to high and the vulnerability score changed accordingly. In the WHPA-A, B, C and D of well FDF03, transport pathways were identified and vulnerability scores increased. See Figure 6 for the re-delineated Freelon WHPA with updated vulnerability scores. The potential policy implication as a result of technical work is summarized further below in the significant threats counts section.

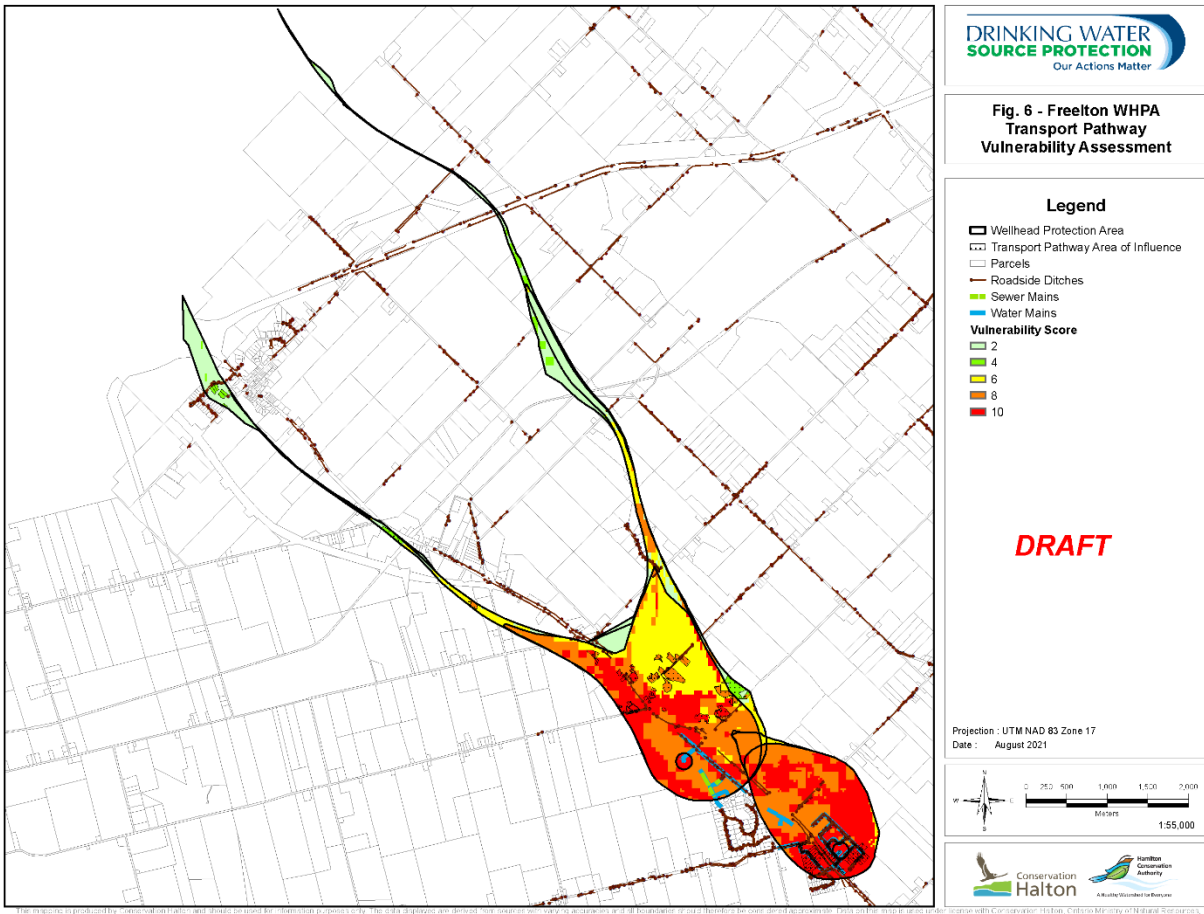


Figure 6: Updated Freelon Wellhead Protection Area with Transport Pathways Assessment

Proposed Updated Managed Lands and Livestock Density Mapping

Managed lands are defined by the *Clean Water Act, 2006* Technical Rules (overarching technical framework) to include lands to which agricultural source material, commercial fertilizer, or non-agricultural source material is applied. Livestock density is an estimate of the number of farm animals on a property, and is equated to nutrient units per acre. The managed lands and livestock density calculations are used to identify potential risks from agricultural activities. The methodology used in the first approved Assessment Report was followed to develop the maps, with the following updates: 2019 Ortho photography, GIS symbology per MECP guidance, and other minor updates such as logos and dates. A summary of changes from the approved assessment reports are provided below, along with Figures 7-9 showing the updated maps.

In the WHPA of Greensville well FDG02, the managed lands percent increased but there are no policy implications based on the land use. In the Kelso WHPA and the Carlisle WHPA, the livestock density increased and the potential policy implication as a result of technical work is summarized further below in the significant threats counts section.

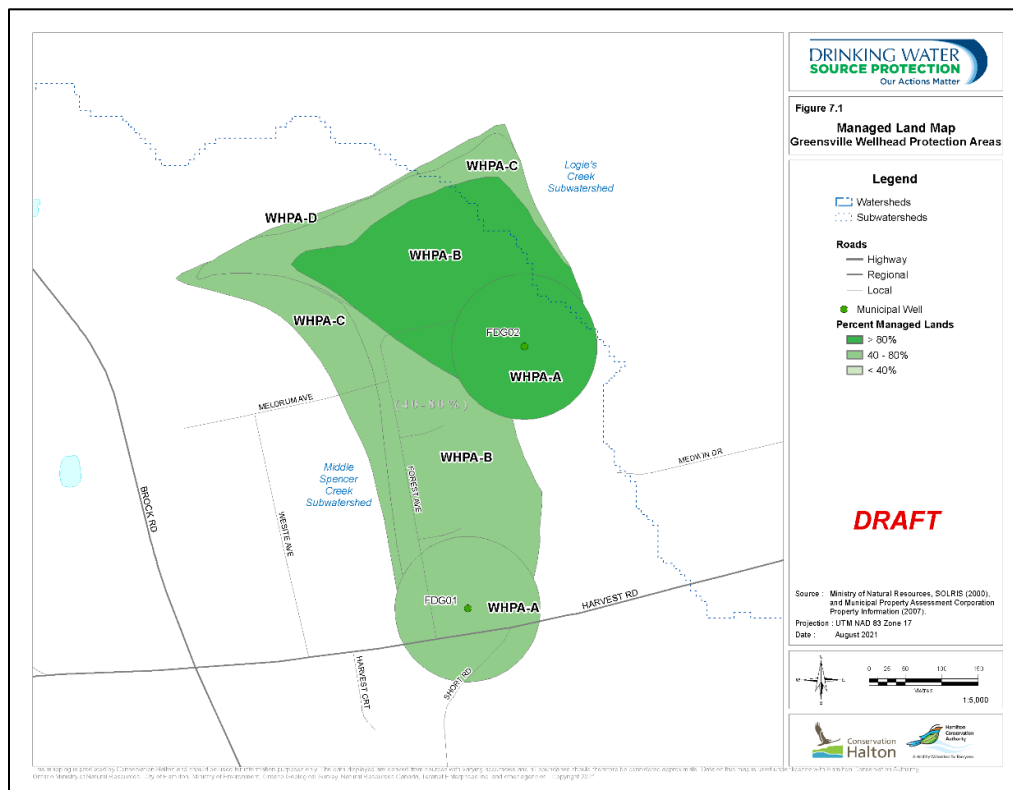


Figure 7: Greensville Managed Lands Map (Figure 7.1 of the Hamilton Assessment Report)

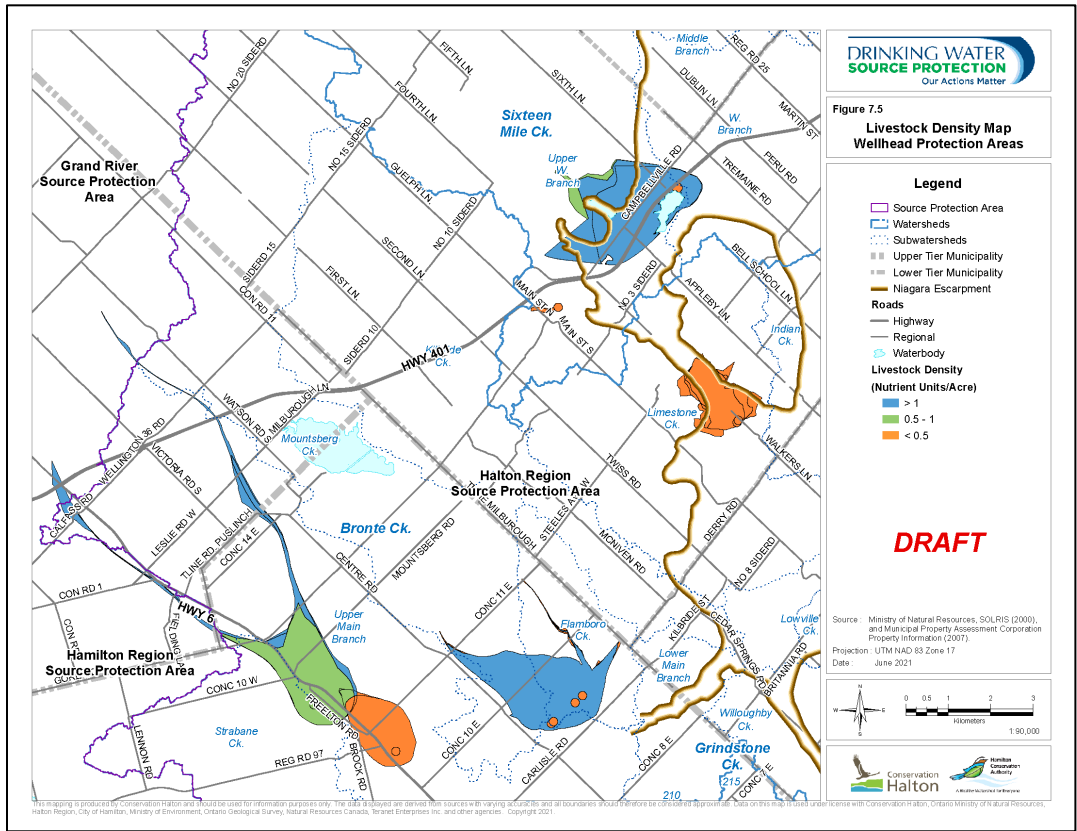


Figure 8: Halton Region Source Protection Area WHPA Livestock Density Map (Figure 7.5 of the Halton Assessment Report; Kelso WHPA overlaps Campbellville Road and Sixth Ln.; Carlisle WHPA overlaps Conc. 10 E)

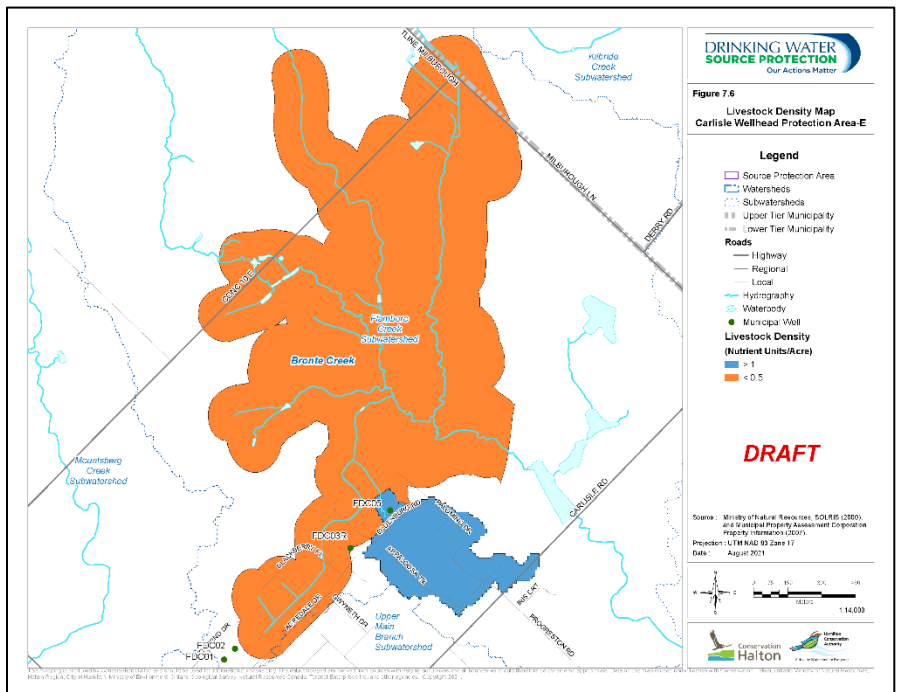


Figure 9: Carlisle WHPA-E Livestock Density Map (Figure 7.6 of the Halton Assessment Report)

Proposed Updated Impervious Surfaces Mapping

Total impervious surface area maps are based on the surface area of all highways and other impervious land surfaces used for vehicular traffic and parking, and pedestrian paths where road salt can be applied. These maps help assess the risks posed to municipal drinking water sources from the application of road salt. The method to develop these maps are provided in the *Clean Water Act, 2006* Technical Rules. Source Protection Region staff updated the impervious surfaces maps to reflect landscape changes since the first approved assessment reports, using 2019 digital ortho photo imagery. In the WHPAs, there are no major landscape changes except for a new subdivision in the City of Hamilton overlapping the Greenville WHPA; however there are **no** new significant risk level road salt application threats identified in WHPAs. In the intake protection zones and highly vulnerable aquifers, there are a few areas where impervious surfaces have changed; however there are **no** new significant risk level road salt application threats identified in these vulnerable areas either.

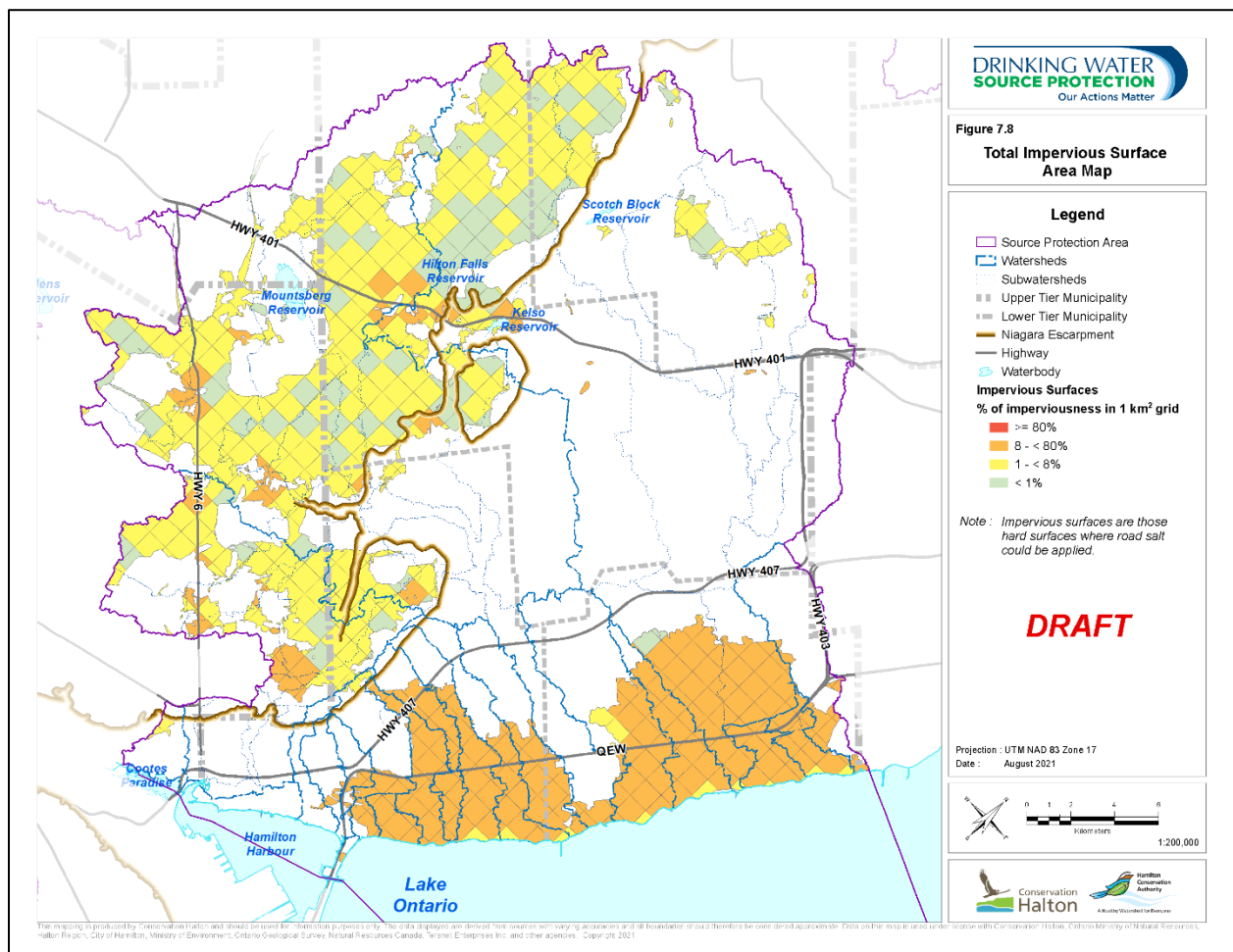


Figure 10: Total Impervious Surfaces Map (Figure 7.8 of the Halton Assessment Report)

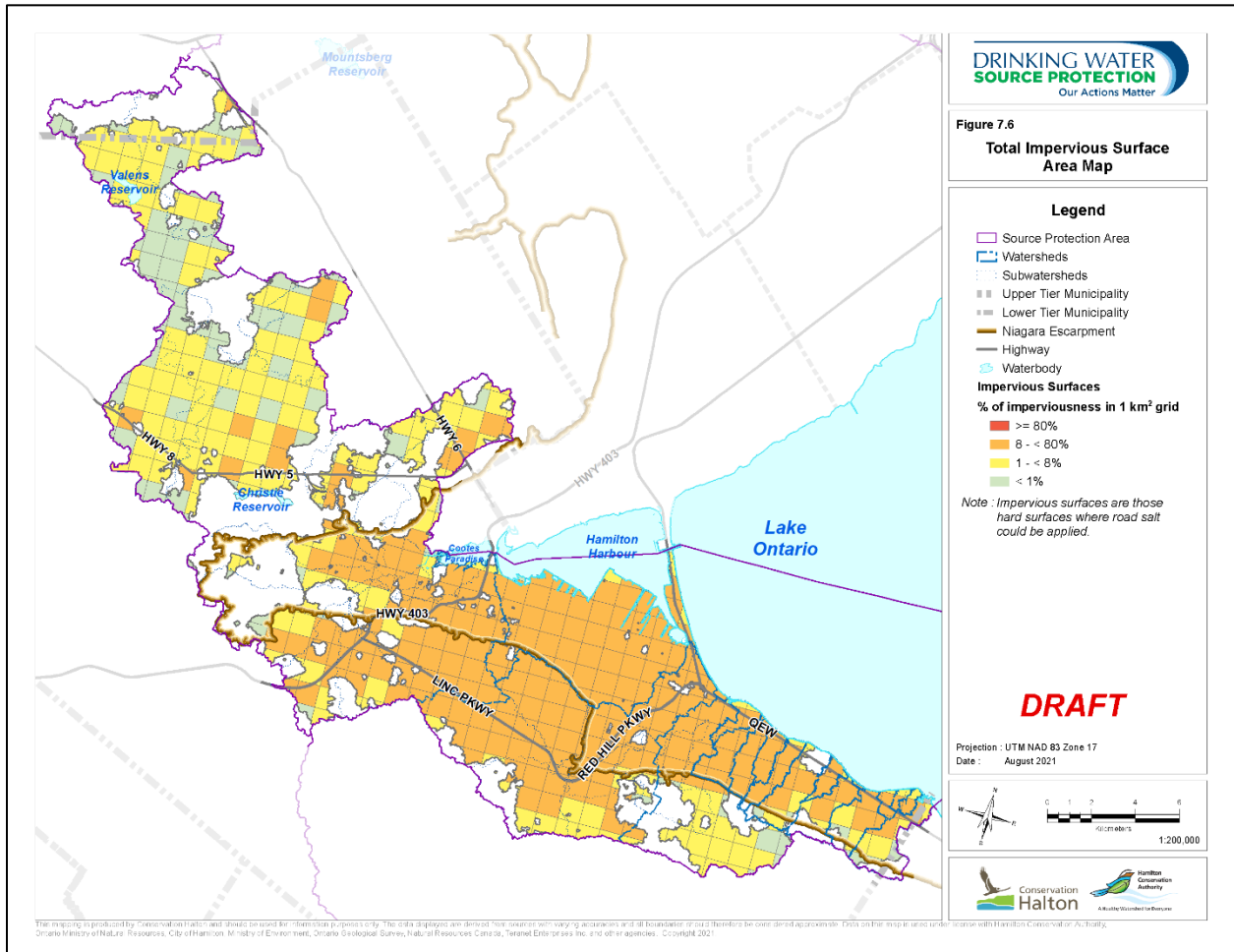


Figure 11: Total Impervious Surfaces Map (Figure 7.6 of the Hamilton Assessment Report)

Proposed Updated Potential Significant Threat Activity Counts

From the technical work conducted for wellhead protection areas (WHPAs), the number of potential significant threat activities has increased in the Freelton, Carlisle, Kelso and Walkers Line WHPAs. In the Greensville WHPA, the number has decreased. The tracked-changes documents are available at the website indicated on page 1. In the Halton Region Assessment Report, please see Table 7.2 on page 277 of the tracked-changes version. In the Hamilton Region Assessment Report, please see Table 7.1 on page 221 of the tracked-changes version. The updated counts are shown in Table 5 below.

In the Freelton WHPA, the large increase in potential significant threat counts is due to the WHPA re-delineation and vulnerability re-assessment. Of the 264 properties in well FDF01 WHPA (south, smaller), approximately 184 properties could have potential significant threat activities occurring. Of the 161 properties in the well FDF03 WHPA, approximately 77 properties could have potential significant threat activities occurring. Applicable source protection policies would apply.

In the Carlisle WHPA, applicable source protection plan policies would apply to three additional properties. In the Kelso WHPA, applicable source protection plan policies would potentially apply to one additional property. In the Walkers Line WHPA, applicable source protection plan policies would potentially apply to one additional property.

In the Greensville WHPA, due to the removal of two previously identified transport pathways through the enhanced, consistent method of analysis applied to all WHPAs in the source protection region, the policy requiring inspections of septic systems would no longer apply to two properties.

The updated threats counts are based on air photos, and a refinement where possible is based on information from municipalities. Several of the properties were field verified for certain types of activities by municipal staff during the first round of source protection planning. This information is being used to inform subsequent pre-consultation followed by public consultation with persons/businesses believed to be engaging in significant threat activities, per consultation requirements of the legislation. Source Protection Region staff continue to work collaboratively and closely with municipal staff to refine the potential significant threats counts where possible.

Table 5: Updated Potential Significant Threat Counts

Drinking Water Threat	Number of Potential Occurrences (Significant Threats)						
	Freelton FDF01	Freelton FDF03	Carlisle	Walkers Line	Campbellville	Kelso	Greenville
Sewage system operation	173P (15P*)	73P (11P*)	36P		33P	4P	34P, 1C (36P, 1C)*
Agricultural source material - application	2C, 4P (0)*	4P (0)*	4C, 4P (0C, 2P)*			2C, 2P (0C, 1P)*	
Agricultural source material - storage	1C, 1P (0)*	4C, 4P (0)*	4C, 4P (0)*			2C, 2P (1C, 2P)*	
Non-agricultural source material - application		4C, 4P (0)*					
Non-agricultural source material - storage	2P (0)*	3P (0)*					
Commercial fertilizer - application	19C (0)*	11C (0)*					
Commercial fertilizer - storage	11C (0)*	12C (0)*				1C	
Pesticide - application	9C (0)*	12C (0)*	4C			1C	
Pesticide - storage	5C (0)*	12C (0)*					
Fuel – handling and storage	175C (0)*	70C (6C)*			1C	3C	
Land associated with livestock		1C, 6P (1C, 1P)*	5C, 5P (1C, 1P)*			2C, 2P (1C, 2P)*	
Road salt - application							5C
Organic solvent - storage	6C (0)*	5C (0)*					
Dense non aqueous phase liquid handling and storage	2C (0)*	4C (0)*	2C (0)*	1C (0)*		1C (0)*	

Notes

C: chemical and P: pathogen circumstances, based on the Table of Drinking Water Threats (2017/2018) under the *Clean Water Act, 2006*, available at:

<https://www.ontario.ca/page/tables-drinking-water-threats>

*The numbers in the brackets are from the current Assessment Reports approved in 2015, and amended in 2017. Where there are no brackets, the counts have not changed.

Proposed Updated Intake Protection Zone (IPZ) Delineations

Municipal drinking water intakes draw from different surface water sources including lakes, rivers, creeks, etc. Under the *Clean Water Act*, they are protected by delineating and assessing intake protection zones (IPZs). There are two IPZs that must be delineated for each municipal intake: IPZ-1 and IPZ-2. A third type, IPZ-3, is optional under the *Clean Water Act* technical framework.

Conservation Halton staff conducted a technical study “Technical Study for the Lake Ontario Intake Protection Zones in the Halton Region and Hamilton Region Source Protection Areas”, August 10, 2021. This technical study provides updates to the certain portions of the Lake Ontario intake protection zone (IPZ) delineations (for three systems of the Halton Region source protection area) and vulnerability assessments for all four systems: Oakville, Burloak, Burlington and Woodward municipal drinking water intakes. The revised inland delineations for Oakville, Burloak, and Burlington IPZ-2 are based on in-stream flow velocities obtained from Conservation Halton hydraulic models developed for a separate floodplain mapping project.

The Table 6 summarize the results of the re-delineation for the intakes of the Oakville, Burloak and Burlington municipal drinking water systems. The updated IPZ maps are below.

Table 6: The 2015 and Re-delineated Lake and Land Areas in the Intake Protection Zones-2

Lake Ontario Intake	2015* IPZ-2 (Land only) km ²	Re-delineated IPZ-2 (Land only) km ²	Summary of Change
Burlington	36.3	41.7	13% more land in the re-delineated IPZ-2: north of Dundas (mainly agricultural) and between Upper Middle Road and QEW at Appleby Line (developed)
Burloak	30.4	38.9	21% more land in the re-delineated IPZ-2: Lakeshore to QEW and at Upper Middle Road and Appleby Line (developed)
Oakville	66.2	53.3	20% less land in the re-delineated IPZ-2: along Upper Middle Road

*The Halton Region Assessment Report was approved in 2015 and amended in 2017 for minor typographical edits.

The modelled IPZ-3s were not changed and threats assessments remain the same as in the current approved assessment reports.

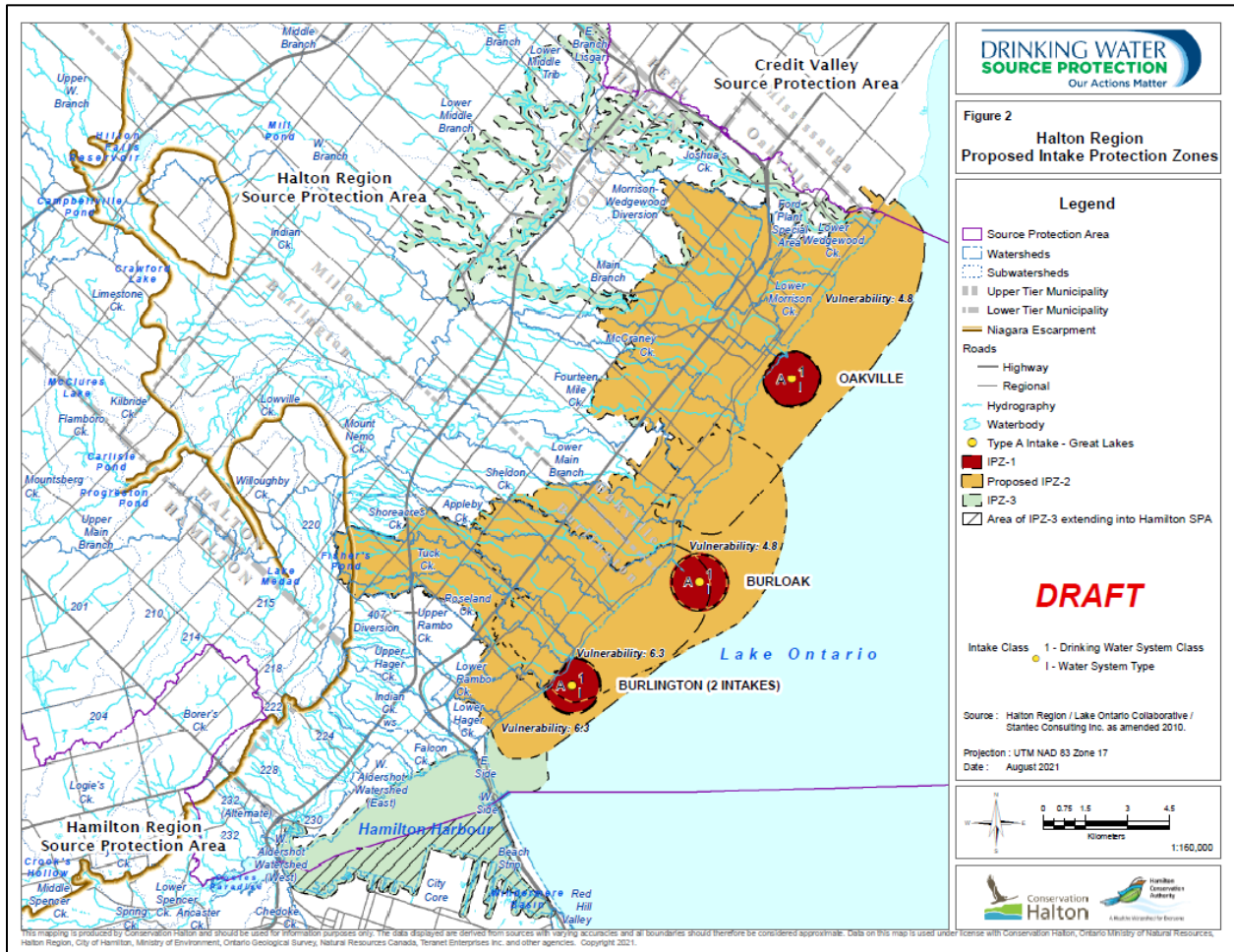


Figure 12: Halton Region Source Protection Area - Intake Protection Zone Delineations (Figure 2 of the Technical Study for the Lake Ontario Intake Protection Zones in the Halton Region and Hamilton Region Source Protection Areas, August 10, 2021)

Proposed Updated Intake Protection Zone (IPZ) Vulnerability Scores

As noted in the previous section, Conservation Halton staff conducted a technical study “Technical Study for the Lake Ontario Intake Protection Zones in the Halton Region and Hamilton Region Source Protection Areas”, August 10, 2021. Staff reassessed the vulnerability of the Lake Ontario intakes in the Halton Region source protection area based on re-delineated IPZ-2 areas and also based on a larger range of source vulnerability factor allowed for IPZ-1 and IPZ-2 of Great Lakes intakes (“type A” intakes), per the 2017 technical rules under the *Clean Water Act, 2006* (specifically, the rule 95.1 which was introduced in 2017).

Vulnerability scores were assigned considering both source and area characteristics, following the 2017 technical rules. The final vulnerability scores are obtained by multiplying a Source Vulnerability Factor (Vsf) with an Area Vulnerability Factor (Vaf), for each zone. The Vsf considers the distance of the intake from shore, the depth of the intake from water surface, and the historical water quality concerns at the intake. The Vaf considers the percentage of the zone that is land, the land characteristics, and the hydrological and hydrogeological conditions around natural or anthropogenic transport pathways.

The Table 7 below shows the revised vulnerability scores for IPZ-1 and IPZ-2. Note that although the revised IPZ-2 vulnerability scores are higher, they are **not** high enough to have significant risk level threats in the re-delineated IPZ-2s.

Table 7: Updated Vulnerability Scores for Intake Protection Zones

Lake Ontario Intake	Reassessed Vulnerability Score of IPZ-1	Reassessed Vulnerability Score of IPZ-2
Burlington	7 (current: 7)	6.3 (current: 5.6)
Burloak	6 (current: 5)	4.8 (current: 4.0)
Oakville	6 (current: 6)	4.8 (current: 4.8)
Woodward	5 (current: 6)	4.0 (current: 4.8)

Note: “current” refers to the Assessment Reports approved in 2015, and amended in 2017 for unrelated edits

SOURCE PROTECTION PLAN (SPP)

For the Halton and Hamilton source protection areas

CHANGE LOG

Table 8

No.	SPP Section or Policy#	SPP Updates
1.	After the cover page	Changes are proposed to the document version number, description, and date to reflect the Section 36 update to the SPP
2.	All policies	<p>As described in the Section 36 workplan, users of the source protection plan requested amendments to provide clarity and to make the plan more easily understood. These include vulnerable area geographic references and legal effect of each policy. Formatting is required to ensure compliance with the Accessibility for Ontarians with Disabilities Act, 2005 (AODA).</p> <p>MECP provided early engagement comments to change legal effect of “must comply” to be: “must conform” for Legal Effect Lists G, H and I (Clean Water Act Part IV S. 57, 58 and 59 policies). This change is made throughout the SPP.</p>
3.	Applicable policies	Update MOECC to “Ministry of Environment, Conservation and Parks” where relevant; update Source Protection Department of the Conservation Authorities to “Halton Region and Hamilton Region Conservation Authorities”
4.	Elaboration of “Legal effect”	The concept of “legal effect” is key to elaborate on to help explain how some polices are legally binding and others are non-binding.
5.	Applicable text	The “establishment and operation of a liquid hydrocarbon pipeline” added as a prescribed threat (and removed as a local threat) per the 2017 Technical Rules.
6.	G-1 (legally binding) Enacts timing requirements for implementation of SPP policies.	<p>The assessment reports are updated from time to time through Clean Water Act, 2006 Section 34, 35, or 36 updates, and typographical and other minor edits through an O. Reg. 287/07 Section 51 update. New threats may be identified. Certain policies to address the threats must be implemented within a certain timeframe dependent upon the date that the updated plan takes effect. In preparation for early engagement, staff’s edits to policy G-1 proposed that the:</p> <ul style="list-style-type: none"> (a) timeline for risk management plans be 5 years from when the updated Source Protection Plan (pursuant to Section 34, 35 or 36) comes into full force and effect; and (b) timeline for prescribed instrument amendments be 3 years from when the updated Source Protection Plan (pursuant to Section 34, 35 or 36) comes into full force and effect. <p>The above edits remove the need to update the timeline policy G-1 each time there is a Section 34 or 35 or 36 update (amendment) to the SPP. It ensures that activities identified as being subject to risk management plan (RMP) and prescribed instrument policies do not need to meet the policy requirements by a</p>

No.	SPP Section or Policy#	SPP Updates
		<p>misinterpreted deadline of 2020 or 2021. It does mean that the timeline depends upon a particular amendment coming into full force and effect; therefore different RMPs and prescribed instrument amendments could have different timelines. E.g.: An RMP resulting from a Section 34 in 2022 would have a timeline of ~ 2027. But an RMP resulting from a Section 35 in 2025 would have a timeline of ~ 2030. There is general consensus amongst municipalities with this approach. (Section 51 is not included in the above proposed edits because timeline amendments for risk management plans and prescribed instruments are not considered to be typographical and other minor edits).</p> <p>MECP provided comments during early engagement in July 2021 on the above policy revision. Revisions were made to Section 2.4 to indicate that updates to the SPP occur from time to time and that the effective date would change accordingly. Policy G-1 is edited to indicate both: the effective date of all policies unless otherwise specified, and the exceptions. Reference to s. 58(3) is removed in policy part (a). Policy Part (b) is removed.</p>
7.	<p>G-2 (legally binding) Designates land uses to which the restricted land uses provisions (Section 59) of the Clean Water Act, 2006 apply.</p>	<p>This addresses a requirement related to policy consistency, per the Minister’s Section 36 amended Order for the HHSPR. This policy update would allow risk management officials to provide written direction to municipal staff regarding types of building or planning applications that can be screened out of the Section 59 notice process.</p> <p>County of Wellington provided comments during early engagement to check that wording matches the Wellington County Chapter of the Grand River Plan dated February 3, 2021. Policy WC-CW-1.3 was used, and staff retained the wording “unless identified specifically within a policy” from the first approved SPP for HHSPR.</p>
8.	T-9-C	<p>The MECP’s updates to the tables of drinking water threats circumstances included a change from the term “stormwater retention ponds” to “stormwater management facilities”. There are no policy implications.</p>
9.	<p>T-26-C a and b (legally binding) Policy part a requires OMAFRA to ensure that nutrient management plans manage the application of commercial fertilizer to never become a significant threat.</p> <p>Monitoring policy part b requires OMAFRA to document the number and locations of properties where NMPs were</p>	<p>T-26-C part a: OMAFRA’s actions satisfy the intent of part a and no change is required.</p> <p>T-26-C part b: For the monitoring part b of the policy, OMAFRA indicated that it does not issue (approve) or review NMPs and that their response to the annual reportable of: “# of prescribed instruments approved” will always be zero/not applicable. Staff therefore recommended the removal of T-26-C part b (the monitoring policy), in March 2021.</p> <p>Since a monitoring policy is required to be written, and it is recognized that a continued reliance is placed on monitoring policy T-22-S part b to fill the gap noted above, it is proposed that the wording from T-22-S part b is used to inform the wording for a revised monitoring policy T-26-C part b. This monitoring policy requires that the MECP’s annual report provide the locations of inspections compliant and non-compliant with nutrient management plans and strategies and non-agricultural source material plans, and the actions taken</p>

No.	SPP Section or Policy#	SPP Updates
	reviewed and record measures taken.	for threat activities related to agricultural source materials, non-agricultural source materials, commercial fertilizer and land used for outdoor confinement areas and farm-animal yards.
10.	<p>T-29-S d Requests the Agrichemical Warehousing Standards Association (AWSA) to review their standards to ensure they include appropriate buffer areas to protect municipal drinking water sources and send a response to the Source Protection Authority within six months.</p> <p>New: T-30-S</p>	<p>Staff recommend that this non-legally binding portion part d (directed to the AWSA) be separated from the legally binding portion parts a, b, c. Part d is proposed to be moved into previously repealed policy T-30-S.</p> <p>The AWSA has implemented this non-legally binding policy. Through correspondence in 2019, they indicate that based on their review of the AWSA standards there are adequate policies and procedures established to comply with municipal, provincial and federal regulatory requirements to protect municipal drinking water. There is a 50m buffer from zoned residential lot lines, hospitals, schools, shopping centres, restaurants, processing facilities for feed or food and other buildings of high occupancy. Pre-approval with AWSA is required if there is potential for infringement into the 50 m buffer. Other measures include spills prevention and response. Staff propose edits that request AWSA to review their standards to ensure they include appropriate buffer areas and emergency planning and response measures to protect municipal drinking water sources. Further discussions are ongoing to encourage AWSA to incorporate information into their auditor notes who in turn could potentially advise operators of individual sites; and to send out industry bulletins to the operators.</p>
11.	<p>T-47-C b (legally binding) Requires risk management plans to manage livestock grazing.</p>	<p>Policy T-47-C part b requires a hard regulatory tool of risk management plans (RMPs) to manage livestock grazing, regardless of the number of animals. Implementation challenges and potential solutions were discussed with municipal staff early in 2021. Accordingly, a proposal to modify the policy was brought to the HHSPC at its March 2021 meeting. The SPC reached consensus on using a 5 NU (per farm property) criteria outside of WHPA-A, to determine whether the policy tool would be education and outreach (for less than 5 NU per farm) or RMP (for 5 or greater than 5 NU per farm). Further discussions on factoring in the vulnerability scores were planned with municipal staff.</p> <p>In late March 2021, the HHSPR hosted a municipal working group meeting to discuss contiguous vulnerability scores (especially a score of 10 through a WHPA-B). Generally, it was agreed that WHPA-A should continue to be subject to RMPs. It was agreed that the proposal (hinging on a 5 NU threshold) would be suitable outside WHPA-A (for significant threat activities). Follow up discussions with the City of Hamilton allowed for a closer look at what this means on the ground, and a review of the policy wording. This has allowed for municipal staff to reach the same consensus as the HHSPC.</p>
12.	<p>T-53-S c Requests that MMAH enact regulations under the Planning Act to enable the use of conditional zoning.</p>	<p>Based on public consultation feedback in 2007, the government is not proposing to proceed with a regulation to enable conditional zoning. In 2019 and in 2021, HHSPR contacted MMAH about this policy. Per the 2020 annual progress reporting, MMAH considers source water protection in its review of new land use planning documents (official plans, comprehensive zoning bylaws) and development applications. There appears to be no pressing need by municipalities and not anticipated in the future. Staff recommended the removal of policy T-53-S part (c). Note that part c was the only non-binding part of the policy. With its removal, the policy becomes legally binding.</p>

No.	SPP Section or Policy#	SPP Updates
13.	T-53-C	During early engagement, County of Wellington recommended adding “the proposed storage location, where applicable” to the policy wording. Staff agree that this would further clarify the information disclosure needs to project proponents.
14.	T-29 C/S, T-34-C/S, T-35-C/S, T-52 C/S, T-53 C/S	<p>Some of the source protection plan policies contain both legally binding and non-binding parts, where the former is meant to address significant level threats while the latter addresses moderate and low level threats. It is recommended that these policies be separated out based on the legal effect (and therefore also by threat level) to ensure clarity for policy implementers and help streamline the annual progress reporting process. These policies are: T-29 C/S, T-34-C/S, T-35-C/S, T-52 C/S and T-53 C/S. They are described below.</p> <ul style="list-style-type: none"> • T-29-C/S: Part d was the only non-binding part of the policy. By moving part d to T-30-S (for reasons described in item no. 9 in this table), the policy T-29-C becomes legally binding. • T-34-C/S: This policy is split into legally binding and non-binding policies of T-34-C and new T-60-S. • T-35-C/S: This policy is split into legally binding and non-binding policies of T-35-C and new T-61-S. • T-52-C/S: This complicated policy is split into legally binding and non-binding policies as described in detail in Table 9 below. • T-53-C/S: Part c was the only non-binding part of the policy. With its removal (for reasons described in item No. 11 in this table), the policy becomes legally binding. <p>Although T-36-S, T-49-S address significant, moderate and low threats, they are non-binding policies and can remain the same.</p>
15.	<p>T-62-S (was L-1-S) Requests the Canada Energy Regulator and TSSA to ensure that their regulatory requirements manage liquid hydrocarbon pipelines that are existing significant threats.</p>	<p>Replaces L-1-S (pipeline integrity testing). Addresses hydrocarbon pipelines as new prescribed threat activity added in the Clean Water Act in 2018 and as modelled (event-based) threat. Considers extensive research by CA staff on applicable legislation and insights from discussions with pipeline companies. Redirects policy away from pipeline companies and to regulatory bodies.</p> <p>The monitoring policy directed to CAs is legally binding and moved to T-68-C.</p>
16.	<p>T-63-S (was L-1-S and L-2-S) Recommends that Canada Energy Regulator and Ontario Energy Board use a preventative approach with pipeline applicants for future significant threats.</p>	<p>Replaces L-1-S and L-2-S. Addresses liquid hydrocarbon pipelines as new prescribed threat activity added in the Clean Water Act in 2018. Considers extensive research by CA staff on applicable legislation and insights from discussions with pipeline companies.</p> <p>The monitoring policy directed to CAs is legally binding and therefore moved to T-68-C.</p>
17.	<p>T-64-S (new) Requests pipeline companies to use watershed and source water protection science in their emergency planning.</p>	<p>A new policy to encourage pipeline companies to leverage watershed and source water protection science. Addresses liquid hydrocarbon pipelines as new prescribed threat activity added in the Clean Water Act in 2018 and as modelled (event-based) threat.</p> <p>The monitoring policy directed to CAs is legally binding and moved to T-68-C.</p>

No.	SPP Section or Policy#	SPP Updates
18.	T-65-S (was T-52-C/S part c) Requests liquid hydrocarbon pipeline companies and owners of bulk fuel storage facilities to update their emergency plans.	Uses non-binding part c of T-52-C/S (part c is non-binding when addressed to pipeline and fuel storage facility owners). Addresses liquid hydrocarbon pipelines as new prescribed threat activity added in the Clean Water Act in 2018 and as modelled (event-based) threat. Addresses modelled, event-based threat of the handling and storage of fuel. The monitoring policy directed to CAs is legally binding and moved to T-68-C.
19.	T-66-C (was T-52-C/S part c) Directs municipalities to update their emergency plans.	Uses legally binding part c of T-52-C/S (part c is binding when directed to municipalities). The monitoring policy directed to CAs is legally binding and moved to T-68-C.
20.	T-67-S (was T-52-C/S parts a, d) Recommends MECP Spills Action Centre to incorporate drinking water protection zone maps and modify their procedures.	Uses non-binding parts a and d of T-52-C/S. Addresses liquid hydrocarbon pipelines as new prescribed threat activity added in the Clean Water Act in 2018 and as modelled (event-based) threat. Addresses modelled, event-based threats of discharges from sewage treatment plants and the handling and storage of fuel.
21.	T-68-C (was T-52-C/S part e) Directs CAs to collaboratively liaise with pipeline companies, fuel storage companies, sewage treatment plant owners on several matters.	Uses legally binding part e of T-52-C/S and is the monitoring policy for policies T-62-S, T-63-S, T-64-S, T-65-S, and T-66-C. Addresses liquid hydrocarbon pipelines as new prescribed threat activity added in the Clean Water Act in 2018 and as modelled (event-based) threat. Addresses fuel storage and discharge from sewage treatment plants where they are a significant threat to Lake Ontario. Efficiently brings together all legally binding policy parts directed to CAs to help address liquid hydrocarbon pipelines and modelled sewage and fuel threats. To address an MECP comment received during early engagement, a supporting policy detail for Policy T-68-C is edited to indicate that it is a monitoring policy and its legal effect is List F. It is correctly listed in Appendix C – Compliance Lists.
22.	O-1-S BMPs for transport pathways	During early engagement, County of Wellington recommended the following: <ul style="list-style-type: none"> • Add “maintenance” of municipal infrastructure to the policy wording. Staff agree that this would include the need to have best management practices to protect groundwater sources during maintenance of municipal infrastructure. • Add “in accordance with Ontario Regulation 903” when referring to the decommissioning of wells. Staff agree with this change.
23.	O-4-S Importation of fill - education and outreach (E&O) policy	During early engagement, County of Wellington noted that the SPP section 3.3.4 is titled ‘Disposal’, but there is no mention of disposal in the policy wording. They indicated that, since this is an education and awareness

No.	SPP Section or Policy#	SPP Updates
		<p>policy, there could possibly be consideration to add: “and disposal” if necessary; or change the title to Importation of Fill.</p> <p>HHSPR staff checked the Explanatory Document for the intent of the policy from the first round of source protection planning: “If contaminated fill is <u>used or disposed</u> of on a property, rain and surface runoff percolating through the material could dissolve the contaminants and carry them to watercourses or down to groundwater” (Explanatory Document - Section 4.3.1 page 251). To match the intent, the policy wording is updated accordingly to refer to the “disposal or use of imported fill”. Minor edits are made to the title of Section 4.3 of the Explanatory Document as well. Note that the province regulates soil reuse through phase one of Ontario’s On-Site and Excess Soil Regulation O. Reg. 406/19, which came into force in January 2021.</p>
24.	<p>O-5-S Transportation of hazardous goods - E&O policy.</p>	<p>Part c: The message and materials may not be reaching the intended audience, and outcomes are unknown. Staff recommended that the implementer be changed from municipalities to: Ministry of Transportation Ontario and Transport Canada.</p> <p>Parts a, b, c: During early engagement, County of Wellington recommended that staff training be added to the policy. Staff agree with the recommendation.</p>
25.	<p>O-6-S</p>	<p>During early engagement, County of Wellington recommended that the policy recommends including contact information for the Spills Action Centre in spills action plans of companies that lease space on relevant port lands.</p>
26.	<p>Appendix B: Collaboration and Consultation</p>	<p>During early engagement, MECP provided a reminder to update the consultation summary section of the plan.</p>

Edits made to address comments received during early engagement are highlighted in blue in the source protection plan.

Source Protection Plan Policy T-52 C/S

Table 9

Current Policy Part and Legal Effect	Current Policy	Proposed Policy and Legal Effect
<p>T-52 C/S overarching policy text (C: legally binding; S: non-binding)</p>	<p>Where discharges from sewage treatment plants, the handling and storage of fuel, and the conveyance of oil in a pipeline that crosses an open body of water are existing significant drinking water threats to Lake Ontario municipal intakes,</p>	<p>Overview: T-52-C/S is proposed to be split into legally binding and non-binding policies as described below.</p>
<p>T-52-S parts a and d List K – Non-binding Significant threat policies to be implemented by stakeholders other than municipalities, local boards, or source protection authorities</p>	<p>a) the Ministry of the Environment and Climate Change shall provide mapping of intake protection zones three and the locations of known significant threats to the Spills Action Centre, and if necessary modify procedures to ensure that the operators of all water treatment plants that could be affected by a spill are notified.</p> <p>d) by February 1 of each year, the Ministry of the Environment and Climate Change shall prepare and submit to the Source Protection Authority a report summarizing their actions for the previous year, including the number, type, and location of spills reported within intake protection zones three, adjusted thresholds, and actions taken or recommended to improve the efficiency and effectiveness of the spill reporting system.</p>	<ul style="list-style-type: none"> • New policy T-67-S for liquid hydrocarbon pipelines (event based IPZ-3 and certain WHPAs), and for sewage and fuel threats (event based IPZ-3s). <p>List K – Non-binding (Part b: Legally binding monitoring policy)</p>
<p>T-52-C part b List C - Legally binding - must conform with Significant threat policies that affect prescribed instrument decisions</p>	<p>b) the Ministry of the Environment and Climate Change shall ensure that the environmental compliance approvals that govern the sewage works include appropriate terms and conditions to ensure that the systems do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans and in consultation with the municipalities responsible for water services the following conditions shall be considered for inclusion - adjustment of the reporting thresholds for pathogens and chemicals of concern in effluent.</p>	<ul style="list-style-type: none"> • Retain as revised policy T-52-C for sewage threats (event based IPZ-3) <p>List C - Legally binding - must conform with (Part b: Legally binding monitoring policy)</p>
<p>T-52-S part c List K - Non legally binding Significant threat policies to be implemented by stakeholders other</p>	<p>c) the owners of facilities* where these significant drinking water threats have been identified are requested to update emergency preparedness/contingency plans to include the location of municipal intakes, actions to be taken to protect drinking water sources should</p>	<ul style="list-style-type: none"> • New policy T-65-S for liquid hydrocarbon pipelines (event based IPZ-3 and certain WHPAs) and fuel threats (event based IPZ-3) <p>List K - Non legally binding</p>

Current Policy Part and Legal Effect	Current Policy	Proposed Policy and Legal Effect
<p>than municipalities, local boards, or source protection authorities</p> <p>*industries (includes liquid hydrocarbon pipeline owners and bulk fuel storage facilities)</p>	<p>an incident occur, and the requirement for inclusion of the protection of drinking water sources in emergency preparedness exercises.</p>	
<p>T-52-C part c</p> <p>List E - Legally binding - must comply with</p> <p>Significant threat policies that impose obligations on municipalities, source protection authorities and local boards</p> <p>**municipalities</p>	<p>c) the owners of facilities** where these significant drinking water threats have been identified are requested to update emergency preparedness/contingency plans to include the location of municipal intakes, actions to be taken to protect drinking water sources should an incident occur, and the requirement for inclusion of the protection of drinking water sources in emergency preparedness exercises.</p>	<ul style="list-style-type: none"> • New policy T-66-C for sewage threats (event based IPZ-3) <p>List E - Legally binding- must comply with</p>
<p>T-52-C part e</p> <p>List F - Legally binding - must comply with</p> <p>Monitoring policy referred to in subsection 22 (2) of the <i>Clean Water Act, 2006</i></p>	<p>e) the Source Protection Department of the Halton Region and Hamilton Region Conservation Authorities shall consult with the owners of facilities where these significant drinking water threats have been identified to request an invitation to observe the emergency preparedness exercises carried out in the vicinity of the Halton-Hamilton Source Protection Region, and to request to view a copy of the emergency preparedness plans when amended.</p>	<ul style="list-style-type: none"> • New policy T-68-C <p>Legally binding monitoring policy</p>

Proposed Updated Policy Format

The Table 10 shows the updated format of the prescribed drinking water threat and other policies. The “Policy” portion is the legal policy text. All other details are added to provide clarity and to make the plan more easily understood for readers.

Table 10: Format for Prescribed Drinking Water Threat and Other Policies

Policy ID	This is a unique identifier for each policy. It does not form part of the legal policy text.
Threat	A description of the threat activity is provided here, using terminology from the MECP Table of Drinking Water Threats online tool at: www.swpip.ca . It does not form part of the legal policy text.
Policy Tool	An indication of the type of policy tool used is provided here. It does not form part of the legal policy text. See Section 2.7 for a description of the different policy tools.
Policy Implementer	The policy implementing body/bodies are identified here. It does not form part of the legal policy text.
Policy	This is the legal policy text.
Legal Effect	This provides an indication of whether the policy is legally binding or not, and the risk level addressed. It does not form part of the legal policy text. See Appendix C for the full legal effect list as required by the Clean Water Act.
Where Policy Applies	This describes the vulnerable area where the policy applies including the vulnerability score and directs the reader to relevant figure showing policy applicability areas. It does not form part of the legal policy text.
When Policy Applies	This indicates whether the policy applies to existing activities, future activities, or both. It does not form part of the legal policy text.
Notes	This is additional information provided for some policies to enhance clarity. It does not form part of the legal policy text.

Note that the general policies (G-1, 2, 3, and 4) are provided in a modified, shorter table format reflecting the level of detail relevant to them.

Proposed Updated and New Policies

As described in the change log, all policies are updated for the new policy format described above and some policies are updated for minor edits. The following policies have notable updates or are new policies, also described in the change log above.

Policy ID	G-1
Policy	<p>This source protection plan came into effect on December 31, 2015, the effective date specified in the Notice of Approval posted on the Environmental Registry of Ontario. Amendments to the Source Protection Plan are permitted in accordance with the Clean Water Act, 2006, and the General Regulations. The effective date for amended policies, only including but not limited to the addition of future drinking water threats and regulated areas and activities, is the date of posting of the Notice of Approval of the amendment provisions on the Environmental Registry of Ontario. Except as set out below, the policies contained in this Source Protection Plan shall come into effect on the date set out by the Minister.</p> <ol style="list-style-type: none"> a. Risk management plans for existing significant threats must be established within five years of the date that the updated Source Protection Plan (pursuant to Section 34, 35 or 36) comes into full force and effect. b. For the purpose of section 43(2) of the <i>Clean Water Act, 2006</i>, the deadline for amendments to prescribed instruments is three years from the date that the updated Source Protection Plan (pursuant to Section 34, 35 or 36) comes into full force and effect. c. For the purpose of section 40(2) of the <i>Clean Water Act, 2006</i>, the official plans for the Region of Halton, the City of Hamilton, and the County of Wellington must be amended to conform to the significant threat policies no later than the time of the next five year review required by section 26 of the <i>Planning Act</i>. d. For the purpose of section 40(2) of the <i>Clean Water Act, 2006</i>, the official plans for the Town of Milton, the Town of Halton Hills, the Town of Oakville, and the City of Burlington, must be amended to conform to the significant threat policies no later than the time of the next five year review required by section 26 of the <i>Planning Act</i>. e. For the purpose of section 42 of the <i>Clean Water Act, 2006</i>, zoning by-law conformity must be in accordance with the <i>Planning Act</i>.
Legal Effect	<ol style="list-style-type: none"> a. Must conform with - legally binding. List H (see Appendix C - Compliance Lists); b. Must conform with - legally binding. List I; c. Must conform with - legally binding. List C; d, e, f Must conform with - legally binding. List A.
Notes	<p>This policy enacts timing requirements for implementation of Plan policies. The source protection plan is updated from time to time. Some of the policies must be implemented within a timeframe dependent upon the date that the updated plan takes effect.</p>

Policy ID	G-2
Policy	<p>In accordance with Section 59 of the Clean Water Act, 2006, unless identified specifically within a policy, all land uses except solely residential uses, where significant drinking water threat activities have been designated for the purposes of Sections 57 and 58 of the Clean Water Act, 2006 are hereby designated as Restricted Land Uses and a written notice from the Risk Management Official shall be required prior to approval of any Building Permit, Planning Act or Condominium Act application.</p> <p>Despite the above policy, a Risk Management Official may issue written direction specifying the situations under which a planning authority or Chief Building Official may be permitted to make the determination that a site specific land use is, or is not, designated for the purposes of section 59. Where such direction has been issued, a site specific land use that is the subject of an application for approval under the Planning Act or for a permit under the Building Code Act is not designated for the purposes of Section 59, provided that the planning authority or Chief Building Official, as applicable, is satisfied that:</p> <ul style="list-style-type: none"> • The application complies with the written direction issued by the Risk Management Official; and, • The applicant has demonstrated that a significant drinking water threat activity designated for the purposes of Section 57 or 58 will not be engaged in, or will not be affected by the application. <p>Where the Risk Management Official has provided written direction designating a land use for the purpose of section 59, a written Notice from the Risk Management Official shall be required prior to approval of any Building Permit under the Building Code Act, 1992 as amended, in addition to Planning Act and Condominium Act applications in accordance with Section 59 of the Clean Water Act, 2006.</p>
Legal Effect	Must conform with - legally binding. List I (see Appendix C - Compliance Lists).
Notes	This policy designates land uses in accordance with section 59(1) of the <i>Clean Water Act</i> and works in conjunction with section 58(1).

Policy ID	T-26-C
Threat	Application of commercial fertilizer
Policy Tool	Prescribed instrument
Policy Implementer	Part a: Ministry of Agriculture, Food and Rural Affairs Part b: Ministry of the Environment, Conservation and Parks
Policy	Where the future application of commercial fertilizer would be a significant drinking water threat, <ul style="list-style-type: none"> a. the Ministry of Agriculture, Food and Rural Affairs shall ensure that nutrient management plans required under the <i>Nutrient Management Act</i> include measures that, when implemented, will ensure that this activity never becomes a significant drinking water threat. b. the Ministry of the Environment, Conservation and Parks shall document the number and location of inspections that were compliant and non-compliant with nutrient management plans and strategies, and non-agricultural source material plans and the actions taken, and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	Part a - Must conform with - legally binding. List C (Appendix C - Compliance Lists). (Part b is a monitoring policy)
Where Policy Applies	See Figures 2 to 11. WHPA-A & B – V. score 10; WHPA-E – V. score 9
When Policy Applies	Future

Policy ID	T-29-C
Threat	Handling and storage of a pesticide
Policy Tool	Clean Water Act Part IV – restricted land use and risk management plan
Policy Implementer	Risk Management Official
Policy	<p>Where the future handling and storage of pesticide would be a significant drinking water threat,</p> <ul style="list-style-type: none"> a. a risk management official shall screen all building permit and <i>Planning Act</i> applications in accordance with policy G-2 for properties where there would be a significant drinking water threat. b. a risk management official shall establish risk management plans with persons proposing to undertake the activities of the handling and storage of pesticide. The implementation of these risk management plans shall be overseen by a risk management inspector. c. the risk management official shall document in their annual report, in accordance with section 65 of Ontario Regulation 287/07, action taken regarding risk management plans for the handling and storage of pesticide and submit this report to the Source Protection Authority by February 1 of each year. d. Repealed.
Legal Effect	<p>Part a – Must conform with - legally binding. List I (Appendix C – Compliance Lists);</p> <p>Part b - Must conform with - legally binding. List H.</p> <p>(Part c is a monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9</p>
When Policy Applies	Future

Policy ID	T-30-S
Threat	Handling and storage of a pesticide
Policy Tool	Best management practice
Policy Implementer	Agrichemical Warehousing Standards Association
Policy	Where the future handling and storage of pesticide would be a significant drinking water threat, <ul style="list-style-type: none"> a. the Agrichemical Warehousing Standards Association is requested to review their standards to ensure they include appropriate buffer areas and emergency planning and response measures to protect municipal drinking water sources. b. the Halton Region and Hamilton Region Conservation Authorities shall request the Agrichemical Warehousing Standards Association annually to confirm that their standards protect municipal drinking water sources.
Legal Effect	Part a - Strategic - non-legally binding. List K (Appendix C – Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	See Figures 2 to 11. WHPA-A & B – V. score 10; WHPA-E – V. score 9
When Policy Applies	Future

Policy ID	T-47-C
Threat	Agricultural source material (ASM) generation - use of land as an outdoor confinement area or a farm-animal yard; and ASM generation - use of land for livestock grazing or pasturing
Policy Tool	Risk management plan, education and outreach
Policy Implementer	Risk Management Official
Policy	<p>To reduce the risks to drinking water sources where there are existing or potential future significant drinking water threats from the use of land as an outdoor confinement area or a farm-animal yard on farms not phased-in under the <i>Nutrient Management Act</i>, or from the use of land for livestock grazing or pasturing on all farms,</p> <ol style="list-style-type: none"> a. the risk management official shall screen all building permit and <i>Planning Act</i> applications in accordance with policy G-2 for properties zoned for agricultural use within these vulnerable areas. b. where a significant threat is identified, the risk management official shall: <ol style="list-style-type: none"> i. establish risk management plans with the persons using or proposing to use farm lands for livestock outdoors within a wellhead protection area-A of any nutrient units and in a wellhead protection area-B and E where there are 5 nutrients units or greater per farm property. The implementation of these risk management plans shall be overseen by a risk management inspector and their content shall be based upon the regulatory requirements of a nutrient management strategy under the <i>Nutrient Management Act</i> and incorporate the best management practices for livestock grazing and pasturing land as set out in Streamside Grazing (2007 and as amended) including extensive grazing within a wellhead protection area-A, and scoped to address these specific threats. ii. undertake an education and outreach program on nutrient management methods and their potential impacts on drinking water sources, in a wellhead protection area-B and E where there are less than 5 nutrients units per farm property. c. the risk management official shall document in their annual report, in accordance with Section 65 of Ontario Regulation 287/07, action taken regarding risk management plans and education and outreach for the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard and submit this report to the Source Protection Authority by February 1 of each year.
Legal Effect	<p>Part a - Must conform with - legally binding. List I (Appendix C – Compliance Lists)</p> <p>Part b (i) - Must conform with - legally binding. List H</p> <p>Part b (ii) - Must comply with - legally binding. List E.</p> <p>(Part c is a monitoring policy)</p>
Where Policy Applies	<p>See Figures 2 to 11.</p> <p>WHPA-A & B – V. score 10; WHPA-E – V. score 9 & 8.1</p>
When Policy Applies	Existing and future
Notes	This policy requires risk management plans to be established making use of related standards from the <i>Nutrient Management Act</i> for the specific threat and nutrient units, as well as best management practices from recognized documents.

Policy ID	T-52-C
Threat	Discharges from sewage treatment plants (modelled sewage treatment plant failure)
Policy Tool	Prescribed instrument
Policy Implementer	Ministry of the Environment, Conservation and Parks
Policy	<p>Where discharges from sewage treatment plants are existing significant drinking water threats to Lake Ontario municipal intakes,</p> <p>a. the Ministry of the Environment, Conservation and Parks shall ensure that the environmental compliance approvals that govern the sewage works include appropriate terms and conditions to ensure that the systems do not become significant drinking water threats. As part of its program to review environmental compliance approvals that are affected by source protection plans and in consultation with the municipalities responsible for water services, the following conditions shall be considered for inclusion - adjustment of the reporting thresholds for pathogens and chemicals of concern in effluent.</p> <p>b. by February 1 of each year, the Ministry of the Environment, Conservation and Parks shall prepare and submit to the Source Protection Authority a report summarizing their actions for the previous year to adjust thresholds.</p>
Legal Effect	Part a - Must conform with - legally binding. List C (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	See Figure 8. Event-based IPZ-3 (no scores)
When Policy Applies	Existing
Notes	Through modelling of a sewage treatment plant failure (resulting in discharge of contaminants into Lake Ontario), some significant threats to municipal lake-based water intakes were identified. This policy uses a regulatory approach to address the threats.

Policy ID	T-53-C
Threat	Multiple
Policy Tool	Land use planning
Policy Implementer	Municipal planning authorities
Policy	<p>To facilitate the effective implementation of policies for significant drinking water threats and assist in municipal decision-making,</p> <ul style="list-style-type: none"> a. the municipal planning authorities are requested to require proponents to disclose whether any of the following activities are expected to occur on the property where they would be significant drinking water threats, proposed storage location, where applicable, as well as the substances utilized or stored and their volume: <ul style="list-style-type: none"> i. the establishment, operation or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage ii. the application or storage of agricultural source material iii. the application, or handling and storage of commercial fertilizer iv. the application, or handling and storage of pesticide v. the application, or handling and storage of road salt vi. the storage of snow vii. the handling and storage of fuel viii. the handling and storage of a dense non-aqueous phase liquid ix. the handling and storage of an organic solvent x. the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard xi. the establishment and operation of a liquid hydrocarbon pipeline. b. the City of Hamilton, the Region of Halton, and the County of Wellington are requested to require a full disclosure report as part of a complete application under the <i>Planning Act</i>. c. Repealed. d. the municipal planning authority shall report to the Source Protection Authority by February 1 of each year on actions taken to amend municipal documents/processes to require disclosure of threat activities and the number of disclosure reports that were received in the previous year.
Legal Effect	Parts a and b Must conform with - legally binding. List A (Appendix C - Compliance Lists) (Part d is a monitoring policy)
Where Policy Applies	See Figures 2 to 11.
When Policy Applies	Future

Policy ID	T-60-S
Threat	Application, and handling and storage of road salt (moderate and low threats)
Policy Tool	Education and outreach; same as Policy T-34-C
Policy Implementer	City of Hamilton, Regional Municipality of Halton, Town of Milton, Town of Halton Hills, Town of Oakville, City of Burlington
Policy	<p>Where the existing and future application, or handling and storage of road salt would be a moderate or low drinking water threat in a wellhead protection area, intake protection zone or issue contributing area,</p> <ol style="list-style-type: none"> a. within two years of the date that the Source Protection Plan comes into effect, the City of Hamilton and the Region of Halton, in collaboration with the City of Burlington and Towns of Milton, Halton Hills and Oakville in Halton Region, are requested to develop and implement education and outreach programs for the private and public sector, as well as the general public, about the impacts of road salt on drinking water sources and the use of best management practices. It is recommended that the key messages be the efficient use of road salts and the use of alternatives. b. the City of Hamilton and the Region of Halton shall document the nature of any new or existing education and outreach program established regarding the application, and handling and storage of road salt, the number of persons contacted, and the location of the participants and report this information to the Source Protection Authority by February 1 of each year.
Legal Effect	Part a - Strategic - non-legally binding. List J (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	<p>See Figures 12, 13, 14, 15.</p> <ul style="list-style-type: none"> • Moderate threats: WHPA-A -V. score 10; WHPA-B – V. score 10, 8; WHPA-C – V. score 8; WHPA-E - V. score 9, 8.1; IPZ-1 – V. score 7. • Low threats: WHPA-A -V. score 10; WHPA-B – V. score 10, 8, 6; WHPA-C – V. score 8, 6; WHPA-D – V. score 6; WHPA-E - V. score 8.1; IPZ-1 – V. score 7, 6; IPZ-2- V. score 6.3, 5.4, HVA – V. score 6.
When Policy Applies	Existing and future

Policy ID	T-61-S
Threat	Application, and handling and storage of road salt (moderate and low threats)
Policy Tool	Salt management plans; same as Policy T-35-C
Policy Implementer	Municipalities
Policy	<p>Where the existing and future application, or handling and storage of road salt would be moderate or low drinking water threats,</p> <ol style="list-style-type: none"> a. within two years of the date that the Source Protection Plan comes into effect, the municipalities shall amend their salt management plans to identify the location of wellhead protection areas, issue contributing areas, and intake protection zones and to enhance best management practices in these areas. b. the municipalities shall advise the Source Protection Authority of the revision to the salt management plans when completed and provide a status update by February 1 of each year until completed.
Legal Effect	Part a - Strategic - non-legally binding. List J (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	<p>See Figures 12, 13, 14, 15.</p> <ul style="list-style-type: none"> • Moderate threats: WHPA-A -V. score 10; WHPA-B – V. score 10, 8; WHPA-C – V. score 8; WHPA-E - V. score 9, 8.1; IPZ-1 – V. score 7. • Low threats: WHPA-A -V. score 10; WHPA-B – V. score 10, 8, 6; WHPA-C – V. score 8, 6; WHPA-D – V. score 6; WHPA-E - V. score 8.1; IPZ-1 – V. score 7, 6; IPZ-2- V. score 6.3, 5.4, HVA – V. score 6.
When Policy Applies	Existing and future

Policy ID	T-62-S
Threat	Establishment and operation of a liquid hydrocarbon pipeline
Policy Tool	Specify Action
Policy Implementer	Canada Energy Regulator, Technical Standards and Safety Authority
Policy	Where the establishment and operation of a liquid hydrocarbon pipeline is an existing significant drinking water threat, the Canada Energy Regulator and Technical Standards and Safety Authority are recommended to ensure that their regulatory requirements manage liquid hydrocarbon pipelines through appropriate design standards (including the location of safety valves), monitoring, maintenance (including integrity management programs) and other relevant practices, such that drinking water sources are protected.
Legal Effect	Strategic - non-legally binding. List K (Appendix C - Compliance Lists). Note: the monitoring policy is T-68-C, directed to Halton Region and Hamilton Region Conservation Authorities.
Where Policy Applies	See Figure 8. Event-based IPZ-3 (no scores)
When Policy Applies	Existing
Notes	This policy leverages regulatory bodies to help manage <u>existing</u> significant threats of liquid hydrocarbon pipelines. The existing significant drinking water threats resulting from spills from a liquid hydrocarbon pipeline are located about two kilometres from the Lake Ontario shore.

Policy ID	T-63-S
Threat	Establishment and operation of a liquid hydrocarbon pipeline
Policy Tool	Specify Action
Policy Implementer	Canada Energy Regulator, Ontario Energy Board
Policy	Where the establishment and operation of a liquid hydrocarbon pipeline could become a significant drinking water threat, the Canada Energy Regulator and Ontario Energy Board in their consideration of a liquid hydrocarbon pipeline application are recommended to ensure that the applicant has complied with and included appropriate design standards (including the location of safety valves), monitoring, maintenance (including integrity management programs) and other relevant practices, that when implemented will prevent a pipeline from becoming a significant drinking water threat.
Legal Effect	Strategic - non-legally binding. List K (Appendix C - Compliance Lists) Note: the monitoring policy is T-68-C, directed to Halton Region and Hamilton Region Conservation Authorities.
Where Policy Applies	See Figures 2 to 11. Event-based IPZ-3 (no scores), WHPA-A & B - V. score 10, WHPA-E – V. score 9
When Policy Applies	Future
Notes	This policy manages <u>future</u> significant threats of liquid hydrocarbon pipelines using a preventative approach.

Policy ID	T-64-S
Threat	Establishment and operation of a liquid hydrocarbon pipeline
Policy Tool	Specify action
Policy Implementer	Liquid hydrocarbon pipeline owners
Policy	Where the establishment and operation of a liquid hydrocarbon pipeline is or could be a significant, moderate or low threat to drinking water sources, liquid hydrocarbon pipeline owners are requested to use threats risk assessment information from assessment reports approved under the Ontario Clean Water Act, 2006 and relevant watershed information while developing and updating emergency planning zones (EPZs) and designated geographical areas (DGAs).
Legal Effect	Significant threats: Strategic - non-legally binding. List K (Appendix C - Compliance Lists); Moderate and low threats: Strategic - non-legally binding. List J. Note: the monitoring policy is T-68-C, directed to Halton Region and Hamilton Region Conservation Authorities.
Where Policy Applies	See Figures 2 to 11. Significant threats: Event-based IPZ-3; WHPA-A & B - V. score 10, WHPA-E – V. score 9 Moderate threats: WHPA-A & B – V. score 10; WHPA-B & C – V. score 8; WHPA-E – V. score 9 & 8.1; IPZ-1 – V. score 7; IPZ-2, score 6.4; WHPA-B, C, D – V. score 6; IPZ-1 – V. score 6; IPZ-2 V. score 6.3 & 5.4; HVAs – V. score 6.
When Policy Applies	Existing and future
Notes	This policy leverages existing watershed and source water protection science to help manage <u>existing and future</u> significant, moderate or low liquid hydrocarbon pipeline threats.

Policy ID	T-65-S
Threat	Establishment and operation of a liquid hydrocarbon pipeline and the handling and storage of fuel
Policy Tool	Specify action – update emergency plans
Policy Implementer	Liquid hydrocarbon pipeline owners and owners of facilities where the handling and storage of fuel occurs
Policy	Where the establishment and operation of a liquid hydrocarbon pipeline is or could be a significant threat to drinking water sources, and where the handling and storage of fuel is an existing significant drinking water threats to Lake Ontario municipal intakes, facility owners are requested to update emergency preparedness/contingency plans to include the location of municipal intakes, actions to be taken to protect drinking water sources should an incident occur, and the requirement for inclusion of the protection of drinking water sources in emergency preparedness exercises.
Legal Effect	Strategic - non-legally binding. List K (Appendix C - Compliance Lists). Note: the monitoring policy is T-68-C, directed to Halton Region and Hamilton Region Conservation Authorities.
Where Policy Applies	See Figures 2 to 11. Pipelines and fuel threats: Event-based IPZ-3 (no scores); Pipelines: WHPA-A, B - V. score 10, WHPA-E – V. score 9
When Policy Applies	Existing and future
Notes	This policy manages <u>existing and future</u> significant threats of liquid hydrocarbon pipeline through emergency response plan updates.

Policy ID	T-66-C
Threat	Discharges from sewage treatment plants
Policy Tool	Emergency plans
Policy Implementer	Municipalities that own sewage treatment plants
Policy	Where discharges from municipal sewage treatment plants are identified as existing significant drinking water threats to Lake Ontario municipal intakes, municipalities that own the sewage treatment plants are requested to update emergency preparedness/ contingency plans to include the location of municipal intakes, actions to be taken to protect drinking water sources should an incident occur, and the requirement for inclusion of the protection of drinking water sources in emergency preparedness exercises.
Legal Effect	Legally binding - must comply with. List E (Appendix C - Compliance Lists) Note: the monitoring policy is T-68-C, directed to Halton Region and Hamilton Region Conservation Authorities.
Where Policy Applies	See Figure 8. Event-based IPZ-3 (no scores)
When Policy Applies	Existing

Policy ID	T-67-S
Threat	Establishment and operation of a liquid hydrocarbon pipeline, discharges from sewage treatment plants and the handling and storage of fuel
Policy Tool	Specify action
Policy Implementer	Ministry of the Environment, Conservation and Parks
Policy	<p>Where the establishment and operation of a liquid hydrocarbon pipeline is an existing significant threat to drinking water sources, and where the discharges from sewage treatment plants and the handling and storage of fuel, are an existing significant threat to Lake Ontario drinking water sources,</p> <ol style="list-style-type: none"> a. the Ministry of the Environment, Conservation and Parks shall provide mapping of intake protection zones three and the locations of known significant threats to the Spills Action Centre, and if necessary modify procedures to ensure that the operators of all water treatment plants that could be affected by a spill are notified. b. by February 1 of each year, the Ministry of the Environment, Conservation and Parks shall prepare and submit to the Source Protection Authority a report summarizing their actions for the previous year, including the number, type, and location of spills reported within intake protection zones three, adjusted thresholds, and actions taken or recommended to improve the efficiency and effectiveness of the spill reporting system.
Legal Effect	Part a - Strategic - non-legally binding. List K (Appendix C - Compliance Lists) (Part b is a monitoring policy)
Where Policy Applies	See Figure 8. Event based IPZ-3 (no scores).
When Policy Applies	Existing
Notes	This policy manages <u>existing</u> significant liquid hydrocarbon pipeline, discharges from sewage treatment plants and the handling and storage of fuel threats through measures at the MECP Spills Action Centre.

Policy ID	T-68-C
Threat	Establishment and operation of a liquid hydrocarbon pipeline, discharges from sewage treatment plants, the handling and storage of fuel
Policy Tool	Education and outreach
Policy Implementer	Halton Region and Hamilton Region Conservation Authorities
Policy	<p>Where the establishment and operation of a liquid hydrocarbon pipeline is or could be a significant threat to Lake Ontario and groundwater municipal drinking water sources and where the discharges from sewage treatment plants and the handling and storage of fuel are existing significant drinking water threats to Lake Ontario municipal intakes, the Halton Region and Hamilton Region Conservation Authorities shall on an annual basis:</p> <ol style="list-style-type: none"> provide educational awareness sessions on drinking water source protection to interested liquid hydrocarbon pipeline companies; provide relevant website addresses for approved assessment reports and the source protection plan and watershed information if available, to liquid hydrocarbon pipeline companies; request the Canada Energy Regulator and Technical Standards and Safety Authority to confirm that their requirements for liquid hydrocarbon pipelines manage existing significant drinking water threats; request the Canada Energy Regulator and Ontario Energy Board to confirm that their requirements for pipeline design standards, monitoring, maintenance and other relevant practices in vulnerable areas prevents a pipeline from becoming a significant drinking water threat; request information updates including new or changes to liquid hydrocarbon pipelines; request an invitation from liquid hydrocarbon pipeline owners, sewage treatment plant owners, and fuel storage facility owners to observe emergency preparedness exercises relevant to the Halton-Hamilton Source Protection Region; and request a copy of their emergency preparedness plans when amended to protect municipal drinking water sources.
Legal Effect	<p>See Figures 2 to 11. Monitoring policy. Must conform with - legally binding. List F (Appendix C - Compliance Lists).</p>
Where Policy Applies	<p>Pipelines, fuel, sewage threats: Event based IPZ-3 (no scores); Pipelines: WHPA-A, B - V. score 10; and WHPA-E - V. score 9.</p>
When Policy Applies	Existing and future
Notes	This policy manages <u>existing and future</u> significant threats of liquid hydrocarbon pipelines through education and outreach.

Policy ID	O-1-S
Threat	Multiple
Policy Tool	Best management practices
Policy Implementer	Municipalities, Ministry of the Environment, Conservation and Parks, Halton Region and Hamilton Region Conservation Authorities
Policy	<p>To achieve the intent of the <i>Clean Water Act, 2006</i>, that drinking water threats identified in the vicinity of a transport pathway cease to be or do not become a significant threat, and that a pathway ceases to endanger the source water of a municipal water supply, the following policies apply:</p> <ol style="list-style-type: none"> a. Municipalities are requested to use best management practices to protect the quantity and quality of groundwater sources during maintenance and the installation of new municipal infrastructure in proximity to municipal wells. b. Municipalities are requested to incorporate conditions of approval for development applications to ensure private wells that are no longer in use are decommissioned in accordance with Ontario Regulation 903. c. The Ministry of the Environment, Conservation and Parks and the municipalities responsible for water services are requested to provide ongoing funding for incentive programs focused on the decommissioning of wells, and for education and outreach programs regarding the decommissioning of wells in accordance with Ontario Regulation 903. d. If funding is provided by the Ministry of the Environment, Conservation and Parks through the Ontario Drinking Water Stewardship Program, the Hamilton and Halton Watershed Stewardship Programs, under the direction of the Halton Region and Hamilton Region Conservation Authorities, shall implement the incentive program to decommission unused wells in accordance with Ontario Regulation 903. e. The municipalities are requested to develop a program to facilitate, where possible and appropriate, the connection to municipal water services of current private well users within the urban area. The users should be required to decommission the unused wells in accordance with Ontario Regulation 903. f. The municipalities are requested to prohibit the construction of new wells and septic systems within the urban area where municipal water and wastewater services are available. g. Repealed h. The Source Protection Authority and Source Protection Committee, upon receipt of a notice from a municipality regarding an application for development of a transport pathway within a wellhead protection area, shall refer the notice to the Halton Region and Hamilton Region Conservation Authorities for follow up and reporting back.
Legal Effect	Strategic - non-legally binding. List J (Appendix C - Compliance Lists).
Where Policy Applies	WHPA and IPZ (all zones and scores)
When Policy Applies	Existing and future

Policy ID	O-4-S
Threat	Other – disposal or use of imported fill
Policy Tool	Education and outreach
Policy Implementer	Halton Region and Hamilton Region Conservation Authorities
Policy	The municipalities and the Halton Region and Hamilton Region Conservation Authorities are requested to develop and implement an education and outreach program for rural landowners, contractors, and developers based on Ministry of the Environment, Conservation and Parks guidance to best protect drinking water sources during the importation of fill for disposal or use.
Legal Effect	Strategic - non-legally binding. List J (Appendix C - Compliance Lists).
Where Policy Applies	Halton-Hamilton Source Protection Region
When Policy Applies	Existing and future
Notes	Soil brought onto a property may contain contaminants such as metals and oil that could be carried by rain water and contaminate drinking water sources. This policy aims to raise awareness.

Policy ID	O-5-S
Threat	Other - transportation corridors
Policy Tool	Emergency plans
Policy Implementer	Municipalities, Ministry of the Environment, Conservation and Parks, <u>The Ministry of Transportation Ontario, Transport Canada</u>
Policy	<p>To ensure spill prevention plans, contingency plans, and emergency response plans are updated for the purpose of protecting drinking water sources with respect to spills that occur within a wellhead protection area or intake protection zone along highways, railway lines, or shipping lanes, the following policies apply:</p> <ol style="list-style-type: none"> a. The municipalities are requested to incorporate the location of wellhead protection areas and intake protection zones into their emergency response plans and train staff, in order to protect drinking water sources when a spill occurs along highways, rail lines, or in shipping lanes. b. The Ministry of the Environment, Conservation and Parks is requested to provide mapping of vulnerable areas and train staff to assist the Spills Action Centre in responding to reported spills along transportation corridors. c. <u>The Ministry of Transportation Ontario and Transport Canada</u> are requested to implement an education and outreach program to encourage all transportation businesses that ship goods through wellhead protection areas and intake protection zones to prepare spill prevention plans and spill contingency plans, to review these plans annually, and to update them, and train staff, as required.
Legal Effect	Strategic - non-legally binding. List J (Appendix C - Compliance Lists).
Where Policy Applies	WHPAs, IPZs (all zones and scores)
When Policy Applies	Existing and future
Notes	Existing legislation often requires facility owners to develop and implement a response plan should a spill into the environment occur. This policy recommends that protection of drinking water sources be considered in prevention, contingency, and emergency response plans.

Policy ID	O-6-S
Threat	Other - shipping
Policy Tool	Spill control plans
Policy Implementer	Hamilton Port Authority
Policy	<p>The Hamilton Port Authority is requested to advise vessel operators using Hamilton Harbour and western Lake Ontario shipping lanes, and the companies that lease space on port lands that the Halton Region and the City of Hamilton municipal drinking water intakes are located near the shore of Lake Ontario in proximity of the Burlington Canal and the shipping lanes and require that they review and/or update their spill control plans to confirm that they include</p> <ul style="list-style-type: none"> i. the location of the municipal drinking water intakes, ii. enhanced best practices for spill containment and cleanup to protect drinking water supplies, and iii. the City of Hamilton, Halton Region and Spills Action Centre emergency contact information.
Legal Effect	Strategic - non-legally binding. List J (Appendix C - Compliance Lists).
Where Policy Applies	Hamilton Harbour, western Lake Ontario shipping lanes, port lands
When Policy Applies	Existing and future