Change Logs

To enable easier review of changes that have been made to the documents that are being submitted, from their previous versions, detailed change logs have been created for each document. These change logs were created as a tool for the SPC to review and consider revisions to the SPP and ARs. These individual change logs have been compiled into this single document as follows. A table of contents is provided on the next page to assist with navigation within this document.

Please refer to the legend below to better understand how the documents have been structured and changes have been indicated. **It is important to note** that references to page numbers and policy or section numbers refer to the previous version of the documents (the versions being updated not the updated version for submission). These page numbers and policy or section numbers may be different in the updated versions.

Generally the text for revision is provided in one row of the table followed by the proposed replacement text. In sections where large parts of text, tables on entire sections are being added or replaced the proposed text or table are added at the end of the change log for that part of the document.

Legend
White Cells- original text
Grey Cells- new text
Yellow highlight- area of original text to be changed
Green highlight- area of new text
Red text- change made in response to MOE comment on TSR proposed Source Protection Plan

Table of Contents

1 Source Protection Plan Changes

1.1 SPP Volume I Suggested Changes

Section	Page	Text	Change Made
2.1	8	Policies for water quantity threats (to be addressed in updated versions of Source Protection Plan, if needed, once Tier 3 Water Budget is completed and included in the Assessment Reports).	
2.1	8	Policies for water quantity threats (Tier 3 Water Budget concluded that there are no significant threats to Water Quantity, therefore no policies are required for water quantity).	Addition of Tier 3 Water Budget results

Table 2-1 Approved Assessment Reports in the Thames-Sydenham and Region

	Approved		Update Submitted	
Source Protection Area	**Version**	**Date**	**Version**	**Date**
Lower Thames Valley Source Protection Area	Amended Proposed Assessment Report	Nov.12, 2010	Updated Assessment Report	Nov 14, 2014
St. Clair Region Source Protection Area	Updated Assessment Report	Revised Nov.18, 2011	Updated Assessment Report	Nov 14, 2014
Upper Thames River Source Protection Area	Amended Proposed Assessment Report	Revised Aug. 12, 2011	Updated Assessment Report	Nov 14, 2014

Section	Page	Text	Reason For Change
2.53	11	System summaries, available in the appendices of each Assessment Report, were developed as part of the Assessment Report to provide a quick summary of the information pertaining to the municipal systems in the Region. It is planned that these summaries will be updated to include an overview of the policy which affects the vulnerable areas. The summaries are contained on the Source Protection Plan DVD and on the Thames-Sydenham and Region website.	
2.53	11	System summaries were developed as part of the Assessment Report to provide a quick summary of the information pertaining to the municipal systems in the Region. These summaries have been removed from the Appendices of the Assessment Reports so that they may be updated from time to time. They will be updated to include an overview of the policies which affect the vulnerable areas. The summaries are contained on the Source Protection Plan DVD and on the Thames-Sydenham and Region website.	System summaries being removed from ARs so that they can be updated as required without the need to update the AR
2.55	12	Early engagement was a crucial step in ensuring transparency. Early engagement included the development of a First Nations Liaison Committee to engage First Nations in the policy development process; the establishment of municipal forums (including providing presentations to councils to keep municipalities engaged in policy development); and the	

Section	Page	Text	Reason For Change
		development of the Conservation Authority disclosure service. This service was incorporated into the CA planning advisory and permitting process. This service was intended to raise awareness of the vulnerable areas as well as inform proponents of projects that the activities that they were or planning to engage in were in vulnerable areas which may be affected by Source Protection Plans. This service augments the required notification of the property owners who are believed to be engaged in activities which may be significant threats to include those who may be planning for such activities in the future.	
2.55	12	Early engagement was a crucial step in ensuring transparency. Early engagement included the development of a First Nations Liaison Committee to engage First Nations in the policy development process; the establishment of municipal forums (including providing presentations to councils to keep municipalities engaged in policy development); and the development of the Conservation Authority disclosure service. This service was incorporated into the CA planning advisory and permitting process. This service was intended to raise awareness of the vulnerable areas as well as inform proponents of projects that the activities that they were planning to engage in were in vulnerable areas which may be affected by Source Protection Plans. This service augments the required notification of the property owners who are believed to be engaged in activities which may be significant threats to include those who may be planning for such activities in the future.	Deleted the word or
Table 3-1	16	**Water Quantity** - (dependent on the outcome of the Tier 3 Water Budget and the Water Quantity Risk assessment)	
Table 3-1	16	**Water Quantity** - Tier 3 Water Budget concluded that there are no Water Quantity SDWT	Addition of Tier 3 Water Budget results
3.1.2.1	19	The Planning Act was not designed to regulate ongoing activities on a specific parcel of land. Section 58 (regulated activities) has been provided under the CWA as a way to address this “gap.” This approach introduces the idea of Risk Management Plans (RMPs), which set out the safety or protective measures that a property owner will take to ensure that a significant threat is sufficiently managed such that it ceases (or never becomes) a significant drinking water threat. RMPs are intended to be site-specific using principles from Best Management Practices to form the foundation of these plans.	
3.1.2.1	19	The Planning Act was not designed to regulate ongoing activities on a specific parcel of land. Section 58 (regulated activities) has been provided under the CWA as a way to address this “gap.” This approach introduces the idea of Risk Management Plans (RMPs), which set out the safety or protective measures that a property owner will take to ensure that a significant threat is sufficiently managed such that it ceases to be (or never becomes) a significant drinking water threat. RMPs are intended to be site-specific using principles from Best Management Practices to form the foundation of these plans.	Added words ‘to be’
3.1.2.1	19	Under Part IV of the CWA, Section 59 (restricted land uses) has been provided as an approach that provides a process for implementing policies associated with Section 57 (prohibition) and Section 58 (regulated activities) and, as such, cannot be used by itself. This approach provides an additional safety barrier by flagging new Planning Act applications and building permits where significant drinking water threat activities are associated with specifically named land uses. This flagging process ensures that applicants are following the applicable Source Protection Plan policies before Planning Act or Building Permit approvals are issued. In areas where Section 59 apply, an individual or business proposing to construct or change the use of a building for a land use named in the policy is required to apply to the Risk Management Official for a notice before proceeding to receive a building permit or Planning Act approval. The Risk	

Section	Page	Text	Reason For Change
		Management Official reviews applications and assesses them in accordance with the Source Protection Policies. If the activity is prohibited through Section 57 of the CWA, the application would not proceed. If the activity has been identified as a regulated activity under Section 58 of the CWA, the application can proceed once a notice has been provided by the RMO, which will occur after an RMP has been completed. This notice will be recognized as applicable law under in next amendment of the Building Code Act. As such, this approach provides a link between Part IV of the CWA and municipal planning and makes a proponent aware of restrictions that may be associated with a specific activity and land use.	
3.1.2.1	19	Under Part IV of the CWA, Section 59 (restricted land uses) has been provided as an approach that provides a process for implementing policies associated with Section 57 (prohibition) and Section 58 (regulated activities) and, as such, cannot be used by itself. This approach provides an additional safety barrier by flagging new Planning Act and Condominium Act applications and Building Permits where significant drinking water threat activities are associated with specifically named land uses. This flagging process ensures that applicants are following the applicable Source Protection Plan policies before Planning Act, Condominium Act or Building Permit approvals are issued. In areas where Section 59 apply, an individual or business proposing to construct or change the use of a building for a land use named in the policy is required to apply to the Risk Management Official for a notice before proceeding to receive a Building Permit, Planning Act or Condominium Act approval. The Risk Management Official reviews applications and assesses them in accordance with the Source Protection Policies. If the activity is prohibited through Section 57 of the CWA, the application would not proceed. If the activity has been identified as a regulated activity under Section 58 of the CWA, the application can proceed once a notice has been provided by the RMO, which will occur after an RMP has been completed. This notice will be recognized as applicable law under in next amendment of the Building Code Act. As such, this approach provides a link between Part IV of the CWA and municipal planning and makes a proponent aware of restrictions that may be associated with a specific activity and land use.	Included Condominium Act and capitalized Building Permit
3.1.2.2	23	The SPC has considered which approaches or combinations of approaches would work best in local circumstances to achieve the objectives set out in the Source Protection Plan. With few exceptions, the overall approach taken by the SPC to achieve this was to manage existing threats and prohibit future threats where possible and reasonable. Where it was not possible or reasonable, the practice was to adequately manage the threat.	
3.1.2.2	23	The SPC has considered which approaches or combinations of approaches would work best in local circumstances to achieve the objectives set out in the Source Protection Plan. With few exceptions, the overall approach taken by the SPC to achieve this was to manage existing threats and prohibit future threats where possible and reasonable. Where it was not possible or reasonable to prohibit future threats, the practice was to adequately manage the threat.	Addition for clarification
3.1.3	23	Consultation on the development of policies for the Source Protection Plan is outlined in the report *Thames-Sydenham Source Protection Plan Consultation and Stakeholder Engagement Plan, October 11, 2011* that is referred to in Section 2.5.5 in Volume I.	
3.1.3	23	Consultation on the development of policies for the Source Protection Plan is outlined in the report *Thames-Sydenham Source Protection Plan Consultation and Stakeholder Engagement Plan, October 11, 2011, Updated November 2, 2012* that is referred to in Section 2.5.5 in Volume I.	Updated date
4.1.1.3	25	Transportation of substances along corridors is not currently a prescribed drinking water threat; however, many Source Protection Committees requested that this activity be included as a local drinking water threat. Within the Thames-	

Section	Page	Text	Reason For Change
		Sydenham and Region Source Protection Region, the transportation of liquid petroleum through pipelines and the transportation of fuel and fertilizer along roads, railways and waterways, could pose a risk to the quality of drinking water. This local threat was identified within the St. Clair Region Source Protection Area through event-based modelling. Event-based modelling was only completed for the IPZs of Sarnia (LAWSS), Petrolia and Wallaceburg. Through this modelling IPZ-3 areas were delineated around these intakes. The modelling determined that these activities under the circumstances modelled constitute a significant threat to drinking water as the contaminants were found to be delivered to the intakes under an extreme event at a concentration which would exceed the drinking water quality standards for that parameter. Local threat policies related to these significant threats can be found in Section 3.2 of Volume III.	
4.1.1.3	25	Transportation of substances along corridors is not currently a prescribed drinking water threat; however, many Source Protection Committees requested that this activity be included as a local drinking water threat. The transportation of fuel along provincial highways, county and local roads, railways and waterways, has been identified as a local threat in Event Based Areas (EBA) in the St. Clair Region and Lower Thames Valley Source Protection Areas. The Transportation of fertilizer along provincial highways, county and local roads, railways and waterways and the transportation of liquid petroleum products through pipelines have also been identified as a local threat in the SCRSPA as it could pose a risk to the quality of drinking water. These local threats were identified within the SCRSPA and LTVSPA through event-based modelling. Event-based modelling, was used to determine where spills from either these local threats or related prescribed drinking water threats may be considered a SDWT. The event-based modelling has established these local threats as significant drinking water threats in the Event Based Areas (EBA) of: • LAWSS, Petrolia, and Wallaceburg intakes in the St Clair Region Source Protection Area, • Wheatley intake in the Lower Thames Valley Source Protection Area, and • Stoney Point intake in the Essex Regions Source Protection Area. The modelling determined that these activities under the circumstances modelled constitute a significant threat to drinking water as the contaminants were found to be delivered to the intakes under an extreme event at a concentration which would exceed the drinking water quality standards for that parameter. Local threat policies related to these significant threats can be found in Section 3.2 of Volume III.	Update to reflect Event Based Areas terminology and updated technical work.
5	29	Ontario has vast and varied landscapes, which lends itself to unique, locally-driven Source Protection Plans to be developed. What adequately protects the drinking water source in an area supplied by deep, well-protected bedrock aquifers and Great Lakes may not be sufficient in areas where aquifers are shallow and more vulnerable or where water comes from inland rivers or lakes. The Province, through the CWA and its associated regulations, has set expectations of how drinking water sources should be protected. Implementers and stakeholders also have expectations as to how drinking water sources should be protected. To achieve expectations related to consistency, the focus on policy development with neighbouring Source Protection Regions has been on the harmonization of the intent of policies and not the requirement of a “cookie cutter” approach, where the Plans are exactly the same for each Region of the Province. This has been facilitated through the collaborative forum of the Source Protection Planning Advisory Committee (SPPAC) facilitated by Conservation Ontario. To understand the development process and policy outcomes of the surrounding jurisdictions, Thames-Sydenham and Region also collaborated with Ausable Bayfield Maitland Valley (ABMV), Saugeen Grey Sauble Northern Bruce Peninsula, Essex and Lake Erie Source Protection Regions.	
5	29	Ontario has vast and varied landscapes, which lends itself to unique, locally-driven Source Protection Plans to be developed. What adequately protects the drinking water source in an area supplied by deep, well-protected bedrock	Grammar edit

Section	Page	Text	Reason For Change
		aquifers or the Great Lakes may not be sufficient in areas where aquifers are shallow and more vulnerable or where water comes from inland rivers or lakes. The Province, through the CWA and its associated regulations, has set expectations of how drinking water sources should be protected. Implementers and stakeholders also have expectations as to how drinking water sources should be protected. To achieve expectations related to consistency, the focus on policy development with neighbouring Source Protection Regions has been on the harmonization of the intent of policies and not the requirement of a "cookie cutter" approach, where the Plans are exactly the same for each Region of the Province. This has been facilitated through the collaborative forum of the Source Protection Planning Advisory Committee (SPPAC) facilitated by Conservation Ontario. To understand the development process and policy outcomes of the surrounding jurisdictions, Thames-Sydenham and Region also collaborated with Ausable Bayfield Maitland Valley (ABMV), Saugeen Grey Sauble Northern Bruce Peninsula, Essex and Lake Erie Source Protection Regions.	
5	29	As previously stated, the Source Protection Plan comes into effect once the approval has been posted on the environmental registry. Implementation of the Source Protection Plan policies is discussed in and Section 2.4 of Volumes II and III. To aid in the implementation of these policies, transition provisions, which establish what activities may continue to proceed and not be subject to rules affecting existing activities rather than those which might affect future activities, have been developed. Details on transition provisions are also found in Section 2.4 of Volumes II and III.	
5	29	As previously stated, the Source Protection Plan comes into effect once the approval has been posted on the environmental registry. Implementation of the Source Protection Plan policies is discussed in Section 2.4 of Volumes II and III. To aid in the implementation of these policies, transition provisions, which establish what activities may continue to proceed and not be subject to rules affecting existing activities rather than those which might affect future activities, have been developed. Details on transition provisions are also found in Section 2.4 of Volumes II and III.	Added word 'and'
5.1	29	The implementation of the Source Protection Plan policies found within Volumes II and III requires cooperation of various stakeholders. The specific legal effect of the policies has been identified within Volume II and Section 2.1 of III.	
5.1	29	The implementation of the Source Protection Plan policies found within Volumes II and III requires cooperation of various stakeholders. The specific legal effect of the policies has been identified within Section 2.1 of Volumes II and III.	Sentence structure corrected
5.1.1	29	The CWA and the source protection planning process were initiated by the Province, and as such, there is a certain level of responsibility for the implementation of the Source Protection Plan. The Minister of Environment is responsible for the review of and approval of this initial proposed Source Protection Plan as well as subsequent reviews and updates.	
5.1.1	29	The CWA and the source protection planning process were initiated by the Province, and as such, the Province has a certain level of responsibility for the implementation of the Source Protection Plan. The Minister of Environment is responsible for the review of and approval of this initial proposed Source Protection Plan as well as subsequent reviews and updates.	Minor edit
5.4.3	34	Where issues have been identified in Section 5 of the Assessment Reports as potentially anthropogenic, further work is	

Section	Page	Text	Reason For Change
		required to determine if human activity may be contributing to the issue. If these issues are found to be wholly or partially anthropogenic, then Issues Contributing Areas (ICA) must be determined. Once this determination has been completed, the policies of the Source Protection Plan will need to be assessed to determine if they adequately deal with the significant threats which contribute to the Issues. It is possible that other policies may need to be developed once ICA have been developed.	
5.4.3	34	Where issues have been identified in Section 5 of the Assessment Reports as potentially anthropogenic, further work may be required to determine if human activity may be contributing to the issue. If these issues are found to be wholly or partially anthropogenic, then Issues Contributing Areas (ICA) must be determined. Once this determination has been completed, the policies of the Source Protection Plan will need to be assessed to determine if they adequately deal with the significant threats which contribute to the Issues. It is possible that other policies may need to be developed once ICAs have been developed. An ICA is included in the UTRSPA Assessment Report for the Tabor wellfield which is part of the Woodstock system. More work is required to determine if and ICA is needed for the nearby Thorton wellfield. The policies in volume 2 have been updated to include policies to address significant threats contributing to the issue in the ICA. Nitrate monitoring has been included in policies to support the work required to determine an ICA for Wallaceburg, This will require further assessment at future updates to the SPP and AR. Microcystin LR has been identified as an issue for intakes in western Lake Erie. It has been identified as an issue under the Act and as such does not have an ICA associated with this issue. Additional monitoring and study is required to determine whether Microcystin LR should be considered as an issue under the technical rules and an ICA delineated. The need for this additional work has been recognized in the policies of this SPP, however it will require re-assessment when the SPP and AR are next updated.	Update based on new ICA work.
5.4.4	34	This Source Protection Plan does not contain policies which address water quantity threats. This is due to the fact that a Tier 3 water budget has not been completed at the time of this Plan. A Tier 3 water budget is underway for some systems in the Upper Thames River Source Protection Area. It has been determined that a Tier 3 water budget is not required for the Lower Thames Valley and St. Clair Region Source Protection Areas. Once the Tier 3 water budget and water quantity risk assessment are completed for the Upper Thames River Source Protection Area, this Source Protection Plan may need to be updated to include policies which deal with any significant threats to drinking water quantity identified in the water quantity risk assessment.	
5.4.4	34	A Tier 3 water budget was conducted for some systems in the Upper Thames River Source Protection Area. It was determined that a Tier 3 water budget was not required for the Lower Thames Valley and St. Clair Region Source Protection Areas. This Source Protection Plan does not contain policies which address water quantity threats. This is due to the fact that the Tier 3 Water Budget concluded that there are no Water Quantity SDWTs.	Addition of Tier 3 Water Budget results
5.4.7	35	The delineation and vulnerability assessment, issues evaluation and threats assessment for the Kettle and Stony Point IPZ-1 and 2 has been completed. The completed work needs to be incorporated into the Assessment Report for the St. Clair Region Source Protection Area. While the work did not identify any significant threats the First Nation may wish to develop policies related to moderate and low drinking water threats to be included in the Thames-Sydenham	

Section	Page	Text	Reason For Change
		and Region Source Protection Plan. The Terms of Reference should also be amended to include this intake.	
5.4.7	35	The delineation and vulnerability assessment, issues evaluation and threats assessment for the Kettle and Stony Point IPZ-1 and 2 has been completed and incorporated into the Assessment Report for the St. Clair Region Source Protection Area. While the work did not identify any significant threats the First Nation may wish to develop policies related to moderate and low drinking water threats to be included in the Thames-Sydenham and Region Source Protection Plan. The Terms of Reference should also be amended to include this intake.	Updated to reflect Kettle Stony IPZ work.

1.2 SPP Volume II Suggested Changes

Table 1 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09 (original)

Policy Approach/Tool	Implementation timing
Specify action	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act	Effective date of SPP, as specified in CWA (see list A for policies to which this applies)
Land Use Planning: • Official Plan updates	3 years from effective date of SPP or at time of next OP review whichever is first
Land Use Planning: • Zoning by-laws	2 years from passing of OP
Existing Prescribed Instruments	3 years from effective date of SPP
Future (new) Prescribed Instruments	Effective date of SPP as specified in CWA
Section 58 Part IV Risk Management Plans for *existing* activities	Section 58 policies would apply to existing activities on a date specified in a notice provided, by the RMO (as per s58(4) of the CWA, 2006), to a person who is engaged in the activity. As per s58(4), the date shall not be less than 120 days after the notice is given
Section 58 Part IV Risk Management Plans for *future* activities	On the effective date of the SPP as specified in the CWA
Section 57 Part IV Prohibitions of *existing* activities	180 days from the effective date of the SPP, as specified in the CWA
Section 57 Part IV Prohibitions of *future* activities	On the effective date of the SPP, as specified in the CWA
Section 59 restricted land use provisions	On the effective date of the SPP, as specified in the CWA

Table 1 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09 (revised)

Policy Approach/Tool	Implementation timing
Specify action (S22(6))	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act (S39)	On the effective date of SPP, as specified in the CWA
Land Use Planning: • Official Plan updates (S40(1))	3 years from the effective date of SPP or at the time of the next OP review whichever is first
Land Use Planning: • Zoning by-laws (S42)	2 years from the passing of the OP
Existing Prescribed Instruments (S43(1))	3 years from the effective date of the SPP
Future (new) Prescribed Instruments (S39(7))	On the effective date of SPP, as specified in the CWA

Part IV Risk Management Plans for *existing* activities (S58)	Section 58 policies would apply to existing activities on a date specified in a notice provided by the RMO, to a person who is engaged in the activity. The date shall not be less than 120 days after the notice is given (as per s58(4)).
Part IV Risk Management Plans for *future* activities (S58(1))	On the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *existing* activities (S57(2))	180 days from the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *future* activities (S57(1))	On the effective date of the SPP, as specified in the CWA
Part IV Restricted Land Use provisions (S59(1))	On the effective date of the SPP, as specified in the CWA

Section	Page	Text	Reason for Change	Changes Made
2.3.6	8	The significant threat policies contained in this plan apply to those areas where the prescribed activities can be significant drinking water threats. The areas where activities can be significant drinking water threats are described in general terms as follows: Significant threat policies generally apply to WHPA-A and B with a vulnerability score of 10. Other areas where policies apply to specific activities are: • The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act o Application of untreated septage can be significant in IPZ-1 (8,9) and WHPA-A and WHPA-B (10) o Landfilling of municipal waste can be significant in WHPA-A, B (8, 10), C (8) o Landfilling solid non-hazardous industrial waste can be significant in WHPA-A, B (8, 10), C (8) o Liquid industrial waste injection into well can be significant in WHPA-A, B (8, 10), C (8);		
2.3.6	8	The significant threat policies contained in this plan apply to those areas where the prescribed activities can be significant drinking water threats. Significant threat policies generally apply to WHPA-A and B with a vulnerability score of 10. Other areas where policies apply to specific activities are: • The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act o Landfilling of municipal waste can be significant in WHPA-A, B (8, 10), C (8) o Landfilling solid non-hazardous industrial waste can be significant in WHPA-A, B (8, 10), C (8) o Liquid industrial waste injection into well can be significant in WHPA-A, B (8, 10), C (8);	Extra sentence left in during a previous edit.	Editorial text change
OC-1.01	13	**Definitions** Where a term is italicized within the policies of this Source Protection Plan, the following definitions and those referenced in Section 2.3 of Volume II shall apply. Defined terms are intended to capture both the singular and plural forms of these terms. *Area Municipality* means one or more of the eight lower tier municipalities located within the County, consisting of the City of Woodstock, Town of Tillsonburg, Town of Ingersoll and Townships of Blandford-Blenheim, East Zorra-Tavistock, Norwich, Southwest-Oxford and Zorra. *County* means Oxford County. *Existing* means undertaken or established as of the date the Source Protection Plan takes effect, or at some point prior to the date the Source Protection Plan takes effect with a demonstrated intent to continue. *New or Future* means not existing, as defined in this Source Protection Plan.		
OC-1.01	13	**Definitions** Where a term is italicized within the policies of this Source Protection Plan, the following definitions and those referenced in Section 2.3 of Volume II shall apply. Defined terms are	Editorial	Editorial text change

Section	Page	Text	Reason for Change	Changes Made
		intended to capture both the singular and plural forms of these terms. □□ Area Municipality– means one or more of the eight lower tier municipalities located within the County, consisting of the City of Woodstock, Town of Tillsonburg, Town of Ingersoll and Townships of Blandford-Blenheim, East Zorra-Tavistock, Norwich, Southwest-Oxford and Zorra. □□ County- means the County of Oxford. □□ Existing– means undertaken or established as of the date the Source Protection Plan takes effect, or at some point prior to the date the Source Protection Plan takes effect with a demonstrated intent to continue. □□ New or Future- means not existing, as defined in this Source Protection Plan.		
OC-1.02	13	**Implementation Timing** Except as set out below, or as otherwise prescribed by the Clean Water Act, the policies contained in this Source Protection Plan shall come into effect on the date of the posting of the notice of approval of this Source Protection Plan on the Environmental Registry. 1. For policies written pursuant to Section 43(2) of the Clean Water Act (prescribed instruments), amendments to existing prescribed instruments shall be completed within three (3) years from the effective date of the Source Protection Plan; 2. For policies written pursuant to Section 40(2) of the Clean Water Act (Official Plan conformity), amendments to the Official Plan required to conform with the policies of this SPP shall be initiated by the County within three (3) years from the effective date of the Source Protection Plan, or as part of the next Official Plan Review undertaken in accordance with Section 26 of the Planning Act, whichever comes first. Amendments to Zoning By-laws required to conform with the significant threat policies shall be initiated by the Area Municipalities within two (2) years of the adoption of the Official Plan conformity amendments; 3. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented two (2) years of the effective date of the Source Protection Plan; and 4. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs and education and outreach) shall be implemented within two (2) years of the effective date of the Source Protection Plan.		
OC-1.02	13	**Implementation Timing** Except as set out below, or as otherwise prescribed by the Clean Water Act, the policies contained in this Source Protection Plan shall come into effect on the date of the posting of the notice of approval of this Source Protection Plan on the Environmental Registry. 1. For policies written pursuant to Section 43(2) of the Clean Water Act (prescribed instruments), amendments to existing prescribed instruments shall be completed within three (3) years from the effective date of the Source Protection Plan; 2. For policies written pursuant to Section 40(2) and Section 42 of the Clean Water Act (Official Plan conformity), amendments to the Official Plan required to conform with the policies of this SPP shall be initiated by the *County* within three (3) years from the effective date of the Source Protection Plan, or as part of the next Official Plan Review undertaken in accordance with Section 26 of the Planning Act, whichever comes first. Amendments to Zoning By-laws required to conform with the significant threat policies shall be initiated by the *Area*	Editorial	Editorial text change MOE suggested change In database vulnerable areas were WHPA-A-C, added D,E, ICA, SGRA, HVA

Section	Page	Text	Reason for Change	Changes Made
		Municipalities within two (2) years of the adoption of the Official Plan conformity amendments; 3. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan; and 4. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs and education and outreach) shall be implemented within two (2) years of the effective date of the Source Protection Plan.		
OC-1.03	14	**Transitional Provisions** 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under Subsection 34(10) of the Planning Act; b. Approval of development in a site plan control area under Subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act. A significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect. 3. Despite the definition of existing, where a significant drinking water threat activity is directly		

Section	Page	Text	Reason for Change	Changes Made
		related to a land use permitted by existing zoning and such activity does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. 4. Despite the definition of existing and the provisions contained in Sections 1 and 3 of the transitional matters policies, where a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered as new or future from that point forward.		
OC-1.03	14	**Transitional Provisions** 1. Despite the definition of *existing*, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under Subsection 34(10) of the Planning Act; b. A site plan under Subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act, a significant drinking water threat activity that is to be established as part of the proposed development may be considered *existing* for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of *existing*, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies.	Oxford change based on MOE comment (change in order of numbered sections)	Editorial text change MOE suggested change

Section	Page	Text	Reason for Change	Changes Made
		3. Despite the definition of *existing* and the provisions contained in Sections 1 and 2 of policy OC 1.03, where a Risk Management Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered as *new* or *future* from that point forward. 4. Despite the definition of *existing*, where a significant drinking water threat activity is being proposed by way of a *new* or amended prescribed instrument, it shall be considered *existing* for the purposes of complying with the applicable significant drinking water threat policies, provided that the application for the *new* or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.		
OC-1.04	15	**Restricted Land Use** In accordance with Section 59 of the Clean Water Act, all land uses identified within the County Official Plan and/or Area Municipal Zoning Bylaws, that are located within an area where Sections 57 or 58 of the Clean Water Act may apply (Well Head Protection Areas A, B or C), are hereby designated for the purposes of Section 59 (Restricted Land Use), with the exception of residential uses. Within these designated land use categories and areas, a notice from the Risk Management Official in accordance with Section 59(2) of the Clean Water Act shall be required prior to approval of any Planning Act or Building Permit application. Despite the above policy, a Risk Management Official may issue written direction specifying the circumstances under which a planning authority or building official may be permitted to make the determination that a site specific land use 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 building official, as the case may be, is satisfied that: • The application complies with the circumstances specified in the written direction from 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.		
OC-1.04	15	**Restricted Land Uses** In accordance with Section 59 of the Clean Water Act, all land uses identified within the County Official Plan and/or Area Municipal Zoning Bylaws, that are located within an area where Sections 57 or 58 of the Clean Water Act applies (Well Head Protection Areas A, B or C and Issue Contributing Areas), are hereby designated for the purposes of Section 59 (Restricted Land Uses), with the exception of residential uses. Within these designated land use categories and areas, a notice from the Risk Management Official in accordance with Section 59(2) of the Clean Water Act shall be required prior to approval of any Planning Act or Building Permit application.	Add ICA in policy text and sidebar	ICA addition text change MOE suggested change Manage/prohibit dropdown in database changed

Section	Page	Text	Reason for Change	Changes Made
		Despite the above policy, a Risk Management Official may issue written direction specifying the situations under which a planning authority or building official may be permitted to make the determination that a site specific land use 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 building official, as the case may be, is satisfied that: • The application complies with the written direction from 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.		from not applicable to manage. WHPA-A-C and ICA added to vulnerable areas Monitoring policies attached: mon guide, county, RMO, SPA (from TSR list)
OC-1.05	15	**Official Plan and Zoning By-law Amendment(s)** The *County* shall amend the Official Plan and the *Area Municipalities* shall amend their respective Zoning By-laws to: 1. Identify the WHPAs in which a *significant drinking water threat* could occur; 2. Indicate that within the areas identified, any use or *activity* that is, or would be, a *significant drinking water threat* is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; 3. Identify the *significant drinking water threats* that are prohibited through *Prescribed Instruments,* or Section 57 of the *Clean Water Act*, in accordance with the *significant drinking water threat*-specific policies contained in this Source Protection Plan*;* and, 4. Incorporate any other amendments required to conform with the *significant drinking water threat*-specific land use policies or to have regard for the low and/or moderate threat-specific land use policies identified in this Source Protection Plan.		
OC-1.05	15	**Official Plan and Zoning By-law Amendment(s)** The *County* shall amend the Official Plan and the *Area Municipalities* shall amend their respective Zoning By-laws to: 1. Identify the WHPAs and/or ICAs in which a significant drinking water threat could occur; 2. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; 3. Identify the significant drinking water threats that are prohibited through Prescribed Instruments*,* or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan*;* and, 4. Incorporate any other amendments required to conform with the significant drinking water threat-specific land use policies or to have regard to the low and/or moderate threat-specific land use policies identified in this Source Protection Plan.	Add ICA in policy text and sidebar	ICA addition text change MOE suggested change All possible vulnerable areas were added in database (WHPA-A-E, ICA, SGRA, HVA) Monitoring policies attached: mon guide, county, RMO, *SPA (*from

Section	Page	Text	Reason for Change	Changes Made
				TSR list)
OC-1.06	16	**Education and Outreach** Education and Outreach programs designed to increase awareness and understanding of drinking water threats, and promote best management practices as a means of reducing the risks to drinking water sources, shall be developed and implemented collaboratively by the County/Conservation Authority/Provincial partners with the Conservation Authority providing a lead role. The programs shall address low, moderate and significant drinking water threats with the priority placed on significant drinking water threats. The focus should be on incorporating Drinking Water Source Protection messaging into existing education and outreach materials and programs as a first priority. New education and outreach materials and programs may also be developed and implemented, if deemed necessary and/or appropriate, and be subject to available funding. The County and Conservation Authorities, in collaboration with the Province (Ministry of Environment), should consider options for the longterm support of education and outreach programs. The program scope shall be subject to available funding.		
OC-1.06	16		no change to policy text	All possible vulnerable areas were added in database (WHPA-A-E, ICA, SGRA, HVA) Monitoring policies attached: mon guide, county, *MOE, *SPA, *CA (*from TSR list)
OC-1.07	16	**Incentive Program Development** The *County* and Conservation Authorities, in collaboration with the Province (Ministry of Environment) and other bodies where possible, shall consider supporting existing incentive programs and/or where deemed necessary or appropriate, the development and implementation of new incentive programs directed at existing *significant drinking water threats.* Such incentive programs may include, but not necessarily be limited to assisting with the costs of implementing risk mitigation practices and transport pathway maintenance and decommissioning and shall be subject to available funding. Incentives shall only be considered for existing *significant drinking water threats* as prescribed		

Section	Page	Text	Reason for Change	Changes Made
		in O. Reg. 287/07. However, incentives shall not be considered for the application of untreated septage; the storage of mine tailings; the application of non-agricultural source material (NASM); the handling and storage of NASM; and the management of runoff that contains chemicals used in the de-icing of aircraft.		
OC-1.07	16		Add ICA in sidebar no change to policy text	WHPA-A-C and ICA added to vulnerable areas Monitoring policies attached: mon guide, county, *MOE, *SPA, *CA (*from TSR list)
OC-1.08	16	**Incentive Program Funding** The Province (Ministry of Environment) shall be encouraged to continue funding the Ontario Drinking Water Stewardship Program, as outlined in Section 97 of the *Clean Water Act*, 2006 and Section 69 of O. Reg. 287/07, to adequately fund risk management practices for *significant drinking water threats* in areas where significant threats may occur.		
OC-1.08	16		Add ICA in sidebar no change to policy text	WHPA-A-C and ICA added to vulnerable areas Monitoring policies attached: mon guide, *MOE, *SPA (*from TSR list)
OC-1.09	17	**Municipal Commenting on Environmental Compliance Approvals** The Ministry of Environment should, collaboratively with the *County,* develop a consultation process related to document sharing and consultation on the issuance and/or notification of prescribed instruments, which could be used to guide information exchange between the two agencies to protect municipal drinking water sources.		
OC-1.09	17		no change to policy text	All possible vulnerable areas were added in database (WHPA-A-E, ICA, SGRA, HVA) Monitoring policies attached: mon guide, county, *MOE, *SPA (*from

Section	Page	Text	Reason for Change	Changes Made
				TSR list)
OC-1.10	17	**Provincial Signage** In accordance with Section 22 (7) of the *Clean Water Act*, the Ministry of Transportation, in collaboration with the Ministry of Environment as well as in consultation with Source Protection Authorities (SPAs), should design signage, to the appropriate Provincial standards, to identify the locations of Wellhead Protection Areas (WHPAs). The Ministry of Transportation should manufacture, install and maintain the signs along Provincial highways within WHPA with a vulnerability score of 10.		
OC-1.10	17		no change to policy text	WHPA-A-B added to vulnerable areas Monitoring policies attached: mon guide, *MTO, *SPA (*from TSR list)
OC-1.11	17	**Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall consider placing Source Protection advisory signage, where municipal arterial roads are located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10. Such signage shall be consistent with the design developed by the Province in collaboration with the SPA and municipalities would be responsible for the purchase, installation and maintenance of such signs.		
OC-1.11	17	**Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall place Source Protection advisory signage, where municipal arterial roads are located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10. Such signage shall be consistent with the design developed by the Province in collaboration with the SPA and municipalities would be responsible for the purchase, installation and maintenance of such signs.	'Conform' language	'Conform' language text edit WHPA-A-B added to vulnerable areas Monitoring policies attached: mon guide, county, municipality, *SPA (*from TSR list)
OC-2.01	18	**Existing Waste Disposal Site - Management** For any *existing* waste disposal site within the meaning of Part V of the *Environmental Protection Act* or as defined by the *Ontario Water Resources Act* that is subject to an *Environmental Compliance Approval*, where this *activity* is a *significant drinking water threat*, the Ministry of the Environment shall review and, where necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions that, when implemented, manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.01	18	**Existing Waste Disposal Site - Management** For any *existing* waste disposal site within the meaning of Part V of the *Environmental*	Add ICA to sidebar	Text edit for consistency

Section	Page	Text	Reason for Change	Changes Made
		Protection Act or as defined by the *Ontario Water Resources Act* that is subject to an *Environmental Compliance Approval*, where this *activity* is a *significant drinking water threat*, the Ministry of the Environment shall review and, where necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions. These terms and conditions, when implemented, shall manage the *activity* so that it ceases to be a *significant drinking water threat*.		between policies Editorial text change Corrected vulnerable areas and added ICA Monitoring policies attached: mon guide, MOE Amen PI, *SPA (*from TSR list)
OC-2.02	18	**Existing Waste Disposal Site - Management (Sec. 58, CWA)** For any *existing* waste disposal site, or aspect thereof, within the meaning of Part V of the *Environmental Protection Act* or as defined by the *Ontario Water Resources Act* that is not subject to an *Environmental Compliance Approval,* where this *activity* is a *significant drinking water threat*, it is designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.02	18	**Existing Waste Disposal Site - Management (Sec. 58, CWA)** For any *existing* waste disposal site, or aspect thereof, within the meaning of Part V of the *Environmental Protection Act* or as defined by the *Ontario Water Resources Act* that is not subject to an *Environmental Compliance Approval,* where this *activity* is a *significant drinking water threat*, it is designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.	Add ICA to sidebar	Text edit for consistency between policies WHPA-A-B and ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (*from TSR list)
OC-2.03	18	**New Waste Disposal Site - Prohibition** For any *new* waste disposal site within the meaning of Part V of the *Environmental Protection Act* or as defined by the *Ontario Water Resources Act* that requires an *Environmental Compliance Appr*oval, where this *activity* would be a *significant drinking water threat*, the Ministry of the Environment shall prohibit this *activity* through the *Environmental Compliance Approvals* process so that it never becomes a *significant drinking water threat*.		
OC-	18		Add ICA to sidebar	Corrected

Section	Page	Text	Reason for Change	Changes Made
2.03			no change to policy text	vulnerable areas and added ICA Monitoring policies attached: mon guide, RMO, *SPA (*from TSR list)
OC-2.04	18	**New Waste Disposal Site - Prohibition (Sec. 57, CWA)** For any *new* waste disposal site, or aspect thereof, within the meaning of Part V of the *Environmental Protection Act* or as defined by the *Ontario Water Resources Act* that does not require an *Environmental Compliance Approval,* where this *activity* would be a *significant drinking water threat*, it is designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that it never becomes a significant drinking water threat.		
OC-2.04	18	**New Waste Disposal Site - Prohibition (Sec. 57, CWA)** With the exception of the following waste disposal site threat subcategories: • storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or • storage of hazardous or liquid industrial waste, where any new waste disposal site, or aspect thereof, within the meaning of Part V of the Environmental Protection Act, that does not require an Environmental Compliance Approval, would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the Clean Water Act and shall be prohibited so that it never becomes a significant drinking water threat.	Add ICA to sidebar	Policy edit to address MOE concern about prohibition of waste sub-threats. UTRCA SPA and Oxford added to policy WHPA-A-B and ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (*from TSR list)
New policy				
OC-2.04.1		**New Waste Disposal Site - Management (Sec. 58, CWA)** Where a new waste disposal site, or aspect thereof, within the meaning of Part V of the Environmental Protection Act does not require an Environmental Compliance Approval and comprises one of the following waste disposal site threat subcategories: • storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or		New policy to address MOE concern about prohibition of waste sub-threats.

Section	Page	Text	Reason for Change	Changes Made
		• storage of hazardous or liquid industrial waste. and where such waste disposal site would be a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity such that it never becomes a significant drinking water threat. The requirements of the risk management plan may be based on Ministry of the Environment tools and requirements for such activities, as set out in the Environmental Protection Act, but may also include any modifications or additional requirements that are deemed necessary or appropriate by the Risk Management Official.		
OC-2.05	19	**Existing Septic Systems and Holding Tanks – Management (Maintenance Inspection)** For any *existing* septic system or septic system holding tank regulated under the *Ontario Building Code Act*, including expansions, modifications or replacements of such systems, or a *new* septic system or septic system holding tank regulated under the *Ontario Building Code Act* required for a municipal water supply well, where these *activities* are, or would be *significant drinking water threats*, the *County* shall implement an on-site sewage system maintenance inspection program, as required by the *Ontario Building Code Act* so that these *activities* cease to be or never become a *significant drinking water threat*.		
OC-2.05	19	**Septic Systems and Holding Tanks – Management (Maintenance Inspection)** For septic systems or septic system holding tanks regulated under the *Ontario Building Code Act*, where such systems are: ☐ existing (including expansions, modifications or replacements); or ☐ new and required for a municipal water supply well or ☐ new and located within an ICA, but outside of a WHPA-A or B with a vulnerability score of 10, and where these activities are, or would be significant drinking water threats, the County shall implement an on-site sewage system maintenance inspection program, as required by the *Ontario Building Code Act* so that these activities cease to be or never become a significant drinking water threat.	Oxford provided re-wording. Add ICA in policy text and sidebar Sidebar should indicate existing and future Existing removed from title	Text change to incorporate ICA Changed to existing and future policy ICA added to vulnerable areas Monitoring policies attached: mon guide, county, *SPA (*from TSR list)
OC-2.06	19	**New Septic Systems - Prohibition (Land Use Planning)** For a *new* septic system or septic system holding tank, with the exception of a new septic system or septic system holding tank regulated under the *Ontario Building Code Act* that is required for a municipal water supply well, where these *activities* would be a *significant drinking water threat*, the *County* shall amend their Official Plan and the *Area Municipalities* shall amend their respective Zoning By-laws to prohibit development requiring a new septic system or septic system holding tank so that these *activities* never become *significant drinking water threats*.		

Section	Page	Text	Reason for Change	Changes Made
OC-2.06	19	**New Septic Systems or Holding Tanks - Prohibition (Land Use Planning)** For new septic systems or new septic system holding tanks regulated under the Ontario Building Code Act, with the exception of: ☐ those required for a municipal water supply well or ☐ those located within an ICA, but outside of a WHPA-A or B with a vulnerability score of 10, where these activities would be a significant drinking water threat, the County shall amend their Official Plan and the Area Municipalities shall amend their respective Zoning By-laws to prohibit uses, buildings or structures that would require a new septic system or septic system holding tank within such areas so that these activities never become significant drinking water threats.	Oxford provided re-wording. Add ICA in policy text and sidebar Will require rationale in the explanatory document	Text change to incorporate ICA ICA added to vulnerable areas Added holding tank detail to policy database Monitoring policies attached: mon guide, county, municipality, *SPA (*from TSR list)
OC-2.07	19	**Existing Septic Systems or Holding Tanks - Management (OWRA)** For an *existing* septic system or septic system holding tank subject to an *Environmental Compliance Approval* in accordance with the *Ontario Water Resources Act*, where these *activities* are *significant drinking water threats*, the Ministry of the Environment shall review and, where necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions that, when implemented, manage these *activities* such that they cease to be *significant drinking water threats*. The terms and conditions should include, but not necessarily be limited to, requirements for the proponent/applicant to undertake mandatory monitoring of groundwater impacts, contingencies in the event that drinking water quality is adversely affected, regular and ongoing compliance monitoring, mandatory system inspections at least every five (5) years, annual reporting to the *Source Protection Authority* and the *County* on any required inspection or monitoring programs and upgrading of these septic systems to current standards, where necessary.		
OC-2.07	19	**Septic Systems or Holding Tanks - Management (OWRA)** For septic systems or septic system holding tanks subject to an Environmental Compliance Approval in accordance with the Ontario Water Resources Act, where such systems are: • existing (including expansions, modifications or replacements); or • new and located within an ICA, but outside of a WHPA-A or B with a vulnerability score of 10, and, where these *activities* are, or would be, *significant drinking water threats*, the Ministry of the Environment shall review and, where necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions. These terms and conditions, when implemented, shall manage these *activities* so that they cease to be, or never become, *significant drinking water threats*.	Oxford provided re-wording. Add ICA in policy text and sidebar Sidebar should indicate existing and future Existing removed from title	Text edit for consistency between policies Text change to incorporate ICA Manage/prohibit dropdown in database changed to manage. ICA added to vulnerable areas

Section	Page	Text	Reason for Change	Changes Made
		The terms and conditions should include, but not necessarily be limited to: • requirements for the proponent/applicant to undertake mandatory monitoring of groundwater impacts; • contingencies in the event that drinking water quality is adversely affected; • regular and ongoing compliance monitoring; • mandatory system inspections at least every five (5) years; • annual reporting to the Source Protection Authority and the County on any required inspection or monitoring programs; and • upgrading of these septic systems to current standards, where necessary.		Monitoring policies attached: mon guide, MOE amen PI, *SPA (from TSR list)
OC-2.08	19	**New Septic Systems or Holding Tanks - Prohibition (OWRA)** For a *new* septic system or septic system holding tank requiring an *Environmental Compliance Approval*, in accordance with the *Ontario Water Resources Act*, where these *activities* would be *significant drinking water threats*, the Ministry of the Environment shall prohibit these *activities* through the *Environmental Compliance Approvals* process so that they never become *significant drinking water threats*.		
OC-2.08	19	**New Septic Systems or Holding Tanks - Prohibition (OWRA)** For a new septic system or septic system holding tank requiring an Environmental Compliance Approval, in accordance with the Ontario Water Resources Act that is located within a WHPA 'A' or WHPA 'B' with a vulnerability score of 10, where these activities would be significant drinking water threats, the Ministry of the Environment shall prohibit these activities through the Environmental Compliance Approvals process so that they never become significant drinking water threats.	Oxford provided re-wording.	Policy text change to specify WHPA (10) Changed septic system detail from 3yr effective date to immediate. Monitoring policies attached: mon guide, MOE PI, *SPA (from TSR list)
OC-2.09	20	**Existing Sewage Treatment Plant Effluent Discharge or Storage of Sewage - Management** For any *existing* sewage treatment plant effluent discharges or storage of sewage, where these *activities* are *significant drinking water threats*, the Ministry of the Environment shall review and, where necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions that, when implemented, manage these *activities* such that they cease to be *significant drinking water threats*.		
OC-2.09	20	**Existing Sewage Discharge or Storage - Management** For any *existing:*	Add ICA to sidebar	Text edit for consistency

Section	Page	Text	Reason for Change	Changes Made
		• sewage treatment plant effluent discharges; • storage of sewage; • industrial effluent discharge; • sewage treatment plant by-pass discharges; or • combined sewer discharge where these *activities* are *significant drinking water threats*, the Ministry of the Environment shall review and, where necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions. These terms and conditions, when implemented, shall manage these *activities* so that they cease to be *significant drinking water threats*.	Add additional threat sub-categories which are SDWT in ICA only Re-format for easier reading (bullet points) and sentence break.	between policies Text change to incorporate additional sewage sub-threats due to ICA Manage/prohibit dropdown in database changed to manage ICA added to vulnerable areas Added 3 new sub-threats in policy details Monitoring policies attached: mon guide, MOE amen PI, *SPA (from TSR list)
OC-2.10	20	**New Sewage Treatment Plant Effluent Discharge or Storage of Sewage - Prohibition** For any *new* sewage treatment plant effluent discharge or storage of sewage, where these *activities* would be *significant drinking water threats*, the Ministry of the Environment shall prohibit these *activities* through the *Environmental Compliance Approvals* process so that they never become *significant drinking water threats*.		
OC-2.10	20	**New Sewage Discharge or Storage - Prohibition** For any *new:* • sewage treatment plant effluent discharges; • storage of sewage; • industrial effluent discharge; • sewage treatment plant by-pass discharges; or • combined sewer discharge where these *activities* would be *significant drinking water threats*, the Ministry of the Environment shall prohibit these *activities* through the *Environmental Compliance Approvals* process so that they never become *significant drinking water threats*.	Add ICA to sidebar Add additional threat sub-categories which are SDWT in ICA only Re-format for easier reading (bullet points) and sentence break.	Text change to incorporate additional sewage sub-threats due to ICA ICA added to vulnerable areas Added 3 new sub-threats in policy

Section	Page	Text	Reason for Change	Changes Made
				details Monitoring policies attached: mon guide, MOE PI, *SPA (from TSR list)
OC-2.11	20	**Sanitary Sewers and Related Pipes - Management** For any *existing* or *new* sanitary sewer and related pipes, where this *activity* is, or would be, a *significant drinking water threat*, the Ministry of the Environment shall ensure that *Environmental Compliance Approvals* for these *activities* are prepared, or, where necessary, amended to incorporate terms and conditions that, when implemented, will manage the *activity* so that it ceases to be or never becomes a *significant drinking water threat*. The terms and conditions may include, but not necessarily be limited to, requirements for regular maintenance and inspections by the holder of the *Environmental Compliance Approval*.		
OC-2.11	20	**Sanitary Sewers and Related Pipes - Management** For any *existing* or *new* sanitary sewer and related pipes, where this *activity* is, or would be, a *significant drinking water threat*, the Ministry of the Environment shall ensure that *Environmental Compliance Approvals* for these *activities* are prepared, or, where necessary, amended to incorporate terms and conditions. These terms and conditions, when implemented, will manage the *activity* so that it ceases to be, or never becomes, a *significant drinking water threat*. The terms and conditions may include, but not necessarily be limited to, requirements for regular maintenance and inspections by the holder of the *Environmental Compliance Approval*.	Add ICA to sidebar	Policy text editorial change ICA added to vulnerable areas Changed from one policy detail of future & existing to separate existing and future details with separate effective dates Monitoring policies attached: mon guide, MOE PI, MOE amen PI, *SPA (from TSR list)
OC-2.12	20	**Existing Stormwater Discharge – Management** For any *existing* stormwater management facility that discharges stormwater, where this *activity* is a *significant drinking water threat*, the Ministry of the Environment shall review and, if necessary, amend *Environmental Compliance Approvals* to incorporate terms and conditions that, when implemented, will manage the *activity* such that it ceases to be a *significant drinking water threat*.		

Section	Page	Text	Reason for Change	Changes Made
OC-2.12	20	**Stormwater Management Facilities – Management** For stormwater management facilities that discharge stormwater; where such facilities are: • existing; or • new and located within an ICA, where the drainage area associated with the storm water management facility is less than or equal to 100 hectares, and, where this activity is, or would be, a significant drinking water threat, the Ministry of the Environment shall review and, where necessary, amend Environmental Compliance Approvals to incorporate terms and conditions. These terms and conditions, when implemented, shall manage the activity so that it ceases to be, or never becomes, a significant drinking water threat.	Oxford provided re-wording. Add ICA in policy text and sidebar Sidebar should indicate existing and future Existing removed from title	Text edit for consistency between policies Text change to incorporate ICA Added future detail in policy database ICA added to vulnerable areas Monitoring policies attached: mon guide, MOE PI, MOE amen PI, *SPA (from TSR list)
OC-2.13	20	**New Stormwater Discharge – Prohibition** For any *new* stormwater management facility that would discharge stormwater, where this *activity* would be a *significant drinking water threat*, the Ministry of the Environment shall prohibit this *activity* through the *Environmental Compliance Approvals* process so that the activity never becomes a *significant drinking water threat.*		
OC-2.13	20	**New Stormwater Management Facilities – Prohibition** For new stormwater management facilities that would discharge stormwater, with the exception of: • new facilities located within an ICA, where the drainage area associated with the storm water management facility is less than or equal to 100 hectares, where this activity would be a significant drinking water threat, the Ministry of the Environment shall prohibit this activity through the Environmental Compliance Approvals process so that the activity never becomes a significant drinking water threat.	Oxford provided re-wording. Add ICA in policy text and sidebar	Text change to incorporate ICA ICA added to vulnerable areas Monitoring policies attached: mon guide, MOE PI, *SPA (from TSR list)
OC-2.14	21	**Application of Agricultural Source Material - Prohibition** For any *new* or *existing* application of agricultural source material to land within a WHPA 'A', where this *activity* is, or would be, a *significant drinking water threat,* it shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that it ceases to be or never becomes a *significant drinking water threat*.		

Section	Page	Text	Reason for Change	Changes Made
OC-2.14	21		no change to policy text	Monitoring policies attached: mon guide, RMO, *SPA (from TSR list) ICA added to vulnerable areas
OC-2.15	21	**Application of Agricultural Source Material - Management** For any *new* or *existing* application of agricultural source material to land outside of a WHPA 'A', where this *activity* is, or would be, a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be or never becomes a *significant drinking water threat*. The requirements of the *Risk Management Plan* will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the *Nutrient Management Act*, but may also include any modifications or additional requirements deemed necessary or appropriate by the *Risk Management Official.*		
OC-2.15	21	**Application of Agricultural Source Material - Management** For any *new* or *existing* application of agricultural source material to land outside of a WHPA 'A', where this *activity* is, or would be, a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be or never becomes a *significant drinking water threat*. The requirements of the *Risk Management Plan* will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the *Nutrient Management Act*, but may also include any modifications or additional requirements deemed necessary or appropriate by the *Risk Management Official.*	no change to policy text	Text edit for consistency between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list) ICA added to vulnerable areas
OC-2.16	21	**New Storage of Agricultural Source Material - Prohibition** For any *new* storage of agricultural source material, where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that it never becomes a *significant drinking water threat*.		
OC-2.16	21	**New Storage of Agricultural Source Material - Prohibition** For any new storage of agricultural source material, within a WHPA 'A' or WHPA 'B" with a vulnerability score of 10, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the Clean Water Act and shall be prohibited so that it never becomes a significant drinking water threat.	Oxford provided re-wording.	Policy text change to specify WHPA (10) Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)

Section	Page	Text	Reason for Change	Changes Made
OC-2.17	21	**Existing Storage of Agricultural Source Material - Management** For any *existing* storage of agricultural source material, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*. The requirements of the *Risk Management Plan* will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the *Nutrient Management Act*, but may also include any modifications or additional requirements deemed necessary or appropriate by the *Risk Management Official*.		
OC-2.17	21	**Storage of Agricultural Source Material - Management** For storage of agricultural source material, where such storage is: • existing; or • new and located within an ICA, but outside of a WHPA-A or B with a vulnerability score of 10, and, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking water threat. The requirements of the Risk Management Plan will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the Nutrient Management Act, but may also include any modifications or additional requirements deemed necessary or appropriate by the Risk Management Official, particularly where such activity is located within an ICA.	Oxford provided re-wording. Add ICA in policy text and sidebar Sidebar should indicate existing and future Existing removed from title	Text edit for consistency between policies Text change to incorporate ICA Added future detail in policy database ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.18	22	**Application of Non-Agricultural Source Material - Prohibition** For any *new* or *existing* application of non-agricultural source material to land where this *activity* is, or would be, a *significant drinking water threat*, the Ministry of Agriculture, Food and Rural Affairs or the Ministry of the Environment, as applicable, shall prohibit this *activity* through the Non-Agricultural Source Material (NASM) Plan process, in accordance with the *Nutrient Management Act*, or through the *Environmental Compliance* *Approval* process, in accordance with the *Environmental Protection Act*, so that this *activity* ceases to be or never becomes a *significant drinking water threat*.		
OC-2.18	22		Add ICA to sidebar no change to policy text	ICA added to vulnerable areas Monitoring policies attached: mon guide, MOE PI, MOE amen PI,

Section	Page	Text	Reason for Change	Changes Made
				*SPA (from TSR list) (2 out of 4 PIs used in policy details, should the others be used?)
OC-2.19	22	**Existing Handling and Storage of Non-Agricultural Source Material - Management** For any *existing* facility for the handling and storage of non-agricultural source material, where this *activity* is a *significant drinking water threat*, the Ministry of Agriculture, Food and Rural Affairs, or Ministry of the Environment, as applicable, shall review and, if necessary, amend the required Non-Agricultural Source Material (NASM) Plan, in accordance with the *Nutrient Management Act*, or *Environmental Compliance Approval*, in accordance with the *Environmental Protection Act*, so that Plans/Compliance Approvals incorporate terms and conditions that, when implemented, manage this *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.19	22	**Existing Handling and Storage of Non-Agricultural Source Material - Management** For any *existing* facility for the handling and storage of non-agricultural source material, where this *activity* is a *significant drinking water threat*, the Ministry of Agriculture, Food and Rural Affairs, or Ministry of the Environment, as applicable, shall review and, if necessary, amend the required Non-Agricultural Source Material (NASM) Plan, in accordance with the *Nutrient Management Act*, or *Environmental Compliance Approval*, in accordance with the *Environmental Protection Act*, so that Plans/Compliance Approvals incorporate terms and conditions. These terms and conditions, when implemented, manage this *activity* so that it ceases to be a *significant drinking water threat*.	Add ICA to sidebar	Text edit for consistency between policies Editorial policy text change ICA added to vulnerable areas Monitoring policies attached: mon guide, MOE amen PI, OMAF amen PI, *SPA (from TSR list)
OC-2.20	22	**New Handling and Storage of Non-Agricultural Storage Material - Prohibition** For any *new* handling and storage of non-agricultural source material, where this *activity* would be a *significant drinking water threat*, the Ministry of Agriculture, Food and Rural Affairs or Ministry of the Environment, as applicable, shall prohibit this *activity* through the Non-Agricultural Source Material (NASM) Plan process in accordance with the *Nutrient Management Act*, or through the *Environmental Compliance Approval* process in accordance with the *Environmental Protection Act*, so that this *activity* never becomes a *significant drinking water threat*.		
OC-	22		Add ICA to sidebar	WHPA A-B and ICA

Section	Page	Text	Reason for Change	Changes Made
2.20			no change to policy text	added to vulnerable areas for MOE PI policy detail Monitoring policies attached: mon guide, MOE PI, OMAF PI, *SPA (from TSR list)
OC-2.21	22	**Application of Commercial Fertilizer to Land - Management** For the *existing* or *future* application of commercial fertilizer to land, on properties zoned for any other use than residential, where this *activity* is, or would be, a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.21	22	**Application of Commercial Fertilizer to Land - Management** For the *existing* or *future* application of commercial fertilizer to land, on properties zoned for any other use than residential, where this *activity* is, or would be, a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be, or never becomes, a *significant drinking water threat*.	Text edit Add ICA to sidebar	Text edit for consistency between policies Added or never becomes to text. ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.22	23	**Existing Handling and Storage of Commercial Fertilizer - Management** For any *existing* handling and storage of commercial fertilizer, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management* *Plan* shall be required to manage the *activity* such that it ceases to be *a significant drinking water threat*.		
OC-2.22	23	**Handling and Storage of Commercial Fertilizer - Management** For handling and storage of commercial fertilizer, where such handling and storage is: • existing; or • new and the total mass of all materials handled or stored that contain the commercial	Oxford provided re-wording. Add ICA to sidebar Sidebar should	Text edit for consistency between policies Text change for clarity

Section	Page	Text	Reason for Change	Changes Made
		fertilizer, in any form including liquid or solid, is less than or equal to 2,500 kilograms and, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking water threat.	indicate existing and future	Added future detail in policy database ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.23	23	**New Handling and Storage of Commercial Fertilizer - Prohibition** For any *new* handling and storage of commercial fertilizer, where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 57 of the *Clean Water* Act and shall be prohibited so that the *activity* never becomes a *significant drinking water threat*.		
OC-2.23	23	**New Handling and Storage of Commercial Fertilizer - Prohibition** For handling and storage of commercial fertilizer, where such handling and storage is: • new and the total mass of all materials handled or stored that contain the commercial fertilizer, in any form including liquid or solid, is greater than 2,5000 kilograms; and, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the Clean Water Act and shall be prohibited so that the activity never becomes a significant drinking water threat.	Oxford provided re-wording. Add ICA to sidebar	Text change for clarity ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.24	23	**Application of Pesticides - Management** For the *existing* or *future* application of pesticides to land, where this *activity* is, or would be, a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be or never becomes a *significant drinking water threat*.		
OC-2.24	23		no change to policy text	WHPA A-B added to vulnerable areas for future policy detail Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)

Section	Page	Text	Reason for Change	Changes Made
OC-2.25	23	**Existing Handling and Storage of Pesticides - Management** For any *existing* facility for the handling and storage of pesticides, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.25	23	**Existing Handling and Storage of Pesticides - Management** For any *existing* facility for the handling and storage of pesticides, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.		Text edit for consistency between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.26	23	**New Handling and Storage of Pesticides (greater than 2500 kg) - Prohibition** For any *new* handling and storage of pesticide threat circumstances, where the total mass of all materials stored that contain a pesticide prescribed under the *Clean Water Act*, in any form, including liquid or solid, is more than 2500 kilograms, and where this *activity* would be a *significant drinking water threat*, this *activity* shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that it never becomes a *significant drinking water threat*.		
OC-2.26	23	**New Handling and Storage of Pesticides (greater than 2500 kg) - Prohibition** For any *new* handling and storage of pesticides, where the total mass of all materials stored that contain a pesticide prescribed under the *Clean Water Act*, in any form, including liquid or solid, is more than 2500 kilograms, and where this *activity* would be a *significant drinking water threat*, this *activity* shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that it never becomes a *significant drinking water threat*.	Editorial	Editorial policy text change Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.27	24	**New Handling and Storage of Pesticides - Management** For any *new* handling and storage of pesticide threat circumstances not addressed by policy OC-2.26, where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it never becomes a *significant drinking water threat*.		
OC-2.27	24	**New Handling and Storage of Pesticides - Management** For any *new* handling and storage of pesticides not addressed by policy OC-2.26, where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it never becomes a *significant drinking water threat*.	Editorial	Text edit for consistency between policies Editorial policy text change

Section	Page	Text	Reason for Change	Changes Made
				Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.28	24	**Handling and Storage of Salt - Prohibition** For any *existing* or *new* handling and storage of road salt, where this *activity* is, or would be, a *significant drinking water threat,* it shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that the *activity* ceases to be or never becomes a *significant drinking water threat*.		
OC-2.28	24		no change to policy text	Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.29	24	**Existing Storage of Snow - Management** For any *existing* storage of snow, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.29	24	**Storage of Snow - Management** For storage of snow that is: • existing; or • new and at or above grade where the storage area is less than or equal to 1 hectare and , where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking water threat.	Oxford provided re-wording. Add ICA to sidebar Sidebar should indicate existing and future	Text edit for consistency between policies Text change to incorporate ICA Added future detail in policy database ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.30	24	**New Storage of Snow - Prohibition** For any *new* storage of snow, where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that the *activity* never becomes a *significant drinking water threat.*		

Section	Page	Text	Reason for Change	Changes Made
OC-2.30	24	**New Storage of Snow - Prohibition** For new storage of snow that is: • below grade; or • at or above grade, where the storage area exceeds 1 hectare and, where this activity would be a significant drinking water threat, it shall be designated for the purpose of Section 57 of the Clean Water Act and shall be prohibited so that the activity never becomes a significant drinking water threat.	Oxford provided re-wording. Add ICA to sidebar	Text change to incorporate ICA Manage/prohibit dropdown in database changed to prohibit ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.31	24	**Existing Handling and Storage of Fuel - Management** For *existing* handling and storage of fuel, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.31	24	**Existing Handling and Storage of Fuel - Management** For *existing* handling and storage of fuel, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.		Text edit for consistency between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.32	25	**New Handling and Storage of Fuel** For *new* handling and storage of fuel, where this *activity* would be a *significant drinking water threat,* *a.* This *activity* shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that the *activity* never becomes a *significant drinking water threat*. *b.* Notwithstanding OC-2.32a, any handling and storage of fuel required for back-up generators at municipal supply wells shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management* *Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.32	25	**New Handling and Storage of Fuel** For *new* handling and storage of fuel, where this *activity* would be a *significant drinking water*		Text edit for consistency

Section	Page	Text	Reason for Change	Changes Made
		threat, *a.* This *activity* shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that the *activity* never becomes a *significant drinking water threat*. *b.* Notwithstanding OC-2.32a, any handling and storage of fuel required for back-up generators at municipal supply wells shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management* *Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.		between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.33	25	**Handling and Storage of DNAPL - Management** For any *existing* or *new* handling and storage of a dense non-aqueous phase liquid, on properties zoned exclusively for residential and/or environmental protection purposes in the Area Municipal Zoning By-laws, where this *activity* is, or would be, a *significant drinking water threat*, 1. The *County,* in collaboration with the *Source Protection Authority*, *Area Municipalities,* the Ministry of the Environment, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties so that it ceases to be or never becomes a *significant drinking water threat*. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can be identified, handled and disposed of appropriately. 2. Notwithstanding (OC-2.33.1), where the quantity and/or volume of DNAPLs handled or stored on a property exceeds that typical of household use, the handling and storage of a dense non-aqueous phase liquid shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.33	25	**Handling and Storage of DNAPL - Management** For any *existing* or *new* handling and storage of a dense non-aqueous phase liquid, on properties zoned exclusively for residential and/or environmental protection purposes in the Area Municipal Zoning By-laws, where this *activity* is, or would be, a *significant drinking water threat*, 1. The *County,* in collaboration with the *Source Protection Authority*, *Area Municipalities,* the Ministry of the Environment, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties so that it ceases to be or never becomes a *significant drinking water threat*. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can be identified, handled and disposed of appropriately. 2. Notwithstanding (OC-2.33.1), where the quantity and/or volume of DNAPLs handled or stored on a property exceeds that typical of household use, the handling and storage of a dense non-aqueous phase liquid shall		Text edit for consistency between policies Monitoring policies attached: mon guide, CA, county, RMO, *SPA (from TSR list)

Section	Page	Text	Reason for Change	Changes Made
		be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.		
OC-2.34	25	**Existing Handling and Storage of DNAPL - Management** For any *existing* handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-laws, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.34	25	**Existing Handling and Storage of DNAPL - Management** For any *existing* handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-laws, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.		Text edit for consistency between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.35	26	**New Handling and Storage of DNAPL - Prohibition** For any *new* handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-laws and located within a WHPA 'A' or 'B' with a vulnerability score equal to ten (10), where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that it never becomes a *significant drinking water threat*.		
OC-2.35	26		no change to policy text	Monitoring policies attached: mon guide, RMO, *SPA (from TSR list) Removed WHPA-B (8,6) from vulnerable areas
OC-2.36	26	**New Handling and Storage of DNAPL - Management** For any *new* handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-laws and located within a WHPA 'B' with a vulnerability score of less than ten (10), or a WHPA 'C', where such an *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of		

Section	Page	Text	Reason for Change	Changes Made
		Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.36	26	**New Handling and Storage of DNAPL - Management** For any *new* handling and storage of a dense non-aqueous phase liquid, on properties zoned for any other use than residential and/or environmental protection in the Area Municipal Zoning By-laws and located within a WHPA 'B' with a vulnerability score of less than ten (10), or a WHPA 'C', where such an *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.	no change to policy text	Text edit for consistency between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list) Removed WHPA-A-B (10) from vulnerable areas
OC-2.37	26	**Existing Handling and Storage of an Organic Solvent - Management** For *existing* handling and storage of an organic solvent, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.37	26	**Existing Handling and Storage of an Organic Solvent - Management** For *existing* handling and storage of an organic solvent, where this *activity* is a *significant drinking water threat*, it shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be a *significant drinking water threat*.	no change to policy text	Text edit for consistency between policies Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.38	26	**New Handling and Storage of an Organic Solvent - Prohibition** For *new* handling and storage of an organic solvent, where this *activity* would be a *significant drinking water threat*, it shall be designated for the purpose of Section 57 of the *Clean Water Act* and shall be prohibited so that the *activity* never becomes a *significant drinking water threat*.		
OC-2.38	26		no change to policy text	Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.39	26	**Runoff that Contains Chemicals Used in De-icing of Aircraft - Management** For a *new* airport where runoff that contains chemicals used in the de-icing of aircraft would be a *significant drinking water threat*, this *activity* shall be designated for the purpose of Section 58		

Section	Page	Text	Reason for Change	Changes Made
		of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it never becomes a *significant drinking water threat*.		
OC-2.39	26		no change to policy text	Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.40	27	**The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard - Management** For the *existing* or *future* use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard, where these *activities* are, or would be, a *significant drinking water threat*, they shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* such that it ceases to be or never becomes a *significant drinking water threat*.		
OC-2.40	27	**The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard - Management** For the *existing* or *future* use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard, where these *activities* are, or would be, a *significant drinking water threat*, they shall be designated for the purpose of Section 58 of the *Clean Water Act* and a *Risk Management Plan* shall be required to manage the *activity* so that it ceases to be or never becomes a *significant drinking water threat*.	Add ICA to sidebar	Text edit for consistency between policies no change to policy text ICA added to vulnerable areas Monitoring policies attached: mon guide, RMO, *SPA (from TSR list)
OC-2.41	27	**Nutrient Management Act - Compliance Monitoring** To reduce the risk to municipal drinking water sources from activities that are regulated under the Nutrient Management Act, where these activities are, or would be, a significant drinking water threat, the Province, through the Ministry of Environment Agricultural Officer, should consider source protection information as a criterion when setting inspection targets and priorities as part of the Ministry's on-farm compliance program.		
OC-2.41	27		no change to policy text	Changed effective date in policy details from 2yr to 3yr ICA added to vulnerable areas

Section	Page	Text	Reason for Change	Changes Made
				Monitoring policies attached: mon guide, MOE PI, MOE amen PI, *SPA (from TSR list)
OC-2.42	27	**Existing Application of Untreated Septage to the Land - Inspections** To reduce the risk to municipal drinking water sources from *existing* land application of untreated septage, where this *activity* is, or would be, a *significant drinking water threat*, the Province (Ministry of Environment) should consider source protection information as a criterion when setting inspection targets and priorities.		
OC-2.42	27		no change to policy text	Changed effective date in policy details from 2yr to 3yr Monitoring policies attached: mon guide, MOE amen PI, *SPA (from TSR list) ICA added to vulnerable areas
OC-2.43	27	**Existing Waste Disposal Sites - Environmental Compliance Approval Fees** To reduce the risk to municipal drinking water sources from *existing* waste disposal sites, where these *activities* are, or would be, a *significant drinking water threat*, the Province (Ministry of Environment) should consider waiving application fees in instances where *Environmental Compliance Approvals* (ECA) are required to be amended for the sole reason of satisfying the policies in this *Source Protection Plan*.		
OC-2.43	27	**Prescribed Instrument Amendment Fees** The Province should consider waiving application fees in instances where Prescribed Instruments (PI) are required to be amended for the sole reason of satisfying the policies in this Plan.		Policy edit so it is not just restricted to Waste Disposal ECA amendments Changed effective date in policy details from 2yr to 3yr

Section	Page	Text	Reason for Change	Changes Made
				ICA added to vulnerable areas Removed PCB sub-threat from policy details Monitoring policies attached: mon guide, MOE amen PI, *SPA (from TSR list)
OC-2.44	28	**Septic Systems - Compliance Monitoring (OWRA)** To reduce the risk to municipal drinking water sources from septic systems or septic holding tanks that are subject to an *Environmental Compliance Approval* (ECA), in accordance with the *Ontario Water Resources Act* and which are a *significant drinking water threat*, the Province (Ministry of Environment) should develop a compliance monitoring program. The compliance monitoring should include inspection of the system to ensure that it continues to function as designed, meets applicable design standards, and is being properly maintained. Priorities for the compliance monitoring program should include areas where known septic failures have been identified and areas where older systems have not recently been inspected. Systems found to be deficient are required to undertake improvements to be in compliance. Where the system is subject to a mandatory inspection as per conditions on the ECA as outlined in Policy OC-2.07, the compliance monitoring program may consider a certificate produced by a qualified person as proof that the system has been inspected and is properly functioning.		
OC-2.44	28		no change to policy text	Changed effective date in policy details from 2yr to 3yr Monitoring policies attached: mon guide, *MOE, *SPA (from TSR list) ICA added to vulnerable areas
OC-2.45	28	**Application of Pesticides - Compliance Monitoring** To reduce the risk to municipal drinking water sources from the land application of pesticides, the Province (Ministry of Environment) should consider compliance monitoring (including		

Section	Page	Text	Reason for Change	Changes Made
		inspection). Compliance monitoring should be considered for Pesticide Permits issued under the *Pesticide Act*, where this *activity* is, or would be, a *significant drinking water threat*. The Ministry of Environment should consider source protection information as a criterion when setting inspection targets and priorities.		
OC-2.45	28		no change to policy text	Changed effective date in policy details from 2yr to 3yr Monitoring policies attached: mon guide, *MOE, *SPA (from TSR list)
OC-2.46	28	**Abandoned Fuel Storage Tanks - Removal** To reduce the risk to municipal drinking water sources from abandoned fuel storage tanks where the storage of fuel is, or would be, a *significant drinking water threat*, the Province (Ministry of Environment) should consider undertaking the removal of abandoned fuel storage tanks.		
OC-2.46	28	**Abandoned Fuel Storage Tank - Removal** To reduce the risk to municipal drinking water sources from fuel storage tanks located on abandoned properties where the storage of fuel is, or would be, a *significant drinking water threat*, the Province (Ministry of Environment) should consider undertaking the removal of fuel storage tanks when they become aware of them.		MOE suggested change Changed effective date in policy details from 2yr to 3yr attached UTRCA SPA and Oxford to policy Monitoring policies attached: mon guide, *MOE, *SPA (from TSR list)
OC-2.47	29	**Commercial Fertilizer Application - Residential Properties** For the *existing* or *future* application of commercial fertilizer to land, on properties zoned exclusively for residential purposes in the Area Municipal Zoning By-laws, where this *activity* is, or would be, a *significant drinking water threat*, *the County*, in collaboration with the Source Protection Authority, Area Municipalities, the Ministry of the Environment, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed		

Section	Page	Text	Reason for Change	Changes Made
		at the owners and/or occupants of such properties and local lawn care companies. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat and how commercial fertilizer can be handled and applied in a manner that would manage the *activity* such that it ceases to be a *significant drinking water threat*.		
OC-2.47	29	**Commercial Fertilizer Application - Residential Properties** For the *existing* or *future* application of commercial fertilizer to land, on properties zoned exclusively for residential purposes in the Area Municipal Zoning By-laws, where this *activity* is, or would be, a *significant drinking water threat*, *the County*, in collaboration with the Source Protection Authority, Area Municipalities, the Ministry of the Environment, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties and local lawn care companies. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat and how commercial fertilizer can be handled and applied in a manner that would manage the *activity* so that it ceases to be, or never becomes, a *significant drinking water threat*.	Text edit no change to policy text	Text edit for consistency between policies Added or never becomes to text attached UTRCA SPA and Oxford to policy Monitoring policies attached: mon guide, CA, *MOE, *SPA (from TSR list) ICA added to vulnerable areas
OC-3.01	30	**Low and Moderate Threat Pesticide Application – Management (Pesticides Act)** To reduce the threat to municipal drinking water sources from the land application of pesticides, the Province (Ministry of Environment) should consider reviewing and amending Pesticide Permits issued under the *Pesticides Act*, to incorporate conditions to address the protection of municipal drinking water sources where this *activity* is, or would be, a low or moderate drinking water threat.		
OC-3.01	30		no change to policy text	Changed effective date in policy details from 2yr to 3yr attached UTRCA SPA to policy ICA added and scores of others corrected in vulnerable areas

Section	Page	Text	Reason for Change	Changes Made
				Monitoring policies attached: mon guide, MOE amen PI, *SPA (from TSR list)
New M&L DWT Policy				
OC-3.02		**New Prescribed Instruments Related to Moderate and Low Threats - Management** To reduce the risk to municipal drinking water sources from new activities that would be: • subject to one or more Prescribed Instruments; and • located in areas where the activity would be a moderate or low drinking water threat; the province should consider incorporating terms and conditions. These terms and conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate these terms and conditions should reduce the risk.	New policy	
OC-4.01	31	**Spill Prevention, Spill Contingency or Emergency Response Plans** To ensure spill prevention plans, spill contingency plans, and emergency response plans are updated for the purpose of protecting municipal drinking water sources with respect to spills that occur along highways or railway lines located within a WHPA, 1. The *County* and area Municipalities should consider incorporating the location of WHPAs into their emergency response plans; and 2. The Ministry of the Environment should consider providing mapping of the identified *vulnerable areas* to the Spills Action Centre to assist them in responding to reported spills along transportation corridors.		
OC-4.01	31		no change to policy text	WHPA-D&E added to vulnerable areas Monitoring policies attached: mon guide, county and municipality, *MOE, *SPA (from TSR list)
OC-4.02	31	**Transport Pathways - MOE** The Ministry of Environment should consider reviewing their programs pertaining to the		

Section	Page	Text	Reason for Change	Changes Made
		decommissioning of abandoned water wells, in accordance with O. Reg. 903 of the *Ontario Water Resources* Act in order to ensure that sufficient staff and financial resources are allocated to such programs to ensure their effective implementation.		
OC-4.02	31		no change to policy text	Monitoring policies attached: mon guide, *MOE, *SPA (from TSR list)
OC-4.03	31	**Transport Pathways - Municipal** To reduce the potential for transport pathways to increase the risk to municipal drinking water sources, municipalities should consider: a) including, as a condition of approval for relevant development applications, confirmation of the decommissioning of unused wells in accordance with O. Reg. 903 of the *Ontario Water Resources Act* (OWRA); b) municipal by-laws to restrict the creation of new transport pathways such as geothermal energy systems, in areas where prescribed drinking water threats would be significant and where alternative services are available. The municipality, in consultation with the Risk Management Official, shall be responsible for determining exceptions to these by-laws; and c) encouraging landowners to improve their wells to meet Provincial standards including making landowners aware of any financial incentives which may be available. If the landowner fails to take appropriate action, the Municipality should notify the Ministry of Environment (MOE) for the purpose of enforcing the standards under O. Reg. 903 of OWRA or other regulations where applicable. Such notification should clearly indicate that the deficiency is occurring in a Wellhead Protection Area (WHPA) and therefore may increase the risk to municipal drinking water sources.		
OC-4.03	31		no change to policy text	Monitoring policies attached: mon guide, county and municipality, RMO, *MOE, *SPA (from TSR list)
OC-4.04	32	**New Transport Pathways Reporting - Municipalities** Under S.27 (3) of the *Clean Water Act,* O. Reg. 287/07, municipalities shall notify the *Source Protection Authority* (SPA) and the *Source Protection Committee* (SPC) if a person applies to the municipality for the approval of a proposal to engage in any *activity* in a Wellhead Protection Area (WHPA) that may result in the creation of a new transport pathway or the modification of an existing transport pathway. This notice shall include a description of the proposal, the identity of the person responsible for the proposal, and a description of the		

Section	Page	Text	Reason for Change	Changes Made
		approvals that are required to engage in the proposed *activity*. The notification shall be included as part of the existing planning process where possible and the proponent is required to be provided with a copy of the notification.		
OC-4.04	32		no change to policy text	Monitoring policies attached: mon guide, county and municipality, *SPA (from TSR list)
OC-4.05	32	**New Transport Pathways Reporting Guidance** The Conservation Authorities within the Source Protection Region shall work collaboratively with the municipalities of the Source Protection Region to develop guidance to identify the *activities* that will create transport pathways and the locations within which municipalities are required to provide notification of such new or altered transport pathways in accordance with Section 27(3) of O. Reg. 287/07 of the *Clean Water Act*. This guidance shall be available as soon as possible after the Source Protection Plan comes into effect.		
OC-4.05	32		no change to policy text	Monitoring policies attached: mon guide, county and municipality, *CA, *SPA (from TSR list)
OC-4.06	32	**Transport Pathway Identification** The Province (Ministry of Environment), in collaboration with municipalities and Conservation Authorities, shall consider developing a program designed to identify transport pathways within Wellhead Protection Areas (WHPAs) A, B, C and D.		
OC-4.06	32		no change to policy text	WHPA-D added to vulnerable areas Monitoring policies attached: mon guide, county and municipality, *MOE,*CA, *SPA (from TSR list)

Section	Page	Text	Reason for Change	Changes Made
OC-4.07	32	**Well Inspection - Provincial** The Province (Ministry of Environment) shall consider prioritizing the enforcement of the requirements of O. Reg. 903 of the *Ontario Water Resources Act* through well inspections using officials with appropriate skills and training. Resources should be focused in areas where improperly constructed, maintained, decommissioned or abandoned wells may increase the potential threat to municipal drinking water sources. The MOE should respond in a timely manner to any deficient wells brought to their attention giving due regard for the increased risk to the municipal drinking water source as identified by the Assessment Report.		
OC-4.07	32	**Provincial Well Inspection** The Ministry of the Environment (MOE) is strongly encouraged to undertake an updated risk-based program analysis of the compliance program associated with the Wells Regulation [R.R.O., 1990 Regulation 903 (Wells) as amended, made under the Ontario Water Resources Act, R.S.O., 1990, c. O. 40]. The program analysis should consider: • Increased MOE field presence with well contractors • Complaint response prioritization where the presence of a transport pathway would endanger sources of municipal drinking water. • Focusing resources in areas where improperly constructed, maintained or abandoned wells may increase the potential threat to municipal drinking water sources.		MOE suggested change Monitoring policies attached: mon guide, *MOE, *SPA (from TSR list)
OC-4.08	33	**Transport Pathways - Management** Municipalities should consider the effect of municipal infrastructure and development servicing on the vulnerability of a Wellhead Protection Area (WHPA) in order to ensure such transport pathways are appropriately managed and/or designed so that they do not increase the risk to municipal drinking water.		
OC-4.08	33		no change to policy text	Monitoring policies attached: mon guide, county and municipality, *SPA (from TSR list)
OC-4.09	33	**Professional Standards Maintained for Well Drillers (MOE)** To reduce the risk to municipal drinking water sources from transport pathways located within vulnerable areas, the Province (Ministry of Environment) should consider placing greater focus on the enforcement of standards and requirements for wells to be installed by licensed installers and decommissioned according to applicable standards by qualified individuals.		
OC-4.09	33		no change to policy text	Monitoring policies attached: mon guide, *MOE, *SPA

Section	Page	Text	Reason for Change	Changes Made
				(from TSR list)
New EA Policy				
OC-4.10		**Environmental Assessment Reviews** To reduce the risk to municipal drinking water sources from activities subject to an environmental assessment (EA) in areas where the activity would be a significant, moderate or low drinking water threat the Conservation Authorities (CAs) should: • review EA documentation when circulated by the proponent; • provide available Source Protection information; and • request Source Protection Planning information (including an assessment of risks for the proposed and preferred alternatives) be included in the EA. Participation in this program by the CAs will be contingent on funding and municipal support of the CA involvement in this program.	New policy	

1.3 SPP Volume III Suggested Changes

Table 1 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09 (original)

Policy Approach/Tool	Implementation timing
Specify action	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act	Effective date of SPP, as specified in CWA (see list A for policies to which this applies)
Land Use Planning: • Official Plan updates	3 years from effective date of SPP or at time of next OP review whichever is first
Land Use Planning: • Zoning by-laws	2 years from passing of OP
Existing Prescribed Instruments	3 years from effective date of SPP
Future (new) Prescribed Instruments	Effective date of SPP as specified in CWA
Section 58 Part IV Risk Management Plans for *existing* activities	Section 58 policies would apply to existing activities on a date specified in a notice provided, by the RMO (as per s58(4) of the CWA, 2006), to a person who is engaged in the activity. As per s58(4), the date shall not be less than 120 days after the notice is given
Section 58 Part IV Risk Management Plans for *future* activities	On the effective date of the SPP as specified in the CWA
Section 57 Part IV Prohibitions of *existing* activities	180 days from the effective date of the SPP, as specified in the CWA
Section 57 Part IV Prohibitions of *future* activities	On the effective date of the SPP, as specified in the CWA
Section 59 restricted land use provisions	On the effective date of the SPP, as specified in the CWA

Table 1 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09 (revised)

Policy Approach/Tool	Implementation timing
Specify action (S22(6))	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act (S39)	On the effective date of SPP, as specified in the CWA
Land Use Planning: • Official Plan updates (S40(1))	3 years from the effective date of SPP or at the time of the next OP review whichever is first
Land Use Planning: • Zoning by-laws (S42)	2 years from the passing of the OP
Existing Prescribed Instruments (S43(1))	3 years from the effective date of the SPP
Future (new) Prescribed Instruments (S39(7))	On the effective date of SPP as specified in the CWA
Part IV Risk Management Plans for *existing* activities (S58)	Section 58 policies would apply to existing activities on a date specified in a notice provided by the RMO, to a person who is engaged in the activity. The date shall not be less than 120 days after the notice is given (as per s58(4)).
Part IV Risk Management Plans for *future* activities (S58(1))	On the effective date of the SPP as specified in the CWA
Part IV Prohibitions of *existing* activities (S57(2))	180 days from the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *future* activities (S57(1))	On the effective date of the SPP, as specified in the CWA
Part IV Restricted Land Use provisions (S59(1))	On the effective date of the SPP, as specified in the CWA

Section / Policy	Page	Text	Reason For Change	Changes Made
2.1.2	4	The Clean Water Act, 2006 Sections 39 (1)(b) and 39 (7)(b) requires certain implementers to “Have Regard To” policies set out in the Source Protection Plan. This legal effect is applicable to those policies where threats have been designated as moderate or low. This includes policies that affect decisions under the Planning Act and Condominium Act 1998 as well as decisions related to prescribed instruments. This legal effect requires the approval authority to carefully consider the policy to determine whether and how the matter is affected by and complies with objectives with a sense of consistency (Doumani and Foran, 2009). Lists B and D in Appendix A of this Volume provide a list of these policies.		
2.1.2	4	The Clean Water Act, 2006 Sections 39 (1)(b) and 39 (7)(b) requires certain implementers to “Have Regard To” policies set out in the Source Protection Plan. This legal effect is applicable to those policies where threats have been designated as moderate or low by the Clean Water Act, 2006. This includes policies that affect decisions under the Planning Act and Condominium Act 1998 as well as decisions related to prescribed instruments. This legal effect requires the approval authority to carefully consider the policy to determine whether and how the matter is affected by and complies with objectives with a sense of consistency (Doumani and Foran, 2009). Lists B and D in Appendix A of this Volume provide a list of these policies.		Minor text edit
2.3	5	Policies can mean different things to different people and these meanings can be converyed in more than one way (Yanow, 1995). To assist the reader in understanding the policies contained within this Volume, this section includes details on:		
2.3	5	To assist the reader in understanding the policies contained within this Volume, this section includes details on:		
2.3.6	8	The approved Assessment Reports define vulnerable areas and assess their vulnerability. Mapping in the Assessment Report therefore defines the areas to which the policies would apply. Policy applicability mapping has been provided in Appendix C of this Volume as a reference to determine the specific areas in which policies would apply. Two mapping sets have been provided, one indicating the areas where significant threat policies would apply and the other indicating the areas where moderate and low threat policies would apply. These maps are organized alphabetically for each municipality in the Thames-Sydenham and Region except for those areas in Oxford County. Refer to Volume II for Oxford maps. The policies within Volume III of the Plan apply to the vulnerable areas associated with Systems in the Thames-Sydenham Region except those in Oxford County		
2.3.6	8	The approved Assessment Reports define vulnerable areas and assess their vulnerability. Mapping in the Assessment Report therefore defines the areas to which the policies would apply. Policy applicability mapping has been provided in Appendix C of this Volume as a reference to assist in understanding where the	Clarity of wording	Policy text edit clarity

Section / Policy	Page	Text	Reason For Change	Changes Made
		various policies contained in this SPP would apply. Two mapping sets have been provided, one indicating the areas where significant threat policies would apply and the other indicating the areas where moderate and low threat policies would apply. These maps are organized alphabetically for each municipality in the Thames-Sydenham and Region except for those areas in Oxford County. Refer to Volume II for Oxford maps. The policies within Volume III of the Plan apply to the vulnerable areas associated with systems in the Thames-Sydenham Region except those in Oxford County.		
2.3.6	8	• Handling and storage of commercial fertilizer in quantities greater than 30,000 kg in event based modelled IPZ (1, 2 and 3) of St. Clair Region Source Protection Area; • Handling and storage of fuel in quantities greater than 34,000 L in event based modelled IPZ (1, 2 and 3) of the St. Clair Region Source Protection Area;		
2.3.6	8	• Handling and storage of commercial fertilizer in quantities greater than 34,000 kg in Event Based Modelled Areas (EBA) of St. Clair Region Source Protection Area; • Handling and storage of fuel in quantities greater than 15,000 L in EBAs of the St. Clair Region and Lower Thames Valley Source Protection Area;		Corrected volumes and incorporated EBA wording
2.3.6	9	As noted above, these areas have been described in this section for the convenience of the reader and it is important to refer to the Provincial Tables of Drinking Water Threats prescribed by the Clean Water Act to determine where, and under what circumstances, an activity would be a significant, moderate or low drinking water threat.		
2.3.6	9	These areas are described in this section for the convenience of the reader only. The Provincial Tables of Drinking Water Threats, as prescribed by the Clean Water Act, must be consulted to determine where, and under what circumstances, a prescribed activity would constitute a significant, moderate or low drinking water threat.	Clarity of wording	Policy text edit clarity
Policy 1.01	13	**General Education and Outreach** Education and Outreach programs designed to increase awareness and understanding of drinking water threats, and promote best management practices as a means of reducing the risks to drinking water sources, shall be developed and implemented collaboratively by Municipal/Conservation Authority/Provincial partners with the Conservation Authority providing a lead role. The programs shall address low, moderate and significant drinking water threats with the priority placed on significant drinking water threats. The focus should be on		

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		incorporating Drinking Water Source Protection messaging into existing education and outreach materials and programs as a first priority. New education and outreach materials and programs may also be developed and implemented, if deemed necessary and/or appropriate and be subject to available funding. Municipalities and Conservation Authorities, in collaboration with the Province (Ministry of Environment), should consider options for the long-term support of education and outreach programs. The program scope shall be subject to available funding.		
Policy 1.01	13	**General Education and Outreach** Education and Outreach programs designed to increase awareness and understanding of drinking water threats, and promote best management practices as a means of reducing the risks to drinking water sources, shall be developed and implemented collaboratively by Municipal/Conservation Authority/Provincial partners with the Conservation Authority providing a lead role. The programs shall address low, moderate and significant drinking water threats with the priority placed on significant drinking water threats and activities which may contribute to an issue. The focus should be on incorporating Drinking Water Source Protection messaging into existing education and outreach materials and programs as a first priority. New education and outreach materials and programs may also be developed and implemented, if deemed necessary and/or appropriate, and be subject to available funding. Municipalities and Conservation Authorities, in collaboration with the Province (Ministry of Environment), should consider options for the long-term support of education and outreach programs. The program scope shall be subject to available funding.	Editorial in policy text. Corrections to policy details in database.	Policy edit to highlight E&O for nitrate and phosphorous Policy text edit editorial Vulnerable areas added to database (WHPA-A-E, IPZ-1-3, HVA, SGRA) Monitor policies added to database (CA, Municipal, Mon Guide, SPA) Applicable municipalities corrected in database 36 Pro/man dropdown in database set to manage
Policy 1.02	13	**Provincial Signage** In accordance with Section 22 (7) of the Clean Water Act, the Ministry of Transportation, in collaboration with the Ministry of Environment as well as in consultation with Source Protection Authorities (SPAs), shall design signage, to the appropriate Provincial standards, to identify the locations of Wellhead Protection Areas (WHPA) and Intake Protection Zones (IPZ). The Ministry of Transportation should manufacture, install and maintain the signs along Provincial highways within WHPA with a vulnerability score of 10, and/or within an IPZ or WHPA-E with a vulnerability score of 8 or higher.		

Section / Policy	Page	Text	Reason For Change	Changes Made
Policy 1.02	13	**Provincial Signage** In accordance with Section 22 (7) of the Clean Water Act, the Ministry of Transportation, in collaboration with the Ministry of Environment as well as in consultation with Source Protection Authorities (SPAs), shall design signage, to the appropriate Provincial standards, to identify the locations of Wellhead Protection Areas (WHPA) and Intake Protection Zones (IPZ). The Ministry of Transportation should manufacture, install and maintain the signs along Provincial highways within WHPA with a vulnerability score of 10, within an IPZ with a vulnerability score of 8 or higher, or within an IPZ-3.	Include IPZ-3	Policy text edit clarity Vulnerable areas added to database (WHPA-A,B ,IPZ-1,3) Monitor policies added to database (SPA, MTO, Mon Guide) Applicable municipalities corrected in database 20 Pro/man dropdown in database set to manage
Policy 1.03	13	**Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall consider placing signage, where municipal arterial roads located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10 and/or Intake Protection Zones (IPZ) or WHPA-E with a vulnerability score of 8 or higher. Municipalities would be responsible for the purchase, installation and maintenance of signs consistent with the design developed by the Province in collaboration with the SPA in accordance with policy 1.02.		
Policy 1.03	13	**Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall place signage, where municipal arterial roads located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10, within an Intake Protection Zone (IPZ) with a vulnerability score of 8 or higher, or within an IPZ-3. Municipalities would be responsible for the purchase, installation and maintenance of signs consistent with the design developed by the Province in collaboration with the SPA in accordance with policy 1.02.	Change to 'conform' language Include IPZ-3	Policy text edit clarity Vulnerable areas added to database (WHPA-A,B ,IPZ-1,3) Monitor policies added to database (SPA, MTO, Mon Guide) Applicable municipalities corrected in database 20 Pro/man dropdown in database set to

Section / Policy	Page	Text	Reason For Change	Changes Made
				manage
Policy 1.04	14	**Incentive Programs** Organizations including but not limited to Municipalities and Conservation Authorities, in collaboration with the Province (Ministry of Environment) and other bodies where possible, shall consider supporting existing incentive programs and/or where deemed necessary or appropriate, support the development and implementation of new incentive programs directed at existing significant drinking water threats. Such incentive programs may include, but not necessarily be limited to, assisting with the costs of implementing risk mitigation practices and transport pathway maintenance and decommissioning and shall be subject to available funding. Incentives shall only be considered for existing significant drinking water threats as prescribed in O. Reg. 287/07. However, incentives shall not be considered for the application of untreated septage; the storage of mine tailings; the application of non-agricultural source material (NASM); the handling and storage of NASM; and the management of runoff that contains chemicals used in the de-icing of aircraft.		
Policy 1.04	14	**Incentive Programs** Organizations including but not limited to Municipalities and Conservation Authorities, in collaboration with the Province (Ministry of Environment) and other bodies where possible, shall consider supporting existing incentive programs and/or where deemed necessary or appropriate, support the development and implementation of new incentive programs directed at existing significant drinking water threats with a priority on existing threats contributing to an issue. Such incentive programs may include, but not necessarily be limited to, assisting with the costs of implementing risk mitigation practices and transport pathway maintenance and decommissioning and shall be subject to available funding. Incentives shall only be considered for existing significant drinking water threats as prescribed in O. Reg. 287/07. However, incentives shall not be considered for the application of untreated septage; the storage of mine tailings; the application of non-agricultural source material (NASM); the handling and storage of NASM; and the management of runoff that contains chemicals used in the de-icing of aircraft.	Include ICA	Policy text edit clarity Vulnerable areas added to database (WHPA-A,B ,IPZ-1,3) Monitor policies added to database (SPA, MTO, Mon Guide) Applicable municipalities corrected in database 20 Pro/man dropdown in database set to manage [Wait until ICA(s) are confirmed to add to vulnerable area and municipalities list in database]
Policy	14	**Continued Funding of Ontario Drinking Water Stewardship Program**		

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1.05		The Province (Ministry of Environment) is encouraged to continue funding the Ontario Drinking Water Stewardship Program, as outlined in Section 97 of the Clean Water Act, 2006 and Section 69 of O. Reg. 287/07, to adequately fund risk management practices for significant drinking water threats in areas where significant threats may occur.		
Policy 1.05	14	**Continued Funding of Ontario Drinking Water Stewardship Program** The Province (Ministry of Environment) is encouraged to continue funding the Ontario Drinking Water Stewardship Program, as outlined in Section 97 of the Clean Water Act, 2006 and Section 69 of O. Reg. 287/07, to adequately fund risk management practices for existing significant drinking water threats with a priority on existing threats contributing to an issue.	Include ICA	Policy text edit clarity Vulnerable areas added to database (WHPA-A,B ,IPZ-1,3) Monitor policies added to database (SPA, MTO, Mon Guide) Applicable municipalities corrected in database 20 Pro/man dropdown in database set to manage [Wait until ICA(s) are confirmed to add to vulnerable area and municipalities list in database]
Policy 1.06	15	**General Land Use Planning** All planning decisions shall be in conformity with those policies that address significant drinking water threats as per Section 39 (1) (a) of the Clean Water Act. All planning decisions shall have regard for those policies that address low and moderate drinking water threats as per Section 39 (1) (b) of the Clean Water Act. At minimum, the Municipalities shall amend the Official Plan and Zoning By-laws to: a. Identify the vulnerable areas in which a significant drinking water threat could occur; b. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; c. Identify the significant drinking water threats that are prohibited through		

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		Prescribed Instruments, or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan; and d. Incorporate any other amendments required to conform with the significant drinking water or to have regard for the low and/or moderate threat specfic land use policies identified in this Source Protection Plan.		
Policy 1.06	15	**General Land Use Planning** All planning decisions shall be in conformity with those policies that address significant drinking water threats as per Section 39 (1) (a) of the Clean Water Act. All planning decisions shall have regard to those policies that address low and moderate drinking water threats as per Section 39 (1) (b) of the Clean Water Act. At minimum, the Municipalities shall amend the Official Plan and Zoning By-laws to: a. Identify the vulnerable areas in which a significant drinking water threat could occur; b. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; c. Identify the significant drinking water threats that are prohibited through Prescribed Instruments, or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan; and d. Incorporate any other amendments required to conform with the significant drinking water or to have regard to the low and/or moderate threat specfic land use policies identified in this Source Protection Plan.	MOE comment to TSR policy text addressed	MOE suggested change Corrected policy link in database (last edit by MOE resulted in the MOE# for this policy directing to another policy) Vulnerable areas added to database (WHPA-A-E, IPZ-1-3, HVA, SGRA) Monitor policies added to database (SPA, Mon Guide, municipalities) Applicable municipalities corrected in database 36 Pro/man dropdown in database set to manage
Policy 1.07	15	**General Restricted Land Use** In accordance with Section 59 of the Clean Water Act, all land uses identified within the Official Plan and/or Zoning By-laws, that are located within an area where Sections 57 or 58 of the Clean Water Act may apply, are hereby designated for the purposes of Section 59 (Restricted Land Use), with the exception of residential uses. Within these designated land use categories and areas, a notice from the Risk Management Official in accordance with Section 59(2) of the Clean Water Act shall be required prior to approval of any Planning Act or Building Permit		

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		application. Despite the above policy, a Risk Management Official may issue written direction specifying the circumstances under which a planning authority or building official may be permitted to make the determination that a site specific land use 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 building official, as the case may be, is satisfied that: • The application complies with the circumstances specified in the written direction from 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.		
Policy 1.07	15	**General Restricted Land Uses** In areas where Sections 57 or 58 of the Clean Water Act applies, all land uses identified within the Official Plan and/or Zoning By-laws, with the exception of residential uses, are hereby designated for the purposes of Section 59 (Restricted Land Uses). Activities identified as significant drinking water threats through event-based modelling are exempted from this policy (as they are covered by policy 1.08). Within these designated land use categories and areas, a notice from the Risk Management Official in accordance with Section 59(2) of the Clean Water Act shall be required prior to approval of any Planning Act or Building Permit application. Despite the above policy, a Risk Management Official may issue written direction specifying the situations under which a planning authority or building official may be permitted to make the determination that a site specific land use 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 building official, as the case may be, is satisfied that: • The application complies with the written direction from 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.	MOE comment to TSR policy text addressed	Policy edit to clearly indicate event modelling does not apply to this policy. MOE suggested change Vulnerable areas added to database (WHPA-A-C, IPZ-1,3) Monitor policies added to database (SPA, Mon Guide, RMO, municipalities) Applicable municipalities corrected in database 20 Pro/man dropdown in database set to manage
Policy	16	**Restricted Land Use for Event-based Modelled Threats**		

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1.08		In accordance with Section 59 of the Clean Water Act, commercial, agricultural and industrial land uses identified within municipal Official Plans and/or Zoning By-laws, are designated for the purposes of Section 59 (Restricted Land Use). This designation would apply in all areas where the policies of the Source Protection Plan indicate the handling and storage of fuel in quantities greater than 34,000 L and the handling and storage of commercial fertilizer in quantities greater than 30,000 kg are subject to Section 57 or Section 58 of the Clean Water Act. Within these designated areas, a notice from the Risk Management Official in accordance with Section 59(2) of the Clean Water Act shall be required prior to approval of any Planning Act or Building Permit application. Despite the above policy, a Risk Management Official may issue written direction specifying the circumstances under which a planning authority or building official may be permitted to make the determination that a site specific land use 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 building official, as the case may be, is satisfied that: • The application complies with the circumstances specified in the written direction from 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.		
Policy 1.08	16	**Restricted Land Uses for Event-based Modelled Threats** For any commercial, agricultural and industrial land uses, identified within municipal Official Plans and/or Zoning By-laws, that are located in areas where event-based modelling has identified activities as significant drinking water threats, Sections 57 and 58 of the Clean Water Act apply. These areas are hereby designated for the purposes of Section 59 (Restricted Land Use). Within these designated areas, a notice from the Risk Management Official in accordance with Section 59(2) of the Clean Water Act shall be required prior to approval of any Planning Act or Building Permit application. Despite the above policy, a Risk Management Official may issue written direction specifying the situations under which a planning authority or building official may be permitted to make the determination that a site specific land use 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 building official, as	MOE comment to TSR policy text addressed Remove specific reference to fuel quantities as this has changed.	Policy edit to clearly indicate event modelling does not apply to this policy. MOE suggested change Vulnerable areas added to database (IPZ-1,3) Monitor policies added to database (SPA, Mon Guide, RMO, municipalities) Applicable

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		the case may be, is satisfied that: • The application complies with the situations specified in the written direction from 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 by the application.		municipalities corrected in database 10 Pro/man dropdown in database set to manage
Policy 1.09	17	**Implementation Timing** Except as set out below or as otherwise prescribed by the Clean Water Act, the policies contained in the Source Protection Plan shall come into effect on the date of the posting of the notice of approval of this Source Protection Plan on the Environmental Registry (effective date). 1. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan. 2. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs, education and outreach) programs shall be implemented within two (2) years of the effective date of the Source Protection Plan. 3. Policies written pursuant to Section 40(2) of the Clean Water Act (deadlines for Official Plan conformity through policy 1.07), shall establish the following implementation timing: a. Updates to Official Plans shall be initiated as soon as possible after the effective date of the Source Protection Plan with a goal to be completed within three (3) years of the effective date of the Source Protection Plan or as part of the Official Plan review where it occurs first; and b. Updates to zoning By-laws shall be initiated as soon as possible after the effective date of the Source Protection Plan with a goal to be completed within two (2) years of the passing of the Source Protection Plan or if Official Plan amendments are required, within two (2) years of the completion of the Official Plan amendments. 4. Policies written pursuant to Section 43(2) of the Clean Water Act (CWA) (prescribed instrument), regarding the amendment to the prescribed instruments shall conform to the Source Protection Plan within three (3) years of the effective date of the Plan. 5. If an activity was engaged in at a particular location before this Source Protection Plan takes effect and the Risk Management Official gives notice to a person who is engaged in the activity at that location (as per Sec. 58(4) of the CWA, 2006), the policies written pursuant to Section 58 shall apply on and after a date specified in the notice.		
Policy 1.09	17	**Implementation Timing** Except as set out below, within another policy within this Source Protection Plan, or as otherwise prescribed by the Clean Water Act, the policies contained in the Source Protection Plan shall come into effect on the effective date of the Source	MOE suggested changes to TSR completed Allow for policy specific	MOE suggested change Policy text edit other

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		Protection Plan. 1. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan. 2. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs, education and outreach) programs shall be implemented within two (2) years of the effective date of the Source Protection Plan. 3. Policies written pursuant to Section 40(2) and Section 42 of the Clean Water Act (deadlines for Official Plan conformity through policy 1.06), shall establish the following implementation timing: a. Updates to Official Plans shall be initiated as soon as possible after the effective date of the Source Protection Plan with a goal to be completed within three (3) years of the effective date of the Source Protection Plan or as part of the Official Plan review where it occurs first; and b. Updates to zoning By-laws shall be initiated as soon as possible after the effective date of the Source Protection Plan with a goal to be completed within two (2) years of the effective date of the Source Protection Plan or if Official Plan amendments are required, within two (2) years of the completion of the Official Plan amendments. 4. Policies written pursuant to Section 43(2) of the Clean Water Act (CWA) (prescribed instrument), regarding the amendment to the prescribed instruments shall conform to the Source Protection Plan within three (3) years of the effective date of the Plan. 5. If an activity was engaged in at a particular location before this Source Protection Plan takes effect and the Risk Management Official gives notice to a person who is engaged in the activity at that location (as per Sec. 58(4) of the CWA, 2006), the policies written pursuant to Section 58 shall apply on and after a date specified in the notice.	timing (i.e. 2.45) Change effective date wording based on MOE comments on other SPPs Incorrect policy # reference	corrections Vulnerable areas added to database (WHPA-A-E, IPZ-1-3, HVA, SGRA,ICA) Monitor policies added to database (SPA, Mon Guide, MOE, MNR, MTO, OMAF, RMO, CA municipalities) Applicable municipalities corrected in database 36 Pro/man dropdown in database set to manage
Policy 1.10	18	**Transitional Provisions** Transitional Matters 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under subsection 34(10) of the Planning Act; b. Approval of development in a site plan control area under subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act. A significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and		

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		• The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect. 3. Despite the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and such activity does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. 4. Despite the definition of existing and the provisions contained in Sections 1 and 3 of the transitional matters policies, where a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered as new or future from that point forward.		
Policy 1.10		**Transitional Provisions** Transitional Matters 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under subsection 34(10) of the Planning Act; b. A site plan under subsection 41(4) of the Planning Act; or		MOE suggested change Grammar edit and numbering re-order Vulnerable areas added to database

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		c. A building permit under the Building Code Act, a significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. 3. Despite the definition of existing and the provisions contained in Sections 1 and 2 of the transitional matters policies, where a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered as new or future from that point forward. 4. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.		(WHPA-A-C, IPZ-1,3) Monitor policies added to database (SPA, Mon Guide, municipalities) Applicable municipalities corrected in database 20 Pro/man dropdown in database set to manage

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Policy 1.11	19	**Definition of Existing and Future** Where a policy in this Source Protection Plan refers to future or existing, the following definitions shall apply: • *Existing*: Means undertaken or established as of the date this Source Protection Plan takes effect. • *Future*: Means not existing as defined in the Source Protection Plan.		
Policy 1.11		**Definition of Existing and Future** Where a policy in this Source Protection Plan refers to future, new or existing, the following definitions shall apply: • *Existing*: Means undertaken or established as of the date this Source Protection Plan takes effect. • *Future or New*: Means not existing as defined in this Source Protection Plan.		Edit to definition Vulnerable areas added to database (WHPA-A-E, IPZ-1-3, HVA, SGRA, ICA) Monitor policies (blank) Applicable municipalities corrected in database 36 Pro/man dropdown-not applicable?
Policy 2.01	20	**Application of Untreated Septage to Land - Prohibition (EPA)** Land application of untreated septage shall be prohibited so that it ceases to be or never becomes a significant drinking water threat. Within vulnerable areas where it is or would be a significant threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process in accordance with the Environmental Protection Act. All ECA issued following the effective date of the Source Protection Plan shall include conditions that, when implemented, would prohibit this future activity where it is or would be a significant drinking water threat.		
Policy 2.01	20	**Application of Untreated Septage to Land - Prohibition** Land application of untreated septage shall be prohibited so that it ceases to be or never becomes a significant drinking water threat. Within vulnerable areas where it is or would be a significant threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process. All ECAs issued following the effective date of the Source Protection Plan shall incorporate terms and conditions. These terms and conditions, when	Consistency in wording with other policies. Remove specific reference to EPA	Policy text edit consistency Policy text edit PI removal Monitor policies added

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		implemented, would prohibit this future activity where it is, or would be, a significant drinking water threat.		to database (SPA, Mon Guide, MOE) Applicable municipalities corrected in database 14 Change existing conditions effective date from 1yr to 3yrs in database
Policy 2.02	20	**Application of Untreated Septage to the Land - Inspections** To reduce the risk to municipal drinking water sources from the land application of untreated septage in vulnerable areas where such activity is or would be a significant drinking water threat, the Province (Ministry of Environment) should consider source protection information as a criterion when setting inspection targets and priorities.		
Policy 2.02	20			*no change to policy text* Change to 3 yr effective date in database
Policy 2.03	20	**Storage of Tailings from Mining Operations - Prohibition** The storage, treatment or discharge of tailings from mining operations shall be prohibited so that it ceases to be or never becomes a significant drinking water threat. This policy shall apply in areas where this activity is, or would be, a significant drinking water threat. Where this activity is subject to Environmental Compliance Approvals (ECA), the Province (Ministry of Environment) shall be consistent with this policy by prohibiting this activity through existing and future ECA issued through the Environmental Protection Act. Further, this activity shall be designated for the purposes of Section 57 of the Clean Water Act (prohibition).		
Policy 2.03	20	**Storage of Tailings from Mining Operations - Prohibition** The storage, treatment or discharge of tailings from mining operations shall be prohibited so that it ceases to be or never becomes a significant drinking water threat. This policy shall apply in areas where this activity is, or would be, a		Policy text edit PI removal Change to 3 yr

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		significant drinking water threat. Where this activity is subject to Environmental Compliance Approvals (ECA), the Province (Ministry of Environment) shall be consistent with this policy by prohibiting this activity through existing and future ECAs. Further, this activity shall be designated for the purposes of Section 57 of the Clean Water Act (prohibition).		effective date for existing in database Added RMO for future in database Added IPZ-1(9) for RMO detail in database
Policy 2.04	21	**Existing Waste Disposal Sites - Management** To reduce the risk to municipal drinking water sources from existing waste disposal sites, where this activity is a significant drinking water threat, it shall be managed such that it ceases to be a significant drinking water threat. In these areas and where the activity is subject to Environmental Compliance Approvals (ECA), the Province (Ministry of Environment) shall review and, if necessary, amend existing ECA issued through the Environmental Protection Act (EPA) to comply with this policy. In issuing these ECA the MOE shall also consider that Waste Disposal Sites may involve the handling and storage of dense non-aqueous phase liquids (DNAPLs) or organic solvents as part of the wastes which they manage. Where any aspect of a waste disposal site that is a significant drinking water threat and is not subject to Environmental Compliance Approvals (ECA), this activity is designated for the purposes of Section 58 of the Clean Water Act.		
Policy 2.04	21	**Existing Waste Disposal Sites - Management** To reduce the risk to municipal drinking water sources from existing waste disposal sites, where this activity is a significant drinking water threat, it shall be managed so that it ceases to be a significant drinking water threat. In these areas and where the activity is subject to Environmental Compliance Approvals (ECAs), the Province (Ministry of Environment) shall review and, if necessary, amend existing ECAs to comply with this policy. Where any aspect of a waste disposal site is a significant drinking water threat and is not subject to an ECA, this activity is designated for the purposes of Section 58 of the Clean Water Act.	DNAPL/organic removed from policy text based on MOE comments to TSR. Editorial revision Remove specific reference to EPA Remove IPZ-1 (10) from sidebar	Text edit for consistency between policies MOE suggested change Text edit editorial Text edit to remove specific PI referral Change to 3 yr effective date for existing in database

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				Applicable municipalities corrected in database11 Added additional policy subcategories in database Added RMO and MOE to all subcategories (except PCB would not allow MOE) in database Added UTRCA SPA in database Removed IPZ-1(10) in database Added monitoring policies in database (SPA, mon guide, MOE, RMO)
Policy 2.05	21	**Future Waste Disposal Sites – Prohibition** Future waste disposal sites shall be prohibited so that they never become a significant drinking water threat. This policy shall apply to vulnerable areas where this activity would be a significant drinking water threat. Where this activity is subject to Environmental Compliance Approvals (ECA) issued through the Environmental Protection Act, the Province (Ministry of Environment (MOE)) shall prohibit this activity through the ECA. In issuing these ECA the MOE shall also consider that Waste Disposal Sites may involve the handling and storage of dense non-aqueous phase liquids (DNAPLs) or organic solvents as part of the wastes which they manage. Where any aspect of this activity which contributes to the prescribed drinking water threat does not require an Environmental Compliance Approval, this activity shall be designated for the purposes of Section 57 of the Clean Water Act.		
Policy 2.05	21	**Future Waste Disposal Sites – Prohibition** Future waste disposal sites, with the exception of the following threat subcategories:	DNAPL/organic removed from policy text based on	Policy edit to address MOE concern about

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		• storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or • storage of hazardous or liquid industrial waste, shall be prohibited so that they never become a significant drinking water threat. This policy shall apply to vulnerable areas where this activity would be a significant drinking water threat. Where this activity is subject to Environmental Compliance Approvals (ECAs), the Province (Ministry of Environment (MOE)) shall prohibit this activity through the ECAs. Where any aspect of this activity, with the exceptions noted above, is a prescribed drinking water threat, and does not require an ECA, this activity shall be designated for the purposes of Section 57 of the Clean Water Act.	MOE comments to TSR. Remove specific reference to EPA Remove IPZ-1 (10) from sidebar	prohibition of waste sub-threats. MOE suggested change Policy text edit PI removal Applicable municipalities corrected in database 11 Added additional policy subcategories in database Added RMO and MOE to all subcategories (except PCB would not allow MOE) in database Removed IPZ-1(10) from vulnerable areas in database Added monitoring policies in database (SPA, mon guide, MOE/RMO)
New policy				
Policy 2.05.1		**Future Waste Disposal Sites – Management** Where a future waste disposal site does not require an Environmental Compliance Approval and comprises one of the following waste disposal site threat subcategories: • storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or • storage of hazardous or liquid industrial waste,		New policy to address MOE concern about prohibition of waste sub-threats.

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		and where such a waste disposal site would be a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it never becomes a significant drinking water threat. The requirements of the risk management plan may be based on Ministry of the Environment tools and requirements for such activities, but may also include any modifications or additional requirements that are deemed necessary or appropriate by the Risk Management Official.		
Policy 2.06	22	**Existing Waste Disposal Sites - Environmental Compliance Fees** To reduce the risk to municipal drinking water sources from existing waste disposal sites in vulnerable areas where such activities are a significant drinking water threat, the Province (Ministry of Environment) should consider waiving application fees in instances where Environmental Compliance Approvals (ECA) are required to be amended for the sole reason of satisfying the policies in this Plan.		
Policy 2.06	22	**Prescribed Instrument Amendment Fees** The Province should consider waiving application fees in instances where Prescribed Instruments (PI) are required to be amended for the sole reason of satisfying the policies in this Plan.		Policy text change based on SPC discussion Change to 3 yr effective date in database Applicable municipalities corrected in database 11 Removed PCB policy subcategory (not subject to ECA) from database
Policy 2.07	22	**Existing Discharge of Stormwater – Management** To reduce the risk to municipal drinking water sources from existing stormwater management facilities in vulnerable areas where the discharge of stormwater is a significant threat, the Province (Ministry of Environment) shall review and, if necessary, amend Environmental Compliance Approvals (ECA). The amendments shall incorporate conditions that, when implemented, would manage this activity		

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		such that it ceases to be a significant drinking water threat. This review should also consider the impact of snow melt water and road salt on drinking water where the handling and storage of road salt and storage of snow are significant drinking water threats.		
Policy 2.07	22	**Existing Stormwater Management Facilities- Management** To reduce the risk to municipal drinking water sources from existing stormwater management facilities in vulnerable areas where the discharge of stormwater is a significant threat, the Province (Ministry of Environment) shall review and, where necessary, amend Environmental Compliance Approvals to incorporate terms and conditions. These terms and conditions, when implemented, shall manage this activity so that it ceases to be a significant drinking water threat. This review should also consider the impact of snow melt water and road salt on drinking water where the handling and storage of road salt and storage of snow are significant drinking water threats.	Clarity of wording Consistency in wording with other policies.	Text edit for consistency between policies Policy text edit Change to 3 yr effective date for existing in database Applicable municipalities corrected in database 14
Policy 2.08	22	**Future Discharge of Stormwater from a Stormwater Retention Pond - Prohibition** To reduce the risk to municipal drinking water sources from future stormwater management ponds in vulnerable areas where the discharge of stormwater from a stormwater retention pond would be a significant drinking water threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process under the Ontario Water Resources Act so that it never becomes a significant drinking water threat.		
Policy 2.08	22	**Future Stormwater Management Facilities - Prohibition** To reduce the risk to municipal drinking water sources from future stormwater management facilities that would be a significant drinking water threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process so that it never becomes a significant drinking water threat.	Consistency in wording with other policies. Remove specific reference to EPA	Policy text edit consistency/PI Pro/man dropdown in database set to prohibit
Policy 2.09	22	**Sanitary Sewers and Related Pipes – Management** To reduce the risk to municipal drinking water sources from sanitary sewers and related pipes (existing and future) in vulnerable areas where these sewers and related pipes are or would be significant drinking water threats, the Province (Ministry of Environment) shall review and, if necessary, amend Environmental Compliance Approvals (ECA) issued through the Environmental Protection Act. Further, all new permits shall also include conditions. These ECA shall incorporate conditions that, when implemented, manage this activity such that it ceases to be a significant drinking water threat.		

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Policy 2.09	22	**Sanitary Sewers and Related Pipes – Management** For any existing or new sanitary sewer and related pipes, where this activity is, or would be, a significant drinking water threat, the Ministry of the Environment shall ensure that Environmental Compliance Approvals (ECA) for these activities are prepared, or, where necessary, amended to incorporate terms and conditions. These terms and conditions, when implemented, shall manage the activity so that it ceases to be, or never becomes, a significant drinking water threat. The terms and conditions may include, but not necessarily be limited to, requirements for regular maintenance and inspections by the holder of the ECA.	Different wording between Vol 2&3, Vol 2 preferable. Consistency in wording with other policies.	Text edit for consistency between policies Policy text edit consistency Change to 3 yr effective date for existing in database
Policy 2.10	23	**Existing Sewage Treatment Plant Effluent Discharge - Management** To reduce the risk to municipal drinking water sources from existing sewage treatment effluent discharge where the discharge is a significant drinking water threat, the Province (Ministry of Environment) shall review and, if necessary, amend Environmental Compliance Approvals (ECA) issued through the Environmental Protection Act. The amendments shall include conditions that, when implemented, manage this activity such that it ceases to be a significant drinking water threat.		
Policy 2.10	23	**Existing Sewage Discharge - Management** To reduce the risk to municipal drinking water sources from existing: • sewage treatment plant effluent discharge; • sewage treatment plant by-pass discharge; or • combined sewer discharge where the discharge is a significant drinking water threat, the Province (Ministry of Environment) shall review and, where necessary, amend Environmental Compliance Approvals (ECA) to incorporate terms and conditions. These terms and conditions, when implemented, shall manage these activities so that they cease to be a significant drinking water threat.	MOE comment to TSR policy text addressed Consistency in wording with other policies. Remove specific reference to EPA	Text edit for consistency between policies MOE suggested change Policy text edit consistency Policy text edit PI removal Pro/man dropdown in database to manage Change to 3 yr effective date for existing in database
Policy 2.11	23	**Future Sewage Treatment Effluent - Prohibition** To reduce the risk to municipal drinking water sources from future sewage treatment effluent discharges where the discharge would be a significant drinking		

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		water threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process under the Environmental Protection Act so that the activity never becomes a significant drinking water threat.		
Policy 2.11	23	**Future Sewage Discharge - Prohibition** To reduce the risk to municipal drinking water sources from future: • sewage treatment plant effluent discharge; • sewage treatment plant by-pass discharge; or • combined sewer discharge where the discharge would be a significant drinking water threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process so that these activities never become a significant drinking water threat.	MOE comment to TSR policy text addressed Remove specific reference to EPA	MOE suggested change Policy text edit PI removal
Policy 2.12	23	**Existing Sewage Storage - Management** To reduce the risk to municipal drinking water sources from existing sewage storage in vulnerable areas where it is a significant drinking water threat, the Province (Ministry of Environment) shall review and, if necessary, amend Environmental Compliance Approvals (ECA) issued through the Environmental Protection Act. These amendments shall include conditions that, when implemented, would manage this activity such that it ceases to be a significant drinking water threat.		
Policy 2.12	23	**Existing Sewage Storage - Management** To reduce the risk to municipal drinking water sources from existing sewage storage in vulnerable areas where it is a significant drinking water threat, the Province (Ministry of Environment) shall review and, where necessary, amend Environmental Compliance Approvals (ECA) to incorporate terms and conditions. These terms and conditions, when implemented, shall manage this activity so that it ceases to be a significant drinking water threat.	Consistency in wording with other policies.	Text edit for consistency between policies Policy text edit consistency Change to 3 yr effective date for existing in database
Policy 2.13	23	**Future Sewage Storage - Prohibition** To reduce the risk to municipal drinking water sources from future sewage storage where this activity would be a significant drinking water threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals (ECA) process under the Environmental Protection Act so that it never becomes a significant drinking water threat.		
Policy 2.13	23	**Future Sewage Storage - Prohibition** To reduce the risk to municipal drinking water sources from future sewage storage	Remove specific reference to EPA	Policy text edit PI removal

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		where this activity would be a significant drinking water threat, the Province (Ministry of Environment) shall prohibit this activity through the Environmental Compliance Approvals process so that it never becomes a significant drinking water threat		Pro/man dropdown in database to manage
Policy 2.14	24	**Existing Septic Systems - Management** To reduce the risk to municipal drinking water sources from existing septic systems or septic system holding tanks that are subject to an Environmental Compliance Approval (ECA), in accordance with the Ontario Water Resources Act, and which are a significant drinking water threat, the Province (Ministry of Environment) shall review and, if necessary, amend the ECA. The amendments shall incorporate conditions that, when implemented, would manage this activity such that the system ceases to be a significant drinking water threat. The conditions may include, but not necessarily be limited to: • mandatory monitoring of groundwater impacts; • contingencies in the event that drinking water quality is adversely affected; • regular and ongoing compliance monitoring; • mandatory system inspections at least every five (5) years; and • annual reporting to the Source Protection Authority on any required inspection or monitoring programs and upgrading these septic systems to current standards, where necessary.		
Policy 2.14	24	**Existing Septic Systems - Management** For existing septic systems or septic system holding tanks (including expansions, modifications or replacements), subject to an Environmental Compliance Approval (ECA), that are a significant drinking water threat, the Province (Ministry of Environment) shall review and, where necessary, amend the ECA to incorporate terms and conditions. These terms and conditions, when implemented, shall manage this activity so that it ceases to be a significant drinking water threat. The terms and conditions may include, but not necessarily be limited to: • mandatory monitoring of groundwater impacts; • contingencies in the event that drinking water quality is adversely affected; • regular and ongoing compliance monitoring; • mandatory system inspections at least every five (5) years; • annual reporting to the Source Protection Authority on any required inspection or monitoring programs; • upgrading these septic systems to current standards, where necessary.	Consistency in wording with other policies.	Text edit for consistency between policies Policy text edit consistency Policy text edit PI removal Change to 3 yr effective date for existing in database
Policy 2.15	24	**Future Septic Systems - Prohibition (Land Use Planning)** To reduce the risk to municipal drinking water sources from future septic systems or septic system holding tanks where this activity would be a significant drinking water threat, municipalities shall update their Official Plans and zoning by-laws to prohibit any uses serviced by private individual sewage systems so that the activity never becomes a significant drinking water threat. For the purposes of this policy,		

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		upgrading, alteration, expansion or replacement of an existing or previously existing septic system to an improved standard shall not be considered to be the installation of a new system.		
Policy 2.15	24	**Future Septic Systems - Prohibition (Land Use Planning)** For new septic systems or new septic system holding tanks regulated under the Ontario Building Code Act, with the exception of: • those required for a municipal water supply facilities, where these activities would be a significant drinking water threat, the Municipalities shall amend their Official Plan and Zoning By-laws to prohibit uses, buildings or structures that would require a new septic system or septic system holding tank within such areas so that these activities never become significant drinking water threats.	Remove unintended restriction on municipal well septic systems. Consistent with Vol 2 Consistency in wording with other policies.	Policy text edit consistency Changed Planning Auth to Municipality in policy details/sidebar in database
Policy 2.16	24	**Septic Systems - Management (Municipal Act)** To reduce the risk to municipal drinking water sources from septic systems or septic system holding tanks in areas where this activity would be a significant threat, municipalities shall consider enacting and enforcing bylaws through the powers granted under the Municipal Act 2001 S.O. 2001 C.25 to require mandatory hook-up to municipal sanitary sewer services and decommissioning of septic systems or holding tanks, where municipal sanitary sewer services exist and where permitted by the servicing policies in the Official Plan.		
Policy 2.16	24	**Septic Systems - Management (Municipal Act)** To reduce the risk to municipal drinking water sources from septic systems or septic system holding tanks in areas where this activity would be a significant threat, municipalities shall consider enacting and enforcing bylaws to require mandatory hook-up to municipal sanitary sewer services and decommissioning of septic systems or holding tanks, where municipal sanitary sewer services exist and where permitted by the servicing policies in the Official Plan.	Remove specific reference to Municipal Act	Policy text edit Act removal Pro/man dropdown in database to manage Change to 2 yr effective date in database
Policy 2.17	25	**Septic Systems - Inspection Programs** For any existing septic system or septic system holding tank regulated under the Ontario Building Code Act, including upgrades and replacements of such systems, or a new septic system or septic system holding tank regulated under the Ontario Building Code Act required for a municipal water supply well, where these activities are, or would be, a significant drinking water threat, Municipalities shall implement an on-site sewage system maintenance inspection program, as required by the Ontario Building Code Act.		

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Policy 2.17	25	**Septic Systems - Inspection Programs** For septic systems or septic system holding tanks regulated under the *Ontario Building Code Act*, where such systems are: • existing (including modifications or replacements); or • new and required for a municipal water supply facilities, and where these activities are, or would be significant drinking water threats, the Municipalities shall implement an on-site sewage system maintenance inspection program, as required by the Ontario Building Code Act so that these activities cease to be or never become significant drinking water threats.	Different wording between Vol 2&3, Vol 2 preferable. Consistency in wording with other policies.	Policy text edit consistency Change to 2 yr effective date in database
Policy 2.18	25	**Septic Systems - Compliance Monitoring** To reduce the risk to municipal drinking water sources from septic systems or septic holding tanks that are subject to an Environmental Compliance Approval (ECA), in accordance with the Ontario Water Resources Act and which are a significant drinking water threat, the Province (Ministry of Environment) should develop a compliance monitoring program. The compliance monitoring should include inspection of the system to ensure that it continues to function as designed, meets applicable design standards, and is being properly maintained. Priorities for the compliance monitoring program should include areas where known septic failures have been identified and areas where older systems have not recently been inspected. Systems found to be deficient are required to undertake improvements to be in compliance. Where the system is subject to a mandatory inspection as per conditions on the ECA as outlined in policy 2.14, the compliance monitoring program may consider a certificate produced by a qualified person as proof that the system has been inspected and is properly functioning.		
Policy 2.18	25	**Septic Systems - Compliance Monitoring** For septic systems or septic system holding tanks subject to an Environmental Compliance Approval (ECA) that are a significant drinking water threat, the Province (Ministry of Environment) shall develop a compliance monitoring program. The compliance monitoring should include inspection of the system to ensure that it: • continues to function as designed; • meets applicable design standards; and • is being properly maintained. Priorities for the compliance monitoring program should include areas where known	Editorial revision Remove specific reference to OWRA	Policy text edit editorial Policy text edit PI removal Change to 3 yr effective date for existing in database

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		septic failures have been identified and areas where older systems have not recently been inspected. Systems found to be deficient are required to undertake improvements to be in compliance. Where the system is subject to a mandatory inspection, as per conditions in the ECA as outlined in policy 2.14, the compliance monitoring program may consider a certificate produced by a qualified person as proof that the system has been inspected and is properly functioning.		
Policy 2.19	25	**Existing Industrial Effluent Discharge - Management** To reduce the risk to municipal drinking water sources from existing industrial effluent discharges within those areas where this activity is a significant drinking water threat, the Province (Ministry of Environment) shall review and, if necessary, amend Environmental Compliance Approvals (ECA) issued through the Ontario Water Resources Act. These amendments will incorporate conditions that, when implemented, will manage the activity such that it ceases to be a significant drinking water threat.		
Policy 2.19	25	**Existing Industrial Effluent Discharge - Management** To reduce the risk to municipal drinking water sources from existing industrial effluent discharges within those areas where this activity is a significant drinking water threat, the Province (Ministry of Environment) shall review and, where necessary, amend Environmental Compliance Approvals (ECA) to incorporate terms and conditions. These terms and conditions, when implemented, will manage the activity so that it ceases to be a significant drinking water threat.	Editorial revision Remove specific reference to OWRA *MOE comment to TSR Table 4 of Appendix D indicates this policy covers CSO and STP by-pass but no indication in policy text*	Text edit for consistency between policies Policy text edit editorial Policy text edit PI removal Change to 3 yr effective date for existing in database *Policy to remain as is, CSO and STP by-pass added to policies 2.10 & 2.11 instead. Table 4 of Appendix D to be corrected*
Policy 2.20	25	**Future Industrial Effluent Discharge - Prohibition** Future industrial effluent discharges shall be prohibited so that this activity never becomes a significant drinking water threat. The Province (Ministry of Environment), through the Environmental Compliance Approvals (ECA) process under the Ontario Water Resources Act shall prohibit this activity in vulnerable areas where it would be a significant drinking water threat.		

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Policy 2.20	25	**Future Industrial Effluent Discharge - Prohibition** Future industrial effluent discharges shall be prohibited so that this activity never becomes a significant drinking water threat. The Province (Ministry of Environment), through the Environmental Compliance Approvals (ECA) process shall prohibit this activity in vulnerable areas where it would be a significant drinking water threat.	*MOE comment to TSR Table 4 of Appendix D indicates this policy covers CSO and STP by-pass but no indication in policy text*	Policy text edit PI removal *Policy to remain as is CSO and STP by-pass added to policies 2.10 & 2.11 instead. Table 4 of Appendix D to be corrected*
Policy 2.21	25	**Application of Agricultural Source Material (ASM) to Land - Management** To reduce the risk to municipal drinking water sources from the application of agricultural source material (ASM), this activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where this activity is or would be a significant drinking water threat. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity such that it ceases to be or never becomes a significant drinking water threat.		
Policy 2.21	25	**Application of Agricultural Source Material (ASM) to Land - Management** To reduce the risk to municipal drinking water sources from the application of agricultural source material (ASM), this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to the Application of ASM that is created, or amended, shall be consistent with this policy.	Editorial/consistency revision	Text edit for consistency between policies Policy text edit editorial / consistency Added OMAFRA to policy details in database
Policy 2.22	26	**Storage of Agricultural Source Material (ASM) - Management** To reduce the risk to municipal drinking water sources from the storage of agricultural source material (ASM) where ASM is or would be stored in a nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed such that it ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The NMA principles (including NMA prohibitions)		

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		shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity such that it ceases to be or never becomes a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA. Instruments created under the NMA shall also be consistent with this policy.		
Policy 2.22		**Storage of Agricultural Source Material (ASM) - Management** To reduce the risk to municipal drinking water sources from the storage of agricultural source material (ASM) where ASM is or would be stored in a nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. NMA principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA. Any Prescribed Instrument related to the Storage of ASM, that is created, or amended, shall be consistent with this policy.	Editorial/consistency revision	Text edit for consistency between policies Policy text edit editorial / consistency Added vulnerable areas to all policy details in database Added monitoring policies to all policy details in database
Policy 2.23	26	**Application of Non-Agricultural Source Material (NASM) to Land – Prohibition** To reduce the risk to municipal drinking water sources from the application of non-agricultural source material (NASM) in vulnerable areas where the activity would be a significant drinking water threat, application of NASM shall be prohibited. Application of NASM shall be designated for the purposes of Section 57 of the Clean Water Act and prohibited through prescribed instruments under the NMA or EPA so that the activity ceases to be or never becomes a significant drinking water threat.		
Policy 2.23	26	**Application of Non-Agricultural Source Material (NASM) to Land – Prohibition** To reduce the risk to municipal drinking water sources from the application of non-agricultural source material (NASM), this activity shall be prohibited where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 57 of the Clean Water Act so that the activity ceases to be or never becomes a significant drinking water threat.	Editorial/consistency revision *MOE comment to TSR about why NASM application is prohibited.*	Policy text edit editorial / consistency Added vulnerable areas to OMAFRA & MOE policy details in database

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		Any Prescribed Instrument related to the Application of NASM, that is created or amended, shall be consistent with this policy.		Added monitoring policies to OMAFRA & MOE policy details in database *SPC discussed and determined they had already considered this in original policy deliberation and will not be changing the policy. The Committee felt that there are additional contaminants in NASM, not considered by the CWA, that justify the prohibition designation even though manage is used for ASM.*
Policy 2.24	27	**Existing Non-Agricultural Source Material (NASM) Storage - Management** To reduce the risk to municipal drinking water sources from the handling and storage of non-agricultural source material (NASM) where NASM is stored in an existing nutrient storage facility as defined under the Nutrient Management Act, this activity shall be managed such that it ceases to be a significant drinking water threat. This activity is designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. The Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan, provided the Risk Management Official is satisfied these principles adequately manage the threat. The Province shall review and, if necessary, amend NASM Plans in accordance with the Nutrient Management Act and/or Environmental Compliance Approvals required under the Environmental Protection Act to ensure NASM storage is managed such that it ceases to be a significant drinking water threat. Risk Management Plans and Prescribed Instruments shall not allow temporary storage of NASM.		
Policy 2.24	27	**Existing Non-Agricultural Source Material (NASM) Storage - Management** To reduce the risk to municipal drinking water sources from the handling and storage of non-agricultural source material (NASM) where NASM is stored in an	Editorial/consistency revision	Text edit for consistency between policies

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		existing nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed where it is a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. NMA principles (including NMA prohibitions) shall form the basis of the Risk Management Plan, provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA. Any Prescribed Instrument related to existing NASM Storage, that is amended, shall be consistent with this policy.		Policy text edit editorial / consistency Added vulnerable areas to RMO policy details in database Added monitoring policies to RMO policy details in database Changed to immediate effective date for the PIs in database
Policy 2.25	27	**Future Non-Agricultural Source Material (NASM) Storage - Prohibition** Future handling and storage of non-agricultural source material (NASM) in a nutrient storage facility as defined under the Nutrient Management Act, shall be prohibited so that it never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 57 of the Clean Water Act and, through prescribed instruments under the NMA or EPA, shall be prohibited where it would be a significant drinking water threat.		
Policy 2.25	27	**Future Non-Agricultural Source Material (NASM) Storage - Prohibition** To reduce the risk to municipal drinking water sources from the future handling and storage of non-agricultural source material (NASM) where NASM would be stored in a nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be prohibited where it would be a significant drinking water threat. This activity shall be designated for the purposes of Section 57 of the Clean Water Act so that the activity never becomes a significant drinking water threat. Any Prescribed Instrument related to future NASM Storage, that is created, shall be consistent with this policy.	Editorial/consistency revision	Policy text edit editorial / consistency Added vulnerable areas to MOE policy details in database Added monitoring policies to MOE policy details in database
Policy 2.26		**Application of Commercial Fertilizer - Management** To reduce the risk to municipal drinking water sources from the application of commercial fertilizer, this activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where this activity is or would be a significant threat. The Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan, provided the Risk Management Official is satisfied these principles adequately		

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		manage the activity such that it ceases to be or never becomes a significant drinking water threat.		
Policy 2.26		**Application of Commercial Fertilizer - Management** To reduce the risk to municipal drinking water sources from the application of commercial fertilizer, this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to the Application of Commercial Fertilizer, that is created or amended, shall be consistent with this policy.	Editorial/consistency revision	Text edit for consistency between policies Policy text edit editorial / consistency
Policy 2.27	28	**Existing Commercial Fertilizer Storage - Management** The handling and storage of commercial fertilizer stored at existing facilities where it is sold or used for application at other sites, shall be managed such that the activity ceases to be a significant drinking water threat. The activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where this activity is a significant drinking water threat. The Risk Management Plan shall not allow temporary storage of commercial fertilizers.		
Policy 2.27	28	**Existing Commercial Fertilizer Storage - Management** The handling and storage of commercial fertilizer stored at existing facilities where it is sold or used for application at other sites, shall be managed so that the activity ceases to be a significant drinking water threat. The activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where this activity is a significant drinking water threat. The Risk Management Plan shall not allow temporary storage of commercial fertilizers.		Text edit for consistency between policies
Policy 2.29	28	**Commercial Fertilizer Storage in Event-based Modelled IPZs - Management** The handling and storage of commercial fertilizer greater than 30,000 kg shall be managed such that it ceases to be or never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. The Risk Management Plan shall not allow temporary storage of commercial fertilizers. This policy shall apply in those areas where this activity has been identified as a significant threat through event-based modelling.		

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Policy 2.29	28	**Nitrogen Based Commercial Fertilizer Storage in Event Based Areas - Management** The handling and storage of nitrogen based commercial fertilizer, in event modelled quantities, shall be managed so that it ceases to be or never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. The Risk Management Plan shall not allow temporary storage of nitrogen based commercial fertilizers. This policy shall apply in event modelled quantities in intake protection zone areas where event-based modelling has identified the activity as a significant drinking water threat.	Remove specific reference to fuel quantities as this has changed.	Text edit to clarify area policy applies to Text edit for consistency between policies Policy text edit fuel quantities Applicable municipalities list corrected in database 3 Removed IPZ-1(10) from vulnerable area in database
Policy 2.30	28	**Application of Pesticides - Management** The application of pesticides to land shall be managed such that it ceases to be or never becomes a significant drinking water threat. This policy shall apply to pesticides identified within the Provincial Drinking Water Threats Tables, in areas where this activity is, or would be, a significant drinking water threat. Pesticide application shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Further, all Pesticide Permits issued under the Pesticide Act (existing and new) shall prohibit the use of pesticides which would be a significant drinking water threat.		
Policy 2.30	28	**Application of Pesticides - Management** The application of pesticides to land shall be managed so that it ceases to be or never becomes a significant drinking water threat. This policy shall apply to pesticides identified within the Provincial Drinking Water Threats Tables, in areas where this activity is, or would be, a significant drinking water threat. Pesticide application shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Further, all Pesticide Permits issued under the Pesticide Act (existing and new) shall prohibit the use of pesticides which would be a significant drinking water threat.		Text edit for consistency between policies Added vulnerable areas to MOE policy details in database Added monitoring policies to MOE policy details in database
Policy 2.31	29	**Application of Pesticides - Compliance Monitoring** To reduce the risk to municipal drinking water sources from the land application of		

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		pesticides, the Province (Ministry of Environment) should consider compliance monitoring (including inspection). This compliance monitoring should be considered for Pesticide Permits issued under the Pesticide Act, where this activity is or would be a significant drinking water threat. The Ministry of Environment should consider source protection information as a criterion when setting inspection targets and priorities.		
Policy 2.31	29			*no change to policy text* Changed to 3 yr effective date on existing and future in database
Policy 2.32	29	**Storage of Pesticides - Management** The handling and storage of pesticides, where pesticides are stored at a facility for retail sale or use, shall be managed such that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The Risk Management Plan shall not allow temporary storage of pesticides.		
Policy 2.32	29	**Storage of Pesticides - Management** The handling and storage of pesticides, where pesticides are stored at a facility for retail sale or use, shall be managed so that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The Risk Management Plan shall not allow temporary storage of pesticides.		Text edit for consistency between policies
Policy 2.34	29	**Existing Pesticide Storage (greater than 2500 kg) - Management** Existing handling and storage of pesticides at a facility where they are manufactured, distributed or processed shall be managed such that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat.		
Policy 2.34	29	**Existing Pesticide Storage (greater than 2500 kg) - Management** Existing handling and storage of pesticides at a facility where they are manufactured, distributed or processed shall be managed so that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan		Text edit for consistency between policies Corrected applicable

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		shall be required where the activity is or would be a significant drinking water threat.		municipalities list in database 11
Policy 2.35	30	**Road Salt Storage - Prohibition** The handling and storage of road salt in any form (solid, liquid, mixed with sand and including for the use as a dust suppressant) shall be prohibited so that it ceases to be or never becomes a significant drinking water threat. In areas where it is or would be a significant drinking water threat, this activity shall be designated for the purposes of Section 57 of the Clean Water Act and shall also be prohibited through the Aggregate Resources Act (ARA) by prohibiting road salt stored in sites licensed or permitted under the ARA.		
Policy 2.35	30			*no change to policy text* Added monitoring policies to MNR policy details in database
Policy 2.36	30	**On-site Snow Storage - Management** The storage of snow on-site shall be managed such that the activity ceases to be or never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The Risk Management Plan shall prohibit snow transported to the storage area from off site and may include other such measures or requirements as are deemed necessary by the Risk Management Official.		
Policy 2.36	30	**On-site Snow Storage - Management** The storage of snow on-site shall be managed so that the activity ceases to be or never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where the activity is or would be a significant drinking water threat. The Risk Management Plan shall prohibit snow transported to the storage area from off site and may include other such measures or requirements as are deemed necessary by the Risk Management Official.		Text edit for consistency between policies
Policy 2.37	30	**Storage of Snow in Aggregate Operations - Prohibition** To reduce the risk to municipal drinking water sources from the storage of snow in aggregate operations, the Province (Ministry of Natural Resources) shall include conditions on Aggregate Permits and site plan approvals under the Aggregate Resources Act. Where it could be a significant drinking water threat (existing), site plans should be reviewed to ensure that they are consistent with Aggregate		

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		Resources Policy A.R.5.00.14; and where it would be a significant drinking water threat (future), that Aggregate Resources Policy A.R.5.00.14 continue to apply for the approval of future sites.		
Policy 2.37	30			*no change to policy text* Pro/man dropdown in database to prohibit Split existing and future into separate policy details to give different date option for each in database.
Policy 2.38	30	**Existing Fuel Storage - Management** The handling and storage of fuel shall be managed such that the activity ceases to be a significant drinking water threat. In circumstances and locations identified in the Provincial Drinking Water Threats Tables as a significant drinking water threat, the activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. This designation shall not apply to the storage of fuel for use in back-up generators for Water Works, Sewage Works or aggregate operations. In the opinion of the Risk Management Official, where an expansion of a facility storing or handling fuel will increase the threat to drinking water, the expansion shall be prohibited.		
Policy 2.38	30	**Existing Handling and Storage of Fuel in Wellhead Protection Areas - Management** To reduce the risk to municipal drinking water sources from the existing handling and storage of fuel, this activity shall be managed where it is a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. The Risk Management Official must be satisfied that the Risk management Plan will adequately manage the activity so that it ceases to be a significant drinking water threat. Where, in the opinion of the Risk Management Official, a future expansion of a facility handling or storing fuel is of such size that it cannot be managed, the Risk Management Plan may restrict the size so that the activity ceases to be a significant drinking water threat. This policy shall not apply to the storage of fuel for use in back-up generators for	Policy wording change for consistency and to take out specific reference to prohibition (made it seem like a manage & prohibit policy).	Text edit to clarify area policy applies to Text edit for consistency between policies Policy text edit consistency. Removed exclusion for sewage works Pro/man dropdown in database to manage

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		Water Works.		
Policy 2.39	31	**Fuel Storage in Event-based Modelled IPZs - Management** The handling and storage of fuel in quantities greater than 34,000 L shall be managed such that the activity ceases to be or never becomes a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. This policy shall apply in those areas where this activity has been identified as a significant threat through event-based modelling. The Risk Management Plan may include, but is not limited to, details concerning how to contain fuel, the location of fuel, and how fuel is stored.		
Policy 2.39	31	**Fuel Storage in Event Based Areas - Management** To reduce the risk to municipal drinking water sources from the handling and storage of fuel, in event modelled quantities, this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. This policy shall apply to event modelled quantities in event based areas where modelling has identified the activity as a significant drinking water threat. The Risk Management Official must be satisfied that the Risk management Plan will adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Where, in the opinion of the Risk Management Official, a future expansion of a facility handling or storing fuel is of such size that it cannot be managed, the Risk Management Plan may restrict the size so that the activity ceases to be or never becomes a significant drinking water threat. The Risk Management Plan may include, but is not limited to: • details concerning how to contain fuel; • the location of fuel; • how fuel is stored. This policy shall not apply to the storage of fuel for use in back-up generators for Water Works.	Remove specific reference to fuel quantities as this has changed. Editorial/consistency revision	Text edit to clarify areas of event modelling. Text edit for consistency between policies Policy text edit fuel quantities & consistency Removed exclusion for sewage works Applicable municipalities list corrected in database 10
Policy 2.40	31	**Future Handling and Storage of Fuel in Wellhead Protection Areas - Prohibition** The future handling and storage of fuel shall be prohibited so that the activity never becomes a significant drinking water threat. In circumstances identified in the Provincial Drinking Water Threats Tables and at locations where this activity would be a significant drinking water threat, this activity is designated for the purposes of Section 57 of the Clean Water Act. This policy shall not apply to the storage of fuel		

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		for use in back-up generators for Water Works, Sewage Works or aggregate operations.		
Policy 2.40	31	**Future Handling and Storage of Fuel in Wellhead Protection Areas - Prohibition** To reduce the risk to municipal drinking water sources from the future handling and storage of fuel this activity shall be prohibited where it would be a significant drinking water threat. This activity shall be designated for the purposes of Section 57 of the Clean Water Act so that the activity never becomes a significant drinking water threat. This policy shall not apply to the storage of fuel for use in back-up generators for Water Works.	Editorial/consistency revision	Text edit to clarify area policy applies to Policy text edit consistency Removed exclusion for sewage works
Policy 2.41	31	**Handling and Storage of Fuel at Aggregate Operations - Management** To reduce the risk to municipal drinking water sources from the handling and storage of fuel where fuel storage is associated with aggregate operations, the Province (Ministry of Natural Resources) shall review and, if necessary, amend site plans issued under the Aggregate Resources Act. These amendments shall incorporate conditions associated with the location of fuel tanks that, when implemented, would re-locate this activity to where it would not be a significant threat to drinking water. Where this is not feasible the conditions shall manage this activity such that it ceases to be a significant drinking water threat.		
Policy 2.41	31	**Handling and Storage of Fuel at Aggregate Operations - Management** To reduce the risk to municipal drinking water sources from the handling and storage of fuel, where fuel storage is associated with aggregate operations, this activity shall be managed where it is a significant drinking water threat. The Province (Ministry of Natural Resources) shall create, review and, where necessary amend any required site plans to adequately manage the activity. These site plans shall incorporate terms and conditions. These terms and conditions, when implemented, shall manage this activity so that it ceases to be or never becomes a significant drinking water threat. The terms and conditions may include, but not necessarily be limited to: • relocation of this activity to an area where the activity is not a significant drinking water threat.	Editorial/consistency revision	Text edit for consistency between policies Policy text edit consistency Pro/man dropdown in database to manage Changed to 3 yr effective date on existing in database Add IPZ 1-3 (no score-fuel) in database
Policy	31	**Handling and Storage of Fuel for Use in Back-up Generators - Management**		

Section / Policy	Page	Text	Reason For Change	Changes Made
2.42		To reduce the risk to municipal drinking water sources from the handling and storage of fuel for use in back-up generators and other liquid power devices, the Province (Ministry of Environment) shall review and, if necessary, amend approvals, licenses or permits issued under the Safe Drinking Water Act or the Ontario Water Resources Act. These amendments shall incorporate conditions that, when implemented, would manage the activity where it is or would be a significant drinking water threat. The conditions may include, but are not limited to, requiring the use of double-walled tanks, secondary containment or regular inspection of fuel tanks and fuel handling equipment.		
Policy 2.42	31	**Handling and Storage of Fuel for Use in Back-up Generators - Management** To reduce the risk to municipal drinking water sources from the handling and storage of fuel, for use in back-up generators for Water Works, this activity shall be managed where it is or would be a significant drinking water threat. The Province (Ministry of Environment) shall create, review and, where necessary amend any required approvals, licenses or permits to adequately manage the activity such that it ceases to be a significant drinking water threat. These approvals, licenses or permits shall incorporate terms and conditions. These terms and conditions, when implemented, shall manage this activity such that it ceases to be or never becomes a significant drinking water threat. The terms and conditions may include, but not necessarily be limited to: • require the use of double-walled tanks; • secondary containment; • regular inspection of fuel tanks and fuel handling equipment.	Editorial/consistency revision Remove specific reference to PIs	Policy text edit consistency Removed exclusion for sewage works Pro/man dropdown in database to manage Changed to 3 yr effective date on existing in database Corrected applicable municipalities in database 11
Policy 2.43	32	**Abandoned Fuel Storage Tank - Removal** To reduce the risk to municipal drinking water sources from abandoned fuel storage tanks where the storage of fuel is or would be a significant drinking water threat, the Province (Ministry of Environment) should consider undertaking the removal of abandoned fuel storage tanks.		
Policy 2.43	32	**Abandoned Fuel Storage Tank - Removal** To reduce the risk to municipal drinking water sources from fuel storage tanks located on abandoned properties where the storage of fuel is, or would be, a *significant drinking water threat*, the Province (Ministry of Environment) shall consider undertaking the removal of fuel storage tanks when they become aware of them.	MOE suggested TSR change wording. Change incorporated.	MOE suggested change Changed to 3 yr effective date on existing & future in database
Policy 2.44	32	**Existing Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs) - Management**		

Section / Policy	Page	Text	Reason For Change	Changes Made
		Existing handling and storage of dense non-aqueous phase liquids (DNAPLs) shall be managed such that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where this activity is a significant drinking water threat and, in the opinion of the Risk Management Official, substantial quantities and concentrations not typical of household use are being handled or stored.		
Policy 2.44	32	**Existing Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs) - Management** Existing handling and storage of dense non-aqueous phase liquids (DNAPLs), through all phases of its life cycle including disposal, shall be managed so that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where this activity is a significant drinking water threat and, in the opinion of the Risk Management Official, substantial quantities and concentrations not typical of household use are being handled or stored.	MOE comment to TSR suggested removing DNAPL /Organic Solvents from waste policies. Edit to this policy a result of removing DNAPL from Waste Management Policies.	Text edit for consistency between policies MOE suggested change
Policy 2.45	32	**Handling and Storage of DNAPL - Education and Outreach** To reduce the risk to municipal drinking water sources from existing handling and storage of dense non-aqueous phase liquids in concentrations typical of household use, where this activity is, or would be, a significant drinking water threat, municipalities, in collaboration with the Source Protection Authority, the Ministry of Environment, and/or other bodies wherever possible, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can be identified and handled and disposed of in a manner such that the activity would cease to be or never become a significant drinking water threat. This policy should be initiated within one (1) year of the effective date of the Source Protection Plan.		
Policy 2.45	32	**Handling and Storage of DNAPL - Education and Outreach** To reduce the risk to municipal drinking water sources from existing handling and storage of dense non-aqueous phase liquids in concentrations typical of household use, where this activity is, or would be, a significant drinking water threat, municipalities, in collaboration with the Conservation Authority, the Ministry of Environment, and/or wherever possible other bodies, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can be identified and handled and disposed of in a manner so that the activity would	Change to 'conform' language Change collaborator from SPA to CA in policy text.	Text edit for consistency between policies Policy text edit conform language Policy text edit CA as collaborating body Change SPA to CA in monitoring policies in

Section / Policy	Page	Text	Reason For Change	Changes Made
		cease to be or never become a significant drinking water threat. This policy shall be initiated within one (1) year of the effective date of the Source Protection Plan.		database Corrected applicable municipalities in database 11
Policy 2.46	32	**Future Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs) - Management** Future handling and storage of dense non-aqueous phase liquids (DNAPLs) shall be managed such that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where, in the opinion of the Risk Management Official, substantial quantities and concentrations not typical of household use would be handled or stored, and where this activity would be a significant drinking water threat other than in Wellhead Protection Area-B (WHPA-B) with a vulnerability score of 10 and WHPA-A.		
Policy 2.46	32	**Future Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLs) - Management** Future handling and storage of dense non-aqueous phase liquids (DNAPLs), through all phases of its life cycle including disposal, shall be managed so that the activity ceases to be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where, in the opinion of the Risk Management Official, substantial quantities and concentrations not typical of household use would be handled or stored, and where this activity would be a significant drinking water threat other than in Wellhead Protection Area (WHPA) A or B with a vulnerability score of 10.	MOE comment to TSR suggested removing DNAPL /Organic Solvents from waste policies. Edit to this policy a result of removing DNAPL from Waste Management Policies. Clarity/consistency revision	Text edit for consistency between policies MOE suggested change Policy text edit clarity / consistency
Policy 2.47	33	**Future Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLS) - Prohibition** Future handling and storage of dense non-aqueous phase liquids (DNAPLs) shall be prohibited so that the activity never becomes a significant drinking water threat, where, in the opinion of the Risk Management Official, substantial quantities and concentrations not typical of household use would be handled or stored. This activity shall be designated for the purposes of Section 57 of the Clean Water Act and shall be prohibited in Wellhead Protection Area (WHPA) A and WHPA-B with a vulnerability score of 10 where it would be a significant drinking water threat.		
Policy 2.47	33	**Future Handling and Storage of Dense Non-Aqueous Phase Liquids (DNAPLS) - Prohibition** Future handling and storage of dense non-aqueous phase liquids (DNAPLs), through all phases of its life cycle including disposal, shall be prohibited so that the activity never becomes a significant drinking water threat. This activity shall be	MOE comment to TSR suggested removing DNAPL /Organic Solvents from waste policies. Edit to this policy a result of removing DNAPL	MOE suggested change Policy text edit clarity / consistency

Section / Policy	Page	Text	Reason For Change	Changes Made
		designated for the purposes of Section 57 of the Clean Water Act and shall be prohibited where, in the opinion of the Risk Management Official, substantial quantities and concentrations not typical of household use would be handled or stored, and where this activity would be a significant drinking water threat in Wellhead Protection Area (WHPA) A and B with a vulnerability score of 10.	from Waste Management Policies. Clarity/consistency revision	
Policy 2.48	33	**Existing Storage of Organic Solvents - Management** Existing handling and storage of organic solvents shall be managed such that the activity ceases to be a significant drinking water threat. Under circumstances identified within the Provincial Drinking Water Threats Tables, in areas where this activity is a significant drinking water threat, this activity is designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required.		
Policy 2.48	33	**Existing Storage of Organic Solvents - Management** Existing handling and storage of organic solvents), through all phases of its life cycle including disposal, shall be managed so that the activity ceases to be a significant drinking water threat. Under circumstances identified within the Provincial Drinking Water Threats Tables, in areas where this activity is a significant drinking water threat, this activity is designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required.	MOE comment to TSR suggested removing DNAPL /Organic Solvents from waste policies. Edit to this policy a result of removing Organic Solvents from Waste Management Policies.	Text edit for consistency between policies MOE suggested change
Policy 2.49	33	**Future Storage of Organic Solvents - Prohibition** Future handling and storage of organic solvents shall be prohibited so that the activity never becomes a significant drinking water threat. Under circumstances identified within the Provincial Drinking Water Threats Tables, in areas where this activity is a significant drinking water threat, this activity is designated for the purposes of Section 57 of the Clean Water Act and shall be prohibited.		
Policy 2.49	33	**Future Storage of Organic Solvents - Prohibition** Future handling and storage of organic solvents), through all phases of its life cycle including disposal, shall be prohibited so that the activity never becomes a significant drinking water threat. Under circumstances identified within the Provincial Drinking Water Threats Tables, in areas where this activity is a significant drinking water threat, this activity is designated for the purposes of Section 57 of the Clean Water Act and shall be prohibited.	MOE comment to TSR suggested removing DNAPL /Organic Solvents from waste policies. Edit to this policy a result of removing Organic Solvents from Waste Management Policies.	MOE suggested change
Policy 2.50	33	**Runoff that Contains Chemicals Used in the De-icing of Aircraft – Management** To reduce the risk to municipal drinking water sources from runoff that contains chemicals used in the de-icing of aircraft, this activity shall be designated for the purposes of Section 58 of the Clean Water Act. Municipalities, through the Risk Management Official, shall work collaboratively with airport authorities to encourage		

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		the development of a Risk Management Plan where this activity is or would be a significant drinking water threat. The Risk Management Plan shall ensure glycol management plans are up-to-date, implemented and effective in managing the activity such that it ceases to be or never becomes a significant drinking water threat.		
Policy 2.50	33	**Runoff that Contains Chemicals Used in the De-icing of Aircraft – Management** To reduce the risk to municipal drinking water sources from runoff that contains chemicals used in the de-icing of aircraft, this activity shall be designated for the purposes of Section 58 of the Clean Water Act. Municipalities, through the Risk Management Official, shall work collaboratively with relevant airport authorities or operators to encourage the development of a Risk Management Plan where this activity is or would be a significant drinking water threat. The Risk Management Plan shall ensure glycol management plans are up-to-date, implemented and effective in managing the activity so that it ceases to be or never becomes a significant drinking water threat.	Editorial revision	Text edit for consistency between policies Policy text edit editorial
Policy 2.51	34	**Agricultural Source Material (ASM) Generation Through Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard** The use of land as livestock grazing or pasturing, an outdoor confinement area or a farm animal yard shall be managed such that the activity ceases to be or never becomes a significant drinking water threat. These activities shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required where these activities are significant drinking water threats. The Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan. Where, in the opinion of the Risk Management Official, a future outdoor confinement area is of such size that it cannot be managed so that the activity never becomes a significant drinking water threat, the activity shall be prohibited.		
Policy 2.51	34	**Agricultural Source Material (ASM) Generation Through Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard** To reduce the risk to municipal drinking water sources from the existing or future use of land for livestock grazing, pasturing, an outdoor confinement area, or a farm-animal yard, these activities shall be managed where they are a significant drinking water threat. These activities shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat.	Policy wording change for consistency. Policy wording change to take out specific reference to prohibition (made it seem like a manage & prohibit policy). Change Existing to Future and Existing in sidebar	Text edit for consistency between policies Policy text edit re-word prohibition reference. Added future to policy details in database Pro/man dropdown in database to manage

Section / Policy	Page	Text	Reason For Change	Changes Made
		Where, in the opinion of the Risk Management Official, a future livestock grazing land, pasture land, outdoor confinement area, or farm-animal yard is of such size that it cannot be managed, the Risk Management Plan may restrict the size so that the activity ceases to be or never becomes a significant drinking water threat.		Added IPZ 1 (8) in database
Policy 2.52	34	**Compliance Monitoring - Nutrient Management Act** To reduce the risk to municipal drinking water sources from activities that are regulated under the Nutrient Management Act, where such activities are, or would be, a significant drinking water threat, the Province, through the Ministry of Environment Agricultural Officer, should consider source protection information as a criterion when setting inspection targets and priorities as part of the Ministry's on-farm compliance program.		
Policy 2.52	34			*no change to policy text* Existing and future effective date 3 yrs in database
Policy 2.53	34	**Transportation of Fuel and Fertilizer Along Roads, Railways and Waterways and the Transportation of Liquid Petroleum Through Pipelines - Municipal** The transportation of fuel and fertilizer along provincial highways, county and local roads, railways, waterways and the transportation of liquid petroleum products through pipelines have been identified as local threats in IPZ-1, 2 and 3 in the St. Clair Region Source Protection Area. Where these local threats have been identified as significant drinking water threats in the St. Clair Region Assessment Report, municipalities within the St. Clair Region Source Protection Area shall consider: a) rerouting, where possible, highways and arterial roads around more vulnerable areas where opportunities arise; b) placing road signs, consistent with policies 1.02 and 1.03, at the entrance to IPZs so emergency responders and those engaged in transportation of these materials are aware that a spill may pose a significant risk to the drinking water source; c) reviewing their emergency response programs with regards to the ability to contain chemical spills; and d) reviewing their water treatment plant response time, procedures and equipment.		
Policy 2.53	34	**Transportation of Fuel and Nitrogen Based Fertilizer Along Roads, Railways and Waterways and the Transportation of Liquid Petroleum Through Pipelines - Municipal**	Remove specific reference to IPZ area being in SCRSPR	Policy text edit to remove specific reference to SCRSPR

Section / Policy	Page	Text	Reason For Change	Changes Made
		The transportation of fuel and nitrogen based fertilizer along provincial highways, county and local roads, railways, waterways and the transportation of liquid petroleum products through pipelines have been identified as local threats in the Assessment Reports. Event based modelling has identified these activities as significant drinking water threats within specified parts of IPZ-1, 2 and 3. In these areas, municipalities shall consider: a) rerouting, where possible, highways and arterial roads around more vulnerable areas where opportunities arise; b) placing road signs, consistent with policies 1.02 and 1.03, at the entrance to IPZs so emergency responders and those engaged in transportation of these materials are aware that a spill may pose a significant risk to the drinking water source; c) reviewing their emergency response programs with regards to the ability to contain chemical spills; and d) reviewing their water treatment plant response time, procedures and equipment.		Created municipal list in database 10 Added LTVCA SPA to SPA list in database Existing and future policy details set to 2yr effective dates in database.
Policy 2.54	35	**Transportation of Fuel and Fertilizer Along Roads, Railways and Waterways and the Transportation of Liquid Petroleum Through Pipelines** The transportation of fuel and fertilizer along provincial highways, county and local roads, railways, waterways and the transportation of liquid petroleum products through pipelines have been identified as local threats in IPZ-1, 2 and 3 in the St. Clair Region Source Protection Area. Where these local threats have been identified as significant drinking water threats in the St. Clair Region Assessment Report, the Province (Ministry of Transportation) in consultation with municipalities and relevant police services, shall consider source protection information as a criterion when establishing and reviewing Emergency Detour Routes.		
Policy 2.54	35	**Transportation of Fuel and Nitrogen Based Fertilizer Along Roads, Railways and Waterways and the Transportation of Liquid Petroleum Through Pipelines** The transportation of fuel and nitrogen based fertilizer along provincial highways, county and local roads, railways, waterways and the transportation of liquid petroleum products through pipelines have been identified as local threats in some IPZ-1, 2 and 3s where event based modelling has been undertaken. Where these local threats have been identified as significant drinking water threats in the Assessment Reports the Province (Ministry of Transportation) in consultation with municipalities and relevant police services, shall consider source protection information as a criterion when establishing and reviewing Emergency Detour Routes.	Remove specific reference to IPZ area being in SCRSPR	Policy text edit to remove specific reference to SCRSPR Pro/man dropdown in database to manage Created municipal list in database 10 Added LTVCA SPA to SPA list in database
Policy 3.01	36	**Moderate and Low Threat Septic Systems - Discretionary Monitoring** To reduce the risk to drinking water sources from septic systems or septic system holding tanks in vulnerable areas where this activity is a low or moderate threat, the		

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		local approval agency of septic systems, under the authority of the Ontario Building Code (municipalities or the Board of Health), should consider including these septic systems as part of the discretionary maintenance inspection program outlined in O. Reg. 315/10. In considering these discretionary inspections, priority should be given to areas where septic systems are known to fail and where older septic systems are predominant.		
Policy 3.01	36	**Moderate and Low Threat Septic Systems - Discretionary Monitoring** To reduce the risk to drinking water sources from septic systems or septic system holding tanks in vulnerable areas where this activity is a low or moderate threat, the local approval agency of septic systems, under the authority of the Ontario Building Code (municipalities or the Board of Health), should consider including these septic systems as part of the discretionary maintenance inspection program outlined in O. Reg. 315/10. In considering these discretionary inspections, priority should be given to areas where septic systems are known to fail and where older septic systems are predominant. Further, special consideration should also be given to maintenance inspection of septic systems which are moderate or low drinking water threats in vulnerable areas where nitrate or phosphorous discharged from septic systems may contribute to identified issues.		Change based on SPC comment. Corrected municipalities list in database 36 Added municipality to monitoring policies in database Added additional vulnerable areas in database
Policy 3.02	36	**Moderate and Low Threat Pesticide Application - Management** To reduce the risk to municipal drinking water sources from the land application of pesticides, the Province (Ministry of Environment) should consider reviewing and, if necessary, amending Pesticide Permits issued under the Pesticides Act, to incorporate conditions to address the protection of municipal drinking water sources where this activity is or would be a low or moderate drinking water threat.		
Policy 3.02	36		Add WHPA-D (6) and possibly more E#'s to sidebar.	*no change to policy text* Corrected municipalities list in database 36 Added municipality to monitoring policies in database Added additional vulnerable areas in database

Section / Policy	Page	Text	Reason For Change	Changes Made
				Changed to 3yr effective date for existing in database.
New M&L DWT Policy				
Policy 3.03		**New Prescribed Instruments Related to Moderate and Low Threats - Management** To reduce the risk to municipal drinking water sources from new activities that would be: • subject to one or more Prescribed Instruments; and • located in areas where the activity would be a moderate or low drinking water threat; the province should consider incorporating terms and conditions. These terms and conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate these terms and conditions should reduce the risk.	New policy	
Policy 4.01	37	**Spill Prevention, Spill Contingency and Emergency Response Plans - Municipal** To ensure spill prevention plans, spill contingency plans, and emergency response plans are updated for the purpose of protecting municipal drinking water sources with respect to spills that occur along highways, or railway lines within a WHPA, municipalities should consider incorporating the location of WHPAs and related spill considerations into their emergency response plans.		
Policy 4.01	37	**Spill Prevention, Spill Contingency and Emergency Response Plans - Municipal** To ensure spill prevention plans, spill contingency plans, and emergency response plans are updated for the purpose of protecting municipal drinking water sources with respect to spills that occur along highways, or railway lines within WHPAs and IPZs, municipalities should consider incorporating the location of WHPAs, IPZs and related spill considerations into their emergency response plans.	IPZs missed in original text.	Policy text change editorial Corrected to applicable municipalities in database
Policy 4.02	37	**Spill Prevention, Spill Contingency and Emergency Response Plans - Provincial** To ensure spill prevention plans, contingency plans, and emergency response plans are updated for the purpose of protecting municipal drinking water sources with respect to spills that occur within a vulnerable area, along highways, or railway		

Section / Policy	Page	Text	Reason For Change	Changes Made
		lines; a. The Ministry of Environment is requested to provide mapping of the identified vulnerable areas to the Spills Action Centre to assist them in responding to reported spills along transportation corridors. b. The Spills Action Centre Operations and the relevant procedures cards include information on vulnerable areas and contacts for municipal water system operators with the expectation that the Spills Action Centre will take action under the circumstances to ensure that the operator is aware of the spill and the potential for impact on the drinking water system.		
Policy 4.02	37			*no change to policy text* Corrected to applicable municipalities in database
Policy 4.03	37	**General Spills Awareness** The Province (Ministry of Environment), in collaboration with municipalities, shall consider developing and implementing general spills awareness programs where significant threats may occur.		
Policy 4.03	37			*no change to policy text* Corrected to applicable municipalities in database
Policy 4.05		**Transport Pathway Policy - Municipal** To reduce the potential for transport pathways to increase the risk to municipal drinking water sources, municipalities should consider: a) including, as a condition for approval on relevant development applications, a record of the decommissioning of unused wells in accordance with O. Reg. 903 of the Ontario Water Resources Act (OWRA); b) the development of municipal by-laws to restrict transport pathways where prescribed drinking water threats would be significant and where alternative services are available. The municipality, in consultation with the Risk Management Official, shall be responsible for determining exceptions to these by-laws; and c) encouraging landowners to improve their wells to meet standards including making landowners aware of any financial incentives which may be available to assist them. If the landowner fails to take appropriate action, the Municipality should		

Section / Policy	Page	Text	Reason For Change	Changes Made
		draw this deficiency to the attention of the Ministry of Environment (MOE) to enforce the standards under O. Reg. 903 of OWRA or other regulation where applicable. In drawing this deficiency to the attention of the MOE, they should indicate that the deficiency is occurring in a Wellhead Protection Area (WHPA) and therefore may be increasing the risk to a municipal drinking water source.		
Policy 4.05		**Transport Pathway Policy - Municipal** To reduce the potential for transport pathways to increase the risk to municipal drinking water sources, municipalities should consider: a) including, as a condition for approval on relevant development applications, a record of the decommissioning of unused wells in accordance with O. Reg. 903 of the Ontario Water Resources Act (OWRA); b) the development of municipal by-laws to restrict private wells and septic systems where prescribed drinking water threats would be significant and municipal servicing is in place to provide an option for water and sewage other than the creation of potential transport pathways. The municipality, in consultation with the Risk Management Official, shall be responsible for determining exceptions to these by-laws; and c) encouraging landowners to improve their wells to meet standards including making landowners aware of any financial incentives which may be available to assist them. If the landowner fails to take appropriate action, the Municipality should draw this deficiency to the attention of the Ministry of Environment (MOE) to enforce the standards under O. Reg. 903 of OWRA or other regulation where applicable. In drawing this deficiency to the attention of the MOE, they should indicate that the deficiency is occurring in a Wellhead Protection Area (WHPA) and therefore may be increasing the risk to a municipal drinking water source.	MOE comment on TSR policies	MOE suggested change
Policy 4.06	38	**New Transport Pathway Reporting - Municipal** Under Section 27 (3) of the Clean Water Act, O. Reg. 287/07, municipalities shall notify the Source Protection Authority (SPA) and the Source Protection Committee (SPC) if a person applies to the municipality for the approval of a proposal to engage in any activity in a Wellhead Protection Area (WHPA) or Intake Protection Zone (IPZ) that may result in the creation of a new transport pathway or the modification of an existing transport pathway. This notice shall include a description of the proposal, the identity of the person responsible for the proposal, and a description of the approvals that are required to engage in the proposed activity. The notification shall be included as part of the existing planning process where possible and the proponent is required to be provided with a copy of the notification. A summary of all such notifications is required to be included as part of the annual reporting requirements identified in policy 5.01.		
Policy	38		Add IPZ-3 to sidebar	*no change to policy

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4.06				text* Added IPZ-3 to vulnerable areas in database
Policy 4.07	39	**New Transport Pathway Reporting Guidance** The Conservation Authorities within the Source Protection Region shall work collaboratively with the municipalities of the Source Protection Region to develop guidance to identify the activities that will create transport pathways and the locations within which municipalities are required to provide notification of such new or altered transport pathways in accordance with Section 27(3) of O. Reg. 287/07 of the Clean Water Act. This guidance shall be available as soon as possible after the Source Protection Plan comes into effect.		
Policy 4.07	39			*no change to policy text* Add Municipality to sidebar (in database)
Policy 4.09		**Transport Pathways Notification - Provincial** When the Source Protection Plan comes into effect, the Province (Ministry of Environment) and federal agencies, shall consider developing a notification program to ensure that the Source Protection Authority (SPA) and Source Protection Committee (SPC) are aware of new or changes to existing pathways. For this notification, they shall consider the guidance developed collaboratively by the Conservation Authorities and the municipalities which is suggested in policy 4.07.		
Policy 4.09				*no change to policy text*
Policy 4.10		**Provincial Well Inspection** The Province (Ministry of Environment) shall consider prioritizing the enforcement of the requirements of O. Reg. 903 of the Ontario Water Resources Act through well inspections using officials with appropriate skills and training. Resources should be focused in areas where improperly constructed, maintained, decommissioned or abandoned wells may increase the potential threat to municipal drinking water sources. The MOE should respond in a timely manner to any deficient wells brought to their attention giving due regard for the increased risk to the municipal drinking water source as identified by the Assessment Report.		

Section / Policy	Page	Text	Reason For Change	Changes Made
Policy 4.10		**Provincial Well Inspection** The Ministry of the Environment (MOE) is strongly encouraged to undertake an updated risk-based program analysis of the compliance program associated with the Wells Regulation [R.R.O., 1990 Regulation 903 (Wells) as amended, made under the Ontario Water Resources Act, R.S.O., 1990, c. O. 40]. The program analysis should consider: • Increased MOE field presence with well contractors • Complaint response prioritization where the presence of a transport pathway would endanger sources of municipal drinking water. • Focusing resources in areas where improperly constructed, maintained or abandoned wells may increase the potential threat to municipal drinking water sources.	MOE suggested TSR change wording.	MOE suggested change
New EA Policy				
Policy 4.12		**Environmental Assessment Reviews** To reduce the risk to municipal drinking water sources from activities subject to an environmental assessment (EA) in areas where the activity would be a significant, moderate or low drinking water threat the Conservation Authorities (CAs) should: • review EA documentation when circulated by the proponent; • provide available Source Protection information; and • request Source Protection Planning information (including an assessment of risks for the proposed and preferred alternatives) be included in the EA. Participation in this program by the CAs will be contingent on funding and municipal support of the CA involvement in this program.	New policy	Edit to policy wording based on input from Oxford County staff.
New Nitrate Monitoring Policy				
Policy 4.13		**Nitrate Monitoring Policy** In accordance with Section 22(2)-[7] of the Clean Water Act monitoring of nitrate is required for the Wallaceburg Surface Water Intake to: • assist in the delineation of the issue contributing area; • identify activities contributing to the issue; and, • assess whether Nitrate continues to be an issue. The Chatham-Kent PUC and St Clair Region Conservation Authority, in collaboration with the Province (Ministry of Environment) and other bodies where	New policy	

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		possible, should continue the support of existing water quality monitoring programs where they relate to the assessment of the Nitrate Issue, the delineation of an ICA or the identification of threats contributing to the Issue. Opportunities to better coordinate monitoring efforts to characterize water quality during events, and areas contributing to the issue under the event, should be considered. Where it is appropriate, additional water quality monitoring should be incorporated into existing programs or added as new programs. These monitoring efforts should be directed at such things as, but not limited to: event based water quality monitoring, correlation between the various monitoring programs, and contributions through transport pathways. Participation in these monitoring programs is dependent on adequate resources (such as funding and staff capacity) being available and the intention to continue to use the Wallaceburg surface water intake as a municipal drinking water source.		
New Microcystin Monitoring Policy				
Policy 4.14		**Microcystin Monitoring Policy** In accordance with Section 22(2)-[7] of the Clean Water Act further monitoring and research of Microcystin is required for the Wheatley and Chatham/South Kent Surface Water Intakes to: • assist in the delineation of the issue contributing area if required and advisable in the future; • assist with future identification of activities contributing to the issue (via the release of Phosphorous); and, • assess whether Microcystin continues to be an issue. The Chatham-Kent PUC and Lower Thames Valley Conservation Authority, in collaboration with the Province (Ministry of Environment), Essex Region Conservation Authority and other bodies where possible, should continue the support of existing water quality monitoring programs where they relate to the	New policy	

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		assessment and understanding of the microcystin issue. Opportunities to better coordinate monitoring efforts during events and provide insight into areas contributing to the issue under the event should be considered. Where it is appropriate, additional water quality monitoring should be incorporated into existing programs or developed as new programs. These monitoring efforts should be directed at such things as, but not limited to: • event based water quality monitoring (both blooms and runoff events), • correlation between the various monitoring programs (locally and within the western Basin of Lake Erie), and • contributions through transport pathways. Participation in these monitoring programs is dependent on adequate resources (including funding and staff capacity) being available.		

1.4 SPP Explanatory Document Suggested Changes Review

Table 1 Existing Significant Prescribed Threat System Summary for Thames-Sydenham and Region Source Protection Region (original)

Type of Threat	Number and Locations for Potential Significant Threats		
	Lower Thames Valley Source Protection Area	Upper Thames River Source Protection Area	Region Total
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	-	7	7
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	30	384	414
Application of agricultural source material (ASM) to the land	5	68	73
Storage of ASM	1	11	12
Application of non-agricultural source material (NASM) to the land	5	26	31
Application of commercial fertilizer to the land	4	36	40
Handling and storage of commercial fertilizer	2	9	11
Application of pesticides to the land	2	40	42
Handling and storage of pesticides	3	7	10
Handling and storage of fuel	49	203	252
Handling and storage of dense non-aqueous phase liquids (DNAPLs)	7	285	292
Handling and storage of organic solvents	2	5	7
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	2	11	13
Total	112	1092	1204
*There are no existing significant prescribed threats located within the St. Clair Region Source Protection Area			

Table 1 Existing Significant Prescribed Threat System Summary for Thames-Sydenham and Region Source Protection Region (revised)

Type of Threat	Number and Locations for Potential Significant Threats			
	Lower Thames Valley Source Protection Area	St. Clair Region Source Protection Area	Upper Thames River Source Protection Area	Region Total
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	6	-	31	37
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	68	-	349	417
Application of agricultural source material (ASM) to the land	9	-	84	93
Storage of ASM	0	-	10	10
Application of non-agricultural source material (NASM) to the land	13	-	36	49
Application of commercial fertilizer to the land	5	-	67	72
Handling and storage of commercial fertilizer	3	6	21	30
Application of pesticides to the land	10	-	51	61
Handling and storage of pesticides	3	-	18	21
Handling and storage of fuel	6	13	59	78

Type of Threat	Number and Locations for Potential Significant Threats			
	Lower Thames Valley Source Protection Area	St. Clair Region Source Protection Area	Upper Thames River Source Protection Area	Region Total
Handling and storage of dense non-aqueous phase liquids (DNAPLs)	14	-	172	186
Handling and storage of organic solvents	2	-	32	34
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	2	-	19	21
	141	19	949	1109
* Some parcels contain multiple threats and may result in the duplication of parcel counts				

Table 2 Significant Local Threats in St. Clair Region Source Protection Area (original and revised)

Original Table			New Table		
Local Threat	**Volume**	**Intake Affected**	**Local Threat**	**Volume**	**Intake Affected**
Tanker truck of fuel spill	34 000 L	Petrolia and LAWSS	Fuel spill of a tanker truck	15,000 L	Petrolia
			Fuel spill of a tanker truck	34 000 L	Petrolia, LAWSS and Wallaceburg
			Fuel spill of a tanker truck	68,000 L	Wallaceburg
Fuel spill from a ship	1 million L	LAWSS, Wallaceburg	Fuel spill from a ship	1 million L	LAWSS
Fertilizer spill	30 000 kg Urea (46% nitrogen)	Wallaceburg	Fertilizer spill	34 000 kg Urea (46% nitrogen)	Wallaceburg
Pipeline rupture	275 000 L	Wallaceburg	Pipeline rupture	275 000 L	Wallaceburg

Section / Policy	Page	Text	Reason For Change	Changes Made
1.3	3	The Source Protection Plan must include policies which address activities set out in the Assessment Report that are or would be significant drinking water threats. The total number of significant prescribed threats found within the Thames-Sydenham and Region Source Protection Region are: 1092 in the Upper Thames River; 112 in the Lower Thames Valley; and none in the St. Clair Region Source Protection Areas, as shown in the following tables.		
1.3	3	The Source Protection Plan must include policies which address activities set out in the Assessment Report that are or would be significant drinking water threats. The total number of significant prescribed threats found within the Thames-Sydenham and Region Source Protection Region are: 949 in the Upper Thames River; 141 in the Lower Thames Valley; and 19 in the St. Clair Region Source Protection Areas, as	# of threats has been further studied and refined	Threats #s corrected

Section / Policy	Page	Text	Reason For Change	Changes Made
		shown in the following tables.		
1.3.1	6	Threat Policy Discussion Papers were not developed for two threat categories; management of agricultural source material (aquaculture), and water quantity threats. The decision to not develop a discussion paper on the management of agricultural source material (aquaculture) was based on the lack of existing operations identified through the Assessment Report process and that the Ministry of Environment Tables of Drinking Water Threats recognizes this activity cannot be a significant threat in the Thames-Sydenham and Region based on vulnerability score. Water quantity discussion papers were not developed because they are only relevant in areas where Tier 3 water budgets have been completed (a task that has not been fulfilled at this time).		
1.3.1	6	Threat Policy Discussion Papers were not developed for two threat categories; management of agricultural source material (aquaculture), and water quantity threats. The decision to not develop a discussion paper on the management of agricultural source material (aquaculture) was based on the lack of existing operations identified through the Assessment Report process and that the Ministry of Environment Tables of Drinking Water Threats recognizes this activity cannot be a significant threat in the Thames-Sydenham and Region based on vulnerability score. Water quantity discussion papers were not developed because the Tier 3 water budget has been completed and did not identify any areas where activities could pose significant or moderate risks to municipal drinking water systems.	Text refers to Tier 3 water budgets not being completed.	Updated now that tier 3 water budget has been completed.
1.3.2	6	o Section 59 Restricted Land Use - a tool to screen new Planning Act applications or building permits within vulnerable areas to ensure activities that have been prohibited do not occur and to provide notice before allowing regulated activities.		
1.3.2	6	o Section 59 Restricted Land Use - a tool to screen new Planning Act, and Condominium Act applications or building permits within vulnerable areas to ensure activities that have been prohibited do not occur and to provide notice before allowing regulated activities.	Missing Condominium Act	Added Condominium Act
1.3.2	9	During the pre-consultation phase of the policy development process, Oxford County also reviewed and considered the draft policies circulated for comment by the TSR SPC, particularly those related to non-significant threat policies e.g. low and moderate threats and transport pathways. Given that as non-significant threat policies were not required to be addressed to the same extent by the LER SPC, Oxford simply chose to incorporate a number of the relevant policies developed by the TSR SPC into their proposed SPP policies for the TSR in an effort to achieve as much policy consistency as possible across that Region.		
1.3.2	9	During the pre-consultation phase of the policy development process, Oxford County also reviewed and considered the draft policies circulated for comment by the TSR SPC, particularly those related to non-significant threat policies e.g. low and moderate threats and transport pathways. Given that non-significant threat policies were not	grammar	Removed the word ‘as’.

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		required to be addressed to the same extent by the LER SPC, Oxford simply chose to incorporate a number of the relevant policies developed by the TSR SPC into their proposed SPP policies for the TSR in an effort to achieve as much policy consistency as possible across that Region.		
1.4	10	Pre-consultation took place within the Thames-Sydenham and Region during April 1, 2012 to June 1, 2012. Consultation on the draft Source Protection Plan occurred in August and September, 2012 and the proposed Source Protection Plan consultation occurred in November to December 2012.		
1.4	10	Pre-consultation took place within the Thames-Sydenham and Region during April 1, 2012 to June 1, 2012. Consultation on the draft Source Protection Plan occurred in August and September, 2012 and the proposed Source Protection Plan consultation occurred in November and December 2012.	grammar	Replaced the word 'to' with the word 'and'.
4.1.1	20	These programs should: • place a high priority on on-site septic systems including moderate and low threats; • identify target audiences, including but not limited to: landowners; municipalities; municipal departments such as fire departments and water operators; road authorities; fuel distributors; rail operators; and private contractors (snow); • consider partnership opportunities with agencies for the efficient delivery of education and outreach programs. Potential partners will include but are not limited to: Technical Standards and Safety Authority; Ontario Farm Environmental Coalition; Ontario Soil and Crop Improvement Association, Ontario Ministry of Agriculture Food and Rural Affairs; Ontario Marine Operators Association; and the Ontario Ministry of Transportation Road Authorities; and • encourage businesses and industries (both regulated and non-regulated under O. Reg. 224/07) to prepare, review and update, when required, Spill Prevention Plans and Spill Contingency Plans to ensure the protection of municipal drinking water has been addressed.		
4.1.1	20	These programs should: • place a high priority on on-site septic systems including moderate and low threats; • include activities which may be expected to contribute to an issue even in the absence of an Issues Contributing Area (ICA) • identify target audiences, including but not limited to: landowners; municipalities; municipal departments such as fire departments and water operators; road authorities; fuel distributors; rail operators; and private contractors (snow); • consider partnership opportunities with agencies for the efficient delivery of education and outreach programs. Potential partners will include but are not limited to: Technical Standards and Safety Authority; Ontario Farm		General E&O policy has been adjusted to include activities which may contribute to an issue to add an E&O complement to the Nitrate and Microcystin monitoring policies.

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		Environmental Coalition; Ontario Soil and Crop Improvement Association, Ontario Ministry of Agriculture Food and Rural Affairs; Ontario Marine Operators Association; and the Ontario Ministry of Transportation Road Authorities; and • encourage businesses and industries (both regulated and non-regulated under O. Reg. 224/07) to prepare, review and update, when required, Spill Prevention Plans and Spill Contingency Plans to ensure the protection of municipal drinking water has been addressed.		
4.1.2	21	It was felt that consideration should be given to: • The importance of transport pathway maintenance and decommissioning; • Existing septic systems identified through phase 1 re-inspection as being in need of repair, replacement or improvement and that have not been issued an order; and • Supporting well and septic system inspections and basic water quality tests.		
4.1.2	21	It was felt that consideration should be given to: • The importance of transport pathway maintenance and decommissioning; • Existing septic systems identified through phase 1 re-inspection as being in need of repair, replacement or improvement and that have not been issued an order; • Activities contributing to an Issue; and • Supporting well and septic system inspections and basic water quality tests.		Incentive programs policy has been adjusted to include activities which may contribute to an issue.
4.1.3	21	The *Planning Act* provides the legislative framework for land use planning in Ontario and sets out how land uses may be regulated. Municipalities can direct or limit the location and types of land use within their boundaries through tools such as official plans, zoning by-laws, site plan control, plan of subdivision, and consents. The SPP contains general land use planning policies (Policy 1.06 and OC-1.05) indicating that Planning authorities and municipalities are required to be consistent with significant threat policies as per Section 39 of the CWA, and have regard for moderate and low threat policies as per Section 39 (1) (b) of the CWA, in their land use planning decision-making process.		
4.1.3	21	The *Planning Act* provides the legislative framework for land use planning in Ontario and sets out how land uses may be regulated. Municipalities can direct or limit the location and types of land use within their boundaries through tools such as official plans, zoning by-laws, site plan control, plans of subdivision, and consents. The SPP contains general land use planning policies (Policy 1.06 and OC-1.05) indicating that Planning authorities and municipalities are required to conform with significant threat policies as per Section 39 of the CWA, and have regard for moderate and low threat policies as per Section 39 (1) (b) of the CWA, in their land use planning decision-making process.	grammar incorrect wording	Changed ‘plan’ to ‘plans’. Changed ‘be consistent’ to ‘conform’.
4.1.4	22	Implementation Timing is discussed in Section 2.3.2 of Volume II and III of the Source		

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		Protection Plan. In establishing the implementation timing, the SPC wanted to simplify the timing as much as possible to ensure that the policies could be effectively implemented. As such, a general timing policy was developed (Policy 1.09) which identifies the implementation timing by type of policy. Exceptions to the general timing are noted in individual policies.		
4.1.4	22	Implementation Timing is discussed in Section 2.3.3 of Volume II and III of the Source Protection Plan. In establishing the implementation timing, the SPC wanted to simplify the timing as much as possible to ensure that the policies could be effectively implemented. As such, a general timing policy was developed (O.C.-1.02 and Policy 1.09) which identifies the implementation timing by type of policy. Exceptions to the general timing are noted in individual policies.	Incorrect section reference.	Changed section reference from '2.3.2' to '2.3.3' added O.C. 1.02
4.1.4	23	As Official Plans and Zoning By-Laws are the primary documents governing local land use decisions, the SPC felt it important to ensure the that these land use planning documents are amended to reflect and/or the applicable Source Protection Plan policies as soon as possible. Such references will serve an important role in ensuring that future land uses do not become significant threats to drinking water. This is particularly true for those policies where land use planning is the primary tool to prevent future activities from becoming a significant threat, such as new septic systems. Land use planning documents also serve as an important tool for communicating land use restrictions that might be associated with activities that are prohibited, regulated or otherwise restricted by the policies of the Source Protection Plan using other tools, such as Part IV prohibition.		
4.1.4	23	As Official Plans and Zoning By-Laws are the primary documents governing local land use decisions, the SPC felt it important to ensure that these land use planning documents are amended to reflect the applicable Source Protection Plan policies as soon as possible. Such references will serve an important role in ensuring that future land uses do not become significant threats to drinking water. This is particularly true for those policies where land use planning is the primary tool to prevent future activities from becoming a significant threat, such as new septic systems. Land use planning documents also serve as an important tool for communicating land use restrictions that might be associated with activities that are prohibited, regulated or otherwise restricted by the policies of the Source Protection Plan using other tools, such as Part IV prohibition.	Text corrections	Removed the word 'the' and the words 'and/or'.
4.1.4	23	Within Oxford County, except where otherwise stated in the implementation timing policies (OC-1.02) or specifically set out in the Clean Water Act, all policies in the SPP come into effect at such time as the Ministry of Environment approves the Source Protection Plan and posts the notice of approval on the Environmental Registry. The policies pertaining to new/future threats will be implemented immediately. However, the majority of the existing threat policies and some of the new/future threat policies will take additional time to fully implement due to other legislative requirements and timelines that must be met, the time required to develop and implement new programs, and budgetary constraints. As such, this policy specifies implementation timing for these various policies, so that they are not required to be implemented immediately upon approval of the Source Protection Plan		

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4.1.4	23	Within Oxford County, except where otherwise stated in the implementation timing policies (OC-1.02) or specifically set out in the Clean Water Act, all policies in the SPP come into effect on the effective date of the Source Protection Plan. The policies pertaining to new/future threats will be implemented immediately. However, the majority of the existing threat policies and some of the new/future threat policies will take additional time to fully implement due to other legislative requirements and timelines that must be met, the time required to develop and implement new programs, and budgetary constraints. As such, this policy specifies implementation timing for these various policies, so that they are not required to be implemented immediately upon approval of the Source Protection Plan.	Clarity of wording	Plan comes in to effect on 'effective date'.
4.1.5	24	In developing the policies of the Source Protection Plan, the SPC identified terms which it felt were important to the understanding of the policies. Definitions for 'existing' and 'future' activities have been included in Policy 1.11 and OC-1.01 to ensure the policies for existing and future threats are applied as intended. Several terms are referenced and explained in the rationale section of this document and in the glossary. Thames-Sydenham Region included terms used in policy such as "handling" and "temporary" in the interpretation sections of Volume III, while Oxford County included terms used in policy directly within its definition policy (OC-1.01).		
4.1.5	24	In developing the policies of the Source Protection Plan, the SPC identified terms which it felt were important to the understanding of the policies. Definitions for 'existing' and 'new or future' activities have been included in Policy 1.11 and OC-1.01 to ensure the policies for existing and new or future threats are applied as intended. Several terms are referenced and explained in the rationale section of this document and in the glossary. Thames-Sydenham Region included terms used in policy such as "handling" and "temporary" in the interpretation sections of Volume III, while Oxford County included terms used in policy directly within its definition policy (OC-1.01).	Sometimes the word 'new' is used but sometimes the word 'future' is used.	Refer to 'new/future' here to indicate either may be used throughout the SPP documents.
4.1.5	24	The definitions of existing and future activities were determined to be critical to the understanding of the specific circumstance under which an existing or future policy would apply to a threat activity, which is particularly important in instances where the policy approaches for 'existing' and 'future' activities differ. For example, in most cases, future occurrences of a particular significant threat activity are prohibited, while existing occurrences are managed.		
4.1.5	24	The definitions of existing and future activities were determined to be critical to the understanding of the specific circumstance under which an existing or future policy would apply to a threat activity, which is particularly important in instances where the policy approaches for 'existing' and' new or future' activities differ. For example, in most cases, future occurrences of a particular significant threat activity are prohibited, while existing occurrences are managed.	Sometimes the word 'new' is used but sometimes the word 'future' is used.	Refer to 'new/future' here to indicate either may be used throughout the SPP documents.
4.1.5	24	Replacements, modifications and expansions are considered existing if changes to the activity do not change the level of threat of the activity, unless otherwise noted in threat-specific policy. For example if the changes were proposed to a significant threat, it should generally be considered existing, however if the changes resulted in a		

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		moderate threat being changed to significant, this should generally be considered as a future threat as this would create a new significant threat. To further clarify the point at which an activity or threat may be considered existing, transitional provisions policies were also developed. A specific policy dealing with replacements, modifications and expansions was included in previous versions of Oxford's policies, however, it was removed based on discussions with MOE. These discussions concluded that policies were not necessary to specifically allow for replacements, modification and expansions to existing significant threats, particularly in cases where Part IV or Prescribed Instrument policies were used. For policies where it was determined that specific provisions for replacements, modifications and expansions were necessary (such as where land use planning tools were used), specific wording was added to those policies.		
4.1.5	24	Replacements, modifications and expansions are considered existing if changes to the activity do not change the level of threat of the activity, unless otherwise noted in threat-specific policy. For example if the changes were proposed to a significant threat, it should generally be considered existing, however if the changes resulted in a moderate threat being changed to significant, this should generally be considered as a future threat as this would create a new significant threat. To further clarify the point at which an activity or threat may be considered existing, transitional provisions policies were also developed. A specific policy dealing with replacements, modifications and expansions was included in previous versions of Oxford's policies, however, it was removed based on discussions with MOE. These discussions concluded that policies were not necessary to specifically allow for replacements, modifications and expansions to existing significant threats, particularly in cases where Part IV or Prescribed Instrument policies were used. For policies where it was determined that specific provisions for replacements, modifications and expansions were necessary (such as where land use planning tools were used), specific wording was added to those policies.	Grammar edit	Changed 'modification' to 'modifications'.
4.1.5	25	Policies 1.10 and OC1.03 outline transitional provisions which establish what proposals for future activities may continue to proceed subject to the policies which pertain to existing threats. Transitional provisions and related definitions e.g. 'existing' and 'new/future' are intended to define the point in time and/or circumstances (e.g. stage in the development approval process) under which a significant treat activity is to be considered new/future versus existing for the purposes of applying the significant threat policies in the Source Protection Plan. This distinction becomes important for significant threat activities for which existing and future occurrences are addressed differently by the SPP policies (e.g. managed versus prohibited). Transitional considerations are particularly important for significant threat activities in instances where future occurrences (e.g. not existing as of the date the Source Protection Plan comes into effect) are prohibited, while existing occurrences of that activity are allowed to continue with appropriate risk management. It is important to understand that the transitional provisions do not exempt a significant threat activity from complying with the policies of the Source Protection Plan, but simply clarify whether existing or future		

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		policies will apply. Either way, the threat activity will be addressed by SPP policies and will need to satisfy the CWA test of 'ceasing to be or never becoming' a significant drinking water threat. In the case of TSR, this will generally mean that this CWA test will simply need to be satisfied through management of the activity, rather than its prohibition, in the limited circumstances where transition is permitted.		
4.1.5	25	Policies 1.10 and OC1.03 outline transitional provisions which establish what proposals for future activities may continue to proceed subject to the policies which pertain to existing threats. Transitional provisions and related definitions e.g. 'existing' and 'new/future' are intended to define the point in time and/or circumstances (e.g. stage in the development approval process) under which a significant threat activity is to be considered new/future versus existing for the purposes of applying the significant threat policies in the Source Protection Plan. This distinction becomes important for significant threat activities for which existing and future occurrences are addressed differently by the SPP policies (e.g. managed versus prohibited). Transitional considerations are particularly important for significant threat activities in instances where future occurrences (e.g. not existing as of the date the Source Protection Plan comes into effect) are prohibited, while existing occurrences of that activity are allowed to continue with appropriate risk management. It is important to understand that the transitional provisions do not exempt a significant threat activity from complying with the policies of the Source Protection Plan, but simply clarify whether existing or future policies will apply. Either way, the threat activity will be addressed by SPP policies and will need to satisfy the CWA test of 'ceasing to be or never becoming' a significant drinking water threat. In the case of TSR, this will generally mean that this CWA test will simply need to be satisfied through management of the activity, rather than its prohibition, in the limited circumstances where transition is permitted.	Grammar edit	Changed 'treat' to 'threat'.
4.1.5	26	The second transitional circumstance pertains to uses and associated activities that could be established on a property in accordance with existing zoning, with no further local development approvals (e.g. Planning Act or building permit). A number of prescribed significant threat activities (e.g. storage and handling of commercial fertilizer, pesticides, organic solvents, DNPALs etc.) would not likely require a building permit or any other form of local approval to be established on a property, even after the SPP comes into effect. This is most likely in cases where there are existing buildings and structures on a property that are suitable for the proposed use (e.g. storage of DNAPLs in an existing industrial building). For example, a proponent may have purchased or leased a property zoned for industrial purposes and containing existing industrial buildings, with the specific intent of operating a new industry that requires the handling and storage of DNAPLs as an essential part of their process. Given that there would not likely be any local planning or building permit approvals required, it is quite likely that the proponent would not be aware that their operation involves a significant threat activity regulated by the SPP policies, especially if the local planning documents (OP and Zoning) have not yet been updated to identify the areas and activities that are subject to the SPP policies. Similarly, in such circumstances it may also be very difficult for the implementing body for a particular policy to confirm whether such activity was established after the date SPP approved. For these		

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		reasons, the SPC determined that it would be fair and reasonable to give transitional consideration to such activities in such circumstances. However, the SPC also believed it was important to include the proviso that at such time as a Risk Management Official/Inspector has visited the site and documented the treat activities at that time, any activities not documented as existing will thereafter be considered future. The intent is that once such inspection has occurred, the owner/operator could no longer claim to be unaware of the SPP restrictions on significant threat activities and the RMO would also have conclusive documentation of the threats that were existing at that point in time. In effect, this would provide a certain 'window' of time for such activities to be established after approval of the SPP and still be evaluated as existing threats. The intent is that the RMO/RMI on-site inspections and existing threat documentation will be conducted as soon as possible after the SPPs are approved. However, given that they will likely be completed on a prioritized basis, the duration of the 'window' for each affected property will vary.		
4.1.5	26	The second transitional circumstance pertains to uses and associated activities that could be established on a property in accordance with existing zoning, with no further local development approvals (e.g. Planning Act or building permit). A number of prescribed significant threat activities (e.g. storage and handling of commercial fertilizer, pesticides, organic solvents, DNPALs etc.) would not likely require a building permit or any other form of local approval to be established on a property, even after the SPP comes into effect. This is most likely in cases where there are existing buildings and structures on a property that are suitable for the proposed use (e.g. storage of DNAPLs in an existing industrial building). For example, a proponent may have purchased or leased a property zoned for industrial purposes and containing existing industrial buildings, with the specific intent of operating a new industry that requires the handling and storage of DNAPLs as an essential part of their process. Given that there would not likely be any local planning or building permit approvals required, it is quite likely that the proponent would not be aware that their operation involves a significant threat activity regulated by the SPP policies, especially if the local planning documents (OP and Zoning) have not yet been updated to identify the areas and activities that are subject to the SPP policies. Similarly, in such circumstances it may also be very difficult for the implementing body for a particular policy to confirm whether such activity was established after the effective date of the SPP. For these reasons, the SPC determined that it would be fair and reasonable to give transitional consideration to such activities in such circumstances. However, the SPC also believed it was important to include the provision that at such time as a Risk Management Official/Inspector has visited the site and documented the threat activities at that time, any activities not documented as existing will thereafter be considered future. The intent is that once such inspection has occurred, the owner/operator could no longer claim to be unaware of the SPP restrictions on significant threat activities and the RMO would also have conclusive documentation of the threats that were existing at that point in time. In effect, this would provide a certain 'window' of time for such activities to be established after approval of the SPP and still be evaluated as existing threats. The intent is that the RMO/RMI on-site inspections and existing threat	Clarity of effective date. Grammar and spelling corrections.	Specifically refer to effective date of SPP Change 'proviso' to 'provision' and 'treat' to 'threat'.

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		documentation will be conducted as soon as possible after the SPPs are approved. However, given that they will likely be completed on a prioritized basis, the duration of the 'window' for each affected property will vary.		
4.1.6	27	Only land uses in areas where one or more significant threat activities may be subject to Part IV policies (e.g. Section 57 prohibition or Section 58 risk management plans) may be designated for the purposes of Section 59 restricted land use. The Section 59 (restricted land use) policies in this SPP (Policy 1.07, OC-1.04) are intended to capture all areas and land uses where a significant drinking water threat subject to a Part IV tools are likely to occur, while allowing some flexibility in determining the types of applications that would be required to obtain a notice from the RMO to be considered a complete application and, therefore, permitted to proceed through the planning or building permit review process. The policy designates as restricted land uses all land uses within municipal Official Plans and zoning by-laws in areas where significant drinking water threats that are subject to Part IV policies, with the exception of residential uses. Residential land uses have been excluded, as they are unlikely to be associated with new significant drinking water threat activities that would be prohibited or require risk management plans. As well, given the number of residential properties located within significant threat areas, the volume of residential building permits that the RMO may have been required to review could be considerable while next to none would be subject to policies utilizing prohibition or risk management under part IV of the CWA. The SPC was of the opinion that this could have placed unnecessary pressure on limited RMO/RMI staffing resources, resulting in potential delays in the development approval process and the implementation of other Part IV SPP policies, such as Risk Management Plans for existing activities while offering very minor improvements in the implementation and compliance with Source Protection Plan policies.		
4.1.6	27	Only land uses in areas where one or more significant threat activities may be subject to Part IV policies (e.g. Section 57 prohibition or Section 58 risk management plans) may be designated for the purposes of Section 59 restricted land use. The Section 59 (restricted land use) policies in this SPP (Policy 1.07, OC-1.04) are intended to capture all areas and land uses where a significant drinking water threat subject to a Part IV tools are likely to occur, while allowing some flexibility in determining the types of applications that would be required to obtain a notice from the RMO to be considered a complete application and, therefore, permitted to proceed through the planning or building permit review process. The policy designates as restricted land uses all land uses within municipal Official Plans and zoning by-laws in areas where there are significant drinking water threats that are subject to Part IV policies, with the exception of residential uses. Residential land uses have been excluded, as they are unlikely to be associated with new significant drinking water threat activities that would be prohibited or require risk management plans. As well, given the number of residential properties located within significant threat areas, the volume of residential building permits that the RMO may have been required to review could be considerable while next to none would be subject to policies utilizing prohibition or risk management under part IV of the CWA. The SPC was of the opinion that this could have placed	Grammar edit	Added the words 'there are'.

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		unnecessary pressure on limited RMO/RMI staffing resources, resulting in potential delays in the development approval process and the implementation of other Part IV SPP policies, such as Risk Management Plans for existing activities while offering very minor improvements in the implementation and compliance with Source Protection Plan policies.		
4.1.6	28	Policy 1.08 applies the same principles to areas identified through event-based modelled areas. In these areas only those activities which could result in the spills which were modelled are significant threats to drinking water. As a result it was determined to be more appropriate to designate only commercial, industrial, and agricultural. It is unlikely that fuel or fertilizers would be associated with other land use in quantities equal to or greater than those modelled. Therefore, in the areas where fuel and fertilizer storage were identified as significant threats through event-based modelling, only those land uses which are likely to be associated with fuel storage over 34,000 L or fertilizer storage over 30,000 kg are designated for the purposes of Section 59. These include commercial, industrial, and agricultural land use.		
4.1.6	28	Policy 1.08 applies the same principles to areas identified through event-based modelling. In these areas only those activities which could result in the spills which were modelled are significant threats to drinking water. As a result it was determined to be more appropriate to designate only commercial, industrial, and agricultural. It is unlikely that fuel or fertilizers would be associated with other land use in quantities equal to or greater than those modelled. Therefore, in the areas where fuel and fertilizer storage were identified as significant threats through event-based modelling, only those land uses which are likely to be associated with fuel storage over 15,000 L or fertilizer storage over 34,000 kg are designated for the purposes of Section 59. These include commercial, industrial, and agricultural land use.	Additional quantities have been modelled.	Change ‘34,000L’ to ’15,000L’. Corrected from ‘30,000kg’ to ’34,000kg’.
4.1.6	28	It is intended that the RMO will develop guidance to assist in refining the types of applications which require a notice to proceed. This guidance could be developed to provide further refinement of the geographic areas, specific land use designations, or the types of permits or applications which require a notice. This will be provided as written direction as referenced in the Restricted Land Use general policies (policies 1-08 and OC-1.04). This guidance will allow the planning authority or building official to determine that the application complies with circumstances included in the guidance and the applicant has demonstrated that a significant threat activity will not be engaged in or will not be affected by the application. If the criteria specified in the policy are satisfied then the site specific land use is not designated for the purposes of Section 59 and therefore a notice is not required from the RMO for the application or approval of the application. This is intended to allow applications which clearly do not involve significant threats to proceed without the involvement of the Risk Management Official. It is anticipated that where there is any doubt as to whether significant threats are affected by the application that it would be referred to the Risk Management Official.		
4.1.6	28	It is intended that the RMO will develop guidance to assist in refining the types of applications which require a notice to proceed. This guidance could be developed to provide further refinement of the geographic areas, specific land use designations, or the types of permits or applications which require a notice. This will be provided as	Minor text edit.	Add the words ‘or affect’.

Section / Policy	Page	Text	Reason For Change	Changes Made
		written direction as referenced in the Restricted Land Use general policies (policies 1-08 and OC-1.04). This guidance will allow the planning authority or building official to determine that the application complies with circumstances included in the guidance and the applicant has demonstrated that a significant threat activity will not be engaged in or will not be affected by the application. If the criteria specified in the policy are satisfied then the site specific land use is not designated for the purposes of Section 59 and therefore a notice is not required from the RMO for the application or approval of the application. This is intended to allow applications which clearly do not involve or affect significant threats to proceed without the involvement of the Risk Management Official. It is anticipated that where there is any doubt as to whether significant threats are affected by the application that it would be referred to the Risk Management Official.		
4.1.6	28	General guidance to RMO on Risk Management Plan requirements, including recommendations for a compliance monitoring program, has been included in Volume II and III Section 2.3.4.		
4.1.6	28	General guidance to RMO on Risk Management Plan requirements, including recommendations for a compliance monitoring program, has been included in Volume II and III Section 2.3.5.	Incorrect section reference	Change section '2.3.4' to '2.3.5'.
4.2	28-29	A variety of factors (including vulnerable area where the activity is located, the vulnerability score assigned to that area, the circumstances related to the activity and the hazard score) determine if a threat is classified as significant, moderate or low. An activity can also be a significant threat in an IPZ (1, 2 or 3) if event-based modelling demonstrates that the contaminant reaches the intake at a concentration that deteriorates the water as a drinking water source. Under events modelled, the storage and handling of similar volumes (34,000L for fuel and 30 000 kg for fertilizer) would be considered significant threats in IPZ within the St. Clair Region Source Protection Area. Policies have been developed for all significant threat activities that currently exist or that could exist in the future. These policies are intended to ensure the activity ceases to be, or never becomes, a significant drinking water threat. The rationale for the significant threat policies are presented by the approaches used as follows:		
4.2	28-29	A variety of factors (including vulnerable area where the activity is located, the vulnerability score assigned to that area, the circumstances related to the activity and the hazard score) determine if a threat is classified as significant, moderate or low. An activity can also be a significant threat in an IPZ if event-based modelling demonstrates that the contaminant reaches the intake at a concentration that deteriorates the water as a drinking water source. Under events modelled, the storage and handling of similar volumes (15,000L for fuel and 34 000 kg for fertilizer) would be considered significant threats in IPZ within the St. Clair Region and Lower Thames Valley Source Protection Areas. Policies have been developed for all significant threat activities that currently exist or that could exist in the future. These policies are intended to ensure the activity ceases to be, or never becomes, a significant drinking water threat. The rationale for the significant threat policies are presented by the approaches used as follows:	Additional quantities have been modelled. Modelling now completed in an additional SPA.	Corrected from 34,000L to 15,000L. Corrected from '30,000kg' to '34,000kg'. Add 'Lower Thames Valley'.

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2	29	The Tables of Drinking Water Threats establish the hazards associated with each activity. These tables identify the circumstances under which each activity is a significant drinking water threat. They also identify the vulnerable areas within which this activity is a significant drinking water threat. Generally, the policies of the Source Protection Plan do not include specific circumstances; instead they refer to these tables to define the circumstances under which an activity would be a significant drinking water threat.		
4.2	29	The Tables of Drinking Water Threats establish the hazards associated with each activity. These tables identify the circumstances under which each activity is a significant drinking water threat. They also identify the vulnerable areas within which this activity is a significant drinking water threat. Generally, the policies of the Source Protection Plan do not include the specific circumstances under which an activity would be a significant drinking water threat.	Text edit Minor wording change needed.	Added the word 'the'. Removed reference that policies refer to 'tables of circumstance'.
4.2.1	29	Section 57 is a "tool of last resort," for existing activities, and was only used when other options, in the opinion of the SPC, were not able to adequately reduce the threat to municipal drinking water sources and the potential impacts from prohibition of the activity was thought to be reasonable given the circumstances. The activities for which this policy approach was used and the associated rationale are outlined in Table 6 below.		
4.2.1	29	Section 57 is a "tool of last resort," for existing activities, and was only used when other options, in the opinion of the SPC, were not able to adequately reduce the threat to municipal drinking water sources and/or the potential impacts from prohibition of the activity was thought to be reasonable given the circumstances. The activities for which this policy approach was used and the associated rationale are outlined in Table 6 below.	Text edit	Added the word 'or'.

Table 6 Rationale for the use of Section 57 Prohibition

Threat	Policy Number	Threat Status	Rationale	Change
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act • Storage of tailings from mining operations	2.03 (1634)	Existing and Future Activities	The storage of tailings from mining operations is designated under the Environmental Protection Act and would require an Environmental Compliance Approval (ECA); however, this sub-threat is explicitly exempted from Part V of the Environmental Protection Act RRO 1990 Regulation 34 (S.3(1)(6)). Part IV (specifically Section 57) was appropriate to address this "gap" because this sub-threat was not identified as a significant threat occurring within the TSR and there is a strong likelihood that it would not be proposed within this Region in the future. Should a mining activity establish within the region, it would not be appropriate to store or treat tailings from the operation in areas where this would be a significant drinking water threat. Location of this activity in areas where it would not pose a significant threat to drinking water sources is the only alternative considered appropriate for managing the risks associated with this activity. Where PI could be used to accomplish this prohibition it has been used; however, Part IV prohibition was used to ensure that no aspect of this activity could become a significant threat to drinking water sources in this region. There were no concerns over this prohibition identified through pre-consultation with policy implementers. For the purposes of policy simplicity and consistency across the County, Oxford choose to apply the same policy approach to all significant waste threats e.g. to manage existing threats through PI or RMP and prohibit future threats through PI or Part IV. Although Oxford County was supportive of TSR's rationale for prohibiting existing occurrences of significant storage of mine tailings, the County determined that it was not necessary to specifically prohibit such existing threats in Oxford, as there were no, nor were there likely to be, any existing occurrences of such threats in the County as of the date the SPP comes into effect.	
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act • Storage of tailings from mining operations	2.03 (1634)	Existing and Future Activities	The storage of tailings from mining operations is designated under the Environmental Protection Act and would require an Environmental Compliance Approval (ECA); however, this sub-threat is explicitly exempted from Part V of the Environmental Protection Act RRO 1990 Regulation 34 (S.3(1)(6)). Part IV (specifically Section 57) was appropriate to address this "gap" because this sub-threat was not identified as a significant threat occurring within the TSR and there is a strong likelihood that it would not be proposed within this Region in the future. Should a mining activity establish within the region, it would not be appropriate to store or treat tailings from the operation in areas where this would be a significant drinking water threat. Location of this activity in areas where it would not pose a significant threat to drinking water sources is the only alternative considered appropriate for managing the risks associated with this activity. Where PI could be used to accomplish this prohibition it has been used; however, Part IV prohibition was used to ensure that no aspect of this activity could become a significant threat to drinking water sources in this region. There were no concerns over this prohibition identified through pre-consultation with policy implementers. For the purposes of policy simplicity and consistency across the County, Oxford choose to apply the same policy approach to all significant waste threats e.g. to manage existing threats through PI or RMP and prohibit future threats through PI or Part IV, with the exception of the storage of hazardous or liquid industrial waste threats not requiring an ECA. Although Oxford County was supportive of TSR's rationale for prohibiting existing occurrences of significant storage of mine tailings, the County determined that it was not necessary to specifically prohibit such existing threats in Oxford, as there were no, nor were there likely to be, any existing occurrences of such threats in the County as of the date the SPP comes into effect.	Explanation that storage of hazardous or liquid industrial waste threats not requiring an ECA is not being dealt with via section 57.
The	2.05	Future	As part of the waste managed at Waste Disposal sites, chemicals may be handled or stored which pose a	

Threat	Policy Number	Threat Status	Rationale	Change
establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	(1805) OC-2.03 (3203)	Activities	threat to drinking water sources. The release of these chemicals into surface or groundwater through the operation or maintenance of the site is a concern. Waste disposal sites are designated under the Environmental Protection Act and require an Environmental Compliance Approval (ECA); however, portions of this threat (such as PCB storage) may be exempted from Part V of the Environmental Protection Act. Section 57 was used as a way to address this "gap" in a manner consistent with how other sub-categories of this threat are to be prohibited through the prescribed instrument. While it was determined to be unreasonable to prohibit existing sites where this activity is a drinking water threat, the nature of this activity is such that the committee determined that future waste disposal sites could, and therefore should, be located in areas where they are not a significant threat to drinking water sources. Through pre-consultation there were no concerns raised to prohibiting this activity in areas where it would be a significant threat to drinking water sources. Dense non-aqueous phase liquids (DNAPLs) and organic solvents were included within this policy related to waste disposal sites since they must be managed throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal). This was identified as a "gap" not covered through the other DNAPL policies.	
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	2.05 (1805) OC-2.03 (3203)	Future Activities	As part of the waste managed at Waste Disposal sites, chemicals may be handled or stored which pose a threat to drinking water sources. The release of these chemicals into surface or groundwater through the operation or maintenance of the site is a concern. Most waste disposal sites require an Environmental Compliance Approval (ECA) under the Environmental Protection Act; however, a number of the waste disposal site sub-threats (such as PCB storage and storage of hazardous or liquid industrial waste) may be exempted from Part V of the Environmental Protection Act. Section 57 was used as a way to address this "gap" in a manner consistent with how other sub-categories of this threat are to be prohibited through the prescribed instrument. While it was determined to be unreasonable to prohibit existing sites where this activity is a drinking water threat, the nature of this activity is such that the committee determined that future waste disposal sites could, and therefore should, be located in areas where they are not a significant threat to drinking water sources. The only exception to the prohibition of new waste threats is for the following waste threat sub-categories, in circumstances where an ECA is not required: • storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or • storage of hazardous or liquid industrial waste, These two exceptions were introduced based on further details regarding the nature of these threats that was provided by the Ministry of the Environment and Climate Change as part of their review of the plan. Upon review of this information, it was determined that these two threat categories capture both large and small quantities of hazardous and liquid industrial waste that can be generated by a broad range of industrial, commercial and/or institutional operations. Examples of such operations include nursing homes, medical clinics, retailers, print shops and laboratories that may only generate small quantities of such wastes as part of their regular operations (e.g. hardware stores that collect hazardous waste for disposal).	Explanation of changes to waste prohibitions resulting from MOE comments. All aspects of the DNAPL and organic solvent life cycles are now dealt with in DNAPL and organic solvent policies, so removed from this policy.

Threat	Policy Number	Threat Status	Rationale	Change
			Given that there are a considerable number of industrial, commercial and institutionally zoned properties located within significant threat areas in the region, it was determined that prohibition of such waste threats where an ECA is not required may have the unintentionally consequence of constraining or prohibiting many planned land uses that only generate fairly small quantities of such wastes. It should be noted that although such activities are not subject to an ECA, there are other tools prescribed by the Environmental Protection Act that the Ministry of the Environment uses to manage such activities. Further, it is understood that uses or sites that store larger quantities of such wastes (e.g. landfills and transfer stations) are generally subject to an ECA. Therefore, the County and the SPC determined that it would be appropriate to continue to prohibit future threat activities in these two threat sub-categories in cases where an ECA is required. As part of their review, the Ministry of the Environment and Climate Change had also suggested that the SPC consider management versus prohibition for the storage of polychlorinated biphenyls (PCB) waste threat sub-category. However, given that such threats can only be significant if they are located below grade or in an outdoor area and not in a container, it was the opinion of the County and the SPC that prohibition remains a reasonable and appropriate approach for future occurrences of such threat activities, as it would simply mean that they would need to be located above grade and in an indoor area or in a container. Through pre-consultation there were no concerns raised with respect to prohibiting this activity in areas where it would be a significant threat to drinking water sources.	
Application of non-agricultural source material (NASM)	2.23 (1656)	Existing and Future Activities	Nitrogen and pathogens are potential concerns that could make their way into municipal drinking water sources when NASM is applied to the land. While the tables of drinking water threats identify only certain types of NASM, as a significant threat due to pathogens, this distinction is not made for the chemical threats associated with NASM. The tables identify application of NASM, including Category 1, as significant threats. The SPC decided that the NMA did not address Category 1 NASMs in a way that the activity would cease to be a significant drinking water threat. While the NMA prohibits the application of the listed activities within 100 m of a well (WHPA-A), the NMA does not make a similar prohibition for WHPA-B with a vulnerability score of 10. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring to establish well specific information on which to base local policy decisions. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-A in the SPR are moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Therefore, the SPC determined that the most appropriate and consistent policy approach would be to prohibit this significant threat activity within the WHPA-A, (as per the NMA), as well as the WHPA-B, with a vulnerability score of 10 where the activities listed in the table below are not already prohibited. It is important to note that prohibition only applies to the activity when it is being undertaken in the circumstances which make it a significant threat. For NASMs, the circumstances include criteria which include livestock density and managed land percentage. The same policy approach has been applied to both existing and future occurrences of this threat, given that NASM application does not occur on an on-going basis on the same parcel of land and, therefore, in effect there can be no application of NASM that would be considered 'existing' under the TSR definition.	

Threat	Policy Number	Threat Status	Rationale	Change
			Oxford County determined the existing Prescribed Instrument (NMA) was adequate to prohibit this activity in Oxford, while Part IV of the CWA was determined to be the most appropriate tool for the remainder of the TSR region	
Application of non-agricultural source material (NASM)	2.23 (1656)	Existing and Future Activities	Nitrogen and pathogens are potential concerns that could make their way into municipal drinking water sources when NASM is applied to the land. While the tables of drinking water threats identify only certain types of NASM, as a significant threat due to pathogens, this distinction is not made for the chemical threats associated with NASM. The tables identify application of NASM, including Category 1, as significant threats. The SPC decided that the NMA did not address Category 1 NASMs in a way that the activity would cease to be a significant drinking water threat. While the NMA prohibits the application of NASM within 100 m of a well (WHPA-A), the NMA does not include a similar prohibition for WHPA-B with a vulnerability score of 10 or Issues Contributing Areas (ICA) for nitrates [section 5.6 of the Upper Thames Region Source Protection Authority Assessment Report provides full detail on the Nitrate ICA that has been delineated in Oxford County]. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring and ICAs for nitrates which provide well specific information on which to base local policy decisions. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-A in the SPR are moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Further, ICAs for nitrates are intended to provide specific protection from threats that may contribute to an identified nitrate issue for a particular well. Therefore, the SPC determined that the most appropriate and consistent policy approach would be to prohibit this significant threat activity within the WHPA-A, (as per the NMA), as well as the WHPA-B, with a vulnerability score of 10 and ICAs for nitrates. It is important to note that prohibition only applies to the activity when it is being undertaken in the circumstances which make it a significant threat. For NASMs, the circumstances include criteria which include livestock density and managed land percentage. The same policy approach has been applied to both existing and future occurrences of this threat, given that NASM application does not occur on an on-going basis on the same parcel of land and, therefore, in effect there can be no application of NASM that would be considered 'existing' under the TSR definition. Oxford County determined the existing Prescribed Instrument (NMA) was adequate to prohibit this activity in Oxford, while Part IV of the CWA was determined to be the most appropriate tool for the remainder of the TSR region	Edit for clarity of language. Inclusion of nitrate ICA in Oxford to this policy.
Storage of NASM	2.25 (1661) OC-2.20 (3218)	Future Activities	The storage of NASM within vulnerable areas could impact municipal drinking water sources through the release of pathogens or nitrogen into surface or groundwater. In considering policy choices, it was determined that prohibition of existing storage was, in most cases, not reasonable. The committee also determined that managing future storage of NASM was not appropriate, when prohibition of future NASM storage was a reasonable and a more precautionary policy direction. Section 57 prohibition prevents the establishment of new significant threats of this type and would therefore accomplish the overall goal of protecting municipal drinking water systems.	

Threat	Policy Number	Threat Status	Rationale	Change
			Oxford County determined the existing Prescribed Instrument (NMA) was adequate to prohibit this activity in Oxford, while Part IV of the CWA was determined to be the most appropriate tool for the remainder of the TSR region.	
			No changes	
Handling and storage of commercial fertilizer	2.28 (1750) OC-2.23 (3221)	Future Activities	Potential impacts to municipal drinking water sources from the storage of commercial fertilizer relate to leaks and spills as a result of aging infrastructure or improper storage. Since the areas where this activity would be prohibited are relatively small and alternate locations could be found to locate new facilities, Section 57 was determined to be the most appropriate approach as it provides the greatest certainly for protection of municipal drinking water sources, by ensuring no additional significant drinking water threats related to this activity can be established.	
Handling and storage of commercial fertilizer	2.28 (1750) OC-2.23 (3221)	Future Activities	Potential impacts to municipal drinking water sources from the storage of commercial fertilizer relate to leaks and spills as a result of aging infrastructure or improper storage. Since the areas where this activity would be prohibited are relatively small and alternate locations could be found to locate new facilities, Section 57 was determined to be the most appropriate approach in the TSR outside of Oxford. In Oxford the County determined it would use prohibition for handling and storage of commercial fertilizer in quantities greater than 2,500 kilograms which is the minimum size threshold for being a significant threat in a WHPA. This approach provides the greatest certainly for protection of municipal drinking water sources, by ensuring no additional significant drinking water threats of that type and size can be established. However, it was determined that Section 57 would not be the most appropriate approach for handling and storage of commercial fertilizer in quantities less than or equal to 2,500 kilograms as they can be a significant threat in an ICA for Nitrates at any quantity. The primary reason being that prohibiting such threats would impact a considerably larger area and number of properties than just those contained in the WHPA A and B and the absence of any minimum size threshold may create unnecessary hardship for existing uses planning to handle or store smaller quantities of commercial fertilizer within such areas in the future. As such, it was determined that any future handling or storage of such smaller quantities of commercial fertilizer could be adequately managed through a Risk Management Plan.	Explanation that prohibition not to be used in Oxford for quantities less than 2500kg.
Handling and storage of pesticides (greater than 2500 kg or 2500 L)	2.33 (1755) OC-2.26 (3224)	Future Activities	Spills from improper handling and storage of pesticides can result in impacts to municipal drinking water sources. The volumes noted in the policy description are established in the Tables of Drinking Water Threats which establish that this activity is a significant threat to drinking water. The areas where this activity is a significant threat are relatively small and alternative locations for this activity to be established are likely available. While the committee did not feel that it was reasonable to prohibit existing storage facilities, it was felt that it was prudent to direct new activities to areas where the risks are not significant. Section 57 was determined to be the most appropriate approach, as it provides the greatest certainly for protection municipal drinking water sources, by ensuring no additional significant drinking water threats related to this activity can be established.	
			No change	
Handling	2.35	Existing	Prohibition of both future and existing salt handling and storage through Section 57 was determined to be the	

Threat	Policy Number	Threat Status	Rationale	Change
and storage of road salt	(1668) OC-2.28 (3226)	and Future Activities	most appropriate approach because road salt storages were not identified within the Thames-Sydenham and Region Assessment Reports as existing significant threats. Only large storage which is exposed to precipitation or runoff is considered a significant threat. The most effective way of managing this threat is to protect it from precipitation and runoff, as that would result in the storage no longer being a significant threat and therefore not prohibited. As a result, the prohibition of the significant threat was determined to be the most appropriate policy approach for this activity, as the activity can still continue or be established, provided that it is constructed in a manner which would not be a significant drinking water threat (not exposed to precipitation or runoff).	
			No change	
Handling and storage of fuel	2.40 (1763) OC-2.32 (3230)	Future Activities	The areas where this activity would be a significant threat to drinking water are relatively small and other locations are generally available where this activity could be undertaken without being a significant threat to drinking water. In the case of fuel less than 2500 L, storage at or above grade is not considered to be a significant threat; therefore, if such storage is located at or above grade it would not be prohibited. This results in only larger storages being prohibited below, at, or below grade in significant threat areas. While the committee did not feel that it was appropriate to prohibit existing storage of fuel which was a significant threat, they determined that Section 57 was the most appropriate approach for future threats, as it provides the greatest certainly for protection municipal drinking water sources, by ensuring no additional significant drinking water threats related to this activity are established. These larger facilities should be located in areas where they are not a significant threat to drinking water.	
Handling and storage of fuel	2.40 (1763) OC-2.32 (3230)	Future Activities	The areas where this activity would be a significant threat to drinking water are relatively small and other locations are generally available where this activity could be undertaken without being a significant threat to drinking water. In the case of fuel storage less than 2500 L (e.g. residential heating oil storage), storage at or above grade is not considered to be a significant threat; therefore, if such storage is located at or above grade it would not be prohibited. Larger storage would be prohibited whether above or below grade in significant threat areas. While the committee did not feel that it was appropriate to prohibit existing storage of fuel which was a significant threat, they determined that Section 57 was the most appropriate approach for future threats, as it provides the greatest certainty for protection of municipal drinking water sources, by ensuring no additional significant drinking water threats related to this activity are established. These larger facilities should be located in areas where they are not a significant threat to drinking water.	Edits for grammar and clarity.
Handling and storage of dense non-aqueous phase liquids (DNAPLs)	2.47 (1675) OC-2.35 (3233)	Future Activities	Dense non-aqueous phase liquids (DNAPLs) are persistent and very toxic chemicals. The CWA establishes that any quantity of the specified chemicals is a significant threat in WHPA-A, B and C regardless of vulnerability score. Section 57 was used to prohibit this activity only in WHPA-A and B with a vulnerability score of 10. In reaching this policy choice, the committee considered that prohibition over the more extensive WHPA-B and C areas could seriously impact economic opportunities in some areas, given the large number of industrial and commercial properties potentially affected. In recognition of these potential impacts, Section 58 (risk management plans) was applied in the other WHPA areas where this activity is a significant threat. This is consistent with the policy direction applied to certain other activities, where prohibition was used to protect the most vulnerable areas, while management was determined to be adequate to reduce the threat to drinking water sources in less vulnerable areas. This prohibition was only applied to future activities, as prohibition of existing activities could result in undue hardship for existing established operations. While prohibition of existing activities was not relied upon to manage the risk, this would not limit the Risk Management Official/Inspector from discussing opportunities for using alternatives to the prescribed DNAPL, or relocating to	

Threat	Policy Number	Threat Status	Rationale	Change
			an alternative location as part of a RMP.	
			Dense non-aqueous phase liquids (DNAPLs) are persistent and very toxic chemicals. The CWA establishes that any quantity of the specified chemicals is a significant threat in WHPA-A, B and C regardless of vulnerability score. Section 57 was used to prohibit this activity only in WHPA-A and B with a vulnerability score of 10. In reaching this policy choice, the committee considered that prohibition over the more extensive WHPA-B and C areas could seriously impact economic opportunities in some areas, given the large number of industrial and commercial properties potentially affected. In recognition of these potential impacts, Section 58 (risk management plans) was applied in the other WHPA areas where this activity is a significant threat. This is consistent with the policy direction applied to certain other activities, where prohibition was used to protect the most vulnerable areas, while management was determined to be adequate to reduce the threat to drinking water sources in less vulnerable areas. This prohibition was only applied to future activities, as prohibition of existing activities could result in undue hardship for existing established operations. While prohibition of existing activities was not relied upon to manage the risk, this would not limit the Risk Management Official/Inspector from discussing opportunities for using alternatives to the prescribed DNAPL, or relocating to an alternative location as part of a RMP. This policy also relates to waste disposal sites since the DNAPLs must be prohibited throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal).	DNAPLs have been removed from the waste policies and the policy text of the DNAPL policy now specifies that this policy applies to the DNAPLs throughout their life cycle.
Handling and storage of organic solvents	2.49 (1677) OC-2.38 (3236)	Future Activities	The Tables of Drinking Water Threats identify quantities above 25L for the handling and storage of prescribed organic solvents as a significant threat to drinking water sources. Only certain types of organic solvents are significant drinking water threats and many are no longer in common use, or there may be alternatives available. As such, this policy is not concerned with addressing household or other incidental use. Section 57 was used to prohibit new handling and storage of organic solvents from being established where it would be a significant threat to drinking water, as the areas where this future activity is prohibited are relatively small alternative locations are generally available. As with other activities which the Source Protection Committee chose to prohibit, they decided that it was not reasonable to prohibit existing handling and storage.	
			The Tables of Drinking Water Threats identify quantities above 25L for the handling and storage of prescribed organic solvents as a significant threat to drinking water sources. Only certain types of organic solvents are significant drinking water threats and many are no longer in common use, or there may be alternatives available. As such, this policy is not concerned with addressing household or other incidental use. Section 57 was used to prohibit new handling and storage of organic solvents from being established where it would be a significant threat to drinking water, as the areas where this future activity is prohibited are relatively small alternative locations are generally available. As with other activities which the Source Protection Committee chose to prohibit, they decided that it was not reasonable to prohibit existing handling and storage. This policy also relates to waste disposal sites since the organic solvents must be prohibited throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal).	Organic solvents have been removed from the waste policies and the policy text of the organic solvents policy now

Threat	Policy Number	Threat Status	Rationale	Change
				specifies that this policy applies to the organic solvents throughout their life cycle.
Application of ASM to Land	OC-2.14 (3212)	Existing and Future (Oxford only)	While the NMA prohibits the application and storage of ASM within 100 m of a well (WHPA-A) for farms regulated under the NMA, it does not establish similar prohibitions for WHPA-B with a vulnerability score of 10. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring as the well specific information upon which to base local policy decisions. Under the Clean Water Act, the tables of drinking water threats identify the risk and level of threat posed by this activity as the same within all areas with a vulnerability score of 10. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-As in the SPR are moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. The County also closely considered the potential impacts of prohibiting the existing and future application of ASM to land in both the WHPA-A, (as per the NMA), and the WHPA-B, with a vulnerability score of 10. However, it was determined that such an approach may have a substantial impact on existing agricultural operations, as this significant threat activity was identified as existing, or likely to be existing, on all agricultural properties located within significant threat areas in the County. For this reason, it was also determined that it would be unlikely that application of ASM to land would be considered a 'new/future' activity on affected properties in the Oxford context. Therefore, the County chose to apply Part IV prohibition to existing and future application of ASM only in the WHPA A, as this is consistent with the requirements for operations regulated under the NMA. As the NMA does not apply to all agricultural operations, Part IV prohibition was determined to be the most appropriate tool to prohibit this activity, as it would ensure that all agricultural operations undertaking this activity within significant threat areas are treated consistently.	
Application of ASM to Land	OC-2.14 (3212)	Existing and Future (Oxford only)	While the NMA prohibits the application and storage of ASM within 100 m of a well (WHPA-A) for farms regulated under the NMA, it does not establish similar prohibitions for WHPA-B with a vulnerability score of 10. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring and nitrate ICAs which provide well specific information on which to base local policy decisions. Under the Clean Water Act, the tables of drinking water threats identify the risk and level of threat posed by this activity as the same within all areas with a vulnerability score of 10. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-As in the SPR are moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. As such the County closely considered the potential impacts of prohibiting the existing and future application of	Edits for grammar. Inclusion of nitrate ICA in Oxford to this policy.

Threat	Policy Number	Threat Status	Rationale	Change
			ASM to land in both the WHPA-A, (as per the NMA), the WHPA-B, with a vulnerability score of 10 and nitrate ICAs. However, it was determined that such an approach may have a substantial impact on existing agricultural operations, as this significant threat activity was identified as existing, or likely to be existing, on all agricultural properties located within significant threat areas in the County. For this reason, it was also determined that it would be unlikely that application of ASM to land would be considered a 'new/future' activity on affected properties in the Oxford context. Therefore, the County chose to apply Part IV prohibition to existing and future application of ASM only in the WHPA A, as this is consistent with the requirements for operations regulated under the NMA. As the NMA does not apply to all agricultural operations, Part IV prohibition was determined to be the most appropriate tool to prohibit this activity, as it would ensure that all agricultural operations undertaking this activity within significant threat areas are treated consistently.	
Storage of ASM	OC-2.16 (3214)	Future (Oxford only)	In the case of the future storage of ASM, it was determined that the most effective and consistent policy approach would be to prohibit within both the WHPA-A, (as per the NMA) and the WHPA-B, with a vulnerability score of 10 (where storage of ASM is not currently prohibited on farms regulated under the NMA). This in keeping with the County's overall policy approach, which is generally to prohibit new/future significant threats from becoming established where achievable and reasonable. As the NMA does not apply to all agricultural operations, Part IV prohibition was determined to be the most appropriate tool to prohibit this activity, as it would ensure that all agricultural operations undertaking this activity within significant threat areas are treated consistently. Prohibition was also deemed to be a reasonable approach in Oxford, given the location of existing livestock barns and other farm buildings/structures, the limited area affected and the ample opportunities to located new facilities outside of significant threat areas. Furthermore, the establishment of ASM storage facilities in the WHPA-A and B is already prohibited by the water quality policies in the Oxford County Official Plan, so the proposed SPP policies will actually reduce the area where such significant threat activities are currently prohibited.	
Storage of ASM	OC-2.16 (3214)	Future (Oxford only)	In the case of the future storage of ASM, it was determined that the most effective and consistent policy approach would be to prohibit within both the WHPA-A, (as per the NMA) and the WHPA-B, with a vulnerability score of 10 (where storage of ASM is not currently prohibited on farms regulated under the NMA). This in keeping with the County's overall policy approach, which is generally to prohibit new/future significant threats from becoming established where achievable and reasonable. As the NMA does not apply to all agricultural operations, Part IV prohibition was determined to be the most appropriate tool to prohibit this activity, as it would ensure that all agricultural operations undertaking this activity within significant threat areas are treated consistently. Prohibition was also deemed to be a reasonable approach in Oxford, given the location of existing livestock barns and other farm buildings/structures, the limited area affected and the ample opportunities to locate new facilities outside of significant threat areas. Furthermore, the establishment of ASM storage facilities in the WHPA-A and B is already prohibited by the water quality policies in the Oxford County Official Plan, so the proposed SPP policies will actually reduce the area where such significant threat activities are currently prohibited. The storage of ASM is also a significant threat in the nitrate ICAs in Oxford. However, given the considerably larger area and number of properties affected and the more limited opportunity to locate such storage facilities outside of a vulnerable area on a number of the agricultural properties located within the ICA, it was	Edits for grammar. Explanation why nitrate ICA not included in this policy.

Threat	Policy Number	Threat Status	Rationale	Change
			determined that it would be more appropriate and reasonable to simply manage future storage of ASM through an RMP in an ICA, but outside of a WHPA A or B, with a vulnerability score of 10. It is intended that the RMP process would be used to direct ASM storage facilities to be located on a portion of a property outside of a vulnerable area wherever possible.	
Handling and Storage of Snow	OC-2.30 (3228)	Future (Oxford only)	Oxford chose to use Risk Management Plans to address existing occurrences of this activity, as no existing occurrences of this activity were identified and, even if there were, it would not be appropriate to prohibit such activities. However, given the threat circumstances e.g. size of storage area at or above grade and existing and planned land uses in significant threat areas, it was determined to be very unlikely that new significant snow storage activities would be proposed in Oxford. Based on the threat circumstances, the limited area potentially affected and the ample opportunities to located new facilities outside of significant threat areas, it was determined that Section 57 was the most appropriate approach for future, as it provides the greatest certainly for protection of municipal drinking water sources, by ensuring no additional significant drinking water threats related to this activity are established.	
Handling and Storage of Snow	OC-2.30 (3228)	Future (Oxford only)	Oxford chose to use Risk Management Plans to address existing occurrences of this activity, as no existing occurrences of this activity were identified and, even if there were, it would not be appropriate to prohibit such activities. However, given the threat circumstances e.g. size of storage area (> 1 ha) at or above grade and existing and planned land uses in significant threat areas, it was determined to be very unlikely that new significant snow storage activities would be proposed within a WHPA-A or B with a vulnerability score of 10 in Oxford. Based on the threat circumstances, the limited area potentially affected and the ample opportunities to locate new facilities outside of significant threat areas, it was determined that Section 57 was the most appropriate approach for future threats in these vulnerable areas, as it provides the greatest certainly for protection of municipal drinking water sources, by ensuring no additional significant drinking water threats related to this activity are established. However, the storage of snow is also a significant threat in a nitrate ICA regardless of the storage area size. Given, the absence of a storage area size threshold to be a significant threat in an ICA and the considerably larger area and number of properties affected, it was determined that it would be more appropriate and reasonable to simply manage future snow storage facilities of <= 1 ha through an RMP, where they are a significant threat. It is intended that the RMP process would be used to encourage such snow storage facilities to be located on a portion of a property outside of a vulnerable area wherever possible.	Remove prohibition on storage of snow in areas less than 1ha.

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.2	34	The RMP process also serves as a site specific education and outreach opportunity by allowing the RMO to comprehensively review and discuss potential alternatives (e.g. processes, substances or locations) that might eliminate the significant threat, as well as best management practices and any available local incentives with the person undertaken the activity. The policies that use Section 58 generally do not outline the contents of a RMP so that the RMO has flexibility to negotiate a RMP that reduces the risk at an appropriate level based on the site-specific situation. A more prescriptive policy may either, not allow the RMO the latitude to satisfy the regulatory requirements		

		that the risk be managed to the point of no longer being significant, or result in the imposition of requirements that may not be necessary in every situation. In some cases, suggested approaches are provided in the policies; however, these are not intended to limit the flexibility of the RMO to negotiate an appropriate RMP with the person engaged in the activity.		
4.2.2	34	The RMP process also serves as a site specific education and outreach opportunity by allowing the RMO to comprehensively review and discuss potential alternatives (e.g. processes, substances or locations) that might eliminate the significant threat, as well as best management practices and any available local incentives with the person undertaking the activity. The policies that use Section 58 generally do not outline the contents of a RMP so that the RMO has flexibility to negotiate a RMP that reduces the risk at an appropriate level based on the site-specific situation. A more prescriptive policy may either, not allow the RMO the latitude to satisfy the regulatory requirements that the risk be managed to the point of no longer being significant, or result in the imposition of requirements that may not be necessary in every situation. In some cases, suggested approaches are provided in the policies; however, these are not intended to limit the flexibility of the RMO to negotiate an appropriate RMP with the person engaged in the activity.	Minor text change	Change the word 'undertaken' to 'undertaking'.

Table 7 The use of Part IV Section 58 Regulated Activities

Threat	Policy Number	Threat Status	Rationale	Change
Establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act - waste disposal sites (not subject to Environmental Compliance Approvals)	2.04 (1799) OC-2.02 (3239)	Existing	Prescribed instruments (PI) issued by the province through various ministries set out terms and conditions that are designed to protect the environment or human health. Where activities are exempt from PI (i.e. Environmental Protection Act) such as PCB storage, it was determined that Section 58 – RMP was the most appropriate tool to fill this "gap.", as it ensures all aspects of the threat are adequately addressed to ensure it ceases to be a significant threat to drinking water. Dense non-aqueous phase liquids (DNAPLs) and organic solvents were included within this policy related to waste disposal sites since they must be managed throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal). This was identified as a "gap" not covered through the other DNAPL policies.	
Establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act - waste disposal sites (not subject to Environmental Compliance Approvals)	2.04 (1799) OC-2.02 (3239)	Existing	Prescribed instruments (PI) issued by the province through various ministries set out terms and conditions that are designed to protect the environment or human health. Where activities are exempt from PI (i.e. Environmental Protection Act) such as PCB storage, it was determined that Section 58 – RMP was the most appropriate tool to fill this "gap.", as it ensures all aspects of the threat are adequately addressed to ensure it ceases to be a significant threat to drinking water.	All aspects of the DNAPL and organic solvent life cycles are now dealt with in DNAPL and organic solvent policies, so removed from this policy.
Handling and storage of fuel	2.38 (1762) OC-2.31 (3229)	Existing	Although prohibition was determined to be the most appropriate approach for addressing future handling and storage of fuel for the reasons outlined under the Part IV prohibition rationale, given the number of potential existing occurrences of this activity, it was determined that a Risk Management Plan was the more appropriate approach for addressing existing threats. The Risk Management Plan process can be used to ensure compliance with the requirements of the Technical Standards and Safety Act and any other requirements deemed necessary by the RMO to protect municipal drinking water sources. Oxford County selected this approach to provide the necessary flexibility to allow for new fuel storage required for back-up generators at municipal wells (which are required for emergency purposes) provided appropriate risk management measures are in place. TSR exempted back-up generators from this policy 2.38 and choose to manage back-up generators using prescribed instruments in policy 2.41.	
Handling and storage	2.38 (1762)	Existing	Although prohibition was determined to be the most appropriate	Corrected reference to policy

Threat	Policy Number	Threat Status	Rationale	Change
of fuel	OC-2.31 (3229)		approach for addressing future handling and storage of fuel for the reasons outlined under the Part IV prohibition rationale, given the number of potential existing occurrences of this activity, it was determined that a Risk Management Plan was the more appropriate approach for addressing existing threats. The Risk Management Plan process can be used to ensure compliance with the requirements of the Technical Standards and Safety Act and any other requirements deemed necessary by the RMO to protect municipal drinking water sources. Oxford County selected this approach to provide the necessary flexibility to allow for new fuel storage required for back-up generators at municipal wells (which are required for emergency purposes) provided appropriate risk management measures are in place. TSR exempted back-up generators from this policy 2.38 and choose to manage back-up generators using prescribed instruments in policy 2.42.	#.
Handling and storage of dense non-aqueous phase liquids (DNAPL)	2.44, 2.46 (1673, 1674) OC-2.33 (3231) OC-2.34 (3232) OC-2.36 (3234)	Existing, Future	DNAPL are a significant threat in WHPA-A, B and C regardless of vulnerability scores. While the SPC thought it was important to prohibit the establishment of new activities within WHPA-A, B with a vulnerability score of 10, they did not feel that it was appropriate to extend this prohibition to all handling and storage where it would be a significant threat due to the extent of the area potentially effected and the associated impact on local economic development opportunities. Nor did they feel that it was appropriate to prohibit existing activities. Specific quantities, concentrations, or risk management measures were not prescribed in the policies developed by the SPC to allow the RMO to effectively manage the risks and focus on the instances of this threat that pose the greatest risk to the drinking water systems. The committee focused this policy only on quantities and concentrations of DNAPL which, in the opinion of the RMO, were not typical of household use. It was determined that household use could be adequately dealt with through education and outreach focused on the safe storage, handling and disposal of these chemicals	
			DNAPL are a significant threat in WHPA-A, B and C regardless of vulnerability scores. While the SPC thought it was important to prohibit the establishment of new activities within WHPA-A, B with a vulnerability score of 10, they did not feel that it was appropriate to extend this prohibition to all handling and storage where it would be a significant threat due to the extent of the area potentially effected and the associated impact on local economic development opportunities. Nor did they feel that it was appropriate to prohibit existing activities. Specific quantities, concentrations, or risk management measures were not prescribed in the policies developed by the SPC to allow the RMO to effectively manage the risks and focus on the instances of this threat that pose the greatest risk to the drinking water systems. The committee	DNAPLs have been removed from the waste policies and the policy text of the DNAPL policy now specifies that this policy applies to the DNAPLs throughout their life cycle.

Threat	Policy Number	Threat Status	Rationale	Change
			focused this policy only on quantities and concentrations of DNAPL which, in the opinion of the RMO, were not typical of household use. It was determined that household use could be adequately dealt with through education and outreach focused on the safe storage, handling and disposal of these chemicals. This policy also relates to waste disposal sites since the DNAPLs must be managed throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal).	
Handling and storage of organic solvents	2.48 (1676) OC-2.37 (3235)	Existing	Section 58 was used for existing handling and storage of organic solvents to allow activities to only be undertaken when the risks can be adequately managed through a RMP. While prohibition of future activities was determined to be the most appropriate approach to address new risks associated with these chemicals, the committee did not think it appropriate to prohibit existing activities and, therefore, chose to manage them through S. 58. Proponents within vulnerable areas may have other threats on their property that would require a RMP. Risk management measures have not been prescribed in order to allow flexibility to the RMO.	
			Section 58 was used for existing handling and storage of organic solvents to allow activities to only be undertaken when the risks can be adequately managed through a RMP. While prohibition of future activities was determined to be the most appropriate approach to address new risks associated with these chemicals, the committee did not think it appropriate to prohibit existing activities and, therefore, chose to manage them through S. 58. Proponents within vulnerable areas may have other threats on their property that would require a RMP. Risk management measures have not been prescribed in order to allow flexibility to the RMO. This policy also relates to waste disposal sites since the organic solvents must be prohibited throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal).	Organic solvents have been removed from the waste policies and the policy text of the organic solvents policy now specifies that this policy applies to the organic solvents throughout their life cycle.
Handling and storage of commercial fertilizer (IPZ event-based modelled areas)	2.29 (2506)	Existing and Future	According to Technical Rule 130, an activity is or would be a significant threat in an IPZ (1, 2 or 3) if modeling demonstrates that the contaminant reaches the intake at a concentration that deteriorates the water as a drinking water source. Modeled significant threats were identified within the St. Clair Region Source Protection Area through event-based modeling of various contaminant spill scenarios including 30 000 kg of commercial fertilizer. Storage and handling of this amount of fertilizer would be considered significant threats in these IPZs. By using Section 58, the handling and storage of commercial fertilizer of this quantity can be undertaken in designated vulnerable areas only when the risk is managed through a Risk Management Plan. Section 57 (prohibition) was considered; however, this approach would be too restrictive and would	

Threat	Policy Number	Threat Status	Rationale	Change
			unduly hamper agricultural opportunities in such a large area. Risk management measures were not explicitly prescribed in the policy to provide flexibility to the Risk Management Official to negotiate suitable measures for the site with the persons engaged in this activity.	
Handling and storage of commercial fertilizer (Event Based Areas (EBA))			According to Technical Rule 130, an activity is or would be a significant threat in an IPZ (1, 2 or 3) if modeling demonstrates that the contaminant reaches the intake at a concentration that deteriorates the water as a drinking water source. Modeled significant threats were identified within the St. Clair Region Source Protection Area through event-based modeling of various contaminant spill scenarios including 34 000 kg of commercial fertilizer. Storage and handling of this amount of fertilizer would be considered significant threats in these EBAs. By using Section 58, the handling and storage of commercial fertilizer of this quantity can be undertaken in designated vulnerable areas only when the risk is managed through a Risk Management Plan. Section 57 (prohibition) was considered; however, this approach would be too restrictive and would unduly hamper agricultural opportunities in such a large area. Risk management measures were not explicitly prescribed in the policy to provide flexibility to the Risk Management Official to negotiate suitable measures for the site with the persons engaged in this activity.	Corrected from '30,000kg' to '34,000kg'. Areas where event modeling has identified threats are now being called 'Event Based Areas (EBA)'
Application of pesticides	2.30 (1663) OC-2.24 (3222)	Existing and Future	Eleven (11) chemicals have been identified within the Ministry of Environment's Tables of Drinking Water Threats. There is the potential for these chemicals to enter either surface or groundwater and pose a threat to municipal drinking water sources. It was generally, determined that handling BMPs can adequately manage the risks associated with these activities. Section 58 would be the most appropriate approach to ensure that BMPs are appropriately applied to manage the risks. Many people engaged in this activity would likely have other threats on their property and a RMP could capture them without introducing another management tool.	
			No change	
Storage of Pesticides	2.32 (1666) OC-2.27 (3225)	Existing and Future	Section 58 was the most appropriate approach because it was felt that there are risk management measures which can adequately manage the risks such that the activity ceases to be a significant threat. Many proponents engaged in this type of activity would likely have other threats on their property and a RMP would capture them without introducing another management tool. Flexibility should be provided to the RMO in order to attain the goal of protecting municipal drinking water sources. Potential opportunities to relocate such storage outside of significant threat areas could also be discussed as part of the RMP process.	
			No change	
Storage of Pesticides	2.34 (3255)	Existing	Section 58 was used for existing handling and storage of pesticides at a	

Threat	Policy Number	Threat Status	Rationale	Change
(greater than 2500 kg and 2500 L)	OC-2.25 (3223)		facility where they are manufactured, distributed or processed to allow activities to only be undertaken when the risk is managed through a RMP. While prohibition of future activities was determined to be necessary to manage the risks associated with these pesticides, the committee did feel it would be appropriate to prohibit existing activities and, therefore, chose to manage them through S. 58. Proponents within vulnerable areas may have other threats on their property that would require a RMP. Risk management measures have not been prescribed in order to allow flexibility to the RMO.	
Storage of Pesticides (greater than 2500 kg and 2500 L)	2.34 (3255) OC-2.25 (3223)	Existing	Section 58 was used for existing handling and storage of pesticides at a facility where they are manufactured, distributed or processed to allow activities to only be undertaken when the risk is managed through a RMP. While prohibition of future activities was determined to be necessary to manage the risks associated with these pesticides, the committee did not feel it would be appropriate to prohibit existing activities and, therefore, chose to manage them through S. 58. Proponents within vulnerable areas may have other threats on their property that would require a RMP. Risk management measures have not been prescribed in order to allow flexibility to the RMO.	Edit for grammar
Storage of Snow	2.36 (1669) OC-2.29 (3227)	Existing and Future Oxford - Existing only	Snow storage and disposal sites are usually located as close as possible to snow removal sites to minimize snow hauling costs and other impacts to the environment. Where snow is stored at the site where it is accumulated, Risk Management Measures can adequately manage the risk such that the activity ceases to be, or never becomes, a significant threat. When snow is being transported to another site, the committee determined that it was important that the snow be transported to a site where it would not be a significant threat. For this reason, the committee decided to include that it was necessary for Risk Management Plans to include provisions that the site not accept snow from other locations. Oxford County chose to use risk management plans for managing existing snow storage and disposal sites, for the above noted reasons. However, Oxford chose to Part IV prohibit new snow storage and disposal sites for the reasons outlined under the Part IV prohibition policy approaches section above.	
Storage of Snow	2.36 (1669) OC-2.29 (3227)	Existing and Future Oxford - Existing and future, where	Snow storage and disposal sites are usually located as close as possible to snow removal sites to minimize snow hauling costs and other impacts to the environment. Where snow is stored at the site where it is accumulated, Risk Management Measures can adequately manage the risk such that the activity ceases to be, or never becomes, a significant threat. When snow is being transported to another site, the committee determined that it was important that the snow be transported to a site where it would not be a significant threat. For this reason, the committee decided to include that it was necessary for Risk Management Plans to	Addition of future storage of snow in areas less than 1ha.

Threat	Policy Number	Threat Status	Rationale	Change
		storage area is <= 1 ha	include provisions that the site not accept snow from other locations. Oxford County chose to use risk management plans for managing existing snow storage and disposal sites and new snow storage and disposal sites <= 1 ha, for the above noted reasons. However, Oxford chose to use Part IV to prohibit new snow storage > 1 ha in area and disposal sites for the reasons outlined under the Part IV prohibition policy approaches section above.	
Handling and storage of fuel (IPZ event-based modelled areas)	2.39 (2505)	Existing and Future	According to Technical Rule 130, an activity is or would be a significant threat in an IPZ (1, 2 or 3) if modelling demonstrates that the contaminant reaches the intake at a concentration that deteriorates the water as a drinking water source. Modelled significant threats were identified within St. Clair Region Source Protection Area through event-based modelling of various contaminant spill scenarios including 34 000 L of fuel. Storage and handling of similar or larger volumes of fuel would be considered significant threats in the IPZs identified through the modelling process. By using Section 58, the handling and storage of fuel can be undertaken in designated vulnerable areas only when the risk is managed through a Risk Management Plan. Section 57 (prohibition) was considered; however, this approach would be too restrictive in such a large area. Specific contents of the Risk Management Plan were not prescribed to allow flexibility to the Risk Management Official.	
Handling and storage of fuel (Event Based Areas (EBA))	2.39 (2505)	Existing and Future	According to Technical Rule 130, an activity is or would be a significant threat in an IPZ (1, 2 or 3) if modelling demonstrates that the contaminant reaches the intake at a concentration that deteriorates the water as a drinking water source. Modelled significant threats were identified within St. Clair Region Source Protection Area through event-based modelling of various contaminant spill scenarios including 15 000 L of fuel. Storage and handling of similar or larger volumes of fuel would be considered significant threats in the EBAs. By using Section 58, the handling and storage of fuel can be undertaken in designated vulnerable areas only when the risk is managed through a Risk Management Plan. Section 57 (prohibition) was considered; however, this approach would be too restrictive in such a large area. Specific contents of the Risk Management Plan were not prescribed to allow flexibility to the Risk Management Official.	Corrected from '34,000L' to '15,000L'. Areas where event modeling has identified threats are now being called 'Event Based Areas (EBA)'
Management of runoff that contains chemicals used in de-icing of aircraft	2.50 (1678) OC-2.39 (3237)	Existing and Future Oxford – Future only	The primary consideration for the management of runoff that contains aircraft de-icing chemicals is to make sure that this runoff does not enter surface and/or groundwater. Although there are no existing instances related to this threat currently within the Thames-Sydenham and Region that are significant threats, a policy was developed to address this threat to encompass the development of new airports or the reclassification of an existing airport's threat level due to changes in passenger service. While airports and related activities are regulated by the Federal	

Threat	Policy Number	Threat Status	Rationale	Change
			government, it was determined that municipalities should work collaboratively with airport authorities to ensure that activities associated with this drinking water threat never become significant. A Risk Management Plan is a formalization of the collaborative effort between the airport authority and the RMO.	
			No change	
Application of ASM	2.21 (1652) OC-2.15 (3213)	Existing and Future Existing and Future (outside WHPA-A)	While both Oxford and TSR choose to prohibit application of ASMs in WHPA-A and manage in WHPA-B, Oxford used Section 57 to prohibit in the WHPA-A and TSR uses the Risk Management Plan to effectively prohibit in the WHPA-A based on NMA principles. Further rationale is provided below.	
Application of ASM	2.21 (1652) OC-2.15 (3213)	Existing and Future Existing and Future (outside WHPA-A)	While both Oxford and TSR choose to prohibit application of ASMs in WHPA-A and manage in WHPA-B, Oxford used Section 57 to prohibit in the WHPA-A and TSR uses the Risk Management Plan to effectively prohibit in the WHPA-A based on NMA principles. Further rationale is provided in section below this table.	Edit for clarity
Storage of ASM	2.22 (1654) OC-2.17 (3215)	Existing and Future Existing	Rationale is provided in section below. In the TSR, temporary storage is prohibited through the RMP, see section below for further rationale.	
Storage of ASM	2.22 (1654) OC-2.17 (3215)	Existing and Future Existing and Future (outside WHPA-A or B, v-score 10)	Rationale is provided in section below this table. In the TSR, temporary storage is prohibited through the RMP, see section below for further rationale.	Edit for clarity
Handling and Storage	2.24	Existing	Rationale is provided in section below.	

Threat	Policy Number	Threat Status	Rationale	Change
of NASM	(1659)		In the TSR, temporary storage is prohibited through the RMP, see section below for further rationale.	
Handling and Storage of NASM	2.24 (1659)	Existing	Rationale is provided in section below this table. In the TSR, temporary storage is prohibited through the RMP, see section below for further rationale.	Edit for clarity
Application of commercial fertilizer	2.26 (1662) OC-2.21 (3219)	Existing and Future	Both Oxford and TSR used the RMP to manage existing and future application of fertilizer. TSR prohibits within WHPA-A through application of NMA prohibitions to the RMP. Oxford exempts residential land use from this section 58 policy, using an an education and outreach policy (OC-2.47) for residential properties instead. Further rationale is provided in section below.	
Application of commercial fertilizer	2.26 (1662) OC-2.21 (3219)	Existing and Future	Both Oxford and TSR used the RMP to manage existing and future application of fertilizer. TSR prohibits within WHPA-A through application of NMA prohibitions to the RMP. Oxford exempts residential land use from this section 58 policy, using an education and outreach policy (OC-2.47) for residential properties instead. Further rationale is provided in section below this table.	Edit for grammar Edit for clarity
Handling and Storage of Commercial Fertilizer	2.27 (1749) OC-2.22	Existing	Rationale is provided in section below. In the TSR, temporary storage is prohibited through the RMP, see section below for further rationale.	
Handling and Storage of Commercial Fertilizer	2.27 (1749) OC-2.22	Existing and Future (outside WHPA-A or B, v-score 10)	Rationale is provided in section below this table. In the TSR, temporary storage is prohibited through the RMP, see section below this table for further rationale.	Edit for clarity
The use of land as livestock grazing or pasturing, an outdoor confinement area or a farm animal-yard	2.51 (1682) OC-2.40 (3238)	Existing and Future	Although outdoor confinement areas are regulated by the Nutrient Management Act, not all farms contained within significant threat areas are subject to the Nutrient Management Act and, therefore, required to have Nutrient Management Plans and/or Strategies. In addition, the Nutrient Management Act does not regulate livestock grazing or pasturing activities. Therefore, It was determined that Risk Management Plans would be the most consistent, appropriate and effective means of addressing this threat. Oxford County did not select direct prohibition of future occurrences of	

Threat	Policy Number	Threat Status	Rationale	Change
			this activity as the preferred approach given the difficulty of differentiating between existing and future occurrences of these activities, which typically do not require a building permit or other development approvals. However, given that no existing OCAs have been identified in the County and there are few, if any, existing livestock barns located within significant threat areas, it is anticipated that the RMP process can be used to achieve location or relocation of such activities outside of significant threat areas in most cases. Similar to Oxford, the TSR SPC felt that while the RMP could best be used to manage this activity, there was a greater risk involved with locating new large outdoor confinement areas within a WHPA-A or WHPA-B with a vulnerability score of 10. The SPC chose to direct the RMO to consider new outdoor confinement areas be located outside the significant threat area where it would be necessary to protect drinking water. Further rationale is provided in section below.	
The use of land as livestock grazing or pasturing, an outdoor confinement area or a farm animal-yard	2.51 (1682) OC-2.40 (3238)	Existing and Future	Although outdoor confinement areas (OCA) are regulated by the Nutrient Management Act, not all farms contained within significant threat areas are subject to the Nutrient Management Act and, therefore, required to have Nutrient Management Plans and/or Strategies. In addition, the Nutrient Management Act does not regulate livestock grazing or pasturing activities. Therefore, It was determined that Risk Management Plans would be the most consistent, appropriate and effective means of addressing this threat. Oxford County did not select direct prohibition of future occurrences of this activity as the preferred approach given the difficulty of differentiating between existing and future occurrences of these activities, which typically do not require a building permit or other development approvals. However, given that no existing OCAs have been identified in the County and there are few, if any, existing livestock barns located within significant threat areas, it is anticipated that the RMP process can be used to achieve location or relocation of such activities outside of significant threat areas in most cases. Similar to Oxford, the TSR SPC felt that while the RMP could best be used to manage this activity, there was a greater risk involved with locating new large outdoor confinement areas within a WHPA-A or WHPA-B with a vulnerability score of 10. The SPC chose to direct the RMO to consider new outdoor confinement areas be located outside the significant threat area where it would be necessary to protect drinking	Edit for grammar. Edit for clarity

Threat	Policy Number	Threat Status	Rationale	Change
			water. Further rationale is provided in section below this table.	

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.2	38	The SPC determined that the most appropriate approach would be to apply Section 58 to significant drinking water threat activities regulated by the Nutrient Management Act, even in instances where they would be subject to a prescribed instrument issued under the NMA. It was felt that using Section 58 policies would ensure that all properties and operations associated with such activities are subject to the same review process and monitoring and management requirements. As well, properties containing such significant threat activities are also likely to contain other significant threats that would require a RMP. Therefore, the RMP process would allow for all threats on a property to be dealt with through a single, consistent process and serve as an education and outreach opportunity by allowing the RMO to inform the person undertaken the activity of any related education and outreach materials and local incentives that might be available. Section 61 O.Reg. 287/07 of the CWA outlines exemptions from Section 58 of the Act wherein a prescribed instrument regulates that activity and that instrument includes conditions which conform to the significant threat policies set out in the Source Protection Plan. This provision allows the person engaged in the activity to determine whether they wish to negotiate a Risk Management Plan for this activity along with other activities not included in the prescribed instrument or pursue a Prescribed Instrument (or notice from the issuer of the instrument) that the instrument contains conditions that conform to the Source Protection Plan. Either way, it is intended that the principles of the NMA would serve as the general basis for the development of a RMP for significant drinking water threats and it is anticipated that the RMO will work closely with OMAFRA staff to determine how such principles should be applied.		
4.2.2	38	The SPC determined that the most appropriate approach would be to apply Section 58 to significant drinking water threat activities regulated by the Nutrient Management Act, even in instances where they would be subject to a prescribed instrument issued under the NMA. It was felt that using Section 58 policies would ensure that all properties and operations associated with such activities are subject to the same review process and monitoring and management requirements. As well, properties containing such significant threat activities are also likely to contain other significant threats that would require a RMP. Therefore, the RMP process would allow for all threats on a property to be dealt with through a single, consistent process and serve as an education and outreach opportunity by allowing the RMO to inform the person undertaking the activity of any related education and outreach materials and local incentives that might be available. Section 61 O.Reg. 287/07 of the CWA outlines exemptions from Section 58 of the Act wherein a prescribed instrument regulates that activity and that instrument includes conditions which conform to the significant threat policies set out in the Source	Minor text change	Change the word ‘undertaken’ to ‘undertaking’.

Section / Policy	Page	Text	Reason For Change	Changes Made
		Protection Plan. This provision allows the person engaged in the activity to determine whether they wish to negotiate a Risk Management Plan for this activity along with other activities not included in the prescribed instrument or pursue a Prescribed Instrument (or notice from the issuer of the instrument) that the instrument contains conditions that conform to the Source Protection Plan. Either way, it is intended that the principles of the NMA would serve as the general basis for the development of a RMP for significant drinking water threats and it is anticipated that the RMO will work closely with OMAFRA staff to determine how such principles should be applied.		
4.2.2	39	The Nutrient Management Act prohibits the application and storage or ASMs, NASMs, and commercial fertilizers within the 100 m zone of municipal wells. The policies (2.21, 2.22, 2.24, 2.26, 2.27, and 2.51) refer to managing rather than prohibiting these activities. However, these policies require that NMA principles, including any NMA prohibitions, form the basis of the RMP and therefore will allow for consistency with the NMA in prohibiting the activities within the WHPA-A while managing in WHPA-B with a vulnerability score of 10.		
4.2.2	39	The Nutrient Management Act prohibits the application and storage of ASMs, NASMs, and the application of commercial fertilizers within the 100 m zone of municipal wells. As such, Oxford County has chosen to directly prohibit such threats in the WHPA A (100 m zone) zone through Section 57 and PI policies (OC-2.14, OC-2.16, OC-2.18, OC-2.20), with the exception of existing ASM storage and the application of commercial fertilizer, which are to be managed through an RMP and existing NASM storage which is to be managed through the PI. For consistency, Oxford also chose to prohibit new ASM and NASM storage and NASM application within the WHPA B with a v-score of 10. The policies applying to the areas of the TSR outside of Oxford (2.21, 2.22, 2.24, 2.26, 2.27, and 2.51) refer to managing rather than prohibiting these activities. However, these management policies require that NMA principles, including any NMA prohibitions, form the basis of the RMP and therefore will allow for consistency with the NMA in prohibiting the activities within the WHPA-A while managing in WHPA-B with a vulnerability score of 10.	Further detail on Oxford agricultural policies.	Further detail on Oxford agricultural policies.
4.2.2	39	The SPC felt that there was a substantially greater likelihood of a leak or spill occurring related to temporary storage. For permanent storage, regulatory controls allow for the implementation and confirmation of structural risk management measures and also serve as an opportunity to ensure that procedural controls and other preventative measures are in place to adequately manage the risks. Temporary facilities do not benefit from these same opportunities, making it a difficult activity to manage. Further, temporary facilities do not generally have the same investment in infrastructure that would be associated with a permanent storage facility. To adequately mitigate the risks related to temporary storage, more prohibitive measures were determined to be necessary. For this reason, Policies 2.22, 2.24, and 2.27 all require that Risk Management Plans shall prohibit temporary storages. Prohibition of temporary facilities was not specifically identified in the Oxford RMP policies for these activities as Oxford was of the opinion that prohibition of such activities would be effectively achieved through the requirements of the RMP.		

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.2	39	The SPC felt that there was a substantially greater likelihood of a leak or spill occurring related to temporary storage. For permanent storage, regulatory controls allow for the implementation and confirmation of structural risk management measures and also serve as an opportunity to ensure that procedural controls and other preventative measures are in place to adequately manage the risks. Temporary facilities do not benefit from these same opportunities, making it a difficult activity to manage. Further, temporary facilities do not generally have the same investment in infrastructure that would be associated with a permanent storage facility. To adequately mitigate the risks related to temporary storage, more prohibitive measures were determined to be necessary. For this reason, Policies 2.22, 2.24, and 2.27 all require that Risk Management Plans shall prohibit temporary storages. Prohibition of temporary facilities was not specifically identified in the Oxford RMP policies for these activities (O.C.-2.17, 2.19, 2.22) as Oxford was of the opinion that prohibition of such activities would be effectively achieved through the requirements of the RMP.	No reference to Oxford policies	Added reference to policies 'O.C.-2.17, 2.19, and 2.22'.

Table 8 Instruments Prescribed in the Clean Water Act

Prescribed Instrument	Gaps Identified	Policy solution	Change
Ontario Water Resources Act	Emergency Generators are often associated with pumping stations and other sewage works. These generators are often fuelled by fuels and in quantities which would be a significant threat to the drinking water.	While the storage of fuel for other purposes is dealt with through Part IV tools, policy requires that these threats be managed through the instruments rather than requiring them to deal with an additional regulatory process (RMP).	
		No change	
Safe Drinking Water Act	Emergency Generators are often associated with wells and intakes and therefore are located within the most vulnerable areas.	While the storage of fuel for other purposes is dealt with through Part IV tools, policy requires that these threats be managed through the instruments rather than requiring them to deal with an additional regulatory process (RMP).	
		No change	
Pesticide Act	The application of pesticides applies to only a limited number of chemicals used in specific circumstances.	The PI policies have been complemented by Section 58 (RMP) for pesticide application that is undertaken in such a manner that it is a significant threat, but does not require approval under the PA.	
		No change	
Nutrient Management Act	Activities associated with the NMA such as application and storage of ASMs, NASMS and commercial fertilizers are prohibited within WHPA-A, but the often more vulnerable WHPA-B with a vulnerability score of 10 where these activities are	The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring to establish well specific information on which to base local policy decisions. In fact, areas in WHPA-B with a vulnerability score of 10	

Prescribed Instrument	Gaps Identified	Policy solution	Change
	also significant threats are not considered.	have a high intrinsic vulnerability, while many of the WHPA-A in the SPR are moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Therefore, the SPC determined that the most appropriate and consistent policy approach would be to prohibit these significant threat activities within the WHPA-A, (as per the NMA), as well as the WHPA-B, with a vulnerability score of 10,where the activities are not already prohibited, under the NMA. It is important to note that prohibition only applies to the activity when it is being undertaken in the circumstances which make it a significant threat	
Nutrient Management Act	Activities associated with the NMA such as application and storage of ASMs, NASMS and application of commercial fertilizers are prohibited within WHPA-A, but the often more vulnerable WHPA-B with a vulnerability score of 10 where these activities are also significant threats are not specifically addressed by the NMA.	The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring to establish well specific information on which to base local policy decisions. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-A in the SPR are moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Therefore, the SPC determined that the most appropriate and consistent policy approach would be to prohibit these significant threat activities within the WHPA-A, (as per the NMA), with the exception of existing ASM and NASM storage and application of commercial fertilizer, as well as the WHPA-B, with a vulnerability score of 10, with the exception of existing ASM and NASM storage and ASM and application of commercial fertilizer, for the reasons indicated in the policy specific rationale. It is important to note that prohibition only applies to the activity when it is being undertaken in the circumstances which make it a significant threat	
Nutrient Management Act	Many existing farms within vulnerable areas are not required to have a NMS. This would include existing farms that annually generate between 5 to 300 nutrient units (NU). These farms would only be subject to the regulatory process if they submitted a building permit application for a new or expanding livestock or manure storage facility.	Use the Part IV tools to capture all farm operations in the WHPA-A and WHPA-B with a vulnerability score of 10.	

Prescribed Instrument	Gaps Identified	Policy solution	Change
	There are two additional triggers that would require a new/existing farm to obtain a NMS – 1. An earthen permanent nutrient storage facility is constructed, and 2. Off-farm anaerobic digestion material is received for treatment.		
Nutrient Management Act	Many existing farms within vulnerable areas are not required to have a NMS. This would include existing farms that annually generate between 5 to 300 nutrient units (NU). These farms would only be subject to the regulatory process if they submitted a building permit application for a new or expanding livestock or manure storage facility. There are two additional triggers that would require a new/existing farm to obtain a NMS – 1. An earthen permanent nutrient storage facility is constructed, and 2. Off-farm anaerobic digestion material is received for treatment.	Use the Part IV tools to capture all farm operations in the WHPA-A and WHPA-B with a vulnerability score of 10 and within ICAs for nitrates, where applicable.	Addition of nitrate ICAs.
Nutrient Management Act	NMA does not require review and approval of instruments. Not all Nutrient Management Strategies (NMS) or Nutrient Management Plans (NMP) are approved by the Director of the Ministry of Agriculture Food and Rural Affairs. Only the first NMS is Director approved and subsequent NMSs updates/revisions are not reviewed and approved. A property owner must have a NMS in order to have a NMP. As of January 1st, 2011, NMPs are no longer Director approved. They are also not submitted to OMAFRA. They are held on the farm property in the event of an inspection and it would be up to the individual farmer to update their plans;	Apply S. 58 to manage these threats generally using the principles of the NMA. While it is possible for the person engaged in the activity to provide a notice from OMAFRA under Sec. 61 O.Reg 287/07 that they have a prescribed instrument that adequately manages the risk, in order for the director to issue such a notice, they would need to review the instrument to ensure that it does adequately manage the risk.	
Nutrient Management Act	NMA does not require review and approval of instruments. Not all Nutrient Management Strategies (NMS) or Nutrient Management Plans (NMP) are approved by the Director of the Ministry of Agriculture Food and Rural Affairs. Only the first NMS is Director approved and subsequent NMSs updates/revisions are not reviewed and approved. A property owner must have a NMS in order to have a NMP. As of January 1st, 2011, NMPs are no longer Director approved. They are also not submitted to OMAFRA. They are held on the farm property in the event of an inspection and it would be up to the	Prohibit these threats directly through Part IV or PI tools and/or apply S. 58 to manage these threats generally using the principles of the NMA. While it is possible for the person engaged in the activity to provide a notice from OMAFRA under Sec. 61 O.Reg 287/07 that they have a prescribed instrument that adequately manages the risk, in order for the director to issue such a notice, they would need to review the instrument to ensure that it does adequately manage the risk.	

Prescribed Instrument	Gaps Identified	Policy solution	Change
	individual farmer to update their plans.		
Nutrient Management Act	The CWA includes ASM generation through livestock grazing or pasturing land, an outdoor confinement area or farm animal yard. Not all aspects of this threat are covered under the NMA.	Apply S. 58 to manage the threats using the principles of the NMA including NMA prohibitions where applicable.	
		No change	

Table 10: Prescribed Instrument Policy additional rationale

Threat	Policy Number	Threat Status	Rationale	Change
Waste Disposal Sites	2.04 (1799) 2.05 (1805) OC-2.01 (3201) OC-2.03 (3239)	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was determined to be the most appropriate approach for the same reasons as outlined in the rationale provided for the uses of Section 57 prohibition for future occurrences of this threat that are not subject to an ECA. Management through a review and, if necessary amendment of the ECA was deemed most appropriate for existing waste disposal sites. The Thames-Sydenham Region included dense non-aqueous phase liquids (DNAPLs) and organic solvents within this policy related to waste disposal sites since they must be managed throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal). This was identified as a "gap" not covered through the other DNAPL policies. Further it is important that implementers are aware that DNAPLs are significant threats in areas where Waste Disposal would not otherwise be a significant threat.	
Waste Disposal Sites	2.04 (1799) 2.05 (1805) OC-2.01 (3201) OC-2.03 (3239)	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was generally determined to be the most appropriate approach for the same reasons as outlined in the rationale provided for the uses of Section 57 prohibition for future occurrences of this threat that are not subject to an ECA, with the exception of the storage of hazardous and liquid industrial waste. Management through a review and, if necessary amendment of the ECA, or where no ECA is required, a risk management plan was deemed most appropriate for existing waste disposal sites and for new storage of hazardous and liquid industrial waste sites that do not require an ECA, for the reasons indicated in the Section 58 policy rationale table.	All aspects of the DNAPL and organic solvent life cycles are now dealt with in DNAPL and organic solvent policies, so removed from this policy.
Discharge of Stormwater	2.07 (1640)	Existing	Discharge of stormwater is a signficiant threat under certain circumstances related to drainage area, land use and chemicals of concern. In addition to these consideration in the review and approval of prescribed instruments it is important to understand that snow melt water may contaminate stormwater where the storage of snow and road salt is a significant threat. These threats also need to be considered in the approvals and review process of Stormwater facilities. It is important to note that the areas and circumstances where these threats are significant may differ slightly from those areas where stormwater discharge is considered a significant threat.	
Stormwater Management	2.07 (1640)	Existing and	Discharge of stormwater is a signficiant threat under certain circumstances related to drainage area, land use and chemicals of concern. In addition to these consideration in the review and	Additional policy references added.

Threat	Policy Number	Threat Status	Rationale	Change
	2.08 (1641) OC-2.12 (3210) OC-2.13 (3211)	Future	approval of prescribed instruments it is important to understand that snow melt water may contaminate stormwater where the storage of snow and road salt is a significant threat. These threats also need to be considered in the approvals and review process of Stormwater facilities. It is important to note that the areas and circumstances where these threats are significant may differ slightly from those areas where stormwater discharge is considered a significant threat. Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was generally determined to be the most appropriate approach. The one exception to future prohibition through the ECA process is for ICA areas within the County of Oxford. For stormwater management facility discharge for a facility with a drainage area <=100 ha and predominately rural, residential and/or agricultural land uses management through the ECA is used. Given that these facilities can be significant threats in an ICA for nitrates regardless of the drainage area of the facility and the ICAs in the County affect a substantially larger area and number of properties than the WHPA A & B with a vulnerability score of 10, it was determined that it would be more reasonable to manage future occurrences of such threats through the ECA process. It should be noted that the areas affected by the ICAs for nitrates in the County are all predominately comprised of rural, residential and/or agricultural land uses, which is why the policy distinction for such facilities in an ICA only pertains to those land uses. Management through a review and, if necessary amendment of the ECA, was deemed most appropriate for existing stormwater management facilities.	New information added to address changes due to the inclusion of an ICA in Woodstock
Sewage	2.09 (1642) 2.10 (1643) 2.11 (1745) 2.12 (1644) 2.13 (1746) 2.14 (1646) 2.19 (1650) 2.20 (1651) OC-2.07 (3205) OC-2.08 (3206) OC-2.09	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activities through the ECA process was generally determined to be the most appropriate approach. The one exception to future prohibition through the ECA process is for sanitary sewers and pipes, which will be managed. For the most part, tools established under Part IV of the Clean Water Act do not apply to activities linked with the establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. The SPC decided that to be consistent with the objective to ensure prescribed drinking water threats never becomes or ceases to be a significant threat, PI policies should be developed. To do this, the SPC felt that the available regulatory framework of Environmental Compliance Approvals (ECA) was appropriate. The Ministry of Environment has regulated sewage works with ECA since the early 1970s and this seemed an appropriate solution when it came to the sub-threats that have been prescribed under this threat category. The SPC decided that ECA should be amended with conditions that, when implemented, would prohibit the activity in vulnerable areas. The SPC decided that it did not want to outline specific conditions within these policies because it would hamper the flexibility of the issuer. Management through a review and, if necessary amendment of the ECA, was deemed most appropriate for existing activities.	New section added

Threat	Policy Number	Threat Status	Rationale	Change
	(3207) OC-2.10 (3208) OC-2.11 (3209)			
Application and Handling and Storage of Non-agricultural Source Materials (NASM)	OC-2.18 (1748) OC-2.19 (1650) OC-2.20 (1651)	Existing and Future	Oxford County choose to apply the PI tool for NASM while TSR choose not to rely exclusively on the PI. Oxford County determined that since the application (both existing and future) or new storage of NASM appears to be comprehensively regulated by the applicable Prescribed Instruments (no gaps or exceptions were identified), these existing regulatory tools were the most appropriate for achieving the desired prohibition of such activities where they would be a significant threat. The Tables of Drinking Water Threats identify the circumstances and vulnerable areas where these activities are a significant threat to drinking water sources While the NMA prohibits the application or storage of NASM within 100 m of a well (WHPA-A), the NMA does not require a similar prohibition for WHPA-B with a vulnerability score of 10. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring which provides well specific information upon which to base local Source Protection policy decisions. Under the Clean Water Act, the tables of drinking water threats identify that the risk and level of threat posed by this activity is the same within areas with a vulnerability score of 10. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-As actually have moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Therefore, based on the Clean Water Act science, it was determined that the most appropriate and consistent policy approach would be to prohibit these significant threat activities within both the WHPA-A, (as per the NMA) and the WHPA-B, with a vulnerability score of 10 (where application of NASM is not currently prohibited under the NMA). The same policy approach has been applied to both existing and future occurrences of this threat, given that NASM application does not occur on an on-going basis on the same parcel of land and, therefore, in effect there can be no application of NASM that would be considered 'existing' under the Oxford definition. Given that existing storage of NASM was not identified, or suspected, in significant threat areas in Oxford, prohibition of existing NASM storage was not deemed to be necessary. However, it was determined that managing future storage of NASM was not appropriate, when prohibition of future NASM storage was both a reasonable and more precautionary policy approach, particularly given the limited area of agricultural land that would be affected within Oxford, much of which is owned by the County. Prohibition prevents the establishment of new significant threats of this type and, therefore, provides the most certainty in achieving the overall goal of protecting municipal drinking water systems.	
Application and	OC-2,18 (1748)	Existing and	Oxford County chose to apply the PI tool for NASM while TSR choose not to rely exclusively on the PI.	Edit for grammar.

Threat	Policy Number	Threat Status	Rationale	Change
Handling and Storage of Non-agricultural Source Materials (NASM)	OC-2.19 (1650) OC-2.20 (1651)	Future	Oxford County determined that since the application (both existing and future) and new storage of NASM appears to be comprehensively regulated by the applicable Prescribed Instruments (no gaps or exceptions were identified), these existing regulatory tools were the most appropriate for achieving the desired prohibition of such activities where they would be a significant threat. The Tables of Drinking Water Threats identify the circumstances and vulnerable areas where these activities are a significant threat to drinking water sources While the NMA prohibits the application or storage of NASM within 100 m of a well (WHPA-A), the NMA does not require a similar prohibition for WHPA-B with a vulnerability score of 10. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring and ICAs for nitrates which provides well specific information upon which to base local Source Protection policy decisions. Under the Clean Water Act, the tables of drinking water threats identify that the risk and level of threat posed by this activity is the same within areas with a vulnerability score of 10. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-As actually have moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Therefore, based on the Clean Water Act science, it was determined that the most appropriate and consistent policy approach would be to prohibit these significant threat activities within both the WHPA-A, (as per the NMA) and the WHPA-B, with a vulnerability score of 10 (where application of NASM is not currently prohibited under the NMA). This prohibition was also applied to vulnerable areas within an ICA for Nitrates in Oxford, as it was determined to be appropriate to prohibit any threats that could contribute to an identified nitrate issue wherever possible and reasonable. The same policy approach has been applied to both existing and future occurrences of this threat, given that NASM application does not occur on an on-going basis on the same parcel of land and, therefore, in effect there can be no application of NASM that would be considered 'existing' under the Oxford definition. Given that existing storage of NASM was not identified, or suspected, in significant threat areas in Oxford, prohibition of existing NASM storage was not deemed to be necessary. However, it was determined that managing future storage of NASM was not appropriate, when prohibition of future NASM storage was both a reasonable and more precautionary policy approach, particularly given the limited area of agricultural land that would be affected within Oxford, much of which is owned by the County. Prohibition prevents the establishment of new significant threats of this type and, therefore, provides the most certainty in achieving the overall goal of protecting municipal drinking water systems.	Edit to include ICA.
Fuel	2.41 (1671) 2.42 (1672)	Existing and Future	Although activities of aggregate extraction at pits and quarries do not contribute chemicals or pathogens to drinking water sources, the Source Protection Committee (SPC) felt that the Aggregate Resources Act could be used to manage the storage of fuel in aggregate operations. To be consistent with the objective to ensure that prescribed drinking water threats never become or cease to be a significant threat, the SPC decided that a policy should be developed using	New section added

Threat	Policy Number	Threat Status	Rationale	Change
			Prescribed Instruments (PI). The SPC felt that the most appropriate use of the Aggregate Resources Act would be to put conditions on site plans that, when implemented, would locate fuel storage and handling outside of the area where it would be significant threat to drinking water. Where this is not feasible, the conditions shall manage the activity so that it would no longer be a significant threat. Back-up generators and other liquid powered devices for water works require fuel storage; however, the Source Protection Committee (SPC) felt that this situation was missing when considering Environmental Compliance Approvals (ECA) issued by the Province. The SPC decided to address this "gap" by developing a policy using Prescribed Instruments (PI). PI issued by the province through various ministries set out terms and conditions that are designed to protect the environment or human health. PI policies are intended to reduce the risk to municipal drinking water sources by managing those risks associated with an activity that has been identified as a drinking water threat in the associated Assessment Report. The SPC felt that this approach would be consistent with the objective to ensure that prescribed drinking water threats never become or cease to be a significant drinking water threat.	

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.4	44	Given that majority of the prescribed drinking water threats are managed or prohibited through other tools (Prescribed Instruments or Part IV of the Clean Water Act), the Thames-Sydenham and Region developed a general policy that uses land use planning as a complementary approach for significant threats, with one exception: sewage systems or sewage works (on-site septics) (Policy 2.15, OC-2.06). On-site septic systems, particularly leaching bed systems, are prevalent throughout the Thames-Sydenham and Region in areas that are not serviced by municipal or communal wastewater treatment systems. Since Part IV tools (Section 57, Section 58, and Section 59) of the Clean Water Act do not apply to this activity, and the Environmental Compliance Approvals (ECA) issued under the Ontario Water Resources Act only apply to large septic systems, the most appropriate approach was to use *land use planning* where prohibition was the desired outcome for future significant threats related to on-site septics. While the mandatory maintenance and inspection program for septic systems approved under the Building Code was seen to be an adequate management tool for existing septic systems, the Source Protection Committee determined that prohibition was the most appropriate approach for future systems as it is consistent with the SPC's overall approach for future threats, to prevent new threats from becoming established wherever possible and reasonable. This approach could prohibit the installation of any uses serviced by private individual sewage both small and large, within vulnerable areas where this activity could be significant.		
4.2.4	44	Given that the majority of the prescribed drinking water threats are managed or prohibited through other tools (Prescribed Instruments or Part IV of the Clean Water	Minor text edits	Edit for grammar.

Section / Policy	Page	Text	Reason For Change	Changes Made
		Act), the SPC developed a general policy that uses land use planning as a complementary approach for significant threats, with one exception: sewage systems or sewage works (on-site septics) (Policy 2.15, OC-2.06). On-site septic systems, particularly leaching bed systems, are prevalent throughout the Thames-Sydenham and Region in areas that are not serviced by municipal or communal wastewater treatment systems. Since Part IV tools (Section 57, Section 58, and Section 59) of the Clean Water Act do not apply to this activity, and the Environmental Compliance Approvals (ECA) issued under the Ontario Water Resources Act only apply to large septic systems, the most appropriate approach was to use *land use planning* where prohibition was the desired outcome for future significant threats related to on-site septics. While the mandatory maintenance and inspection program for septic systems approved under the Building Code was seen to be an adequate management tool for existing septic systems, the Source Protection Committee determined that prohibition was generally the most appropriate approach for future systems as it is consistent with the SPC's overall approach for future threats, to prevent new threats from becoming established wherever possible and reasonable. This approach could prohibit the installation of any uses serviced by private individual sewage both small and large, within vulnerable areas where this activity could be significant. The one exception to the prohibition through land use planning policy approach for new septic systems has been established for vulnerable areas located within ICA for nitrates, but outside of a WHPA A or B with a vulnerability score of 10. There is one such area that has been identified within Oxford County. Given that the vulnerable area associated with the ICA covers a considerably larger area and number of properties than just those contained in the WHPA A and B, it was determined that prohibition may have the potential to prevent some properties from establishing a new dwelling anywhere on the property (where permitted by existing zoning) and as such would not be reasonable. As such, it was determined that any future septic systems and holding tanks within such vulnerable areas could be permitted and appropriately managed through the septic system re-inspection program. However, through the septic system approval process, property owners would still be encouraged to locate new systems outside of the ICA on their property wherever possible.	Additional information provided for new nitrate ICA areas.	Explanation why septic prohibition not used in ICA.
4.2.4	45	Additionally, in the case of Oxford County, the area affected by this prohibition is limited and, based on review of the properties potentially affected, the impact on future development in the County is anticipated to be minimal. Furthermore, development on new septic systems in the WHPA-A and B is already prohibited by the water quality policies contained in the Oxford County Official Plan, so the proposed policies will actually reduce the area where such significant threat activities are currently prohibited.		
4.2.4	45	Additionally, in the case of Oxford County, the area affected by this prohibition is limited to the WHPA A and B with a vulnerability score of 10 and, based on review of the properties potentially affected, the impact on future development in the County is anticipated to be minimal. Furthermore, development on new septic systems in the WHPA-A and B is already prohibited by the water quality policies contained in the Oxford County Official Plan, so the proposed policies will actually reduce the area	Clarify area of applicability	Specified WHPA-A&B(10)

Section / Policy	Page	Text	Reason For Change	Changes Made
		where such significant threat activities are currently prohibited.		
4.2.5	45	In Oxford County, two significant threat policies use education and outreach, one for DNAPLS (OC-2.33) and one for residential use of commercial fertilizer application (OC-2.47). As DNAPLs are considered a significant drinking water threat in any quantity, the use of small quantities or concentrations of DNAPLs in association with residential uses may potentially be a significant threat, as the chemicals are readily available and may be found within commonly used products. However, given the large number of residential properties that would need to be reviewed to determine whether DNAPLs were present and the likelyhood of anything other than small 'household' type quantities being found, it was determined that an education and outreach program focused on the safe storage, handling and disposal of these chemicals would generally be adequate to ensure DNAPLs potentially associated with these land uses cease to be, or never become, a significant drinking water threat.		
4.2.5	45	In Oxford County, two significant threat policies use education and outreach, one for DNAPLS (OC-2.33) and one for residential use of commercial fertilizer application (OC-2.47). As DNAPLs are considered a significant drinking water threat in any quantity, the use of small quantities or concentrations of DNAPLs in association with residential uses may potentially be a significant threat, as the chemicals are readily available and may be found within commonly used products. However, given the large number of residential properties that would need to be reviewed to determine whether DNAPLs were present and the likelihood of anything other than small 'household' type quantities being found, it was determined that an education and outreach program focused on the safe storage, handling and disposal of these chemicals would generally be adequate to ensure DNAPLs potentially associated with these land uses cease to be, or never become, a significant drinking water threat.	Grammar edit	Corrected spelling
4.2.6	46	Since there may be significant application and/or administrative fees associated with amending an existing Environmental Compliance Approval (ECA) for existing waste disposal sites, Policies 2.06 and OC-2.43 were developed to encourage early compliance. The SPC felt that it was not appropriate to require the person engaged in the activity to pay an additional fee for an ECA amendment required for the sole purpose of satisfying this policy. This incentive would reduce the potential financial impact on proponents to comply with the Source Protection Plan and in achieving the overall goal of reducing the risks to municipal drinking water sources. This policy, if implemented by the province, would provide an incentive for early adoption of risk management measures rather than the applicant waiting until they are forced to amend their instrument. By implementing management or mitigation measures earlier, the risks to drinking water sources are reduced.		
4.2.6	46	Since there may be significant application and/or administrative fees associated with amending an existing Prescribed Instrument (PI), Policies 2.06 and OC-2.43 were developed to encourage early compliance. The SPC felt that it was not appropriate to		

Section / Policy	Page	Text	Reason For Change	Changes Made
		require the person engaged in the activity to pay an additional fee for a PI amendment required for the sole purpose of satisfying this policy. This incentive would reduce the potential financial impact on proponents to comply with the Source Protection Plan and in achieving the overall goal of reducing the risks to municipal drinking water sources. This policy, if implemented by the province, would provide an incentive for early adoption of risk management measures rather than the applicant waiting until they are forced to amend their instrument. By implementing management or mitigation measures earlier, the risks to drinking water sources are reduced.		
4.2.7	46	The establishment, operation, or maintenance of a system that collects, stores, transmits, treats, or disposes sewage - Septic systems and holding tanks (Policy 2.16) suggests municipalities make mandatory hook-ups to sanitary sewers where they exist in significant threat areas. Although Oxford County does not include a similar policy, that does not preclude the County from enacting such By-law where deemed necessary or appropriate by the County.		
4.2.7	46	The establishment, operation, or maintenance of a system that collects, stores, transmits, treats, or disposes of sewage - Septic systems and holding tanks (Policy 2.16) suggests municipalities make mandatory hook-ups to sanitary sewers where they exist in significant threat areas. Although Oxford County does not include a similar policy, that does not preclude the County from enacting such By-laws where deemed necessary or appropriate by the County.	Minor text edits	Edit for grammar
4.2.7	46	In developing the policies of this plan, there was a perception by most people involved that inspections of various activities were random and infrequent. Inspections for the purposes of compliance monitoring and enforcement are an important part of reducing the risk to drinking water sources. For example, in the case of the handling and storage of fuel, the Technical Standards and Safety Authority (TSSA) inspect public outlets every three (3) years, but they do not inspect private outlets unless invited by the owner/operator. Other compliance monitoring programs are complaint driven rather than proactively assessing the compliance with prescribed instruments. Through discussions with the Ministry of Environment, it was determined that policies for increasing/ prioritizing inspections could not be written into Prescribed Instrument policies. Specify Action was identified as the most appropriate approach to address the compliance monitoring and enforcement. Policies have also been developed to reinforce and serve as a reminder of the importance of inspections that are required to be completed under regulatory requirements (e.g. septic system inspections under the Ontario Building Code Act). The threats affected by inspection policies are:		
4.2.7	46	In developing the policies of this plan, there was a perception by most people involved that inspections of various activities were random and infrequent. Inspections for the purposes of compliance monitoring and enforcement are an important part of reducing the risk to drinking water sources. For example, in the case of the handling and storage of fuel, the Technical Standards and Safety Authority (TSSA) inspect public outlets every three (3) years, but they do not inspect private outlets unless invited by the owner/operator. Other compliance monitoring programs are complaint driven rather than proactively assessing the compliance with prescribed instruments. Through	Minor text edits	Edit for grammar

Section / Policy	Page	Text	Reason For Change	Changes Made
		discussions with the Ministry of Environment, it was determined that policies for increasing/ prioritizing inspections could not be written into Prescribed Instrument policies. Specify Action was identified as the most appropriate approach to address compliance monitoring and enforcement. Policies have also been developed to reinforce and serve as a reminder of the importance of inspections that are required to be completed under regulatory requirements (e.g. septic system inspections under the Ontario Building Code Act). The threats affected by inspection policies are:		

Table 11 Supplementary Specify Action Policies

Threat	Policy Number	Policy Description	Threat Status	Rationale	Change
Storage of snow	2.37(1761)	Prohibition of snow storage in aggregate operations	Future and Existing	The Ministry of Natural Resources under the Aggregate Resources Policy Manual Policy A.R. 5.00.14 (salt storage and snow dumps on licensed/permitted sites) prohibits the storage of snow in aggregate operations. A policy was developed as a reminder of this regulation.	
				No change	
Handling and storage of fuel	2.43(1768) OC-2.43 (3265)	Removal of abandoned fuel storage tanks	Future and Existing	Fuel can enter into surface water or groundwater via spills. There had been a “gap” identified regarding the removal of abandoned fuel tanks. Specify Action was the best approach to address this.	
Handling and storage of fuel	2.43(1768) OC-2.46 (3265)	Removal of abandoned fuel storage tanks	Future and Existing	Fuel can enter into surface water or groundwater via spills. There had been a “gap” identified regarding the removal of abandoned fuel tanks. Specify Action was the best approach to address this. The same effective date is being used for both existing and future for this policy. The rationale behind that is that for this policy future mean newly found rather than newly created, so it was determined that it was not feasible to immediately remove fuel tanks on abandoned properties as soon as the Province is made aware of them.	Corrected policy reference # Included rationale for same existing and future dates.

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.8	47	Local threats policies are based on local threats that have been approved by the Ministry of Environment. The transportation of fuel and fertilizer along provincial highways, county and local roads, railways, waterways, and the transportation of liquid petroleum products through pipelines have been identified as local threats in IPZ-1, 2 and 3 in the St. Clair Region Source Protection Area. The intent of Policies 2.53 and 2.54 associated with local threats is to manage the risks to drinking water sources through spills response. It is important that these programs build in existing consideration of the downstream use of the water sources for drinking by adding the knowledge of the Intake Protection Zones into spills preparedness, response and prevention programs. It is important to understand that risks to drinking water sources exist beyond the defined IPZ areas. The IPZ areas, especially IPZ-2, provide an indication of the level of risk and travel time to the intake under modelled conditions.		

Section / Policy	Page	Text	Reason For Change	Changes Made
		Local threats have been only identified within the St. Clair Region Source Protection Area. Event-based modelling, which is used to determine these local threats, has only been completed for the IPZ-3 regions of LAWSS, Petrolia and Wallaceburg intakes. The event-based modelling has established these local threats as significant drinking water threats in the IPZ of the St. Clair Region Source Protection Area.		
4.2.8	47	Local threats policies are based on local threats that have been approved by the Ministry of Environment. The transportation of fuel along provincial highways, county and local roads, railways and waterways, have been identified as a local threat in Event Based Areas (EBA) in the St. Clair Region and Lower Thames Valley Source Protection Areas. The Transportation of fertilizer along provincial highways, county and local roads, railways and waterways and the transportation of liquid petroleum products through pipelines have also been identified as local threats in the SCRSPA. The intent of Policies 2.53 and 2.54 associated with local threats is to manage the risks to drinking water sources through spills response. It is important that these programs build in existing consideration of the downstream use of the water sources for drinking by adding the knowledge of the Intake Protection Zones into spills preparedness, response and prevention programs. It is important to understand that risks to drinking water sources exist beyond the defined IPZ areas. The IPZ areas, especially IPZ-2, provide an indication of the level of risk and travel time to the intake under modelled conditions. Event-based modelling, was used to determine where spills from either these local threats or related prescribed drinking water threats may be considered a SDWT. The event-based modelling has established these local threats as significant drinking water threats in the Event Based Areas (EBA) of: • LAWSS, Petrolia, and Wallaceburg intakes in the St Clair Region Source Protection Area, • Wheatley intake in the Lower Thames Valley Source Protection Area, and • Stoney Point intake in the Essex Regions Source Protection Area. Event Based Areas are the areas within the Intake Protection Zones (parts of IPZ-1, IPZ-2, IPZ-3) where the event-based modelling has demonstrated that a spill can reach the intake at a concentration which would deteriorate the water for the purposes of drinking. The spills may be the result of the local threat activity (transportation) or it may be the result of a similar prescribed drinking water threat (storage or handling). Within the EBA these activities are identified as SDWT under the circumstance (volumes) modelled.	IPZ-3s now being referred to as event based areas (EBAs)	Change IPZ-3 reference to EBA Clarification on EBA areas
4.3.1	48	Low and moderate threats policies that use the Prescribed Instrument approach have only been developed for the application of pesticides. Pesticide permits are required in order to apply these chemicals in some situations. It is important that applicants and the issuer of the permits are fully aware of the potential impacts of pesticides on drinking water sources. By making the applicant aware that they are in an area where		

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		the application of the pesticide is a low or moderate threat to drinking water, it is less likely that, through error or intent, application discharge could occur (Policy 3.02 and OC-3.01).		
4.3.1	48	Low and moderate threats policies that use the Prescribed Instrument approach have been developed for two policies. For the application of pesticides, pesticide permits are required in order to apply these chemicals in some situations. It is important that applicants and the issuer of the permits are fully aware of the potential impacts of pesticides on drinking water sources. By making the applicant aware that they are in an area where the application of the pesticide is a low or moderate threat to drinking water, it is less likely that, through error or intent, application discharge could occur (Policy 3.02 and OC-3.01). The policy on new PIs related to moderate and low threats (3.03, OC-3.02) was developed to encourage consideration when issuing PIs that the level of risk reduction imposed by the PI be reasonable, in the opinion of the issuer of the PI, so that the threat never becomes a SDWT in areas where the vulnerability would allow for that. Where the activity provides a potential threat to a municipal drinking water source it is suggested that the operator of the drinking water system be consulted on their perception of the level of risk.	Additional PI policy was created.	Rationale for the new policy was added.
4.4	49	The Clean Water Act indicates that the Source Protection Plan may contain other permitted policies. The Thames-Sydenham and Region has focused on two groups: • spill prevention plans, spill contingency plans and emergency response plans; and • transport pathways.		
4.4	49	The Clean Water Act indicates that the Source Protection Plan may contain other permitted policies. One of the other permitted policies that were created was a policy for environmental assessment reviews (4.12, OC-4.10). This policy was developed to emphasize the importance that Source Water Protection is considered at the beginning and throughout the EA process. If not considered when proposed and preferred alternative options are being assessed, it may result in the selection of an alternative which conflicts with policies within the Source Protection Plan (SPP). This may result in challenges for the proponent later through approval processes. This policy would apply in areas where the activity would be a significant, moderate or low drinking water threat. The remainder of other permitted policies for the Thames-Sydenham and Region has focused on three groups: • spill prevention plans, spill contingency plans and emergency response plans; • transport pathways; and • monitoring of a drinking water issue identified in the assessment report.	Policy was added requesting source water protection is considered throughout the entire EA process.	Rationale for the EA policy added.

Section / Policy	Page	Text	Reason For Change	Changes Made
4.4.1	49	Spill prevention plans, spill contingency plans, and emergency response plans are communication tools for a variety of agencies (province, municipal staff) as well as the general public. As such, policies have been developed to be implemented by the province and the municipality. These plans would benefit from including information about areas where spills may pose a risk to municipal drinking water sources. Since the impacts as well as the outcomes of most spills are directly related to the level of preparedness, it was important to include these types of policies (Policies 4.01, 4.02 and 4.03 and OC-4.01) within the Source Protection Plan to encourage municipalities and the province to include the vulnerable areas and other information developed through the Source Protection Planning process in the spill prevention, spill contingency, and emergency response plans. Specify Action was the most appropriate approach to use to develop these policies.		
4.4.1	49	Spill prevention plans, spill contingency plans, and emergency response plans are communication tools for a variety of agencies (provincial, municipal, etc.) as well as the general public. As such, policies have been developed to be implemented by the province and the municipality. These plans would benefit from including information about areas where spills may pose a risk to municipal drinking water sources. Since the impacts as well as the outcomes of most spills are directly related to the level of preparedness, it was important to include these types of policies (Policies 4.01, 4.02 and 4.03 and OC-4.01) within the Source Protection Plan to encourage municipalities and the province to include the vulnerable areas and other information developed through the Source Protection Planning process in the spill prevention, spill contingency, and emergency response plans. Specify Action was the most appropriate approach to use to develop these policies.	Minor text edits	Edit for grammar
		New Section		
4.4.3	51	**Monitoring of a Drinking Water Issue Identified in the Assessment Report** Through the assessment reports two separate issues have been identified, Nitrate at the Wallaceburg surface water intake and Microcystin at the Wheatley and Chatham/South Kent surface water intakes. While there was adequate information to identify these issues the SPC determined that at this time there was not adequate information available to: determine if Issues Contributing Areas (ICA) are required, delineate the ICAs, and develop significant threat policies for the ICAs. Policies 4.13 and 4.14 were created to identify the need for continued water quality monitoring to provide the required data to answer the outstanding questions. In the case of Nitrate it was decided to conduct additional monitoring/data collection while awaiting the outcome of an ongoing Environmental Assessment on the drinking water sources for the Wallaceburg area. If the EA determines the existing intake will remain in use this monitoring is required to confirm the potential reversing of the nitrate trend and provide insight into whether Nitrate should remain an issue at the intake. If Nitrate remains an issue, the monitoring would also provide data to refine the area contributing to the nitrate issue. In the case of Microcystin continued monitoring, of Microcystin and Phosphorous (a limiting nutrient for Microcystin), is required to provide enough years of	Policy was added suggesting further monitoring/data collection for the Nitrate and Microcystin policies.	Rationale for the Nitrate and Microcystin monitoring policies.

Section / Policy	Page	Text	Reason For Change	Changes Made
		data to determine if there is an increasing trend in Microcystin levels at the intakes. These policies support the continuation of existing Provincial, Conservation Authority and Municipal data collection programs, as well as the inclusion of new data collection programs such as collection of event-based data. The policy acknowledges that this data collection will all be dependent on the availability of funding and staff resources.		
4.5	51	It was also realized that a level of consistency in the monitoring reports was essential. To achieve this consistency, it was determined that a guidance document was necessary. This guidance is to be developed by the Conservation Authorities in collaboration with the policy implementer as outlined in Policies 5.02 and OC-5.09. This document would outline specific contents and format of the monitoring report and is intended to obtain meaningful information without being unduly onerous.		
4.5	51	It was also realized that a level of consistency in the monitoring reports was essential. To achieve this consistency, it was determined that a guidance document was necessary. This guidance is to be developed by the Conservation Authorities in collaboration with the policy implementer as outlined in Policies 5.02 and OC-5.08. This document would outline specific contents and format of the monitoring report and is intended to obtain meaningful information without being unduly onerous.	Incorrect policy # reference	Changed 'O.C.-5.09' to 'O.C.-5.08'
5	53	This Explanatory Document has provided the rationale that Thames-Sydenham and Region SPC used to develop the policies within the Source Protection Plan that would satisfy these objectives. The policies were developed using the SPC guiding principles (develop fair and reasonable solutions; ensure consensus within SPC; ensure clarity of information; ensure open communication and respect diversity of opinion) ensuring that the policies were effective, fair and reasonable as well as being implementable.		
5	53	This Explanatory Document has provided the rationale that the Thames-Sydenham and Region SPC used to develop the policies within the Source Protection Plan that would satisfy these objectives. The policies were developed using the SPC guiding principles (develop fair and reasonable solutions; ensure consensus within the SPC; ensure clarity of information; ensure open communication and respect diversity of opinion) ensuring that the policies were effective, fair and reasonable as well as being implementable.	Minor text edits	Edit for grammar
5	53	Education and Outreach as well as Land Use Planning tools were generally used as complementary tools for significant threats. Incentives have also been identified as a complementary tool; however, policies were only developed for existing activities for specific prescribed threats. Where Section 57 (prohibition) and Section 58 (risk management plans) were used, Section 59 (restricted land use) was used as a complementary tool. In situations where the desired action was not within the authority of the other tools, policies were developed to specify actions that would achieve the Source Protection Plan's objectives. The Clean Water Act provides the authority that the Source Protection Plan may include other permitted policies which the Thames-Sydenham and Region used to developed policies that addressed spills and transport pathways.		

Section / Policy	Page	Text	Reason For Change	Changes Made
5	53	Education and Outreach as well as Land Use Planning tools were generally used as complementary tools for significant threats. Incentives have also been identified as a complementary tool; however, the policies developed only apply to existing activities for specific prescribed threats. Where Section 57 (prohibition) and Section 58 (risk management plans) were used, Section 59 (restricted land use) was used as a complementary tool. In situations where the desired action was not within the authority of the other tools, policies were developed to specify actions that would achieve the Source Protection Plan's objectives. The Clean Water Act provides the authority that the Source Protection Plan may include other permitted policies which the Thames-Sydenham and Region used to developed policies that addressed spills and transport pathways.	Minor text edits	Edit for grammar
5	53	Monitoring is a key component of understanding the effectiveness of the Source Protection Plan in reducing threats to drinking water sources. The Thames-Sydenham and Region has developed policies that use a collaborative approach to accomplish this goal. Policies of the Source Protection Plan will ensure that the Source Protection Authorities have the necessary information to fulfil their reporting requirements. This information is important to ensure that the Source Protection Plan is meeting its requirements in an effective manner.		
5	53	Monitoring is a key component of understanding the effectiveness of the Source Protection Plan in reducing threats to drinking water sources. The Thames-Sydenham and Region has developed policies that use a collaborative approach to accomplish this goal. Policies of the Source Protection Plan will ensure that the Source Protection Authorities have the necessary information to fulfill their reporting requirements. This information is important to ensure that the Source Protection Plan is meeting its requirements in an effective manner.	Minor text edits	Edit for grammar

1.5 Glossary Suggested Changes

Term	Definition and Source	
	•	
EBA	• Event Based Areas	New entry
	•	

Term	Definition and Source	
Event Based Areas	• In the Thames-Sydenham and Region, Event Based Areas (EBA) are the areas within the Intake Protection Zones (parts of IPZ-1, IPZ-2, IPZ-3) where event-based modelling has demonstrated that a spill can reach the intake at a concentration which would deteriorate the water for the purposes of drinking. • Event-based modelling involved the use of specific event which was not to exceed an extreme event as defined by the Technical Rules • Each EBA is associated with a specific contaminant, and quantity. • The spills modelled may be the result of the local threat activity (transportation) or it may be the result of a similar prescribed drinking water threat (storage or handling). Within the EBA these activities are identified as SDWT under the circumstance (volumes) modelled.	New entry
	•	
Extreme event	• A period of heavy precipitation or winds up to a 100 year storm event; a freshet; or a surface water body exceeding its high water mark (Technical Rules[3]). • An event up to an extreme event is used for event-based modelling	New entry
Groundwater Under the Direct Influence	• means groundwater having incomplete/undependable subsurface filtration of surface water and infiltrating precipitation (See website: http://www.ene.gov.on.ca/envision/techdocs/4167e.htm) • generally used to refer to groundwater that shows physical evidence of surface water contamination or surface water organisms (See website: http://www.ene.gov.on.ca/envision/techdocs/4167e.htm)	
Groundwater Under the Direct Influence	• means groundwater having incomplete/undependable subsurface filtration of surface water and infiltrating precipitation • generally used to refer to groundwater that shows physical evidence of surface water contamination or surface water organisms	Remove weblink
handling	• to the storing, transmitting, transporting or distribution of a material, and includes putting them into any container including, but not limited to one in a motor vehicle, watercraft, or trailer as per O. Reg. 217/01 and 213/01.	
handling	• Means the storing, transmitting, transporting or distribution of a material, and includes putting them into any container including, but not limited to one in a motor vehicle, watercraft, or trailer as per O. Reg. 217/01 and 213/01.	Minor text edit
mapping symbology	• Mapping products guidance in a document produced by the Water Resources Information Program (WRIP) of Ministry of Natural Resources (MNR) to provide guidance and ensure consistency in source protection planning mapping products • Available at website: https://www.ene.gov.on.ca/en/water/cleanwater/cwa-technical-rules.php	
mapping symbology	• Mapping products guidance in a document produced by the Water Resources Information Program (WRIP) of Ministry of Natural Resources (MNR) to provide guidance and ensure consistency in source protection planning mapping products • Available at website: https://www.ontario.ca/environment-and-energy/mapping-symbology-clean-water-act	Weblink correction
MNR	• Ontario Ministry of Natural Resources	

Term	Definition and Source	
MNR, MNRF	• Ontario Ministry of Natural Resources • Ontario Ministry of Natural Resources and Forestry • Provincial ministries may be realigned from time to time and references to MNR are intended to be a generic reference to the ministry having responsibilities for natural resources and as such may be a reference to any one of the past or future ministries having that responsibility.	Edit to account for changing ministry names over time
MOE	• Ontario Ministry of Environment	
MOE, MOECC, MOEE	• Ontario Ministry of Environment • Ontario Ministry of Environment and Climate Change • Ontario Ministry of Environment and Energy • Provincial ministries may be realigned from time to time and references to MOE are intended to be a generic reference to the ministry having responsibilities for the environment and as such may be a reference to any one of the past or future ministries having that responsibility.	Edit to account for changing ministry names over time
MTO	• Ontario Ministry of Transportation	
MTO	• Ontario Ministry of Transportation • Provincial ministries may be realigned from time to time and references to MTO are intended to be a generic reference to the ministry having responsibilities for transportation and as such may be a reference to any one of the past or future ministries having that responsibility.	Edit to account for changing ministry names over time
OMAFRA	• Ontario Ministry of Agriculture, Food and Rural Affairs	
OMAFRA, OMAF	• Ontario Ministry of Agriculture, Food and Rural Affairs • Ontario Ministry of Agriculture and Food • Provincial ministries may be realigned from time to time and references to OMAFRA are intended to be a generic reference to the ministry having responsibilities for agriculture and as such may be a reference to any one of the past or future ministries having that responsibility.	Edit to account for changing ministry names over time
PTTW	• Permit To Take Water • A permit required under the Ontario Water Resources Act if the water taking is more than 50,000 liters per day (Ontario Water Resources Act, website: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90o40_e.htm#BK51)	
PTTW	• Permit To Take Water • A permit required under the Ontario Water Resources Act if the water taking is more than 50,000 liters per day (Ontario Water Resources Act, website: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90o40_e.htm#BK55	Weblink correction
RSC	• Record of Site Condition • Document that must be filed in the Environmental Site Registry to protect property owners from environmental cleanup orders (See website: http://ene.gov.on.ca/envision/land/decomm/condition.htm	
RSC	• Record of Site Condition • Document that must be filed in the Environmental Site Registry to protect property owners from environmental cleanup orders (See website: http://docs.ontario.ca/documents/1015-rsc-handbook.html#document/p1	Weblink correction

Term	Definition and Source	
SAR	• Species at Risk • As per the Species at Risk Act (See website: http://www.sararegistry.gc.ca/default_e.cfm), assigned a status such as extinct or endangered	
SAR	• Species at Risk • As per the Species at Risk Act (See website: http://www.sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1), assigned a status such as extinct or endangered	Weblink correction
Notes: 1. Clean Water Act (2006): http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_06c22_e.htm 2. MOE. Technical Support Document for the Ontario Drinking Water Standards, Objectives and Guidelines. 2006 3. Technical Rules: Assessment Report: http://www.ene.gov.on.ca/en/water/cleanwater/cwadocs/Tech_Rules_For_Assessment_Report_16Nov09.pdf 4. International Joint Commission. http://www.ijc.org/rel/boards/annex2/buis.htm 5. Table of Drinking Water Threats Glossary: http://www.ene.gov.on.ca/envision/env_reg/er/documents/2009/010-7573%202.pdf 6. General Regulation 287/07 (Clean Water Act, 2006): http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_070287_e.htm 7. Regulation 169/03 (Safe Drinking Water Act, 2002): http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_030169_e.htm		
Notes: 8. Clean Water Act (2006): http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_06c22_e.htm 9. MOE. Technical Support Document for the Ontario Drinking Water Standards, Objectives and Guidelines. 2006 10. Technical Rules: Assessment Report: http://www.ontario.ca/environment-and-energy/technical-rules-assessment-report 11. International Joint Commission. http://www.ijc.org/rel/boards/annex2/buis.htm 12. Table of Drinking Water Threats Glossary: http://www.ene.gov.on.ca/envision/env_reg/er/documents/2009/010-7573%202.pdf 13. General Regulation 287/07 (Clean Water Act, 2006): http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_070287_e.htm 14. Regulation 169/03 (Safe Drinking Water Act, 2002): http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_030169_e.htm		Weblink correction

2 Revisions to the UTRSPA Assessment Report

2.1 Section 1– Introduction and Background

Section	Page	Text	Reason For Change	Changes Made
Cover And Footers		Amended Proposed Assessment Report Revised - August 12, 2011 1.0 Introduction and Background Approved	Reflect updated version	
		Updated Assessment Report November 14, 2014 1.0 Introduction and Background		
1.0	1-1	The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee was to complete an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan is to contain policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.	verb tense change to match the rest of the section	
		The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee completed an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan contains policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.		
1.0	1-11/2	The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (SPR). The Assessment Reports are to contain detailed information which identify vulnerable areas associated with drinking water systems, assess the level of vulnerability, identify issues related to the drinking water sources, identify activities within those vulnerable areas which pose threats to the systems, and assess the risk due to threats. The three Source Protection Areas of the Thames-Sydenham and Region SPR as shown in the following Map 1-1. An Assessment Report is prepared for each Source Protection Area.	Verb tense changes	

Section	Page	Text	Reason For Change	Changes Made
		The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (SPR). The Assessment Reports contain detailed information which identify vulnerable areas associated with drinking water systems, assess the level of vulnerability, identify issues related to the drinking water sources, identify activities within those vulnerable areas which pose threats to the systems, and assess the risk due to threats. The three Source Protection Areas of the Thames-Sydenham and Region SPR are shown in the following Map 1-1. An Assessment Report is prepared for each Source Protection Area.		
1.1	1-2	This Assessment Report is modular in nature. It is comprised of several Sections and Appendices. The Sections are, in effect, a summary of various technical studies which are described later in this section. Each of the Sections is summarized in Section Summaries contained in Appendix 2. Material pertinent to a specific drinking water system is summarized in System Summaries included in Appendix 3. Maps form a large part of the content of the Assessment Report, and are contained in Appendix 1. Tabloid sized (11"x17") maps are included in this report, and may be printed on letter sized paper and remain mostly legible. The entire document is available on Compact Disk (CD) complete with the appendices to the Assessment Report.	AR and SPP now on same DVD	
		This Assessment Report is modular in nature. It is comprised of several Sections and Appendices. The Sections are, in effect, a summary of various technical studies which are described later in this section. Each of the Sections is summarized in Section Summaries contained in Appendix 2. Material pertinent to a specific drinking water system is summarized in System Summaries included in Appendix 3. Maps form a large part of the content of the Assessment Report, and are contained in Appendix 1. Tabloid sized (11"x17") maps are included in this report, and may be printed on letter sized paper and remain mostly legible. The entire document is available on DVD complete with the appendices to the Assessment Report and the Source Protection Plan.		
1.1	1-2	The Watershed Characterization Reports for the region were completed in 2008. A three volume report was produced for the Thames Watershed and Region which included the Upper Thames River Source Protection Area and the Lower Thames Valley Source Protection Area. A summary of the report was developed which included all of the mapping products used in the Watershed Characterization Report. The summary of the Thames Watershed and Region Watershed Characterization Report is included in Appendix 5. The summary and the full Watershed Characterization Reports are available in portable document format (Adobe PDF) on Compact Disk (CD).	Reflect current organization of reports on DVD	
		The Watershed Characterization Reports for the region were completed in 2008. A three volume report was produced for the Thames Watershed and Region which included the Upper Thames River Source Protection Area and the Lower Thames Valley Source Protection Area. A summary of the report was developed which included all of the mapping products used in the Watershed Characterization Report. The summary of the Thames Watershed and Region Watershed Characterization Report is included in Appendix 5. The summary and the full Watershed Characterization Reports are available in portable document format (Adobe PDF) on the Source Protection Plan DVD.		

Section	Page	Text	Reason For Change	Changes Made
1.1	1-3	Further, a Tier 3 local area risk assessment and water budget will be done to assess the water quantity threats at each drinking water system exhibiting a potential for stress in the Tier 2 assessment.	Update status	
		Further, a Tier 3 local area risk assessment and water budget was completed to assess the water quantity risks at each drinking water system exhibiting a potential for stress in the Tier 2 assessment.		
1.1	1-3	The Issues Evaluation Section describes the methods applied and the findings of the drinking water quality issues evaluation process across the Source Protection Area. The detailed methodology for the issues evaluation process is included in Appendix 8. A table of issues identified is included in the Issues Evaluation section as well as a description of the impact of identifying an issue. The findings reported in this section are also included in the System Summaries in Appendix 3.		
		The Issues Evaluation Section describes the methods applied and the findings of the drinking water quality issues evaluation process across the Source Protection Area. The detailed methodology for the issues evaluation process is included in Appendix 8. A table of issues identified is included in the Issues Evaluation section as well as a description of the impact of identifying an issue.		
1.1	1-4	This section also outlines the additional work required to investigate activities believed to be threats. An overview of this information is presented in the System Summaries included in Appendix 3.		
		This section also outlines the additional work required to investigate activities believed to be threats.		
1.2.4	1-6	Update Web Links http://www.ene.gov.on.ca/environment/en/resources/STD01_078436.html. http://www.ene.gov.on.ca/environment/en/legislation/clean_water_act/STDPROD_081301.html	Update Web Links	
		https://www.ontario.ca/environment-and-energy/tables-drinking-water-threats https://www.ontario.ca/enviornment-and-enegry/provinical-tables-circumstances		
1.2.6	1-7	Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan will contain policies focused on activities which are identified as threats.	Verb tense	
		Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan contains policies focused on activities which are identified as threats.		
1.3	1-9	Discussions with First Nations encouraged their participation on the Source Protection Committee. Those discussions led to the recent appointment of two of the three First Nations members on the Source Protection Committee. These two members were appointed by the London District Chief's Council to represent the eight First Nations in the region.	Still just 2?	

Section	Page	Text	Reason For Change	Changes Made
		Discussions with First Nations encouraged their participation on the Source Protection Committee. Those discussions led to the appointment of three First Nations members on the Source Protection Committee. These members were appointed by the London District Chief's Council to represent the eight First Nations in the region.		
1.3	1-10	*Table 1-1 SPC members and representation*	Reflect current SPC members	
		See updated table appended to the end of this change log		
1.5	12	The Terms of Reference for the Upper Thames River Source Protection Area were approved by the Minister of the Environment and the notice of approval posted on the Environmental Registry on April 20, 2009. This approval set the due date of this Assessment Report one year from the posting of the approval of the Terms of Reference, April 20, 2010, which was met. The report was further amended to produce the current Amended Proposed Assessment Report, due in December 2010.	Needs to reflect current AR status	
		The Terms of Reference for the Upper Thames River Source Protection Area were approved by the Minister of the Environment and the notice of approval posted on the Environmental Registry on April 20, 2009. This approval set the due date of the Assessment Report one year from the posting of the approval of the Terms of Reference, April 20, 2010, which was met. The report was amended to produce the Amended Proposed Assessment Report, dated in August 8, 2011. It has since been updated to the current *Updated* Assessment Report due to be submitted for approval in early 2015		
1.10.1	1-19	Caldwell First Nation is also established in the area near Rondeau Bay; however they currently do not have a reserve.	Reflect more accurate description of current area	
		Caldwell First Nation is also established in the area between Leamington and Rondeau Bay; however they currently do not have a reserve.		
1.8	1-14	Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, requires a public meeting and posting of the Assessment Report for comment. Two posting periods are required: one posted by the Source Protection Committee for consultation on the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report is then submitted to the Ministry of the Environment along with comments received in the final posting period. The Director may then approve the Assessment Report or require changes to the report.	Reflect updated AR	
		Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, requires a public meeting and posting of the Assessment Report. Two posting periods are required: one posted by the Source Protection Committee for consultation on the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report is then submitted to the		

Section	Page	Text	Reason For Change	Changes Made
		Ministry of the Environment along with comments received in the final posting period. The Director may then approve the Assessment Report or require changes to the report which has been referred to as the amended proposed Assessment Report. Once approved any revisions are included in an updated Assessment Report.		
1.8	1-16	*Table 1-4 Summary of planned UTRSPA Assessment Report Consultation*	No longer relevant	
		Delete table contents but retain table with the following text: Please refer to Assessment Report Consultation in Appendix 4 for details on Assessment Report consultation		
1.9	1-16	The following schedule describes at high level the work conducted so far, and the Source Protection Planning process.	Update to reflect current status	
		The following schedule describes at high level the work required to complete the Assessment Report and Source Protection Plan and update the Assessment Report and amended the Source Protection Plan before the approval of the first Source Protection Plan for the Thames-Sydenham and Region.		
1.9	1-17	*Figure 1-1 Source Protection planning schedule overview*	update figure	
		See revised figure appended to this change log		
1.9	1-19	The proposed report was updated and amended as required by the Director, due to additional technical work carried out, as described in Section 1.10.2. The Amended Proposed Assessment Report will also be posted on the Internet for a 30 day comment period.		
		The proposed report was amended as required by the Director, due to additional technical work carried out, as described in Section 1.10.2. The Amended Proposed Assessment Report was also posted on the Internet for a 30 day comment period. The current report is an Updated Assessment Report which fills in many of the data gaps identified in previous Assessment Reports. Local consultation with those affected by the updates has be conducted as well as a posting and open house in conjunction with the consultation on the amended proposed Source Protection Plan.		
1.10.1	1-20	First Nations participate on the Source Protection Committee with the appointment of three First Nations members. Previously various staff of the Southern First Nations Secretariat and councilors from the First Nations have participated in various ways including informal participation in tours and meetings of the Source Protection Committee, forums and workshops held at various stages in the Source Protection Planning process. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. Interest has been expressed in the participation in some of the technical studies.	update	
		First Nations participate on the Source Protection Committee with the appointment of three First Nations		

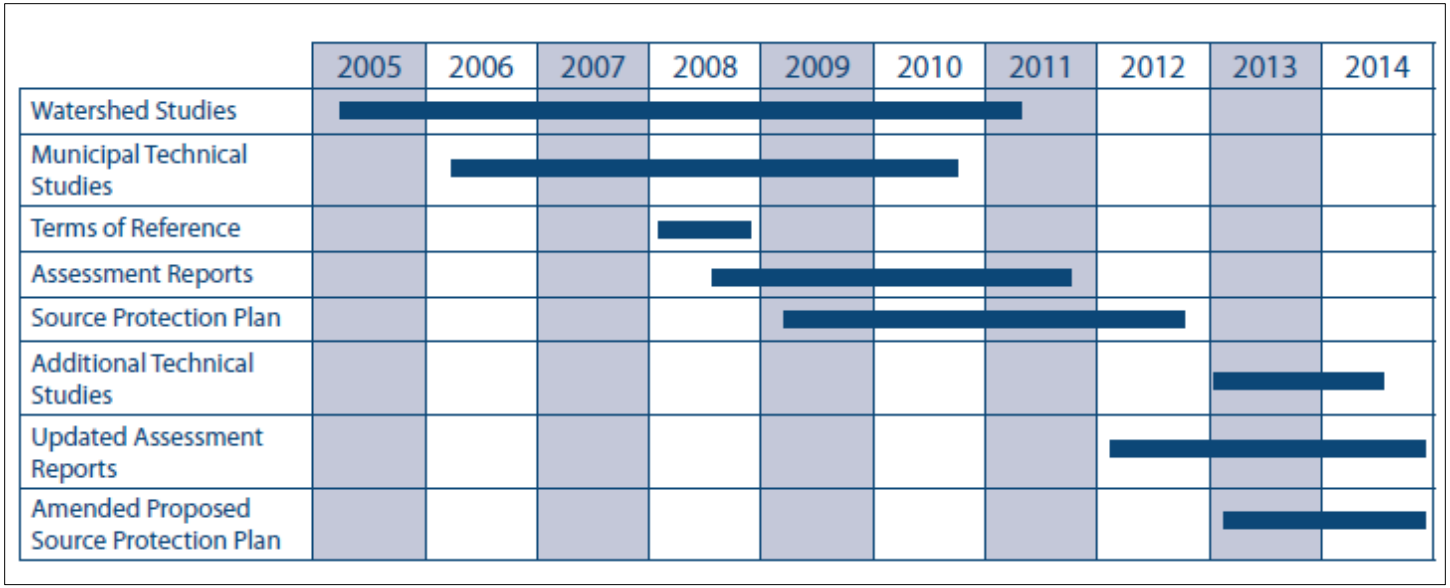
Section	Page	Text	Reason For Change	Changes Made
		members. Previously various staff of the Southern First Nations Secretariat and councilors from the First Nations have participated in various ways including informal participation in tours and meetings of the Source Protection Committee, forums and workshops held at various stages in the Source Protection Planning process. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. The Chippewas of Kettle & Stony Point First Nation (in St Clair Region Source Protection Area) passed a band council resolution requesting the Minister to include their intake in the Terms of Reference for the region and allow them to undertake the technical work to include Intake Protection Zones for their intake. Other First Nations in the Lower Thames Valley Source Protection Area participated in a study to assess a potential WHPA-E associated with their GUDI wells. The First Nations Working Group also explored potential policies which could be put in place on reserve to afford their groundwater a similar level of protection to municipal systems under the Source Protection Plan although they did not formally request to have their systems added to the Terms of Reference for the region.		
1.10.2	20	Several of the gaps identified in the Proposed Assessment Report are now filled. These include the Tier 2 water budget drought scenario analysis, the delineation, vulnerability assessment and threats assessment (vulnerability scoring approach) of WHPA-E, and threats assessment of sewer line threats. Filling of those data gaps in early 2011 allowed them to be included in the current Amended Proposed Assessment Report, thus allowing for the materials to be available to the Source Protection Committee for the development of the Source Protection Plan. The Source Protection Plan is required to be submitted in August 2012. Section 9 indicates the remaining few gaps in the Upper Thames River Source Protection Area Assessment Report. The Assessment Report can be amended if the Source Protection Committee becomes aware of the need to amend the report. Changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source Protection Committee. As a result of this new information or understanding, the Source Protection Committee may amend the Assessment Report in the future. The Source Protection Committee will also need to consider amendments to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan will be established by the Minister in the approval of the Source Protection Plan. Any amendments to the Assessment Report would require consultation of those affected by the amendments.		
		Several of the gaps identified in the Proposed Assessment Report are now filled. This updated Assessment report includes the completion of the Tier 3 Water Budget and Water Quantity Risk Assessment, as well as Issues Contributing Area delineation. The SGRA and related risk assessment information has also been updated. The Source Protection Plan is also amended and consultation on the Plan is occurring with this Assessment Report. Section 9 indicates the remaining few gaps in the Upper Thames River Source Protection Area Assessment Report.		

Section	Page	Text	Reason For Change	Changes Made
		The Assessment Report can be updated if the Source Protection Committee becomes aware of the need to update the report. Changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source Protection Committee. As a result of this new information or understanding, the Source Protection Committee may update the Assessment Report in the future. The Source Protection Committee will also need to consider amendments to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan will be established by the Minister in the approval of the Source Protection Plan. Any updates to the Assessment Report would require consultation of those affected by the amendments.		
A11-Glossary				
		Add EBA – Event Based Area And Event Based Area – An area within which an activity is a significant drinking water threat based on event modelling. It may be comprised of parts of IPZ-1, IPZ-2 and IPZ-3		

Table 1-1 SPC members and representation

Chair			Robert Bedggood
Municipalities		Chatham-Kent	Sheldon Parsons
		Lambton	Darrell Randell
		London	Patrick Donnelly
		Middlesex	James Maudsley
		Elgin	Brent Clutterbuck
		Oxford	Pat Sobeski
		Perth, Stratford, St. Marys, Huron	Joe Salter
Sectors	Agriculture		John Van Dorp
			Patrick Feryn
			Don McCabe
	Industry/Commercial		Dean Edwardson
			Earl Morwood
	Aggregate/Oil and Gas	Aggregate and Quarries	Paul Hymus
		Oil and Gas	Hugh Moran
Other			George Marr
			Doug McGee
			Joseph Kerr
			Carl Kennes
			Valerie M'Garry
			John Trudgen
			Charles Sharina
First Nations			Kennon Johnson
			Augustus Tobias
			Darlene Whitecalf
Liaisons		Medical Officers of Health	Jim Reffle
		Province	Teresa McLellan
		Source Protection Authority	Murray Blackie

Updated Figure 1-1



2.2 Updates to UTRCA Assessment Report to reflect the completion of the Tier 3 Water Budget

Section	Existing Page	Text Changes original / proposed revisions
Section 1- Introduction and Background		
S 1.1 Water Budget and Water Quantity Stress Assessment (Section 3)	1-3ii	Further, a Tier 3 local area risk assessment and water budget will be done to assess the water quantity threats at each drinking water system exhibiting a potential for stress in the Tier 2 assessment.
Suggested revision	1-3ii	Further, a Tier 3 local area risk assessment and water budget was completed to assess the water quantity threats at each drinking water system in the sub-watersheds exhibiting a potential for stress in the Tier 2 assessment. The area for Tier 3 investigation determined that there were no significant or moderate water quantity threats for the systems analyzed.

Section 3 - Water Budget and Water Quantity Stress Assessment:		
S 3.0 Water Budget and Water Quantity Stress Assessment, par 2	3-1	On the other hand, where there is a significant potential for stress, activities contributing to the stress will be assessed to determine if they constitute significant threats. This is done through the Tier 3 Water Budget in only those areas where the potential for stress warrants this detailed local analysis.
Suggested revision		On the other hand, where there is a significant potential for stress, activities contributing to the stress were assessed to determine if they constituted significant threats. This was done through the Tier 3 Water Budget in those areas where the potential for stress warranted a detailed local analysis.
S 3.0 Water Budget and Water Quantity Stress Assessment	Last para p. 3-2	As the potential for stress on some drinking water sources was determined to be moderate or significant through the Tier 1 and Tier 2 Water Budgets, Tier 3 Local Area Risk Assessments are required for the Upper Thames River Source Protection Area. Work is underway for the completion of the Tier 3 study and the results will be

		included in future updates to the Assessment Report.
Suggested revision		As the potential for stress on some drinking water sources was determined to be moderate or significant through the Tier 1 and Tier 2 Water Budgets, Tier 3 Local Area Risk Assessments were required for the Upper Thames River Source Protection Area. A Tier 3 Water Budget and Local Area Risk Assessment (Tier 3 Assessment) was completed for the municipal drinking water systems of : • City of Woodstock, the Town of Ingersoll, and the Community of Beachville, located within the County of Oxford, • the Town of St. Marys, • the City of Stratford and • the Village of St. Paul's located within the County of Perth.
3.2.4 Recharge	p. 3-4	In the Tier 2 Water Budget for the Upper Thames River Source Protection Area, recharge was estimated based on a combination of surficial geology and land use. The landscape is examined using Geographic Information System (GIS) software, and all possible combinations of land use and surficial geology are considered and combined to form one of nine different hydrologic response units (HRU). Each of these response units is then associated with recharge value for a particular climate zone, which has been calibrated for these HRUs throughout southwestern Ontario using a surface water model (GAWSER), and further refined for the UTRSPA.
Suggested revisions		In the Tier 2 Water Budget for the Upper Thames River Source Protection Area, recharge was estimated based on a combination of surficial geology and land use. At the Tier 3 level, a closer examination of the hydrologic response units in the GAWSER surface water model was completed. This allowed for a better representation of pervious and impervious areas in urban setting. This provides a better representation of recharge than was provided in the Tier 2 Water Budget.
3.3.4 Tier 3 Water Budget	p. 3-13	The Tier 3 Water Budget, or local area risk assessment, is a local water balance undertaken on the scale of a single drinking water supply system and is intended to examine the reliability of that supply, including testing of drought and future demand scenarios. The Tier 2 analysis completed in the Upper Thames River Source Protection Area requires that 6 municipal systems undergo a Tier 3 analysis. These systems are illustrated in Map 3-6, and this analysis has just begun at the time of publication of the Assessment Report.
Suggested revisions		The Tier 3 Water Budget, or local area risk assessment is a local water balance undertaken on the scale of a single municipal drinking water supply system. The Tier 3 Water Budget is intended to examine the reliability of that supply, including testing of drought and future demand scenarios. The purpose of a Water Quantity Stress Assessment is to compare available groundwater and surface water supply to the demand from existing, future and planned drinking water systems. Where the Tier Two analysis found the ratio of water demand to water supply is high, watersheds were classified as having a "Moderate" or "Significant" potential for water quantity stress and a Tier 3 analysis was required. The Tier 2 analysis completed in the Upper Thames River Source Protection Area (SWS 2011) required that 6 municipal systems, illustrated in Map 3-6, undergo a Tier 3 analysis. A Tier 3 Assessment was therefore completed for the following municipal drinking water systems: • City of Woodstock, the Town of Ingersoll, and the Community of Beachville, located within the County of Oxford, • the Town of St. Marys, • the City of Stratford and • the Village of St. Paul's located within the Perth South.
Section 3.4 Water Quantity Stress and Local Area Risk Assessment		Section 3.4 Water Quantity Stress Assessment
Suggested Revision		Section 3.4 Water Quantity Stress and Local Area Risk Assessment
3.4 Water Quantity Stress Assessment	p. 3-20	From the Tier 2 Stress Assessment, municipal systems which are moving to a Tier 3 analysis include:

		• Stratford • St. Marys • St. Pauls • Woodstock • Beachville • Ingersoll Tier 3 work has begun for these systems with data being collected as of May 2010. The Tier 3 work is expected to be completed in 2012.
Suggested revisions		From the Tier 2 Stress Assessment, municipal systems which moved to a Tier 3 analysis include: • Stratford • St. Marys • St. Pauls • Woodstock • Beachville • Ingersoll Tier 3 work has been completed for these six municipal systems.
Section 3.4.2	3-21	New section added following 3.4.1

Suggested addition	3-21	*Section 3.4.2 Local Area Risk Assessment (Tier 3 Assessment)* Map 3.6 outlines the Groundwater Potential for Stress Areas identified in the Tier 2 assessment. If a subwatershed with a municipal system is found to have a moderate or significant potential for stress in Tier 2 (Table 3-6 (b)), it then moves to a Tier 3 local area risk assessment which looks at each municipal system, or combination of systems where the local areas may overlap. In Tier 3 new stress assessments are not made; rather, a risk assessment of the reliability of individual systems to be able to meet demand was conducted. Six municipal systems, identified in the Tier 2 assessment, with a moderate or significant potential for stress advanced to the Tier 3. A Local Area Risk Assessment (Tier 3) was completed for the following municipal drinking water systems: • the City of Woodstock, the Town of Ingersoll, and the Community of Beachville, located within the County of Oxford, • the Town of St. Marys, • the City of Stratford, and • the Village of St. Paul's located within Perth South. The following is a synopsis from the Executive Summary of the Tier 3 Assessment and Local Area Risk Assessment Reports (Matrix, 2014). These Reports are provided in their entirety as supporting documents to this Assessment Report. The groundwater supply system of the City of Woodstock consists of 11 wells constructed in both bedrock and overburden aquifers, while the seven groundwater wells in Ingersoll and single well in Beachville draw water solely from bedrock aquifers in the Cedar Creek and South Thames above Ingersoll subwatersheds. Despite the Tier 2 indication of potential stress, to date, the City of Woodstock, Town of Ingersoll and Community of Beachville have not had any issues meeting their water quantity requirements. The groundwater supply system of the Town of St. Marys consists of three wells constructed in bedrock aquifers. The Tier 2 Water Quantity Stress Assessment identified the Trout Creek/North Thames River subwatershed as having a Moderate potential for groundwater stress. Despite this indication of potential stress, to date, the Town of St. Marys has not had issues meeting their water quantity requirements. The groundwater supply system of the City Stratford consists of 11 bedrock wells, while that of the Village of St. Paul's consists of a single bedrock well. The Tier 2 Water Quantity Stress Assessment identified the Avon River and Trout Creek / North Thames River subwatersheds as having a Significant and Moderate potential for groundwater stress, respectively. Despite this indication of potential stress, to date, the City of Stratford and Village of St. Paul's have not had issues meeting their water quantity requirements. These systems are illustrated in Map 3-6.

New section 3.4.2 (continued)		Three groundwater models were constructed to complete the three Tier 3 Local Area Risk Assessment. The Tier 3 Risk Assessment undertook a detailed review and representation of the physical system within the Stratford/St. Paul's Area, St. Marys Area and the Woodstock-Ingersoll-Beachville Area. The conceptual model used within the Tier 3 Assessment was refined and enhanced from earlier conceptualizations, Ontario Geological Survey aquifer mapping information was utilized where available and insights gained from more detailed local and regional studies were incorporated. The GAWSER surface water model that was developed for the Tier 2 Assessment was updated for the current assessment to provide refined estimates of groundwater recharge for groundwater modelling. Where the model domains extended beyond the UTRCA watershed, the GAWSER model was not available The GAWSER model was calibrated using data from non-regulated stream gauges in the greater study area. A groundwater flow model was developed for each study area using MODFLOW for St. Marys and Stratford and St. Pauls. The model included a finite difference grid that was refined around municipal pumping wells to assess groundwater flow and the potentiometric surface impacts at a well field scale. Similarly, a FEFLOW groundwater flow model was created for the Woodstock, Beachville and Ingersoll area. The groundwater flow models were calibrated to a fine level of detail with close attention to both local and regional observed water levels, stream baseflow estimates, recharge estimates from the GAWSER model, as well as municipal pumping and high quality water level observation data. As such, the Tier 3 models were calibrated at the municipal well field-scale to both steady-state (long term average) and transient (time-varying) conditions. As the surface water and groundwater models were both satisfactorily calibrated to observed steady-state and transient water levels and flows, they are considered to be reliable tools for water budget estimation. The groundwater and surface water models were used to assess the reliability of the systems under various scenarios. The scenarios are identified in the Technical Rules (MOE, 2009). The scenarios include various combinations of average annual and draught conditions under current, and future demands. The scenarios also include consideration the effects of future development on recharge. Each of the scenarios are assessed to determine whether the water levels in the wells are drawn down below a level at which they are safe to continue to operate (Safe Additional Available Drawdown). Based on the results of the Risk Assessment modelling scenarios all Local Areas assessed were classified as having a Low Risk Level. This is largely due to an abundance of capacity in municipal supply wells. Following the Technical Rules, no consumptive water users or potential reductions to groundwater recharge within the Local Area are classified as significant water quantity threats. Under all scenarios investigated, municipal wells were able to withdraw their allocated quantity of water, without exceeding safe available drawdown thresholds within the well, or without impacts to other water uses. Despite the indication of potential stress in earlier investigations, none of the six had issues meeting their water quantity requirements. The 6 systems were classified as having a Low Risk Level. As a result, the Local Area was assigned a "**Low**" Risk level. This is largely due to an abundance of capacity in municipal supply wells; also due to low anticipated growth and low forecast increase in water demand, as well as an abundance of additional water in municipal supply wells.
New Section 3.4.3		New section to be added following the new section 3.4.2
Suggested addition		**3.4.3 Uncertainty in the Tier 3 Assessment** As part of the Tier 3 Assessment, existing surface and groundwater models were enhanced, using a detailed characterization of wells and decreased area of investigation. Additional detailed hydrogeologic and/or hydrologic characterization was undertaken within and surrounding the municipal wells. More specifically, the Tier 3 analysis identified the low water operating constraints of the municipal wells, included individual municipal well water level

		measurements and pumping data and local area characterization gleaned from local studies. The representation of the groundwater flow system was calibrated to available hydraulic head data, pumping rates at municipal wells and streamflow measurements using a set of parameters (e.g., recharge and hydraulic conductivity) that are consistent with the conceptual model. The surface water model was calibrated to both overall streamflow, as well as low flow conditions and was used to generate estimates of groundwater recharge. While the numerical model is considered appropriate for the Tier 3 Assessment, consideration of the certainty of the Risk Level Assignment was completed based on a number of factors observed throughout the completion of this Tier 3 Assessment. Factors 1-4 are common through all study areas, Factors 5 & 6 are limited to the Stratford / St; Pauls areas. The areas to which the factors apply are shown in brackets with each factor. These factors include: 1) Slow growth or higher historical Demand - the resulting effect of increased withdrawals on future water levels and flows is expected to be minimal (Stratford, St Marys, St Pauls, Beachville and Ingersoll). Stratford system has historically pumped at a much higher rate (as much as 30% higher in the mid 1990's). 2) Conservative estimates of SAAD – The estimates of Safe Additional Available Drawdown (SAAD) are considered conservative based on the estimate of the safe water level in each well. (Oxford, St Marys Stratford and St Pauls) 3) High capacity – The Capacity, represented by the amount of SAAD, is more than able to meet future growth projections (Oxford, St Marys, Stratford and St Pauls) 4) Flexibility of the water supply systems – if increased demand caused an undesirable amount of drawdown the operator has sufficient flexibility to re-proportion the increased demand to one or more of the remaining wells. (Stratford, St Marys, Woodstock and Ingersoll) 5) Reduced simulated recharge – During numerical model calibration, the magnitude of recharge derived from the GAWSER surface water model, representing existing conditions, was decreased by 7% in areas of coarser grained surficial deposits to reduce localized mounding (simulated hydraulic head values above ground surface) in the numerical model. Therefore, even before simulated recharge was reduced due to development proposed in the OP (Scenarios G(1), G(3), H(1), and H(3)), recharge was already conservatively low in Existing conditions. (Stratford and St Pauls) 6) Predominance of confining clay till – Due to the extent and thickness of the fine-grained overburden, which separates the surficial systems from the deeper bedrock production aquifers, there is an intuitively higher degree of certainty that there would be a negligible impact on surface water features due to increased municipal pumping. Additionally, land use development is predicted to have a much smaller impact on recharge reduction (Stratford and St Pauls) All of the factors listed above contribute to a High confidence in the Low Risk Level that was assigned to the Local Area of all assessed systems.
3.5 Significant Groundwater Recharge Areas	P 3-22 1st par	Significant Groundwater Recharge Areas (SGRAs) are delineated through the water budget work. These areas are determined through the use of the recharge calculated in the Tier 2 Water Budget and discussed in Section 3.2.4 above.
Suggested revisions		Significant Groundwater Recharge Areas (SGRAs) are delineated through the water budget work. These areas are determined through the use of the recharge calculated in Tier 3 Water Budget. The same methodologies were used as in Tier 2, however, improvements to the GAWSER surface water numerical model improved the representation of recharge in urban areas. Improvements to the classification of soils and land use in urban areas allowed better representation of impervious and pervious areas.

3.5 Significant Groundwater Recharge Areas	P 3-22 2nd par	Rule 44(1) was used in the TSR to determine the SGRAs, and the entire Upper Thames basin was used as "the whole of the groundwater recharge area" for the purposes of determining average recharge. The average recharge of the entire Upper Thames River is 132 mm/a. According to Rule 44(1), this is multiplied by 1.15 to provide the criteria of SGRA. Therefore 151 mm/a is the threshold used to determine the significance of groundwater recharge areas in the Upper Thames River Source Protection Area.
Suggested revisions.		As required by the Technical Rules, Significant Groundwater Recharge Area mapping was updated as part of the Tier 3 Assessment. Using Rule 44(1) of the Technical Rules (MOE 2009), a threshold of 115% of the average groundwater recharge rate was applied against the groundwater recharge rates estimated by the Tier 3 GAWSER surface water model. Similar to the Tier 2 SGRA mapping exercise, a 25 ha filter was applied to remove small isolated identified areas, or to infill small non-identified areas that were surrounded by identified areas. The average recharge of the entire Upper Thames River is 132 mm/a. The majority of SGRAs are located in the southern portions of the Upper Thames River Conservation Authority, in pervious surficial materials surrounding and within the City of London and the municipality of Thames Centre. There are localized SGRAs surrounding Woodstock and Ingersoll, as well as St. Marys. Moving north to Stratford, tills become the predominant geology, and SGRAs are minimal. Overall, the identified SGRAs are similar to where sand and gravel deposits have been delineated within the surficial geology mapping.
3.6 Data Gaps and Next Steps	p. 3-24	Table 3-8 summarizes data gaps identified through the Tier 1 and Tier 2 Water Budgets and Water Quantity Stress Assessments. As the stress assessment was completed through a combination of Tier 1 and Tier 2 Water Budgets, it is expected that there would be data gaps. In the case of surface water analysis, if work were to proceed to Tier 2, many of these gaps would need to be addressed at that time. In the case of groundwater analysis, work proceeding to Tier 3 will address many of the data gaps found in Tier 2.
Suggested revisions		In the case of groundwater analysis, Tier 3 analysis improved the local understanding and reduced the uncertainty.
Table 3-8 *third point*	p. 3-24	Improved understanding of water use: Where Tier 3 assessment will be undertaken, updated PTTW will be considered to the extent that the data is available.
Suggested revisions		Delete point
Table 3-8 2nd gap	p. 3-24	Completion of the Peer Review of the T2WB
Suggested revisions		Delete gap

Section	Existing Page	Text Changes original / proposed revisions
A2-3 Water Budget Summary		
Tier 3 Water Budget	p.3	The Tier 3 Water Budget (T3WB or Tier 3) is a local area water balance undertaken on the scale of a single water supply system and is intended to examine the reliability of that supply. Municipal water systems in Beachville, Ingersoll, Stratford, St. Marys, St. Pauls and Woodstock will be assessed through the T3WB. This work was initiated in 2010, starting with data collection and work plans. The stress assessment and the identification of water quantity threats will be completed in early 2012 dependant on available funding and data.
Suggested revisions		The Tier 3 Water Budget (T3WB or Tier 3) is a local area water balance undertaken on the scale of a single water supply system and is intended to examine the reliability of that supply. Municipal water systems in Beachville, Ingersoll, Stratford, St. Marys, St. Pauls and Woodstock were assessed using improved groundwater models and various combinations of scenarios (including draught, future demand, steady state and transient conditions) were assessed. The Local Areas, delineated through the Tier 3 Water Budget were delineated and classified as having a Low Risk Level. This is largely due to an abundance of capacity in municipal supply wells. Following the Technical Rules, no consumptive water users or potential reductions to groundwater recharge within the Local

Section	Existing Page	Text Changes original / proposed revisions
		Area are classified as significant water quantity threats.
Tier 3 Water Budget Data Gaps	p. 13 of 38	Also, a Tier 3 Water Budget is required for the drinking water systems identified through the Tier 2 Water Budget.
Suggested revisions		Delete gap

Section	Existing Page	Text Changes original / proposed revisions
A2-4 Vulnerability Assessment		
Significant Groundwater Recharge Areas	P 20 / 38	Significant Groundwater Recharge Areas (SGRA) are delineated through the Water Budget Process. In the Upper Thames River SPA, SGRAs were delineated through the Tier 1 Water Budget. The initial delineation has been updated based on improved methodologies developed through the Tier 2 Water Budget undertaken in the Upper Thames River SPA. Areas in the river valley/flood plain areas were further reviewed, to remove areas of discharge.
revisions		SGRA delineations were refined through the Tier 3 Water Budget. The same methodologies were used as in Tier 2, however, improvements to the surface water model improved the representation of recharge in urban areas. Improvements to the classification of soils and land use in urban areas allowed better representation of impervious and pervious areas.
Map 5	P 20/38	Significant Groundwater Recharge Areas Vulnerability
Map 5	20 of 38	SGRA maps needs updating to Tier 3 SGRA maps
Additional changes may be require as a result of other technical work		

Section	Existing Page	Text Changes original / proposed revisions
A2-9 Data Gaps		
Data Gaps	P 37 / 38	The Technical Rules: Assessment Report identifies many of the requirements of the Assessment Report. For some of these requirements, the technical rules allow for the submission of a work plan if the information necessary to complete the item is not available. These items include threats contributing to identified drinking water quality issues, Tier 3 Water Budget, Wellhead Protection Area-E (WHPA-E) and Wellhead Protection Area-F (WHPA-F) associated with systems that are Groundwater Under Direct Influence of surface water (GUDI), and Intake Protection Zone (IPZ) - 3.
Table 1 work Plan	P 37 / 38	3 and 4 th points in Table 1
		Delete 3 and 4 th points in Table 1

2.3 Section 4 – Vulnerability Assessment

Section	Page	Text	Reason For Change	Changes Made
4.5 Significant Groundwater Recharge Areas	p. 4-52	Significant Groundwater Recharge Areas or SGRAs are delineated through the Water Budget Process. In the Upper Thames River Source Protection Area these were delineated through the Tier 2 Water Budget. The delineation of the SGRAs is described in detail in Section 3 – Water Budget and Water Quantity Stress Assessment.	Updated SGRA from T3WB	
		Significant Groundwater Recharge Areas or SGRAs are delineated through the Water Budget Process. In the Upper Thames River Source Protection Area these were delineated through the Tier 2 Water Budget and updated through the Tier 3 Water Budget. The delineation of the SGRAs is described in detail in Section 3 – Water Budget and Water Quantity Stress Assessment.		
4.3.5 Vulnerability Adjustments of the WHPA (Oxford Wellfields)	4-36	... Adjustments to the vulnerability mapping were made in three areas to account for *transport pathways*. These areas include: • The sand/gravel pits located in WHPA-B of the well 2 and 4 of the Tabor wellfield: vulnerability categories were adjusted from medium to high, resulting in an increase in vulnerability score from 8 to 10 • The village of Sweaburg to account for a higher density of existing private wells and septic systems in WHPA-B of the wells 1, 3, 5, 8 and 11 of the Thornton wellfield; vulnerability categories were adjusted from medium to high, resulting in an increase in vulnerability score from 8 to 10 • The Pattulo Avenue/Greenly Line portion of WHPA-C and D from bedrock Well 9, to account for a high density of private wells; in WHPA-C, vulnerability categories were adjusted from low to medium, resulting in an increase in vulnerability score from 2 to 6, while in WHPA-D, vulnerability categories were adjusted from low to medium, resulting in an increase in vulnerability score from 2 to 4.	To reflect updated technical work	
		... Adjustments to the vulnerability mapping were made in three areas to account for *transport pathways*. These areas include: • The sand/gravel pits located in WHPA-B of the well 2 and 4 of the Tabor wellfield: vulnerability categories were adjusted from medium to high, resulting in an increase in vulnerability score from 8 to 10 • The village of Sweaburg was previously assessed to account for a higher density of existing private wells and septic systems in WHPA-B and C of the wells 1, 3, 5, 8 and 11 of the Thornton wellfield; vulnerability categories were adjusted from medium to high, resulting in an increase in vulnerability score from 8 to 10 and 6 to 8, however since the previous assessment most of the wells in this area have been decommissioned as part of an Oxford County project to service the village with municipal water, therefore only the properties which have private wells remaining on the property have had their vulnerability adjusted. • The Pattulo Avenue/Greenly Line portion of WHPA-C and D from bedrock Well 9, to account for a high density of private wells; in WHPA-		

Section	Page	Text	Reason For Change	Changes Made
		C, vulnerability categories were adjusted from low to medium, resulting in an increase in vulnerability score from 2 to 6, while in WHPA-D, vulnerability categories were adjusted from low to medium, resulting in an increase in vulnerability score from 2 to 4.		
Map 4-1-17 **Map 7-3-17** **Map 4-2-1** **Map 4-2-2**		Revised mapping to be provided	Map revisions to reflect the changes in vulnerable area maps as a result of the update to the SGRA and Woodstock vulnerability adjustments	
Vulnerability section summary		Revisions to be determined	To reflect changes in the AR	
Woodstock System summary		Revisions to be determined	To reflect changes in the AR	

2.4 Section 5 – Issues Evaluation

Section	Page	Text	Reason For Change	Changes Made
Table 5-5	5-9	**Technical Studies on Drinking Water Quality Issues Evaluation**	To incorporate new work	
		Final Tabor 2/4 and Tillsonburg 4/5 Municipal Well Nitrate Contributing Areas Technical Memorandum Matrix Solutions Inc, December 20, 2013 Woodstock Rural (Thorton Wellfield) Technical Memorandum, AR Lottimer Woodstock Thorton Wellfield, Issue Contributing Area for Nitrate April 22, 2014 Thorton Issue Contributing Area Workplan, Oxford County, July 3, 2014 Tier Three Water Budget and Local Area Risk Assessment Oxford County Matrix Solutions Inc. March 2014 Technical Memorandum Final Tabor 2/4 and Tillsonburg 4/5 Municipal Well Nitrate Contributing Areas Matrix Solutions, December 20, 2013		
Table 5-6	5-13	Nitrate concentrations at the Woodstoc well no. 1, 3, 5, 8 and 11 (Thornton wellfield) have been increasing. Currently water from this wellfield is combined with water from the Tabor wellfield to ensure nitrate levels in the distribution system remain low. The Thornton wellfield represents a significant portion of the total supply to the Woodstock system and therefore Nitrate has been identified as an issue in the Thornton Wellfield.	Reflect further analysis completed since AR	
		Further assessment in 2013/14 has identified the potential for the levels in some of the wells to be leveling off or decreasing. This may be attributed to the modified nutrient management plans used on the properties in municipal ownership within this vulnerable area. Additional monitoring is required to assess whether an ICA is required and whether Nitrate remains an Issue at the Thorton wellfield.		
Table 5-6	5-13	Potentially both natural and anthropogenic causes, further investigation required	Reflect further analysis completed since AR	
		Anthropogenic		
5.6 Issues		Add new section	Describe	

Section	Page	Text	Reason For Change	Changes Made
Contributing Area			methodologies Document ICA and	
		Add text appended below table		
5.6 Workplan	5-14	If a drinking water quality *issue* is identified as per Rule 114, the area and the activity contributing to a drinking water quality *issue* must also be identified as per Rule 115. In the Upper Thames River SPA, some of the *issues* are naturally occurring and are therefore understood to not be subject to Rule 115. The sources or causes of the rest of the *issues* are yet to be determined. If more information becomes available to the SPC it may be possible to determine the source or cause of an *issue*. If it is determined that an *issue* (identified as per Rule 114) is wholly or partially due to anthropogenic sources, the work (to identify the area and activities contributing to the *issue*, as per Rule 115), or the work plan (as per rule 116) would be included in a subsequent assessment report..		
5.6.1 Workplan		If a drinking water quality *issue* is identified as per Rule 114, the area and the activity contributing to a drinking water quality *issue* must also be identified as per Rule 115. In the Upper Thames River SPA, some of the *issues* are naturally occurring and are therefore understood to not be subject to Rule 115. The sources or causes of some of the other *issues* are yet to be determined. If more information becomes available to the SPC it may be possible to determine the source or cause of those *issues*. If it is determined that an *issue* (identified as per Rule 114) is wholly or partially due to anthropogenic sources, the work (to identify the area and activities contributing to the *issue*, as per Rule 115), or the work plan (as per rule 116) would be included in a subsequent assessment report. Nitrate in the Thorton and Tabor wellfields have been identified as anthropogenic. An ICA has been delineated for the Tabor wellfield. Nitrate data from Thorton wells suggests that the levels may be leveling off and decreasing. This may be attributed to the enhanced nutrient management plans used on properties owned by the municipality. Additional monitoring is required to confirm the trend and determine if Nitrate should remain an issue at these wells. The following workplan is being implemented by the County of Oxford and the Issue will be re-assessed as part of the next update to the Assessment Report. Table 5-7 Woodstock Thorton ICA Workplan		

<table>
<tr><th>Section</th><th>Page</th><th>Text</th><th>Reason For Change</th><th>Changes Made</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th></th><th>Task</th><th>Timeline</th></tr>
<tr><td></td><td>Continue with Enhanced Nutrient Management Plans on County-owned farmland within the wellfield</td><td>2014 – 2015</td></tr>
<tr><td></td><td>U. of Waterloo to monitor nitrate migration across landscape to improve conceptual understanding and refine model</td><td>On-going</td></tr>
<tr><td></td><td>Monitor nitrate levels at each well</td><td>On-going</td></tr>
<tr><td></td><td>Prioritize negotiation of Risk Management Plans associated with nitrate application within the wellfield</td><td>Upon effect of the TSR SPP</td></tr>
<tr><td></td><td>Retain 3rd party consultant to analyze data, and provide recommendation regarding nitrate issue designation</td><td>2019/2020</td></tr>
<tr><td></td><td>If necessary:
delineate ICA using Tier 3 Water Budget hydrogeological model and U. of Waterloo conceptual understanding of nitrate movement through the aquifer
identify the associated significant drinking water threats
amend Assessment Report</td><td>2020/2021</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>Table 5-7 Woodstock</td><td>5-15</td><td>University of Waterloo has confirmed that the presence of the parameter is likely due to historical nutrient Application practices on the surrounding agricultural fields. Nitrate concentrations at the wells have been increasing and the research has found that concentrations within the Wellhead Protection Area are higher than those currently seen in the production wells. (Sources of information: Bekeris, L. 2007, Haslauer, C. 2005, Padusenko, G. 2001, Robertson, W. and Sebol L. 2004). The findings of these studies will be reviewed. Additional sampling may be needed. Sampling and analysis of nitrates in the Thamesford vulnerable area and well water may be conducted.</td><td>Thamesford Nitrate Issue was removed in previous revisions to the AR. Reference to additional analysis added and confirming the need for additional monitoring</td><td></td></tr>
<tr><td>Table 5-8</td><td></td><td>University of Waterloo has confirmed that the presence of the parameter is likely due to historical nutrient Application practices on the surrounding agricultural fields. Nitrate concentrations at the wells have been increasing and the research has found that concentrations within the Wellhead Protection Area are higher than those currently seen in the production wells. (Sources of information: Bekeris, L. 2007, Haslauer, C. 2005, Padusenko, G. 2001, Robertson, W. and Sebol L. 2004).A further assessment of levels in 2014 suggests that levels may be decreasing in the Thorton wells. Additional sampling is needed to confirm the trend and assess whether Nitrate is still an Issue at the Thorton wellfield.</td><td>Adjust table numbering to reflect addition of table above</td><td></td></tr>
<tr><td>Issue Section Summary</td><td></td><td></td><td>To reflect changes in the AR</td><td></td></tr>
<tr><td></td><td></td><td>Revisions to be determined</td><td></td><td></td></tr>
</table>

Section	Page	Text	Reason For Change	Changes Made
Map 4-1-17b			To reflect addition of ICA	
		New ICA map previously distributed		completed
Map 7-3-17b			To reflect addition of ICA	
		New ICA map previously distributed		completed

New section to be added before 5.6 Work Plans which become 5.6.1

5.6 Issue Contributing Areas

Rule 115 requires an Issue Contributing Area (ICA) to be delineated for Issues identified as being partially or entirely anthropogenic and the activities contributing to the Issue must be identified. Nitrate is identified for the well numbers 1, 3, 5, 8 and 11 (Thorton wellfield) and well numbers 2, 4 (Tabor wellfield) of the Woodstock drinking water system. The County of Oxford engaged Matrix Solutions to undertake a study to delineate the land uses and areas contributing nitrate to the municipal wells, or Issue Contributing Area (ICA), within the previously mapped Well Head Protection Areas (WHPAs) for Woodstock Wells 2 and 4 (Tabor). The ICA mapping was then used by Oxford County to complete the nitrate activity and condition mapping within the contributing areas as specified in the Technical Guidance for ICA delineation (MOE, 2010).

Nitrate is the most common form of nitrogen found in water. Nitrate is usually introduced into groundwater through widespread or diffuse sources, commonly called non-point sources. Nitrate nitrogen is a naturally occurring essential plant nutrient. The Ontario Drinking Water Quality Standards (MOE, 2006a) specify a Maximum Allowable Concentration (MAC) of 10 mg-N/L is set to protect infants from methemoglobinemia (blue baby syndrome). Nitrate is naturally occurring in groundwater and the nitrate level of most ambient groundwater is low, generally less than 1 mg/l (as N). The presence of nitrate in groundwater greater than 3 mg/l usually reflects the impact of human activities (anthropogenic). Nitrate is highly soluble since there is no mineral in the soil that can precipitate or bind it to limit its concentration and therefore Nitrate persists and accumulates. In general, overburden wells have higher nitrate concentrations than bedrock wells (3 CA groundwater study).

The applied methodology is based upon experience from research completed by the University of Waterloo assessing nitrate contributing areas and transport to the Woodstock Wells No. 1, 3, 5, 8 and 11 (Thornton Wellfield). The final ICA delineation was completed for areas within the established WHPAs developed as part of the Source Protection work by Golder (2010).

Nitrate Sources

The activities associated with agriculture (fertilizer and ASM), residential development (septic effluent) and wetlands (decaying organic material) are known sources of nitrate in groundwater which are present in the WHPA. Agriculture is the dominant land use in the WHPAs and application of nitrate fertilizers has been increasing in Canada since the 1950s. Nitrate contributions from septic systems and decaying organic materials were assumed to be negligible given the small land area within the WHPAs and typical loadings associated with these features.

Modelling Tools

A conceptual hydrogeological model and MODFLOW numerical model were developed to define WHPA's in the Woodstock area. As part of the Tier 3 Water Quantity Risk Assessment, refinements to the conceptual and numerical models included the development of a new, more detailed, peer reviewed FEFLOW numerical model and further refinement to recharge through the GAWSER surface water model.

The Tier 3 FEFLOW model was used to estimate the time of travel through the saturated zone from the point of recharge (water table) to the well. This analysis uses backward particle tracking methods and is consistent with the approach used by Golder (2010) to delineate time of travel capture zones and WHPAs. The MOE SAAT guidelines (2006) were utilized to estimate the unsaturated zone time of travel and were based on soil texture and mobile moisture content estimates.

The total estimated time of travel (total time lag) from the ground surface to Woodstock Wells 2 and 4 (Tabor wellfield) and was delineated by adding the average saturated zone time of travel to average unsaturated zone time of travel for each land use mapped in GIS. The total time of travel exceeds 60 years in areas southwest of the Tabor wells due to thick till and lower recharge. Within the areas contributing recharge to the wells, time of travel is less than 60 years and as short as about 5 years. In this area, the overlying till is thinner and the rate of recharge is higher. The largest contribution of Nitrate mass is from the 25 to 60 years time of travel category. This is consistent with the observed increase in nitrate concentrations over decades at both well fields.

The Nitrate Issue Contributing Areas forWoodstock well numbers 2 and 4 (Tabor), have the following characteristics:
They lie within the land area that contributes 100% of the recharge to each well field.
The land use is primarily agriculture.

The total travel time from ground surface to the well is less than 60 years.
The areas contributing recharge to the well, but not considered to have significantly contributed to the measured nitrate at the well are:
The non-agricultural land use areas.
The areas with the total time of travel greater than 60 years.

The Issue Contributing Area (ICA), contained within the WHPA, is shown in Map 4.1-17b and reflects the areas with a total time of travel through the saturated and unsaturated zones of 60 years or less. It should be noted that the WHPA-B through D zones are delineated based on travel time through the saturated zone only (within the aquifer) and do not include time of travel from the surface to the saturated zone. As a result the 60 year total travel time used to delineate the ICA Is largely within the WHPA-D (25 year time of travel).

Activities contributing to the Nitrate issue within this ICA are considered significant drinking water threats. The source protection plan will include policies which when implemented will ensure that these activities cease to be or never become significant drinking water threats. The existing activities which are contributing to the nitrate issue are enumerated in section 7.

Since inorganic nitrogen fertilizer application became common during the last 60 years it was assumed that the nitrate mass at the wells has a total travel time less than 60 years. The majority of the nitrate mass (65%) is estimated to have a total time of travel of 25 to 60 years. Only 6% of the nitrate mass has total time of travel less than 5 years. As the majority of mass has a long time of travel to the wells from the point of nitrate application and the large amount of mass currently resident in the unsaturated zone, it’s expected that significant reductions in fertilizer application will take at least ten years before a significant reduction in nitrate concentrations at the well would be observed. This is supported by experience in the Thorton wellfield where enhanced nutrient management plans have been utilized since 2003 on lands owned by the municipality. After a decade of reduced nitrate application, reductions in nitrate levels are starting to be observed at the wells. Continued management efforts and monitoring will be necessary to confirm this trend and assess the effectiveness of the SPP policies over decades of implementation.

2.5 Section 7 – Threats and Risk Assessment – Water Quality

Section	Page	Text	Reason For Change	Changes Made
Title page and footers	all	Revised – August 12, 2011 Approved	Reflect this update to the AR	
		Updated – November 14, 2014		
Table 7-1	7-2	Technical Studies on Drinking Water Threats and Risk Assessment	Update to include additional work	
		Add the following reports: Thames-Sydenham and Region, Technical Memo Terry Chapman, Stephan Clark		
7.1.1	7-7	http://www.ene.gov.on.ca/environment/en/resources/STD01_078436.html http://www.ene.gov.on.ca/environment/en/legislation/clean_water_act/STDPROD_081301.html	Correct broken links when MOE website replaced with ONe-Site	
		https://www.ontario.ca/environment-and-energy/tables-drinking-water-threats The MOE tables of circumstances are not currently available on a single page on the MOE web site however they may be searched individually from the following page by searching “provincial table” on the MOE web site https://www.ontario.ca/government/search-results?query=provincial+table&op=Search		
7.1.4	7-15	If an *issue* is identified, the *activities* that contribute to the identified *issue* and the areas where they occur (within *vulnerable areas*) must also be identified. For the *activities* or *conditions* contributing to *issues* that are deemed to be *significant threats* as described above, the *risks* the *activities* or *conditions* pose must be reduced through the source protection plan.	Add text to reflect Woodstock ICA threats identification	
		If an *issue* is identified, the *activities* that contribute to the identified *issue* and the areas where they occur (within *vulnerable areas*) must also be identified. A nitrate Issue has been identified for the Woodstock rural wellfields (Thorton and Tabor) as described in section 5. An Issue Contributing Area (ICA) has been delineated for the Tabor wellfield and the activities contributing to the issue have been identified and included in the numbers of locations of significant drinking water threats included in the following sections. For the Thorton wellfield, monitoring suggests that current and planned measures may be improving the nitrates in the drinking water source. A work plan is therefore included in section 5 which suggests the issue be re-evaluated in a future update to the SPP. As such there are no additional significant drinking water threats contributing to the issue for the Thorton wellfield. For the *activities* or *conditions*contributing to *issues* that are deemed to be *significant threats* as described above, the *risks* the *activities* or *conditions* pose must be reduced through the source protection plan.		
7.1.5	7-17	A tier 2, or site-specific, risk assessment to confirm the number of locations at which significant threats occur, will be conducted while developing the source protection plans, if needed.		

Section	Page	Text	Reason For Change	Changes Made
		Significant threats verification work was initiated in Perth and Middlesex Counties and the tables included in this assessment report are based on this updated information . Oxford County will undertake similar work as part of preparing for implementation and as such the information is not available for this update to the Assessment Report. The verification work was initiated in Perth and Middlesex to confirm previously identified threats, however it became apparent that it was also important to consider new threats which had become established since the previous inventory or which had been missed in previous inventories. This work was completed by CA staff using similar methodologies to the previous inventory work. It was generally completed as a desktop exorcise with drive-by inspections where appropriate. Managed land, livestock density and percent imperious data was considered where this information is included as a circumstance. Home heating fuel options and septic/sanitary servicing was also used to refine the threats inventory. Consistent linking to threats circumstances consistent with updated provincial data models was also undertaken to assist in the implementation of policies. Numbers of locations of significant drinking water threats provided in the tables in the following section are based on this updated inventory work. While this work is an improvement on the previous inventories it will be important that site inspection as part of routine compliance monitoring or threats verification be undertaken by Risk Management Inspectors as part of the implementation of the SPP.		
7.2	7-18	...of assigned vulnerability scores. This applies to *intake protection zones* and *wellhead protection areas* only, for drinking water systems identified in the Source Protection Area Terms of Reference. The area and *activities* contributing to a drinking water quality *issue* (known to be partially or wholly due to *anthropogenic* sources) must both be identified. The determination of the sources of identified *issues* is noted as a data gap in Section 5 - Issues Evaluation of the Assessment Report.		
		...of assigned vulnerability scores. This applies to *intake protection zones* and *wellhead protection areas* only, for drinking water systems identified in the Source Protection Area Terms of Reference. The area and *activities* contributing to a drinking water quality *issue* (known to be partially or wholly due to *anthropogenic* sources) must both be identified. An Issue Contributing Area (ICA) has been delineated for the Tabor wellfield and the activities contributing to the issue have been identified and included in the number of locations of significant drinking water threats included in the following sections. For the Thorton wellfield monitoring suggests that current and planned measures may be improving the nitrates in the drinking water source. A work plan is therefore included in section 5 which suggests the issue be re-evaluated in a future update to the SPP. As such there are no additional significant drinking water threats contributing to the issue for the Thorton wellfield.		
Tables 7-5, 7-7	7-19	Update tables with updated threats inventories for Perth and Middlesex	Update to reflect new information	
		Revised tables are provided below		
Table 7-6	7-20		Add ICA threats	
		Add ICA to vulnerable areas listed for Woodstock Rural (Tabor), identify number of threats identified and add note that these may also be identified in other parts of the WHPA which overlap with the ICA, but circumstances resulting in SDWT are different		
Tables 7-9 to 7-15	7-22	Update tables based on threats verification work		
		Revised tables are provided below	Update to reflect	

Section	Page	Text	Reason For Change	Changes Made
			new information	
7.2.18	7-33	Add new text at the end of the section		
Proposed addition		Table 7-26a indicates the number of locations where significant threats could occur in the Woodstock ICA of the Upper Thames River Source Protection Area based on current land use. The land use within the Woodstock WHPA is mainly agricultural. Map 7-3-17b shows areas in the Woodstock WHPA where activities 'are or would be' low, moderate or significant threats which contribute to an Issue. The level of threat is significant, regardless of the vulnerability score and the circumstances associated with the activity provided the circumstances identify the activity as a threat due to Nitrate (identified as an Issue).		
Table 7-26a	7-34	Add new table of ICA threats. Note overlap with WHPA and differing circumstances		
Table 7-27 to 7-32	7-35	Update tables based on threats verification work		
7.3 Tier 2 Risk Assessment	7-40	Revise title	Describe and reflect new work	
Proposed section title		7.3 Site-Specific Risk Assessment		
7.3 Tier 2 Risk Assessment	7-40	A tier 2, or site-specific, risk assessment to confirm the number of locations at which significant threats occur, would be conducted while developing the source protection plans, if needed. As part of the consultation on this assessment report, those who are believed to be engaging in a significant threat will be notified. This will allow their participation in the tier 2 risk assessment. The tier 2 work involves the examination of land use activities and the circumstances under which they are undertaken, through site visits and discussions with the landowners. The outcome of the tier 2 risk assessment will be part of a future Assessment Report.		
Proposed revision		A site-specific risk assessment to confirm the existence of significant threats will be necessary as part of implementation. Although additional efforts have been made to verify significant threats, this has not included on site verification of the threat. Although this level of effort was considered as part of the threats verification, it would still be necessary during implementation. Further it will also be necessary as part of compliance monitoring for part IV implementation in both locations where significant threats have been identified and those where threats have not been identified. This is due in part to the potential for activities and circumstance to change at any location without any regulatory approval process. As part of the consultation on this assessment report, those who are believed to be engaging in a significant threat will be notified.		
7.4 Data Gaps	7-40	If a drinking water quality issue is identified at a well or intake as per Rule 114 and is known to be partially or wholly due to anthropogenic causes, the area and the activity contributing to a drinking water quality issue must also be identified as per Rule 115. In the Upper Thames River SPA, some of the issues are naturally occurring and are therefore understood to not be subject to Rule 115. The sources or causes of the rest of the issues are yet to be determined. If more information becomes available to the SPC it may be possible to determine the source or cause of an issue. If it is determined necessary to conduct the work (to identify the area and activities contributing to the issue, as per Rules 114 and 115), that work would be included in a subsequent assessment report.		
Proposed		If a drinking water quality issue is identified at a well or intake as per Rule 114 and is known to be		

Section	Page	Text	Reason For Change	Changes Made
revisions		partially or wholly due to anthropogenic causes, the area and the activity contributing to a drinking water quality issue must also be identified as per Rule 115. In the Upper Thames River SPA, some of the issues are naturally occurring and are therefore understood to not be subject to Rule 115. Nitrates have been identified as partially or wholly anthropogenic for the Woodstock rural well fields. An ICA has been identified for the Tabor Well field and the threats contributing to the issue have been identified. For the Thorton well field a workplan has been developed which continues to monitor the results from implementation of current management measures. The results from this monitoring will be used to determine if an ICA needs to be delineated to address the issue at Thorton. This will need to be reassessed in subsequent updates to the Assessment Report. The sources or causes of the rest of the potentially anthropogenic issues are yet to be determined. If more information becomes available to the SPC it may be possible to determine the source or cause of those issues. If it is determined necessary to conduct the work (to identify the area and activities contributing to the issue, as per Rules 114 and 115), that work would be included in a subsequent assessment report.		
		Threats Section Summary		
		Update to reflect revisions to this section		
		System summaries		
		Revise to reflect updated threats inventories		

Threats Tables for UTRSPA Assessment Report

Section 7

Table 7-5 Number of Locations of Significant Drinking Water Threats in Middlesex County and City of London

System - wellfield	Vulnerable Area	Vulnerability Score	Number of Locations of Significant Threats
Birr	WHPA - A	10	13
	WHPA - B	6	0
	WHPA - C	4	0
	WHPA - D	2	0
Melrose	WHPA - A	10	13
	WHPA - B	10	10
	WHPA - C	6, 8	0
	WHPA - D	2, 4, 6	0
Dorchester	WHPA - A	10	5
	WHPA - B	10	36
	WHPA - B	6	0
	WHPA - C	4, 8	0
	WHPA - D	2, 6	0
	WHPA - E	6.3	0
Thorndale	WHPA - A	10	6
	WHPA - B	6	1
	WHPA - C	4	0
	WHPA - D	2	0
City of London-Fanshawe wells	WHPA - A	10	4
	WHPA - B	10	1
	WHPA - C	8	0
	WHPA - D	Not applicable*	Not applicable
	WHPA - E	7	0
City of London-Hyde Park wells	WHPA - A	10	1
	WHPA - B	10	1
	WHPA - B	6, 8	0
	WHPA - C	6	1
	WHPA - C	4, 8	0
	WHPA - D	2, 4, 6	0

*WHPA reaches steady state in WHPA-C, therefore there is no WHPA-D

Table 7-6 Number of Locations of Significant Drinking Water Threats in Oxford County

System - wellfield	Vulnerable Area	Vulnerability Score	Number of Locations of Significant Threats
Beachville	WHPA - A	10	6
	WHPA - B	6, 8	0
	WHPA - C	4, 8	1
	WHPA - D	2, 4, 6	0
Embro	WHPA - A	10	4
	WHPA - B	6	3
	WHPA - C	4	0
	WHPA - D	2	0
Hickson	WHPA - A	10	10
	WHPA - B	8	0
	WHPA - C	4	0
	WHPA - D	2	0
Ingersoll	WHPA - A	10	21
	WHPA - B	6, 8, 10	22
	WHPA - C	2, 6	16
	WHPA - D	2, 4, 6	0
Innerkip	WHPA - A	10	2
	WHPA - B	8	0
	WHPA - C	6, 8	0
	WHPA - D	2, 4	0
Lakeside	WHPA - A	10	6
	WHPA - B	6	0
	WHPA - C	4	0
	WHPA - D	2	0
Mount Elgin	WHPA - A	10	17
	WHPA - B	6	0
	WHPA - C	4	0
	WHPA - D	2	0
Tavistock	WHPA - A	10	5
	WHPA - B	6	10
	WHPA - C	4	1
	WHPA - D	2	0
Thamesford	WHPA - A	10	6
	WHPA - B	6, 8, 10	6
	WHPA - C	4, 8, 10	0
	WHPA - D	2, 8	0
	WHPA - E	6.3	0
Woodstock – Urban Wells	WHPA - A	10	6
	WHPA - B	8, 6	20
	WHPA - C	6, 2	55
	WHPA - D	4, 2	0
Woodstock –	WHPA - A	10	20

Table 7-6 Number of Locations of Significant Drinking Water Threats in Oxford County

System - wellfield	Vulnerable Area	Vulnerability Score	Number of Locations of Significant Threats
Rural Wells	WHPA - B	10, 8	9
	WHPA - C	8, 6, 2	0
	WHPA - D	4, 2	0
	WHPA - E	7	0

Table 7-7 Number of Locations of Significant Drinking Water Threats in Perth County, City of Stratford and Town of St. Marys

System - wellfield	Vulnerable Area	Vulnerability Score	Number of Locations of Significant Threats
Mitchell	WHPA - A	10	16
	WHPA - B	6	2
	WHPA - C	4	0
	WHPA - D	2	0
Shakespeare	WHPA - A	10	1
	WHPA - B	6	0
	WHPA - C	4	0
	WHPA - D	2	0
Sebringville	WHPA - A	10	13
	WHPA - B	10	0
	WHPA - C	4	0
	WHPA - D	2	0
St. Pauls	WHPA - A	10	17
	WHPA - B	6	0
	WHPA - C	4	0
	WHPA - D	2	0
Stratford	WHPA - A	10	27
	WHPA - B	6	4
	WHPA - C	4	1
	WHPA - D	2	0
St. Marys	WHPA - A	10	31
	WHPA - B	6, 8, 10	21
	WHPA - C	4, 6	0
	WHPA - D	2, 4, 6	0
	WHPA - E	7.2	0

Table 7-9 Significant Threats in the Birr WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The application of agricultural source material to land	Pathogen	A
Application Of Non-Agricultural Source Material (NASM)	Pathogen	A
The application of commercial fertilizer to land.	Chemical	A
The application of pesticide to land.	Chemical	A
Number of occurences of significant prescribed drinking water threats		13
Total number of locations of significant prescribed drinking water threats		13*

*some parcels may have more than one activity occurring

Table 7-10 Significant Threats in the Dorchester WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A, B
The application of agricultural source material to land	Pathogen	A, B
The storage of agricultural source material	Pathogen	A, B
The application of non-agricultural source material to land	Pathogen	A, B
The handling and storage of commercial fertilizer	Chemical	A, B
The application of pesticide to land	Chemical	A, B
The handling and storage of pesticide	Chemical	B
The handling and storage of fuel	Chemical	A, B
The handling and storage of an organic solvent.	Chemical	A,B
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Pathogen	A, B
The handling and storage of a dense non-aqueous phase liquid	Chemical	A,B,C
Number of occurences of significant prescribed drinking water threats		103
Total number of locations of significant prescribed drinking water threats		41*

*some parcels may have more than one activity occurring

Table 7-12 Significant Threats in the City of London-Fanshawe WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The application of pesticide to land	Chemical	A
The handling and storage of fuel	Chemical	A, B
Number of occurences of significant prescribed drinking water threats		5
Total number of locations of significant prescribed drinking water threats		5*

*some parcels may have more than one activity occurring

Table 7-13 Significant Threats in the City of London-Hyde Park WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A, B
The handling and storage of fuel	Chemical	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A,B,C
Number of occurences of significant prescribed drinking water threats		6
Total number of locations of significant prescribed drinking water threats		2

*some parcels may have more than one activity occurring

Table 7-14 Significant Threats in the Melrose WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A, B
The application of agricultural source material to land	Pathogen, Chemical	B
The application of non-agricultural source material to land	Pathogen, Chemical	B
The application of commercial fertilizer to land	Chemical	B
The application of pesticide to land.	Chemical	B
The handling and storage of fuel	Chemical	A, B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A,B,C
Number of occurences of significant prescribed drinking water threats		33
Total number of locations of significant prescribed drinking water threats		23*

*some parcels may have more than one activity occurring

Table 7-15 Significant Threats in the Thorndale WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The application of agricultural source material to land	Chemical, Pathogen	A
The application of non-agricultural source material to land	Chemical, Pathogen	A
The handling and storage of commercial fertilizer	Chemical	A
The application of pesticide to land	Chemical	A

The handling and storage of pesticide	Chemical	A
The handling and storage of fuel.	Chemical	B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A,B,C
Number of occurences of significant prescribed drinking water threats		18
Total number of locations of significant prescribed drinking water threats		7*

*some parcels may have more than one activity occurring

Table 7-16 Significant Threats in the Beachville WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	C
Number of occurrences of significant prescribed drinking water threats		7
Total number of locations of significant prescribed drinking water threats		7*

*some parcels may have more than one activity occurring

Table 7-17 Significant Threats in the Embro WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The application of agricultural source material to land	Pathogen	A
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Pathogen	A
The handling and storage of fuel	Chemical	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B
Number of occurrences of significant prescribed drinking water threats		9
Total number of locations of significant prescribed drinking water threats		7*

*some parcels may have more than one activity occurring

Table 7-18 Significant Threats in the Hickson WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The application of agricultural source material to land	Pathogen	A
The application of agricultural source material to land	Chemical	A
The application of commercial fertilizer	Chemical	A
The application of pesticide to land	Chemical	A
Number of occurences of significant prescribed drinking water threats		21
Total number of locations of significant prescribed drinking water threats		10*

*some parcels may have more than one activity occurring

Table 7-19 Significant Threats in the Ingersoll WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	Chemical	A
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A, B
The application of agricultural source material to land	Chemical, Pathogen	A, B
The storage of agricultural source material	Chemical, Pathogen	B
The application of commercial fertilizer to land	Chemical	A, B
The application of pesticide to land	Chemical	B
The handling and storage of pesticide	Chemical	A, B
The handling and storage of fuel	Chemical	A, B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B, C
The handling and storage of an organic solvent	Chemical	A
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Chemical, Pathogen	A
Number of occurences of significant prescribed drinking water threats		61
Total number of locations of significant prescribed drinking water threats		40*

*some parcels may have more than one activity occurring

Table 7-20 Significant Threats in the Innerkip WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The application of agricultural source material to land	Pathogen	A
The application of pesticide to land	Chemical	A
Number of occurences of significant prescribed drinking water threats		3
Total number of locations of significant prescribed drinking water threats		2*

*some parcels may have more than one activity occurring

Table 7-21 Significant Threats in the Lakeside WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The application of agricultural source material to land	Chemical, Pathogen	A
The application of commercial fertilizer to land	Chemical	A
The application of pesticide to land	Chemical	A
Number of occurences of significant prescribed drinking water threats		13
Total number of locations of significant prescribed drinking water threats		6*

*some parcels may have more than one activity occurring

Table 7-22 Significant Threats in the Mount Elgin WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	Pathogen	A
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The application of agricultural source material to land	Pathogen	A
The application of pesticide to land	Chemical	A
The handling and storage of fuel	Chemical	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Pathogen	A
Number of occurences of significant prescribed drinking water threats		34
Total number of locations of significant prescribed drinking water threats		17*

*some parcels may have more than one activity occurring

Table 7-23 Significant Threats in the Tavistock WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The handling and storage of fuel	Chemical	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B, C
The handling and storage of an organic solvent	Chemical	A
Total number of occurences of significant threats		19
Total number of locations of significant threats		15*

*some parcels may have more than one activity occurring

Table 7-24 Significant Threats in the Thamesford WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A, B
The application of agricultural source material to land	Pathogen	A, B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B
The application of pesticide to land	Chemical	A
Number of occurences of significant prescribed drinking water threats		10
Total number of locations of significant prescribed drinking water threats		8*

*some parcels may have more than one activity occurring

Table 7-25 Significant Threats in the Woodstock WHPA (Urban well system)

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	Chemical	A

The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
The handling and storage of fuel	Chemical	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B, C
Number of occurences of significant prescribed drinking water threats		71
Total number of locations of significant prescribed drinking water threats		68*

*some parcels may have more than one activity occurring

Table 7-26 Significant Threats in the Woodstock WHPA (Rural well system)

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A, B
The application of agricultural source material to land	Chemical, Pathogen	A, B
The application of commercial fertilizer to land	Chemical	A
The application of pesticide to land	Chemical	A, B
The handling and storage of pesticides	Chemical	A, B
The handling and storage of fuel	Chemical	A, B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	B
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Chemical, Pathogen	B
Number of occurrences of significant prescribed drinking water threats		57
Total number of locations of significant prescribed drinking water threats		29*

*some parcels may have more than one activity occurring

Table 7-26a Significant Threats in the Woodstock ICA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical

The application of agricultural source material to land	Chemical
The storage of agricultural source material	Chemical
The application of commercial fertilizer	Chemical
The handling and storage of commercial fertilizer	Chemical
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Chemical
Number of occurrences of significant prescribed drinking water threats	75
Total number of locations of significant prescribed drinking water threats	31
*some parcels may have more than one activity occurring. The activities identified in this table may also be identified as chemical threats in 7-26.	

Table 7-27 Significant Threats in the Mitchell WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A
The handling and storage of fuel	Chemical	A, B
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act.	Chemical	A, B
The application of commercial fertilizer to land.	Chemical	A, B
The application of non-agricultural source material to land.	Chemical, Pathogen	A, B
The application of pesticide to land.	Chemical	A, B
The application of agricultural source material to land.	Pathogen	A, B
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard. O. Reg. 385/08, s. 3.	Pathogen	A, B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B, C
Number of occurences of significant prescribed drinking water threats		45
Total number of locations of significant prescribed drinking water threats		16*

*some parcels may have more than one activity occurring

Table 7-28 Significant Threats in the Sebringville WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Pathogen	A
Number of occurences of significant prescribed drinking water threats		13
Total number of locations of significant prescribed drinking water threats		13

Table 7-29 Significant Threats in the Shakespeare WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A
Number of occurences of significant prescribed drinking water threats		1
Total number of locations of significant prescribed drinking water threats		1

*some parcels may have more than one activity occurring

Table 7-30 Significant Threats in the St. Marys WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The application of agricultural source material to land	Chemical, Pathogen	B
The storage of agricultural source material	Pathogen	B
The application of commercial fertilizer to land	Chemical	B
The handling and storage of commercial fertilizer	Chemical	B
The application of pesticide to land	Chemical	B
The handling and storage of fuel	Chemical	B
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A, B
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act	Chemical	B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B
The handling and storage of an organic solvent	Chemical	A, B

The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Pathogen	B
Total number of occurances of significant threats		151
Total number of locations of significant threats		52*

*some parcels may have more than one activity occurring

Table 7-31 Significant Threats in the St. Pauls WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A
The application of agricultural source material to land	Chemical, Pathogen	A
The application of non-agricultural source material to land.	Chemical, Pathogen	
The application of commercial fertilizer to land	Chemical	A
The application of pesticide to land	Chemical	A
The handling and storage of fuel.	Chemical	
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Chemical, Pathogen	A
The handling and storage of an organic solvent.	Chemical	A,B
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A,B,C
Number of occurrences of significant prescribed drinking water threats		38
Total number of locations of significant prescribed drinking water threats		17*

*some parcels may have more than one activity occurring

Table 7-32 Significant Threats in the Stratford WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A, B, C
The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act.		A

The application of commercial fertilizer to land	Chemical	A
The handling and storage of commercial fertilizer	Chemical	A
The application of pesticide to land	Chemical	A
The handling and storage of pesticide	Chemical	A
The handling and storage of fuel.	Chemical	A
The handling and storage of an organic solvent.	Chemical	A
The handling and storage of a dense non-aqueous phase liquid	DNAPL	A,B,C
Number of occurences of significant prescribed drinking water threats		37
Total number of locations of significant prescribed drinking water threats		27*

*some parcels may have more than one activity occurring

2.6 Section 8– Great Lakes

Section	Page	Text	Reason For Change
8.2.1	8-4	The Great Lakes Water Quality Agreement (*GLWQA*), first signed in 1972 and renewed in 1978, expresses the commitment of Canada and the United States to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin Ecosystem and includes a number of objectives and guidelines to achieve these goals. In 1987, a Protocol was signed to help develop and implement Remedial Action Plans (*RAPs*) and Lakewide Management Plans (*LaMPs*). RAPs focus on the geographic Areas of Concern (*AOCs*), which are identified under the Canada-Ontario Agreement Respecting Great Lakes Water Quality described in Section 8.2.2. LaMPs are designed to improve the environmental quality of the open waters of each of the Great Lakes. In accordance with the GLWQA, the goal of the Lake Erie LaMP is to restore and protect the beneficial uses of Lake Erie, with a focus on the beneficial-use impairments listed in the Agreement. Ecosystem objectives specific to Lake Erie are established to guide LaMP efforts toward defined endpoints. In 1994, nine conservation authorities created a co-operative agreement to combine the strengths of their individual, long-term community partnerships across the Lake Erie Basin, and improve the ability to work with provincial and federal governments.	Update status of agreement

		The group established is called the Federation of Conservation Authorities of Lake Erie, or *FOCALErie*, and is comprised of the Essex Region, Lower Thames Valley, Upper Thames River, St. Clair Region, Catfish Creek, Kettle Creek, Long Point Region, Grand River and Niagara Peninsula Conservation Authorities. *FOCALErie* supports the Lake Erie *LaMP* through projects such as public involvement and Lake Erie basin geographic information system compilation and updates. The City of London and neighbouring communities in the *UTRSPA* receive water from Lake Huron and Lake Erie intakes located outside the SPA. It is important to note that *FOCALErie* provides a mechanism for Conservation Authorities including the Upper Thames River CA to deal with other, broader Great Lakes concerns and to coordinate watershed planning and implementation activities at a scale beyond their individual watershed boundaries. As mentioned before, the Thames River originates in the *UTRSPA* and continues to flow through the *LTVSPA* where it outlets into Lake St. Clair, which in turn outlets into Lake Erie. The Great Lakes Water Quality Agreement (*GLWQA*) has been considered in the Lower Thames Valley Source Protection Area Assessment Report. Under the Great Lakes Water Quality Agreement, the Four Agency Management Committee established a framework for binational coordination of environmental issues on Lake St. Clair (U.S. Environmental Protection Agency, Environment Canada, Ontario Ministry of Environment, Michigan Department of Environmental Quality. 2004). It is called the Lake St. Clair Management Plan. Lake St. Clair intakes in the Essex Region SPA supply some communities in the Lower Thames Valley Source Protection Area.	
Proposed revision		Negotiations to amend the GLWQA were launched in early 2010. On February 12, 2013, the Governments of Canada and the United States ratified the Great Lakes Water Quality Agreement of 2012. The Agreement facilitates binational action on threats to water quality and ecosystem health. Under the Great Lakes Water Quality Agreement, the governments of Canada and the United States agreed “to restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem”. This is accomplished in part through the development and implementation of binational Lakewide Management and Action Plans (LAMPs) for each lake. Through the development of issue related strategies, the LAMP will identify actions required to restore and protect the lakes and evaluate the effectiveness of those actions. The Thames-Sydenham and Region Source Protection Region is straddled by Lakes Erie and Huron. Lake Erie's ecosystem and economy are threatened by algal blooms that have become a regular occurrence throughout the Western basin of the lake during summer months, leading to poor aesthetics, recreational beach closures and reduced tourism revenue. The blooms are attributed primarily to excessive nutrient inputs from urban and rural land uses. In addition, Lake Erie water quality is affected by habitat loss and degradation and the introduction of non-native aquatic and terrestrial plant species. The top priority for Lake Erie Lakewide Action and Management Plan (LAMP) partners is to address excess algal blooms by reducing nutrient inputs to the lake. The Lake Erie LAMP is coordinated by a committee of water quality and natural resource managers from both Canada and the United States, with participation from federal, provincial, state and local governments that have a role in implementation. Although no formal Lakewide Management Plan exists for Lake Huron, the Lake Huron Binational Partnership was formed in 2002 to meet commitments in the Canada-United States Great Lakes Water Quality Agreement for lakewide management. The Partnership facilitates information sharing, sets priorities, and coordinates binational environmental protection and restoration activities. The U.S. Environmental Protection Agency, Environment Canada, Michigan Departments of Natural Resources and Environmental Quality, and the Ontario Ministries of Environment and Natural Resources form the core of the Partnership. The Lake Huron Binational Partnership focuses on key priorities and on the ground actions that help to improve and protect the overall quality of Lake Huron including controlling non-point source pollution and improving fish spawning and nursery	

		habitat.	
8.3.1		A Lakewide Management Plan is yet to be established for Lake Huron. In 2004, a report was prepared entitled Lake Huron Bi-national Partnership Action Plan and is described based on information from http://www.epa.gov/glnpo/lakehuron/LH%202004.pdf. This plan does provide an overview of issues and recommends actions to address these issues. The approach to Lake Huron differs from the Lake-wide Management Plans (LaMPs) of Lakes Superior, Michigan, Erie and Ontario in that there has been no systematic assessment of beneficial use impairments, identification of causes, definition of critical pollutants, determination of chemical sources and loadings, and release of a report for comment. The alternative approach focuses on areas of obvious importance, such as identified Areas of Concern, tackles these as priorities in the first action plans, and will expand over time to include other activities that investigate the less severe or obvious issues in the lake. Through the GLWQA, three Areas of Concern in the Lake Huron basin are identified none of which are in the UTRSPA. Under the Action Plan, three priority issues - contaminants in fish and wildlife; biodiversity and ecosystem change; fish and wildlife habitat - were given priority for immediate action while other issues will be tracked and added as the Partnership pursues this process of updating and expanding activities over time. Other Lake Huron concerns include: low water levels, botulism, cormorant populations, blue-green algae blooms, aquaculture, the spread of exotic non-native species such as the Common Reed Grass (Australius phragmities), emerging contaminants and global climate change. The 2008-2010 Action Plan tracks progress on issues identified in the previous cycle, including contaminants in fish, changes in food web structure and protection of critical habitat, and has been expanded to address emerging issues, such as observed increases in nearshore algae and diseases such as botulism (http://www.epa.gov/glnpo/huron.html).	Update status of agreement
Proposed Revision		Areas of Concern (AOC) are locations within the Great Lakes identified as having experienced high levels of environmental harm. Under the 1987 Great Lakes Water Quality Agreement between Canada and the United States, 43 such areas were identified, 12 of which were Canadian and 5 of which were shared binationally. The 2012 Great Lakes Water Quality Agreement reaffirms both countries' commitments to restoring water quality and ecosystem health in Great Lakes Areas of Concern. The St. Clair River, a binational AOC is located within the Thames-Sydenham and Region Source Protection Region. In order to improve the environmental conditions of the AOC, a Remedial Action Plan (RAP) has been developed for the St. Clair River. The St. Clair River RAP is a partnership between Canadian and U.S. federal governments, provincial (Ontario) and state (Michigan) governments, with cooperation from the public and stakeholders through the St. Clair Binational Public Advisory Committee. Environment Canada and the Ontario Ministry of the Environment and Climate Change are the lead government agencies for the Canadian side of the St. Clair River Remedial Action Plan. The St. Clair Region Conservation Authority is working with these agencies to assist in the local implementation of the plan.	
8.3.2		The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem	Future update
		This agreement has been negotiated but has not received final sign off. This text should be revised following final signoff	

Revisions to the UTRSPA Assessment Report – Section 9

Section 9– Data Gaps and Next Steps

Section	Page	Text	Reason For Change	Changes Made
9.1	9-2	Several of the gaps identified in the Proposed Assessment Report are now filled. These include the Tier 2 water budget drought scenario analysis, the delineation, vulnerability assessment and threats assessment (vulnerability scoring approach) of *WHPA-E*, and threats assessment of sewer line threats. Filling of those data gaps in early 2011 allowed them to be included in the current Amended Proposed Assessment Report, thus allowing for the materials to be available to the Source Protection Committee for the development of the *Source Protection Plan*. The *Source Protection Plan* is required to be submitted in August 2012.	Reflect completed work	
		Several of the gaps identified in the Amended Proposed Assessment Report are now filled. These include the Tier 3 water budget and the delineation of Woodstock ICA.		
9.1	9-2	It is important that this information be completed in a timely fashion so that it is available to the Source Protection Committee for use in developing the Source Protection Plan	Statement no longer valid	
		Delete sentence		
9.1	9-3	Also, as described in Section 7.3, a site-specific *risk* assessment to confirm the number of locations at which *significant threats* occur, would be conducted while developing the source protection plans, if needed. The tier 2 work involves the examination of land use *activities* and the *circumstances* under which they are undertaken, through site visits and discussions with the landowners. The outcome of the tier 2 *risk* assessment will be part of a subsequent Assessment Report.		
		Also, as described in Section 7.3, a site-specific *risk* assessment to confirm the number of locations at which *significant threats* occur, would be undertaken as municipalities prepare for the implementation of source protection plans. Site specific risk assessment is an important part of compliance monitoring of activities within the vulnerable areas where significant drinking water threats may occur. The site specific assessment involves the examination of *activities* and the *circumstances* under which they occur, through site visits and discussions with the landowners. The outcome of the site specific *risk* assessment will be part of annual reports to the Source Protection Authorities and can be summarized in subsequent Assessment Reports to provide an ongoing assessment of the number of locations of significant drinking water threats.		

Section	Page	Text	Reason For Change	Changes Made
9.1	9-2	*Table 9-1 Work Plan to fill Data and Analysis Gaps*	Whole Table needs to be updated	
		See revised table below		
9	4	Prior to the submission of the Assessment Report to the Director, the Clean Water Act identifies consultation requirements. The required consultation is part of a more comprehensive consultation plan being conducted in the Thames-Sydenham and Region involving local and regional consultation on the draft proposed and the proposed Assessment Report, and the technical work that has informed it. See Section 1 - Introduction and Background for more information on the Assessment Report consultation process. Once consultation is complete and the Source Protection Committee has considered input received through the consultation, the Assessment Report is submitted to the Director (Ministry of Environment) for approval. The Director can approve the Assessment Report or request amendments to it. Amendments which the Director requests will not require consultation.	Needs to be changed to reflect current round of consultation.	
		Prior to the submission of an Assessment Report to the Director, the Clean Water Act identifies consultation requirements. The required consultation is part of a more comprehensive consultation plan being conducted in the Thames-Sydenham and Region involving local and regional consultation on the draft proposed, proposed Assessment Report, and Updated Assessment Reports as well as the technical work that has informed it. See Section 1 - Introduction and Background for more information on the Assessment Report consultation process. Once consultation is complete and the Source Protection Committee has considered input received through the consultation, the Assessment Report is submitted to the Director (Ministry of Environment) for approval. The Director can approve the Assessment Report or request amendments to it. Amendments which the Director requests will not require consultation.		

Table 9-1 Work Plan to fill Data and Analysis Gaps

Gap	Description	Work Plan	Planned Completion Schedule
Edge-matching of HVA and SGRA with neighbour-ing regions	▪ Edge-matching of HVA and SGRA with neighbouring regions is to be completed in order to form seamless mapping between source protection regions	▪ This work will be considered when neighbouring regions' HVA and SGRA maps are complete ▪ Methodologies will be determined in consultation with the neighbouring regions once the extent of the challenges are known.	Dependent on when neighbouring regions complete HVA and SGRA maps
Impact of Climate Change	▪ Work undertaken in Upper Thames River Source Protection Area although focused more on flooding and infrastructure than on water supply ▪ Requires an understanding of the local climatic conditions resulting from global climate change which is not yet available ▪ Impact on source water protection is unknown	▪ Examine data available for the Upper Thames River Source Protection Area and assess relevancy to source protection ▪ Consider local climactic conditions when information becomes available ▪ Prepare draft section on climate change if data allows ▪ Update Assessment Report if warranted	To be determined
Improved understand--ing of water use	▪ Use actual water use data in water budget work	▪ Obtain actual water use data from all significant water users through the PTTW reporting system ▪ Requires reassessment after sufficient data has been reported, perhaps when Assessment Report requires future update ▪ Where Tier 3 assessment will be undertaken, updated PTTW will be considered to the extent that the data is available	Subsequent Assessment Report, dependent on other programs
Compare Capture zones with those from Tier 3 Model	▪ Tier 3 Water Budget model has improved the level of understanding in some of the capture zones in the UTRSPA ▪ An assessment of the impact of that improved understanding on the capture zones should be undertaken	▪ Compare conceptual models used for WHPA delineation with those used for T3WB ▪ Determine the likely impacts on capture zone delineation ▪ If appropriate run models to delineate revised WHPA	Subsequent Assessment Report dependent on available resources
Woodstock ICA	▪ An assessment of nitrate levels in 2014 suggests that levels may be decreasing in the Tabor wells. Additional sampling is needed to confirm the trend and assess whether Nitrate is still an Issue at the Thorton wellfield.	▪ Continue with enhanced nutrient management plans on County owned farmland within the wellfield ▪ U. of Waterloo to monitor nitrate migration across landscape to improve conceptual understanding and refine model ▪ Monitor nitrate levels at each well ▪ Prioritize negotiation of RMP associated with nitrate application within the wellfield ▪ Retain consultant to analyze data and provide recommendation regarding nitrate issue designation ▪ If necessary delineate ICA using T3WB model and U of Waterloo conceptual understanding of nitrate movement through the aquifer, identify associated significant drinking water threats and amend AR as appropriate.	Subsequent Assessment Report

*Dependent upon submission of the updated Assessment Report and/or approved funding

3 Revisions to the LTVSPA Assessment Report

3.1 Section 1– Introduction and Background

Please note that similar revisions will be undertaken in section 1 of the UTRSPA and SCRSPA Assessment Report.

Section	Page	Text	Reason For Change	Changes Made
Cover And Footers		Amended Proposed Assessment Report November 12, 2010 1.0 Introduction and Background Approved	Reflect updated version	
		Updated Assessment Report November 14, 2014 1.0 Introduction and Background		
1.0	1	The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee was to complete an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan is to contain policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.	verb tense change to match the rest of the section	
		The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee completed an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan contains policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.		
1.0	1/2	The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (SPR). The Assessment Reports are to contain detailed information which identify vulnerable areas associated with drinking water systems, assess the level of vulnerability, identify issues related to the drinking water sources, identify activities within those vulnerable areas which	Verb tense changes	

Section	Page	Text	Reason For Change	Changes Made
		pose threats to the systems, and assess the risk due to threats. These Assessment Reports are being completed for the three Source Protection Areas of the Thames-Sydenham and Region SPR as shown in the following Map 1-1.		
		The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (SPR). The Assessment Reports ~~are to~~ contain detailed information which identify vulnerable areas associated with drinking water systems, assess the level of vulnerability, identify issues related to the drinking water sources, identify activities within those vulnerable areas which pose threats to the systems, and assess the risk due to threats. These Assessment Reports have been completed for the three Source Protection Areas of the Thames-Sydenham and Region SPR as shown in the following Map 1-1.		
1.2.2	6	In order to fully define the contents of, and methodologies used in developing Assessment Reports, the Ministry of the Environment (MOE) released *Technical Rules*: *Assessment Report* (December 12, 2008). During the drafting of the Proposed Assessment Report, the Director (MOE) was in the process of amending those *rules* (November 2009). Amendments not addressed in that report are incorporated into the current Amended Proposed Assessment Report.	Ammemded Proposed AR is not the current AR.	
		In order to fully define the contents of, and methodologies used in developing Assessment Reports, the Ministry of the Environment (MOE) released *Technical Rules*: *Assessment Report* (December 12, 2008). During the drafting of the Proposed Assessment Report, the Director (MOE) was in the process of amending those *rules* (November 2009). Amendments not addressed in that report were incorporated into the Amended Proposed Assessment Report and are still reflected in the current Updated Assessment Report.		
1.2.6	7	Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan will contain policies focused on activities which are identified as threats.	Verb tense	
		Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan contains policies focused on activities which are identified as threats.		

Section	Page	Text	Reason For Change	Changes Made
1.2.6	7/8	Although a regulation defining the scope and content of a Source Protection Plan has not yet been introduced, the province has consulted on a discussion paper which will form the basis for a Source Protection Plan regulation. The discussion paper outlines the nature of the policies which would be described in a future regulation. These policies may include: o education and outreach programs(leading to voluntary risk reduction) o incentive programs (leading to voluntary risk reduction) o land-use planning approaches(e.g. official plans, zoning bylaws, site plan controls, development permits) o new or amended provincial instruments(e.g. Certificates of Approval) o risk management plans o prohibition o restricted land uses. The discussion paper indicates that the more restrictive policies listed above would only be applied to significant drinking water threats. Similarly, the policies related to significant threats are mandatory and must be implemented, whereas the policies related to moderate and low risk drinking water threats leave some discretion to the implementer. The Source Protection Plan may also include various policies related to monitoring.	Regulation now in place	
		Ontario regulation 287/07, among other things, defines the scope and content of a Source Protection Plan The regulation outlines the nature of the policies which would be included in a Source Protection Plan. These policies may include: o education and outreach programs(leading to voluntary risk reduction) o incentive programs (leading to voluntary risk reduction) o land-use planning approaches(e.g. official plans, zoning bylaws, site plan controls, development permits) o new or amended provincial instruments(e.g. Certificates of Approval) o risk management plans o prohibition o restricted land uses. The regulation indicates that the more restrictive policies listed above would only be applied to significant drinking water threats. Similarly, the policies related to significant threats are mandatory and must be implemented, whereas the policies related to moderate and low risk drinking water threats leave some discretion to the implementer. The Source Protection Plan may also include various policies related to monitoring.		
1.3	9	Discussions with First Nations encouraged their participation on the Source Protection Committee. Those discussions led to the recent appointment of two of the three First Nations members on the Source Protection Committee. These two members were appointed by the London District Chief's Council to represent the eight First Nations in the region.	Still just 2?	

Section	Page	Text	Reason For Change	Changes Made
		Discussions with First Nations encouraged their participation on the Source Protection Committee. Those discussions led to the appointment of three First Nations members on the Source Protection Committee. These members were appointed by the London District Chief's Council to represent the eight First Nations in the region.		
1.3	10	*Table 1-1 SPC members and representation*	Needs to be updated	
		See updated table appended to the end of this change log		
1.4	11	The lead at the Lower Thames Valley Source Protection Authority is Jack Robertson, Water Management Supervisor.	Jack retired	
		The lead at the Lower Thames Valley Source Protection Authority is Jason Wintermute, Water Management Supervisor.		
1.5	12	The Terms of Reference for the Lower Thames Valley Source Protection Area were approved by the Minister of the Environment and the notice of approval posted on the Environmental Registry on April 20, 2009. This approval set the due date of this Assessment Report one year from the posting of the approval of the Terms of Reference, April 20, 2010, which was met. The report was further amended to produce the current Amended Proposed Assessment Report, due in December 2010.	Needs to reflect current AR status	
		The Terms of Reference for the Lower Thames Valley Source Protection Area were approved by the Minister of the Environment and the notice of approval posted on the Environmental Registry on April 20, 2009. This approval set the due date of the Assessment Report one year from the posting of the approval of the Terms of Reference, April 20, 2010, which was met. The report was amended to produce the Amended Proposed Assessment Report, dated in November 12, 2010. It has since been updated to the current *Updated* Assessment Report due to be submitted for approval in early 2015		
1.6.1	13	Caldwell First Nation is also established in the area near Rondeau Bay; however they currently do not have a reserve.	Reflect more accurate description of current area	
		Caldwell First Nation is also established in the area between Leamington and Rondeau Bay; however they currently do not have a reserve.		
1.8	15	Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, requires a public meeting and posting of the Assessment Report for comment. Two posting periods are required: one posted by the Source Protection Committee for consultation on the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report is then submitted to the Ministry of the	Reflect updated AR	

Section	Page	Text	Reason For Change	Changes Made
		Environment along with comments received in the final posting period. The Director may then approve the Assessment Report or require changes to the report.		
		Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, requires a public meeting and posting for the draft proposed Assessment Report. Two posting periods are required: one posted by the Source Protection Committee for consultation on the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report is then submitted to the Ministry of the Environment along with comments received in the final posting period. The Director may then approve the Assessment Report or require changes to the report which has been referred to as the amended proposed Assessment Report. Once approved any revisions are included in an updated Assessment Report.		
1.8	16	Amendments required by the Director are incorporated into an amended Proposed Assessment Report which involves local consultation of those affected by the changes made to the report	Add consultation for updated AR	
		Amendments required by the Director are incorporated into an amended Proposed Assessment Report which involves local consultation of those affected by the changes made to the report. Once approved any revisions to the Assessment Report are referred to as an Updated Assessment Report. As with the Amended Proposed Assessment Report, an Updated Assessment Report requires consultation with those affected by the updates. As some of the current updates are considered broad updates local consultation has been carried out in those areas where new vulnerable areas have been defined. A broad regional consultation has also been planned for the updated Assessment Report which exceeds the requirements for consultation on either the Draft Proposed or Proposed Assessment Report consultation including an open house in each area and a consultation period of approximately a month and a half.		
1.8	16	*Table 1-5 Summary of planned LTVSPA Assessment Report Consultation*	No longer relevant	
		Delete table contents but retain table with the following text: Please refer to Assessment Report Consultation in Appendix 4 for details on Assessment Report consultation		
1.9	16	The following schedule describes at high level the work required to complete the remaining work to be included in the Assessment Report and the rest of the Source Protection Planning process.	Update to reflect current status	
		The following schedule describes at high level the work required to complete the Assessment Report and Source Protection Plan and update the Assessment Report and amended the Source Protection Plan before the approval of the first Source Protection Plan for the Thames-Sydenham and Region.		

Section	Page	Text	Reason For Change	Changes Made
1.9	17	*Figure 1-1 Source Protection planning schedule overview*	Revise figure?	
		See revised figure appended to this change log		
1	19	The current report is an Amended Proposed Assessment Report which fills in most of the data gaps identified in the Proposed Assessment Report. Local consultation with those affected by the amendments will be conducted.	AR version	
		The current report is an Updated Assessment Report which fills in many of the data gaps identified in previous Assessment Reports. Local consultation with those affected by the updates will be conducted.		
1.10.1	19	While the First Nations have been encouraged to participate in the development of the Assessment Report in a number of ways, to date that participation has been rather limited and very informal in nature. First Nations forums were set up in 2008-2009 across the region. First Nations participation on the Source Protection Committee has recently begun with the appointment of two of the three First Nations members. Previously various staff and councillors of the First Nations and the Southern First Nations Secretariat have participated in various ways including informal participation in tours and meetings of the Source Protection Committee, forums and workshops held at various stages in the Source Protection planning process. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. Recently, interest has been expressed in the participation in some of the technical studies, however that work has yet to be initiated.	Revise to reflect more current work	
		The First Nations have been encouraged to participate in the development of the Assessment Report in a number of ways, That participation has been rather limited and very informal in nature. First Nations forums were set up in 2008-2009 across the region. First Nations participation on the Source Protection Committee began with the appointment of two of the three First Nations members. Previously various staff and councillors of the First Nations and the Southern First Nations Secretariat have participated in various ways including informal participation in tours and meetings of the Source Protection Committee, forums and workshops held at various stages in the Source Protection planning process. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. A first Nations Liaison Committee was established to engage interested First Nations in the source protection planning process. The Chippewas of Kettle & Stony Point First Nation (in St Clair Region Source Protection Area) passed a band council resolution requesting the Minister to include their intake in the Terms of Reference for the region and allow them to undertake the technical work to include Intake Protection Zones for their intake. Other First Nations in the Lower Thames Valley Source Protection Area participated in a study to assess the WHPA-E associated with their GUDI wells. The First Nations Working Group also explored potential policies which could be put in place on reserve to afford their groundwater a similar level of protection to municipal systems under the Source Protection Plan although they did not formally request to have their systems added to the Terms of Reference for the region.		

Section	Page	Text	Reason For Change	Changes Made
1.10.2	20	As there are a number of data gaps identified in the Assessment Report posted for comment, amendments to the Assessment Report, prior to the submission of the Source Protection Plan in 2012, was anticipated. The Data Gaps section of this report identifies the gaps and discusses plans to fill those gaps. The Assessment Report can be amended at any time that the Source Protection Committee becomes aware of the need to amend the report. Further, changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source Protection Committee. As a result of this new information or understanding, the Source Protection Committee may amend the Assessment Report. Any amendments to the Assessment Report would require consultation of those affected by the amendments. The Source Protection Committee will also need to consider amendments to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan will be established by the Minister in the approval of the Source Protection Plan. Many of the data gaps identified in the Data Gaps and Next Steps section of the Proposed Assessment Report resulted in amendments to the Assessment Report. The current report is an Amended Proposed Assessment Report which fills in these previously identified gaps. The vulnerability and threats assessment tasks related to the West Elgin emergency intake, livestock density and managed lands are included in the current report. Local consultation with those affected by the amendments will be conducted. The terms ‘updated’ or ‘amended’ used throughout the report refers to a future Assessment Report following approval of this Amended Proposed Assessment Report.	Verb tense and reflect the current AR	
		As there were a number of data gaps identified in previous versions of the Assessment Report, updates to the Assessment Report were anticipated. The Data Gaps section of this report identifies the gaps and discusses plans to fill those gaps. The Assessment Report can be updated at any time that the Source Protection Committee becomes aware of the need to update the report. Further, changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source Protection Committee. As a result of this new information or understanding, the Source Protection Committee may update the Assessment Report. Any updates to the Assessment Report would require consultation of those affected by the updates. The Source Protection Committee will also need to consider updates to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan is established by the Minister in the approval of the Source Protection Plan. The current report is an Updated Assessment Report which fills in some of the previously identified gaps. Local consultation with those affected by the updates will be conducted. The term ‘updated’ or ‘amended’ used throughout the report may refer to a future Assessment Report following approval of this Updated Assessment Report or to this Update Assessment Report itself.		

Section	Page	Text	Reason For Change	Changes Made
A11-Glossary				
		Add EBA – Event Based Area And Event Based Area – An area within which an activity is a significant drinking water threat based on event modelling. It may be comprised of parts of IPZ-1, IPZ-2 and IPZ-3		

Table 1-1 SPC members and representation

Chair			Robert Bedggood
Municipalities		Chatham-Kent	Sheldon Parsons
		Lambton	Darrell Randell
		London	Patrick Donnelly
		Middlesex	James Maudsley
		Elgin	Brent Clutterbuck
		Oxford	Pat Sobeski
		Perth, Stratford, St. Marys, Huron	Joe Salter
Sectors	Agriculture		John Van Dorp
			Patrick Feryn
			Don McCabe
	Industry/Commercial		Dean Edwardson
			Earl Morwood
	Aggregate/Oil and Gas	Aggregate and Quarries	Paul Hymus
		Oil and Gas	Hugh Moran
Other			George Marr
			Doug McGee
			Joseph Kerr
			Carl Kennes
			Valerie M'Garry
			John Trudgen
			Charles Sharina
First Nations			Kennon Johnson
			Augustus Tobias
			Darlene Whitecalf
Liaisons		Medical Officers of Health	Jim Reffle
		Province	Teresa McLellan
		Source Protection Authority	Murray Blackie

3.2 Section 3– Water Budget and Water Quantity Stress Assessment

Section	Page	Text	Reason For Change	Changes Made
3.2.4	5	In the Tier 2 Water Budget for the Upper Thames River Source Protection Area, recharge is being calculated using surface water and groundwater models. These models use surficial geology and land use characterized in hydrologic response units. Following the completion of the Tier 2 Water Budget for the Upper Thames River Source Protection Area, the MOEE method will be reapplied to the Lower Thames Valley and St Clair Region Source Protection Areas where detailed computer models are not available. In reapplying the MOEE method, surficial geology will be used in place of soils for constancy with the additional work undertaken in the Tier 2 Water Budget and an improved representation of recharge. This will most likely result in an amendment to the Assessment Report.	Needs to be changed to reflect that this work did occur	
		In the Tier 2 Water Budget for the Upper Thames River Source Protection Area, recharge was calculated using surface water and groundwater models. These models use surficial geology and land use characterized in hydrologic response units. Following the completion of the Tier 2 Water Budget for the Upper Thames River Source Protection Area, the MOEE method was reapplied to the Lower Thames Valley and St Clair Region Source Protection Areas where detailed computer models are not available. The county soils maps used in the Tier 1 analysis are completed to different levels of detail in different counties, and some have been updated more recently than others. As such, there can be discontinuities across county boundaries, and, as they were created mainly for agricultural purposes, they were not completed in urban areas. Surficial geology mapping has the advantage of being continuous across the study area, and includes urban areas. In reapplying the MOEE method, surficial geology was used in place of soils for constancy with the more detailed work undertaken in the Tier 2 Water Budget and an improved representation of recharge.	wording mostly from SCR AR	

Section	Page	Text	Reason For Change	Changes Made
3	11	The Conceptual Water Budget successfully completed the peer review process and the draft has been accepted by the MNR.However, work on the Tier 1 Water Budget was not completed in time to complete the peer review process prior to posting of this draft of the Assessment Report for the Lower Thames Valley Source Protection Area. The material included in this draft of the Assessment Report is based on a final draft submitted to the peer reviewers for their review and comment. Peer review of the work included in this Assessment Report is not a requirement of the technical rules; however the Source Protection Committee relies on the technical experts on the peer review committee to ensure that the work is suitable for the purposes of developing a Source Protection Plan for the area. Due to the peer reviewers having reviewed much of the material as the work progressed, it is not anticipated that changes resulting from the review will have a substantial effect on the stress assessment, the delineation of SGRAs, or the other information presented in this draft of the Assessment Report. It is, however, anticipated that the comments will continue to improve the documentation and interpretation of the work undertaken. Minor changes may be incorporated into the report prior to posting the proposed Assessment Report for consultation. If, however, significant changes are required, the need for these changes will be acknowledged in the next version (the proposed Assessment Report), and dealt with through the amended Assessment Report discussed in other sections.	Needs to reflect outcome of peer review.	
		The Conceptual Water Budget and Tier 1 Water Budget successfully completed the peer review process and have been accepted by the MNR.		
3	17	Rule 44 identifies the criteria for determining whether a recharge area is significant: o theareaannuallyrechargeswatertotheunderlyingaquiferataratethatisgreaterthan the rate of recharge across the whole of the related groundwater recharge area by a factor of 1.15 or more; or o theareaannuallyrechargesavolumeofwatertotheunderlyingaquiferthatis55%or more of the volume determined by subtracting the annual evapotranspiration for the whole of the related groundwater recharge area from the annual precipitation for the whole of the related groundwater recharge area. Table 3-7 below summarizes the recharge and the conditions which must be met for an area within a particular subwatershed to be deemed significant. It is worth noting that in most cases rule 44(1) provides a more conservative criterion for SGRA declaration than does rule 44(2).	Bullets should be labeled with the sub-rule for clarity.	

Section	Page	Text	Reason For Change	Changes Made
		Rule 44 identifies the criteria for determining whether a recharge area is significant: 44(1) the area annually recharges water to the underlying aquifer at a rate that is greater than the rate of recharge across the whole of the related groundwater recharge area by a factor of 1.15 or more; or 44(2) the area annually recharges a volume of water to the underlying aquifer that is 55% or more of the volume determined by subtracting the annual evapotranspiration for the whole of the related groundwater recharge area from the annual precipitation for the whole of the related groundwater recharge area. Table 3-7 below summarizes the recharge and the conditions which must be met for an area within a particular subwatershed to be deemed significant. It is worth noting that in most cases rule 44(1) provides a more conservative criterion for SGRA declaration than does rule 44(2).		
3	20	*Table 3-8 Data gaps related to Water Budget and Water Quantity Stress Assessment*	Needs to be updated to reflect work now completed.	
		Remove the following lines in the table Revise SGRAs for consistency with T2 work Completion of the peer review of the T1WB		
		Map 4-8 illustrates the *Significant Groundwater Recharge Areas* in the Lower Thames Valley Source Protection Area. The vulnerability of the *SRGAs* is considered in the Vulnerability Assessment section of the Assessment Report. It is, however, important to point out that the *SGRAs* which are coincident with *Highly Vulnerable Aquifers* (*HVA*), will receive a vulnerability score of 6 which can result in a moderate threat, while activities in the other *SGRAs* cannot result in water quality *threats* due to the *vulnerability* score being 4 or less.	Reflect that the SGRA map has been updated	
		Map 4-8 illustrates the *Significant Groundwater Recharge Areas* in the Lower Thames Valley Source Protection Area updated based on surficial geology as discussed above. The vulnerability of the *SRGAs* is considered in the Vulnerability Assessment section of the Assessment Report. It is, however, important to point out that the *SGRAs* which are coincident with *Highly Vulnerable Aquifers* (*HVA*), will receive a vulnerability score of 6 which can result in a moderate threat, while activities in the other *SGRAs* cannot result in water quality *threats* due to the *vulnerability* score being 4 or less.		
3.6	3-19	Table 3-8 summarizes data gaps identified through the Tier 1 Water Budget and Water Quality Stress Assessment. As the *stress* assessment was completed through a Tier 1 Water Budget, it is expected that there would be data gaps. If work was to proceed to a Tier 2 Water Budget, many of these gaps would need to be addressed at that time. As the potential for *stress* has no effect on municipal water systems,	Reflect that revisions were made to table 3-8	

Section	Page	Text	Reason For Change	Changes Made
		additional work is not required through Source Protection Planning. These gaps become more of a problem for other programs, such as the Permit to Take Water Program, which would benefit from results with a lower level of uncertainty.		
		Table 3-8 summarizes data gaps identified through the Tier 1 Water Budget and Water Quality Stress Assessment. This table has been updated to reflect the completion of the Tier 1 peer review and improvements to the SGRA. As the *stress* assessment was completed through a Tier 1 Water Budget, it is expected that data gaps would remain. If work was to proceed to a Tier 2 Water Budget, many of these gaps would need to be addressed at that time. As the potential for *stress* has no effect on municipal water systems, additional work is not required through Source Protection Planning. These gaps become more of a problem for other programs, such as the Permit to Take Water Program, which would benefit from results with a lower level of uncertainty.		
Section 3 summary		Update section summary to reflect changes in section 3		
Maps		Update maps 4-8 and 4-9, 7-1c, 7-2d, 7-3d		

3.3 Section 4– Vulnerability Assessment

Section	Page	Text	Reason For Change	Changes Made
4.1	2	The peer review committee reviewed each technical report, met with the consultants and project teams to discuss the project and submitted comments based on their review and the discussion. Comments were considered and responded to by the consultant or project team members. These comments and the responses form part of the peer review record along with the terms of reference for the peer review committee discussed above. The peer review process added considerable value to the technical report by ensuring that the work was well documented.	Peer Review of Vulnerability Assessment needs content about IPZ-3	
		The peer review committee reviewed each technical report with the exception of the recent IPZ-3 technical work, met with the consultants and project teams to discuss the project and submitted comments based on their review and the discussion. Comments were considered and responded to by the consultant or project team members. These comments and the responses form part of the peer review record along with the terms of reference for the peer review committee discussed above. Peer review for work initiated following the completion of the peer review process, including the IPZ-3 work, was provided by technical staff at the Ministry of the Environment and Climate Change, ongoing involvement of the project teams of the Thames-Sydenham and Region and Essex Region and the Technical Advisory committee formed by the Thames-Sydenham and Region SPC. The peer review process added considerable value to the technical report by ensuring that the work was well documented		
4.1	2	However, following the completion of the peer review of all of these studies, it has been suggested that the peer reviewers provide a relative comparison of the uncertainty of the projects so that a consistent interpretation between studies is available. This may result in changes to the uncertainty reported in this Assessment Report, which would be documented in a subsequent amendment to the Assessment Report.	Document additional work that remains uncompleted	
		However, following the completion of the peer review of all of these studies, it was suggested that the peer reviewers provide a relative comparison of the uncertainty of the projects so that a consistent interpretation between studies is available..		

Section	Page	Text	Reason For Change	Changes Made
4.2	3	An Intake Protection Zone (IPZ) is delineated around an intake in a surface water body. In the Lower Thames Valley Source Protection Area, the intakes draw water from Lake Erie. Map 4-1 shows the location of the intakes and the IPZ around the intakes. An Intake Protection Zone is comprised of an IPZ-1, IPZ-2 and IPZ-3. The IPZ-1 and IPZ-2 in the Lower Thames Valley Source Protection Area were delineated through two projects as discussed below. The IPZ-3 delineation and assessment will be considered in an amended assessment report.	Relect IPZ-3 work completed	
		An Intake Protection Zone (IPZ) is delineated around an intake in a surface water body. An Intake Protection Zone is comprised of an IPZ-1, IPZ-2 and IPZ-3. In the Lower Thames Valley Source Protection Area, the intakes draw water from Lake Erie. The Stoney Point water treatment plant intake, located in Lake St. Clair in the Essex Region Source Protection Authority, has an IPZ-3 that extends into the Lower Thames Valley Source Protection Area. Map 4-1 shows the location of the intakes and the IPZ around the intakes. The IPZ in the Lower Thames Valley Source Protection Area were delineated through three projects as discussed below. IPZ-3 delineation and assessment for the West Elgin and Chatham/South Kent intakes may be considered in a future update to the Assessment Report.		
4.2.1	3	Another project was led by the Municipality of West Elgin with the Ontario Clean Water Agency (*OCWA*) providing technical and project management services for the municipality. The West Elgin water treatment plant is owned by the Municipality of West Elgin and is managed by the Tri-County Water Management Committee. The vulnerability assessment study was also undertaken by Stantec Consulting Limited, who retained Alex McCorquodale for the hydrodynamic modelling work.	Surface Water Vulnerability Assessment Projects section needs content for IPZ-3	
		Another project was led by the Municipality of West Elgin with the Ontario Clean Water Agency (*OCWA*) providing technical and project management services for the municipality. The West Elgin water treatment plant is owned by the Municipality of West Elgin and is managed by the Tri-County Water Management Committee. The vulnerability assessment study was also undertaken by Stantec Consulting Limited, who retained Alex McCorquodale for the hydrodynamic modelling work A third project was led by Lower Thames Valley Conservation Authority staff to assess the IPZ-3 for the Stoney Point water treatment plant intake that extends into the Lower Thames Valley Source Protection Area. This work was based on prior work conducted by Baird and Associates and used similar methodologies to assess how far upstream the impacts could be realized at the intake. A further project was lead by the ERCA to assess fuel spill in Lake Erie tributaries as they pertain to systems in the Essex Region. This work included tributaries in the ERSPA which		

Section	Page	Text	Reason For Change	Changes Made
		could result in a threat to the Wheatley intake in the LTVSPA. The in lake modelling was completed by Baird and linear dispersion analysts was completed by ERCA staff with input from LTVCA staff.		
4.2.1	4	The above referenced technical reports are peer reviewed and components finalized, so that they could be included in the Assessment Report. The technical studies are listed below In Table 4-1. The May 2008 West Elgin vulnerability assessment technical study was updated in an addendum report in November 2009, in order to meet current technical rules. *Table 4-1 Technical Studies on Vulnerability Assessment*	Changes to table required to reflect IPZ3 work	
		The above referenced technical reports are peer reviewed as described in the peer review section and included in the Assessment Report. The technical studies are listed below in Table 4-1. *Table 4-1 Technical Studies on Vulnerability Assessment* *Add LTVCA and Bair Report references*		
4.2.4	10	parcels abutting the buffered watercourses were included in the IPZ as transport pathways.	Need to specify IPZ-2 as not all IPZs used transport pathways	
		parcels abutting the buffered watercourses were included in the IPZ-2 as transport pathways.		
4.2.5	11	4.2.5 IPZ-3 Delineation A third zone around intakes can also be developed. This zone is referred to as an Intake Protection Zone-3 (IPZ-3). For Great Lakes intakes, the IPZ-3 includes areas which can contribute contaminants under an extreme event at a concentration which would result in a deterioration of the source water for the purposes of human consumption. The IPZ-3 work is yet to be undertaken and will be part of an amended Assessment Report.	Remove Great Lakes comment as St. Clair is not a Great Lake under the rules and the statement is valid without it. New content required for IPZ-3	

Section	Page	Text	Reason For Change	Changes Made
		This section 4.2.5 is replaced by the new section which follows this change log		
4	12	According to Rule 88, IPZ-1 is assigned an area vulnerability factor of 10, while the factor for IPZ-2 is between 7 and 9,	Scores for IPZ-2 come from Rule 89	
		According to Rule 88, IPZ-1 is assigned an area vulnerability factor of 10, while according to Rule 89, the factor for IPZ-2 is between 7 and 9,		
4.2.6	13	*Insert the following new text before source vulnerability factor is discussed*	describe IPZ3 scoring	
		The methodology for determining the Area Vulnerability factor for the Stoney Point IPZ-3 is that same as that used for determining the IPZ-2 Area Vulnerability factors. The upland area in the IPZ-3 is composed of greater than 66% land. The area is very flat and mainly under agricultural production. Most of the area is tile drained. The dominant soil types in the area are clay with some loam type soils. The IPZ-3 is broken up into zones of 6 hours of travel time. The zone immediately at the mouth of the Thames River starts with an Area Vulnerability factor of 7 which is consistent with the area vulnerability assigned in the ERSPA. From this score the value decreases by 1 for every additional 6 hours of travel time up the tributaries. These Area Vulnerability Factors are the same as those used on the Essex Region Source Protection Area side of the IPZ-3. Taken on its own, the 15,000 L IPZ-3 in the Lower Thames Valley Source Protection Area would not be represented well by the above description as the area mostly covers the community of Lighthouse Cove. However, when combined with the 15,000 L IPZ-3 on the Essex Region Source Protection Area, the values are likely representative of the whole of the 15,000 L IPZ-3, and for the sake of consistency, the same Area Vulnerability factors have been used.		
4.2.6	14	*Insert the following new text after the paragraph ending* A factor of 0.6 was assigned to the Wheatley primary intake while a factor of 0.7 was assigned to the Wheatley emergency intake considering intake depth, length and number of water quality concerns.	Insert a few sentences about IPZ3 scoring range and what to consider	
		The Source Vulnerability factor for the Stoney Point intake was determined by prior technical work conducted by the Essex Region Source Protection Authority and was determined to have a value of 0.9.		
4.2.6	14	http://www.ec.gc.ca/raps-pas/default.asp?lang=En&n=299C927C-1)	Bad web link	
		http://www.ec.gc.ca/raps-pas/default.asp?lang=En&n=96C6AD6F-1		

Section	Page	Text	Reason For Change	Changes Made
Table 4-3	14	*Table 4-3 Summary of Vulnerability Score of Intakes*	Add Vulnerability Scoring for IPZ-3	
		Replace with new table shown at the end of this change log		
4.2.6	14/15	Activities in these Great Lakes intakes vulnerable areas are not classified as significant threats because for a Great Lakes intake, the vulnerability scores that can be assigned are less than 8. Further, in IPZ-2 for the Chatham/South Kent Intake there can be no threats as the rules require that for an activity to be considered a threat it must occur in an area with a vulnerability score greater than 4. This is discussed in more detail in Section 7 - Threats and Risk Assessment. <>	Add content discussing implications of IPZ-3 scoring in Lake St. Clair	
		Activities in these Great Lakes intakes vulnerable areas are not classified as significant threats because for a Great Lakes intake, the vulnerability scores that can be assigned are less than 8. Similarly, even though intakes on Lake St. Clair are considered Type C and not Great Lakes intakes, the Vulnerability Scores start at 6.3 and decrease from there. Consequently, there can be no significant threats in the IPZ-3 based on the Vulnerability Scoring. Further, in IPZ-2 for the Chatham/South Kent Intake there can be no threats as the rules require that for an activity to be considered a threat it must occur in an area with a vulnerability score greater than 4. This is discussed in more detail in Section 7 - Threats and Risk Assessment		
4.2.7	15	Table 4-4 below summarizes the uncertainty assessed for the Chatham/South Kent and Wheatley Intake Protection Zones as identified by the consultants involved in the studies	Consultants only did IPZ-1 and 2 work	
		Table 4-4 below summarizes the uncertainty assessed for the Chatham/South Kent and Wheatley IPZ-1s and IPZ-2s as identified by the consultants involved in the studies		
4.2.7	17	Further details are available in the Stantec Consulting Ltd. vulnerability assessment technical report on the Wheatley and Chatham/South Kent intakes.	Insert section about uncertainty in IPZ-3	
		Further details are available in the Stantec Consulting Ltd. vulnerability assessment technical report on the Wheatley and Chatham/South Kent intakes. The uncertainty associated with the Wheatley IPZ-3 and the Stoney Point IPZ-3 are both high. These IPZ-3 were determined using the same models as was used for the IPZ-2 modelling. Therefore, the discussion above regarding why the IPZ-2 were assigned a uncertainty of high are equally applicable to the IPZ-3 delineations		

Section	Page	Text	Reason For Change	Changes Made
4.3.4	20	Two other WHPAs can be delineated for wells which are under the direct influence of surface water (Groundwater Under the Direct Influence or GUDI). Systems are assessed to determine if they are GUDI through requirements of the Safe Drinking Water Act, 2002 (subsection 2(2) of O. Reg 170/03). Highgate is currently identified as a GUDI system. The status of this system as GUDI is being discussed with MOE. Should a surface water body effectively bypass the aquifer's protection, a WHPA-E must be delineated. Rule 49(3) states that a WHPA-E is to be defined if the interaction between surface water and groundwater has the effect of decreasing the time of travel of water to the well when compared to the time it would take water to travel to the well if the raw water supply for the well was not under the direct influence of surface water. Rule 50 requires that a WHPA-F be delineated if the WHPA-E was delineated, and if the well is subject to issues which originate from outside the other parts of the WHPA. The MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Assessment Report as information available at this time indicates that the system does not meet the test in Rule 49 (3).	Update for status of Highgate	
		Two other WHPAs can be delineated for wells which are under the direct influence of surface water (Groundwater Under the Direct Influence or GUDI). Systems are assessed to determine if they are GUDI through requirements of the Safe Drinking Water Act, 2002 (subsection 2(2) of O. Reg 170/03). Should a surface water body effectively bypass the aquifer's protection, a WHPA-E must be delineated. Rule 49(3) states that a WHPA-E is to be defined if the interaction between surface water and groundwater has the effect of decreasing the time of travel of water to the well when compared to the time it would take water to travel to the well if the raw water supply for the well was not under the direct influence of surface water. Rule 50 requires that a WHPA-F be delineated if the WHPA-E was delineated, and if the well is subject to issues which originate from outside the other parts of the WHPA. There are no GUDI municipal drinking water systems in the LTVSPA.		
4.3.5	21	A grid of particles to be released at the water table was established. Particles were spaced 100 metres apart in the upgradient area of each well. The travel time of each particle to move from its original position to the water table was then calculated, in order to determine WWAT.	correction	
		A grid of particles to be released at the water table was established. Particles were spaced 100 metres apart in the upgradient area of each well. The travel time of each particle to move from its original position to the well was then calculated, in order to determine WWAT.		

Section	Page	Text	Reason For Change	Changes Made
4.3.5	23	As described in section 4.3.4, the MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Assessment Report as information available at this time indicates that the system does not meet the test in Rule 49 (3).	Highgate is not GUDI	
		Delete paragraph		
Title and Footers	all	Change title page and footers to reflect the current version of the report and remove approve	To reflect the current version of the report	
		Update Assessment Report November 14, 2014		

4.2.5 IPZ-3 Delineation

A third zone around intakes can also be developed. This zone is referred to as an Intake Protection Zone-3 (IPZ-3).

As per Rule 68 an IPZ-3 may be delineated if modelling demonstrates that a release of a chemical parameter or pathogen from an activity or a proposed activity during an extreme event would be transported to the intake and result in the deterioration of the water for use as a source of drinking water. The Technical Rules define an extreme event as a period of heavy precipitation or up to a 100 year storm, or a freshet. General approaches to the modelling were provided in the MOE's Technical Bulletin: Delineation of Intake Protection Zone-3 Using Event Based Approach (EBA) dated July 2009.

In order to delineate the extent of the IPZ-3 it is necessary to establish the concentration of contaminant which would result in a deterioration of the water for use as a source of drinking water. The Ontario Drinking Water Quality Standards were selected as the benchmark to be applied to the IPZ-3 delineation. This is consistent with the benchmarks used for identifying an Issue.

A model was developed by Baird and Associates through the IPZ-2 work which was also used in the delineation of IPZ-3. This model was used to explore the possible extent of boundaries to an IPZ-3 through reverse particle tracking. The model was then used to determine concentrations of a contaminant which would arrive at an intake following a spill. The model was used to simulate the contaminant travel within Lake Erie or Lake St. Clair while an analytic approach described in MOE's Technical Bulletin was used to consider the dispersion and dilution within the tributaries flowing towards the lakes.

The following sections address the work conducted for those portions of the IPZ-3 in the Lower Thames Valley Source Protection Area for the Wheatley intake and for the Stoney Point intake in the Essex Region Source Protection Area. IPZ-3 work for the Chatham/South Kent and West Elgin intakes has not been undertaken and may be included in a future Assessment Report update.

4.2.5.1. Wheatley IPZ-3

The Wheatley intake is located very close to the Lower Thames Valley Source Protection Area's boundary with the Essex Region Source Protection Area and as a result the IPZ-3 is delineated in both Source Protection Areas.

In the case of the Wheatley intake, the concern is fuel spills and the parameter chosen to model was the benzene component of the fuel. The modelling completed for the Wheatley IPZ-3 followed the general approach outlined in the MOE Technical Bulletin (July 2009). Based on previous IPZ-2 work, it was decided that modelling one spill upstream on a tributary in Pelee/Hillman Creek (west of the intake in the Essex Region Source Protection Area) would be sufficient as the results could be extrapolated to other nearby tributaries. A fuel spill of 34,000 L of gasoline (with 2% benzene content) was chosen as this roughly corresponds to the volume contained in a tanker truck. However, the modelling would be equally applicable to a fixed storage of equal size. The location of the spill was chosen to be the Highway 77 crossing, 12.3 km upstream from the lake, near the headwaters of the watershed. The spill location is shown on Map 4-3b. Modelling was used to determine contaminant concentrations arriving at the intake from the spill under 5 different extreme events. The extreme events were selected as 100-year return period events using a joint probability analysis on wind direction, speed and duration as well as tributary flows.

Three of the extreme events modelled found that contaminants from a 34,000 L spill near the headwaters of Pelee/Hillman Creek reached the Wheatley primary and emergency intakes at a concentration above the benzene Ontario Drinking Water Quality Standard of 0.005 mg/L. As a result, Baird and Associates recommended delineating an IPZ-3 from the mouth, throughout all the upstream tributaries, all the way to headwaters of Pelee/Hilllman Creek. They also recommended including the smaller tributaries between Pelee/Hillman Creek and the intake as spills in these locations would be expected to result in similar or higher concentrations arriving at the intake.

The concentrations arriving at the intake were sufficiently high that it was concluded that a 15,000 L spill would also produce an exceedance of the Ontario Drinking Water Quality Standard. As a result, both Source Protection Authorities have moved forward using a potential 15,000 L spill for Threat and Risk Assessment work.

Based on the results of modelling in Pelee/Hillman Creek, it was determined that the Two Creeks watershed, located east of the intakes in the Lower Thames Valley Source Protection Area, should also be included in the IPZ-3. Two Creeks is a smaller watershed than Pelee/Hillman and its longest path up the drainage network is also shorter than Pelee/Hillman. As a consequence there would be less in-stream dilution in Two Creeks for the same size spill.

The outlet of Two Creeks is also closer to the intakes than the outlet of Pelee/Hillman. Two Creeks is approximately 1.5 km from the intakes whereas Pelee/Hillman is approximately 4.0 km away. In terms of in-lake travel times, the outlet of Two Creeks is also closer as it lies within the Wheatley IPZ-2 whereas Pelee/Hillman lies outside the IPZ-2. As a consequence there would also be less in-lake dilution in Two Creeks for the same size spill.

While these arguments are largely qualitative, they all indicate that, based on the modelling undertaken for Pelee/Hillman Creek, for the same size spill anywhere along the Two Creeks drainage network, there would be an exceedance of the Ontario Drinking Water Quality Standard at the intake.

The next Lake Erie tributary east of Two Creeks is Yellow Creek. This drainage system is extremely flat and has multiple outlets to Lake Erie. As such, the simple inferences made to include Two Creeks in the IP-3 can't be applied in the case of Yellow Creek. It is possible that future modelling work may show that this tributary should also be included in the IPZ-3.

As specified in the Technical Rules, the IPZ-3 extends on to the land a distance of 120 metres, or to the Floodplain Regulation Limit whichever is greater (as long as water from the land actually flows to the watercourse). Transport pathways were not considered in the IPZ-3 delineations. The extent of the Wheatley IPZ-3 is shown on Map 4-3b.

4.2.5.2 Stoney Point IPZ-3

The Stoney Point intake is located in the Essex Region Source Protection Area very close to the boundary with the Lower Thames Valley Source Protection Area. As a result, the IPZ-3 is delineated in both Source Protection Areas.

In the case of the Stoney Point intake, the concern is fuel spills and the parameter chosen to model was the benzene component of the fuel. The modelling completed for the Wheatley IPZ-3 followed the general approach outlined in the MOE Technical Bulletin (July 2009). The modelling used to delineate the IPZ-3s for Essex Region Source Protection Area Lake St. Clair tributaries will not be discussed in this report as the IPZ-3 delineation in the Lower Thames Valley Source Protection Area is not dependant on that work.

Based on previous IPZ-2 work and some preliminary IPZ-3 work conducted by the Essex Region Source Protection Authority, Baird and Associates modelled 3 spills in the downstream portion of the Thames River watershed. Two fuel spills of 34,000 L of gasoline (with 2% benzene content) were chosen as this roughly corresponds to the volume contained in a tanker truck and one fuel spill of 68,000 L was chosen as it roughly corresponds to the volume contained in a rail tanker. While the spills chosen were transportation related, the modelling would be equally applicable to a spill from a fixed storage of equal size. Results of this early modelling indicated that the IPZ-3 would extend substantially further upstream in the tributaries. Therefore, staff at the Lower Thames Valley Conservation Authority expanded the Baird and Associates work by conducting additional modelling in the tributaries using the analytic approach described in MOE's Technical Bulletin.

Modelling in Lake St. Clair was conducted to determine contaminant concentrations arriving at the intake from a spill leaving the mouth of the Thames River under 2 different extreme events. The extreme events were selected as 100-year return period events using a joint probability analysis on wind direction, speed and duration as well as tributary flows. Those events include a 10-year return period wind event, 2 year return period flow in the St. Clair River and mean flow from the Thames River. This modelling showed that for one of the events, a 0.49 mg/L peak benzene concentration at the mouth of the Thames produced a 0.18 mg/L peak benzene concentration at the intake; an exceedance of the of the Ontario Drinking Water Standard (0.005 mg/L benzene) by a factor of 36.

Two spill locations for a 15,000 L gasoline spill and three spill locations for a 34,000 L spill were modelled using the analytical approach to determine the resulting concentrations at the mouth of the Thames River. The spill locations for the 15,000 L spills were 1) on the Thames River 1 km upstream of the Big Creek confluence and 2) on Big Creek 250 m upstream of the Baptiste Creek confluence. The spill locations for the 34,000 L spills were 1) on the Thames River 2 km upstream of the Prairie Siding Bridge approximately where the diking stops, 2) on Jeanettes Creek at the Forbes Internal Drain pump station, and 3) at the furthest upstream confluence in the Big Creek watershed on the West Ogle Drain in the Municipality of Leamington. The spill locations are shown on Map 4-10.

The 5 modelled fuel spills each produced a peak benzene concentration at the mouth of the Thames River of 0.20 mg/L or greater. This is approximately two-fifths of the concentrations used for the in-lake modelling that produced a 36 times exceedance at the intake. As a result, two IPZ-3, one for a15,000 L fuel spill and one for a 34,000 L fuel spill have been delineated upstream from the mouth of the Thames River to these locations.

As the West Ogle Drain location was the furthest upstream confluence in the Big Creek watershed, all other branches and tributaries in the watershed were included in the 34,000 L IPZ-3 delineation. Spills on these watercourses should all produce similar or greater concentrations at the mouth of the Thames River since they all would have shorter travel times in the drainage network and smaller flows which would produce less dilution and dispersion between the spill and the mouth of the Thames River.

The area of the lower Thames River watershed, including the Big Creek and Jeanettes Creek watersheds, through which this IPZ-3 is being delineated, presents some particular challenges for modelling. The area is extremely flat and the elevation of the land is very similar to Lake St. Clair water levels. In order to keep the land dry enough for agriculture, much of the area is covered by dikes and pumping schemes. The pump stations are essentially dams that keep Lake St. Clair water from backing up the drainage network. The dams have pumps associated with them to pump the water from the upstream side of the dam to the lake side of the dam. The existence of these pumps present some challenges in applying the simple analytical models outlined in the MOE Technical Bulletin.

Preliminary exploratory modelling of the pumping schemes using the simple analytical models led to the conclusion that the watercourses behind the pumping schemes should be excluded from the IPZ-3. The operation of the pumps are not tied directly to flow in a tributary nor necessarily related to flows in the Thames River. No particular pump can be assumed to be in operation just because a mean flow situation exists in the downstream tributary. If the pump is running, that means there is a significant depth of water accumulated on the upstream side of the pump. These depths far exceed what would be expected under gravity driven flows. Preliminary exploratory modelling using a modest upstream depth of 1 m when a pump is sending out mean flows suggested that this additional volume behind the pump was creating enough dilution that watercourses behind the pump scheme should be excluded from the IPZ-3, especially when combined with the substantial dilution incurred when the smaller tributary exits into the much larger Thames River.

As specified in the Technical Rules, the IPZ-3 extends on to the land a distance of 120 metres, or to the Floodplain Regulation Limit whichever is greater, as long as water from the land actually flows into the watercourse. The extensive diking system though this area limits the extent to which the IPZ-3 extends onto the land. Throughout much of the downstream portion of the Thames River and Big Creek watersheds, the 34,000 L IPZ-3 only extends to the top of the dike, not the full 120 m nor to the Regulation Limit.

The upstream extents of the 34,000 L IPZ-3 on Thames River and Jeanettes Creek were determined primarily based on where the uncertainty was too great to include areas further upstream in the IPZ-3, rather than specific numeric results from the modelling areas upstream of these locations. On Jeanettes Creek, the IPZ-3 terminates at a large wetland pond area with a couple of islands in the middle. The simple analytical methods used for modelling dispersion and dilution in the watercourses were not designed for this situation. Rather than introducing additional uncertainty into the calculation by making a series of assumptions to deal with this area, the IPZ-3 terminates at that location. On the Thames River, the 34,000 L IPZ-3 was terminated at the upstream end of the dike system, about 5 km downstream from the City of Chatham. The additional uncertainty introduced by modelling through an urban area containing a complex storm drainage system, is not appropriate given the density of properties and uses within the area. As a result the IPZ-3 was terminated downstream of Chatham. The 15,000 L IPZ-3 was terminated at a location that produced the same peak benzene concentrations at the mouth of Thames River as that determined from the 34,000 L spill located on the Thames River. More thorough and site specific modelling should be considered in the future which might demonstrate that areas further upstream should be included in the IPZ-3 as part of a future update to this assessment report.

It is also possible that the IPZ-3 extends further north and east along the Lake St. Clair shoreline. However, the next few outlets into the lake are controlled by pump schemes. Based on the preliminary exploratory modelling on pump schemes, it didn't seem likely that these drainage systems would be included.

It should be noted that the technical report by Baird and Associates also showed that a spill in the Thames River could reach the Belle River intake in the Essex Region Source Protection Area with a concentration exceeding the Ontario Drinking Water Quality Standard. Should consideration be given to delineating an IPZ-3 into the Lower Thames Valley Source Protection Area for that intake at some point in the future, it should be noted that the Stoney Point IPZ-3 would be larger and be assessed a higher vulnerability. Source Protection Plan polices could be written to address these concerns at the Belle River intake by applying similar policies designed to protect the Stoney Point intake. System operators should however be aware that some spills resulting in an exceedance at the Stoney Point intake could also result in an exceedance at the Belle River intake.

Transport pathways were not considered in the IPZ-3 delineations. The extent of the Stoney Point IPZ-3s are shown on Map 4-10.

Replace table 4-3 with the following

Table 4-3 Summary of Vulnerability Score of Intakes

Intake	Area Vulnerability Factor			Source Vulnerability Factor	Vulnerability Score		
	IPZ-1	IPZ-2	IPZ-3		IPZ-1	IPZ-2	IPZ-3
Chatham/South Kent Intake	10	8	na	0.5	5.0	4.0	na
Wheatley Primary Intake	10	8	na	0.6	6.0	4.8	na
Wheatley Emergency Intake	10	8	na	0.7	7.0	5.6	na
West Elgin Primary Intake	10	7	na	0.6	6.0	4.2	na
West Elgin Emergency Intake	10	8	na	0.7	7.0	5.6	na
Stoney Point intake (ERSPA)	na	na	7, 6, 5, 4, 3	0.9	na	na	6.3, 5.4, 4.5, 3.6, 2.7

3.4 Revisions to the LTVSPA Assessment Report – Section 5

Revisions related to Wheatley Microcystin Issue

Section	Page	Text	Reason For Change	Changes Made
5.2 Impact of Identifying an Issue	5-6	Should an *issue* be identified as per Technical Rule 114, the *issue* contributing area must be delineated as per Rule 115. Also as per rule 115, activities that contribute to the *issue* within the *issue* contributing area must be identified and are deemed to be a *significant risk* to the source of drinking water for those systems included in the Terms of Reference for the LTVSPA. *Significant risks* must be mitigated through the *source protection plan*. As per Technical Rules 68, 130 and 131, a third intake protection zone (*IPZ-3*) for surface water intakes may be delineated to include the activity and area known to contribute to the drinking water quality *issue*. These tasks are yet to be completed and will be part of an amended Assessment Report.	To document the potential for an issue under the Act and differentiate it from an Issue under the Rules	
		Should an *issue* be identified as per Technical Rule 114, the *issue* contributing area must be delineated as per Rule 115. Also as per rule 115, activities that contribute to the *issue* within the *issue* contributing area must be identified and are deemed to be a *significant risk* to the source of drinking water for those systems included in the Terms of Reference for the LTVSPA. *Significant risks* must be mitigated through the *source protection plan*. If the information required to delineate the ICA and identify the activities contributing to an issue are not readily ascertained, rule 116 allows for a work schedule to be identified to ascertain the information specified in rule 115. As per Technical Rules 68, 130 and 131, a third intake protection zone (*IPZ-3*) for surface water intakes may be delineated to include the activity and area known to contribute to the drinking water quality *issue*. These tasks are yet to be completed and will be part of an amended Assessment Report In addition to the identification of an issue by rule 114, rule 115.1 allows for the identification of an issue which is not identified in accordance with rule 114. This is often referred to as an issue identified under that Act to differentiate it from an issue identified under the rules (specifically rule 114). Issues identified as per rule 115.1 do not require the delineation of an ICA and cannot have significant threats identified which contribute to the issue. They may however be addressed through specify action policies and be the subject of monitoring and reporting.		
	5-6	*Significant risks* must be mitigated through the *source protection plan*.	Consistent capitalization of terms	

Section	Page	Text	Reason For Change	Changes Made
		Significant risks must be mitigated through the *Source Protection Plan*.		
5.3 Issues Evaluation Methodology	5-6	Identifying *issues* is a key step in the overall process of protecting drinking water quality. *Issues* were identified in the Lower Thames Valley Source Protection Area by following the Thames-Sydenham and Region Issues Evaluation Methodology (May 14, 2009), depicted in Figure 5-1. The methodology is provided in Appendix 8.	To document the potential for an issue under the Act and differentiate it from an Issue under the Rules	
		Identifying *issues* is a key step in the overall process of protecting drinking water quality. *Issues* were identified in the Lower Thames Valley Source Protection Area by following the Thames-Sydenham and Region Issues Evaluation Methodology (May 14, 2009), depicted in Figure 5-1. This methodology was developed to guide the technical work to assess an issue under the Rules (rule 114). The methodology is provided in Appendix 8.		
Table 5-5		Update to add reference to ERCA microcystin work	to add reference to ERCA microcystin work	
		Add text describing ERCA work (SPC reports), Thames-Sydenham and Region discussion paper		
Table 5.6		Add Microcystin issue		
		System: Wheathley Issue: Microcystin Brief Description: Microcystin, a neurotoxin, is released, when certain algae cells (blue-green) break down. If left intact the algae is able to be removed, with the microcystin remaining contained in the cells, through common filtration methods. Changes to water treatment processes are made to reduce the likelihood that cells would be ruptured before being removed from the water. For the past few years raw and treated water are tested during the algae bloom season for microcystin. Phosphorous is the limiting nutrient for algae growth and as such contributes to the growth of algae. Microcystin levels were reviewed for Wheatley and other intakes in the western basin of Lake Erie. In the 3 years of data reviewed, a single exceedance and some levels approaching the half MAC were measured in the raw water while treated water levels remain barely detectable at Wheatley. Although available data does not allow for a trend to be established, it is commonly though that the frequency and severity of algae blooms are getting worse. Although the levels did not satisfy the issues evaluation process developed to satisfy rule 114, Microcystin was however is identified as an issue under the CWA as per rule 115.1. It is recommended that monitoring efforts be continued and improved to coordinate the various monitoring programs. Further, it is recommended that monitoring and research be continued into the relationship between microsystin and phosphorous levels. Natural or Anthropogenic: Anthropogenic factors (local and international) contribute		

Section	Page	Text	Reason For Change	Changes Made
		excessive phosphorous which make it possible for excessive algae growth.		
System Summary, Wheatley		Update to reflect microcystin		
Issues Section Summary		Update to reflect microcystin		

3.5 Section 7– Threats and Risk Assessment Water Quality

Section	Page	Text	Reason For Change
7	7-2	Dillon Consulting Ltd. was the primary consultant who completed the threats and risk assessment work for these groundwater systems. LTVCA staff created mapping products needed in threats analysis, and analysed certain types of threats.	Need to add a paragraph how Threat and Risk Assessment was done for IPZ-3
Proposed revision		Dillon Consulting Ltd. was the primary consultant who completed the threats and risk assessment work for these groundwater systems. Threats and risk assessment in the EBA and IPZ-3 were completed by LTVCA staff based on the event modelling in the EBA. Threats and risk assessment in the IPZ-3 for the Stoney Point intake were also undertaken by LTVCA staff based on an extension of the IPZ-3 delineation and vulnerability scoring in the Essex Region SPA. LTVCA staff created mapping products needed in threats analysis, and analysed certain types of threats.	
7	7-2, 3	*Table 7-1 Technical Studies on Drinking Water Threats and Risk Assessment*	Update Table with Tech Report on IPZ-3
Proposed revision		Add rows: Wheatley | Name of report, ERCA, Month, 2014 Stoney Point | Name of report, LTVCA Month 2014	
7	7-3	Work related to IPZ-3 is yet to be completed	Specify which IPZ-3s as some work has been done.
Proposed revision		Work related to IPZ-3 has been undertaken on the Wheatley Intake and the IPZ-3 from the Stoney Point intake in Essex Region SPA has been extended into the Lower Thames Valley SPA.	
7	7-33	Highgate is currently classified as a GUDI (groundwater under the direct influence of surface water) system. As described in section 4.3.4, the MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Assessment Report as information available at this time indicates that the system does not meet the test in Rule 49 (3).	Highgate lo longer classified as GUDI
Proposed revision		Highgate is no longer classified as a GUDI (groundwater under the direct influence of surface water) system.	
7	7-5	The activities 1 to 18 and 21 are prescribed drinking threats related to drinking water quality and are discussed in this section	Minor editorial revision
Proposed revision		The activities 1 to 18 and 21 are prescribed drinking water threats related to drinking water quality and are discussed in this section	
7	7-6	WHPA-E and WHPA-f are delineated for drinking water systems designated to be groundwater under the direct influence of surface water (GUDI). Work related to IPZ-3 is yet to be completed. As described in Section 4.3.4 and 7.1, the MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Assessment Report as information available at this time indicates that the system does not meet the test in Rule 49 (3).	No longer relevant
		Delete text	
7	7-7	According to the Technical Rules: Assessment Report, vulnerability scores for Great Lakes IPZ range from 3.5 to 7.0 (depending on whether it is for IPZ-1 or IPZ-2), and for WHPA, range from 2 to 10 (depending on whether it is for WHPA-A, WHPA-B, WHPA-C or WHPA-D).	Discussion of ranges for IPZ-3 needed.
Proposed revision		According to the Technical Rules: Assessment Report, vulnerability scores for Great Lakes IPZ-1 and IPZ-2 range from 3.5 to 7.0 (depending on whether it is for IPZ-1 or IPZ-2). For intakes in Lake St Clair,	

		vulnerability for IPZ-3 must be lower than the score for IPZ-2 and vary depending on the travel time to the intake. For WHPA the vulnerability ranges from 2 to 10 (depending on whether it is for WHPA-A, WHPA-B, WHPA-C or WHPA-D).	
7	7-7	dependent on the circumstances associated with activity	Missed 'the'
Proposed revision		dependent on the circumstances associated with the activity	
7	7-8	Hence, the circumstances of the activity are considered to determine the level of risk associated with a water threat.	No such thing as a water threat
Proposed revision		Hence, the circumstances of the activity are considered to determine the level of risk associated with a drinking water threat.	
7	7-8	BTEX	Spell out the acronym the first time
Proposed revision		Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)	
7	7-9	The Percent of Impervious Areas within the grids touching WHPA and IPZ have been calculated; however HVA and SGRA have yet to be calculated.	Remove whole sentence.
Proposed revision		~~The Percent of Impervious Areas within the grids touching WHPA and IPZ have been calculated; however HVA and SGRA have yet to be calculated~~	
7	7-10	This was undertaken for each part of the WHPA and IPZ which have been delineated.	Only done where the vulnerability score can produce a threat.
Proposed revision		This was undertaken for each part of the WHPA and IPZ where the vulnerability could result in the activities being a drinking water threat. This evaluation has not been completed for IPZ-3.	
7	7-14	The Clean Water Act also allows the Source Protection Committee to include activities that they consider being drinking water threats but are not prescribed drinking water threats, upon approval of the Director. These are called other activities (Rule 119). The Source Protection Committee can also identify additional circumstances (not already in the tables of drinking water threats) under which they consider the activity to be a prescribed drinking water threat. The Source Protection Committee is considering a few such other activities, as discussed in Section 7.3. These include geothermal systems (harnessing underground temperature), transportation corridors (shipping or road transport of materials) and rifle ranges (shooting practice areas). Other activities may be listed as threats only if the Source Protection Committee identifies them as drinking water threats, and similar to the prescribed threats, if the hazard score is greater than 4 and the risk score calculated is greater than 40, and if the hazard score (calculated based on certain criteria set out in the technical rules) is agreed upon by the Director (MOE).	Need to reflect additional local threats for the LTV
Proposed revision		The Clean Water Act also allows the Source Protection Committee upon approval of the Director, to include activities that they consider drinking water threats but are not prescribed drinking water threats. These are called other activities (Rule 119) and are often referred to as local threats. The SPC has requested permission to consider transportation of fuel as threat. Appendix 13 contains the director's letter granting that request. The Source Protection Committee can also identify additional circumstances (not already in the tables of drinking water threats) under which they consider the activity to be a prescribed drinking water	

		threat. The Source Protection Committee is considering a few such other activities, as discussed in Section 7.3. These include geothermal systems (harnessing underground temperature), transportation corridors (shipping or road transport of materials) and rifle ranges (shooting practice areas). Other activities may be listed as threats only if the Source Protection Committee identifies them as drinking water threats, and similar to the prescribed threats, if the hazard score is greater than 4 and the risk score calculated is greater than 40, and if the hazard score (calculated based on certain criteria set out in the technical rules) is agreed upon by the Director (MOE). This information is included in the Director's letter included in Appendix 13 MOE communications. Event based modelling may be used to determine if these other activities (local threats), or prescribed drinking water threats, are considered significant drinking water threats.	
Appendix 13	new	Add Appendix 13 – Ministry of Environment Communications	
Proposed revision		*To include*: Approval of AR Approval of transportation threats Approval of alternative methods for IPZ-3	
7	7-15	The sources of some of the issues is yet to be determined.	Grammar
Proposed revision		The sources of some of the issues are yet to be determined.	
7	7-15	Also as per rule 115, activities that contribute to the issue within the issue contributing area must be identified and are deemed to be a significant risk to the source of drinking water for those systems included in the Terms of Reference for an SPA.	Deemed to be significant threat not risk? Also, it is not Rule 115 that makes these significant.
Proposed revision		Also as per rule 131, activities that contribute to the issue within the issue contributing area must be identified and are deemed to be a significant drinking water threat for systems included in the Terms of Reference for an SPA.	
7	7-15	Significant risks must be mitigated through the source protection plan.	Threat or risk?
Proposed revision		Significant threats must be mitigated or prevented through the source protection plan.	
7	7-15	As per Technical Rules 68, 130 and 131, a third intake protection zone (IPZ-3) for surface water intakes may be delineated, based on an extreme event, to include the activity and area known to contribute to the drinking water quality issue. These tasks are yet to be completed and will be part of an amended Assessment Report.	Revise in relation to current ICA position.
Proposed revision		As per Technical Rules 68, 130 and 131, a third intake protection zone (IPZ-3) for surface water intakes may be delineated, based on an extreme event, to include the activity and area known to contribute to the drinking water quality issue. These tasks are yet to be completed and may be part of an amended Assessment Report if an ICA is delineated for an issue under the rules (115).	
7	7-16	The threats analysis for IPZ of the West Elgin, Wheatley and Chatham/South Kent intakes on Lake Erie was based on reviewing the Ministry of Environment tables of drinking water threats and the vulnerability scores of these IPZ. The vulnerability scores and vulnerable areas were considered to generate the listing of land use activities that are or would be drinking water threat in each vulnerable area. The listing details	Need to specify which IPZs now that IPZ-3 exist and describe IPZ-3/EBA threats assessment

		land use activities that, given the vulnerability score for each specific vulnerable area, would present low, moderate, or significant drinking water threats.	
Proposed revision		The threats analyses for IPZ-1 and IPZ-2 of the West Elgin, Wheatley and Chatham/South Kent intakes on Lake Erie was based on reviewing the Ministry of Environment Tables of Drinking Water Threats and the vulnerability scores of the IPZ. The vulnerability scores and vulnerable areas were considered to generate the listing of land use activities that are or would be drinking water threat in each vulnerable area. The listing details land use activities that, given the vulnerability score for each specific vulnerable area, would present low, moderate, or significant drinking water threats. In the Event Based Areas activities are identified as significant drinking water threats through the event based modelling which is described in section 4.	
7	7-16	For the threats analysis in the Ridgetown and Highgate WHPAs, an inventory of land use activities that may be associated with prescribed drinking water threat was conducted. The inventory was based on a review of multiple data sources including public records, data provided through questionnaires completed by municipal officials, previous contaminant/historical land use information, and data collected during windshield surveys. No site specific information was collected; therefore, all prescribed drinking water threat activities are considered potential rather than confirmed.	Discuss local threat if it is evaluated for WHPAs
Proposed revision		For the threats analysis in the Ridgetown and Highgate WHPAs, an inventory of land use activities that may be associated with prescribed drinking water threat was conducted. The inventory was based on a review of multiple data sources including public records, data provided through questionnaires completed by municipal officials, previous contaminant/historical land use information, and data collected during windshield surveys. No site specific information was collected; therefore, all prescribed drinking water threat activities are considered potential rather than confirmed. Due to the transient nature of the transportation threats it is not possible to inventory people engaged in these activities	
7.1.5	7-16	A tier 2, or site-specific, risk assessment is planned for 2010 to confirm the number of locations at which significant threats occur.	Revise to reflect that tier 2 is not being completed and describe the verification process
Proposed revision		A site-specific risk assessment to confirm the existence of significant threats will be necessary as part of implementation.	
7.2	7-17	The Source Protection Committee has not identified any 'other' (not prescribed) activities or circumstances (not in the tables of drinking water threats) at this point. However, the Source Protection Committee has expressed a concern to the MOE over the risks associated with the transportation of materials through pipelines or other corridors.	Change to reflect new local threat approval
Proposed revision		The Source Protection Committee has been approved to consider transportation of fuel as a local threat.	
7.2	7-17	Activities that contribute to issues are deemed a significant risk by the Clean Water Act.	Improve clarity
Proposed revision		Activities that contribute to issues within an ICA are deemed a significant threat by the Clean Water Act.	
7.2.1	7-18	For activities related to the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard, no chemical or pathogen threats were identified in IPZs with vulnerability scores at or greater than 4.5 (chemical) and 4.2 (pathogen) due to current land use (scores lower than these do not result in these activities being identified as threats in IPZs).	Improve clarity

Proposed revision		For activities related to the use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard, no chemical or pathogen threats were identified in IPZ-1 or IPZ-2 with vulnerability scores at or greater than 4.5 (chemical) and 4.2 (pathogen) due to current land use (scores lower than these do not result in these activities being identified as threats in IPZs). These activities have not been inventoried in the IPZ-3, however in this area they cannot be considered significant drinking water threats due to the vulnerability scoring of the area.	
7.2.2	7-18	As can be seen from Table 7-5, there are no locations of activities that 'are or would be' significant threats within the IPZ, the HVA and SGRA. There are however locations where significant threats 'are or would' occur in the WHAP-A, WHAP-B and WHPA-C.	Need to specify which IPZs now that IPZ-3 exist
Proposed revision		As can be seen from Table 7-5, there are no locations of activities that 'are or would be' significant threats within the IPZ-1, IPZ-2, the HVA and SGRA. There are however locations where significant threats 'are or would' occur in the WHAP-A, WHAP-B and WHPA-C as well as IPZ-3 where event based modelling has identified significant threats (in an EBA).	
7.2.3	19	*Table 7-5 : Number of Locations of Significant Drinking Water Threats*	Update with IPZ-3, confirm values haven't changed
		Replace with tables appended to this change log	
7.2.3 and on	7-20, 22, 23, 26, 27, 28	http://www.ene.gov.on.ca/en/water/cleanwater/provincialTables.php.	Bad web link
		https://www.ontario.ca/environment-and-energy/provincial-tables-circumstances	
7.2.3 and on	7-20, 22, 23, 26, 27, 28	http://www.ene.gov.on.ca/en/water/cleanwater/cwa-technical-rules.php.	Bad web link
		http://www.ontario.ca/environment-and-energy/tables-drinking-water-threats	
Table 7-7, 7-8, 7-9, 7-10, 7-12	7-22 to 7-25	*Table 7-7, 7-8, 7-9, 7-10, 7-12*	Update based on threats verification
		Replace with tables appended to this change log	
7.2.7	27	The table on the map and the Table 7-12 below indicate the vulnerability score and vulnerable area in which the activities 'are or would' be low, moderate or significant threats. The level of threat is dependent upon the vulnerable area (IPZ-1 or 2).	Need to add for IPZ-3/EBA
Proposed revision		The table on the map and the Table 7-12 below indicate the vulnerability score and vulnerable area in which the activities 'are or would' be low, moderate or significant threats. The level of threat is dependent upon the vulnerable area (IPZ-1 or 2). In the EBA significant threats are determined through the use of event based models.	
7.2.9		*New section to be added*	To document number of

			significant threats in the EBA separate from PDWT in IPZ-1, 2.
7.2.9	7-30	Wording was changed. 15,000 L spills were not modelled in ERCA. They modelled 34,000 and then said the exceedance was large enough to justify lowering it to 15,000.	
		7.2.9 Threats in EBA Tables 7-14 and 7-15 identify the numbers of suspected significant threats in the Event Based Areas (EBA) for Wheatley and Stoney Point intakes. These threats are considered significant threats as a result of the event based modelling used to delineate the IPZ-3 as described in section 4.2.5. An IPZ-3 is created to contain the parts of the EBA which extend beyond the IPZ-1 and IPZ-2. These EBA are based on the specific circumstances (chemical and quantity) modelled under an extreme event. For both intakes fuel spills were modelled based on 15,000 and 34,000 L spills (15 cubic metres and 34 cubic metres). Within this area the modelling has identified that the chemical can arrive at the intake at a concentration which would result in the deterioration of the water as a drinking water source and as such can be identified as a significant drinking water threat in that area. The EBA may contain all or only parts of the IPZ-1, 2, and 3.	
7.3	7-28, 29	A tier 2, or site-specific, risk assessment is planned for 2010 to confirm the number of locations at which significant threats occur. As part of the consultation on this assessment report, those who are believed to be engaging in a significant threat will be notified. This will allow their participation in the tier 2 risk assessment. The tier 2 work involves the examination of land use activities and the circumstances under which they are undertaken, through site visits and discussions with the landowners. The outcome of the tier 2 risk assessment will be part of an amended Assessment Report.	Reflect that tier 2 risk assessment is not planned
Proposed revision		A site-specific risk assessment to confirm the existence of significant threats will be necessary as part of implementation. Although additional efforts have been made to verify significant threats, this has not included on site verification of the threat. Although this level of effort was considered as part of the threats verification, it would still be necessary during implementation. Further it will also be necessary as part of compliance monitoring for part IV implementation in both locations where significant threats have been identified and those where threats have not been identified. This is due in part to the potential for activities and circumstance to change at any location without any regulatory approval process. As part of the consultation on this assessment report, those who are believed to be engaging in a significant threat will be notified.	
7.4	7-29	The delineation and vulnerability assessment of IPZ-3 is yet to be complete. It is estimated to complete this work in fall 2010. Thereafter, the impervious, managed lands and livestock density calculations and associated threats identification and risk assessment will be completed for these vulnerable areas in 2011, to be a part of an amended Assessment Report. Highgate is currently classified as a GUDI (groundwater under the direct influence of surface water) system. As described in Section 4.3.4 and 7.1, the MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Assessment Report as information available at this time indicates that the system does not meet the test in Rule 49 (3). A preliminary investigation has been completed to determine if there are any conditions. A couple of potential conditions in the Lower Thames Valley Source Protection Area are being considered. More work	Update to reflect IPZ-3 work, what work was done/not done according to the timeline, comments about Highgate still valid?

		will be undertaken on identifying and assessing conditions for potential threats, and the Assessment Report will be amended if necessary.	
Proposed revision		Impervious, managed lands and livestock density calculations and associated threats identification and risk assessment have not been completed for IPZ-3. This is only necessary for the IPZ-3 related to the type D intake at Stoney Point. This work when completed will not identify any significant threats due to the vulnerability score of these areas. A preliminary investigation has been completed to determine if there are any conditions. A couple of potential conditions in the Lower Thames Valley Source Protection Area are being considered. If warranted more work will be undertaken on identifying and assessing conditions for potential threats, and the Assessment Report will be amended if necessary.	
Table 7-14, 7-15		new table	Inventory significant threats in EBA
		Add table 7-14, 7-15 appended to this change log	
		Threats Section Summary	
		Update to reflect revisions to this section	
		System summaries	
		Revise to reflect updated threats inventories	

Table 7-5 : Number of Locations of Significant Drinking Water Threats

System and Vulnerable Area	Vulnerability Score	Number of Locations of Significant Threats
Chatham/South Kent Water Treatment Plant		
IPZ-1	5.0	0
IPZ-2	4.0	0
Highgate Well Supply System		
WHPA - A	10	32
WHPA - B	6	2
WHPA - C	4	0
WHPA - D	2	0
Ridgetown Well Supply System		
WHPA - A	10	25
WHPA - B	6	0
WHPA - C	2	0
WHPA - D	2	0
West Elgin Water Treatment Plant – Primary Intake		
IPZ-1	6.0	0
IPZ-2	4.2	0
West Elgin Water Treatment Plant – Emergency Intake		
IPZ-1	7.0	0
IPZ-2	5.6	0
Wheatley Water Treatment Plant – Primary Intake		
IPZ-1	6.0	0
IPZ-2	4.8	0
IPZ-3	n/a	14*
Wheatley Water Treatment Plant – Emergency Intake		
IPZ-1	7.0	0
IPZ-2	5.6	0
IPZ-3	n/a	14*
Stoney Point Intake (Essex Region SPA)		
IPZ-3	2.7 to 6.3	18
HVAand SGRA		
HVA	6.0	0
SGRA	6.0, 4.0 and 2.0	0
* Event modelled threats only (fuel storage and handling)		

Table 7-7 Number of Locations of Significant Threats in the Highgate WHPAs

Vulnerable Area	Vulnerability Score	Significant Threats Related To		
		Pathogens	Chemicals	DNAPLs
WHPA-A	10	31	1	1
WHPA-B	6	0	0	1
WHPA-C	4	0	0	0
WHPA-D	2	0	0	0

Table 7-8 Significant Threats in the Highgate WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A
The application of agricultural source material to land	Pathogen	A
The application of pesticide to land.	Chemical	A
The application of non-agricultural source material to land	Pathogen	A
The handling and storage of dense non aqueous phase liquids	DNAPL	A, B
The handling and storage of fuel	Chemical	A
Number of occurences of significant prescribed drinking water threats		39
Total number of locations of significant prescribed drinking water threats		34*

*some parcels may have more than one activity occurring

Table 7-9 Number of Locations of Significant Threats in the Ridgetown WHPAs

Vulnerable Area	Vulnerability Score	Significant Threats Related To		
		Pathogens	Chemicals	DNAPLs
WHPA-A	10	15	42	10
WHPA-B	6	0	0	2
WHPA-C	2	0	0	0
WHPA-D	2	0	0	0

Table 7-10 Significant Threats in the Ridgetown WHPA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	WHPA
Erie Street System		
The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage	Chemical, Pathogen	A
The application of agricultural source material to land	Pathogen	A
The storage of agricultural source material	Chemical, Pathogen	A
The application of non-agricultural source material to land	Chemical, Pathogen	A
The handling and storage of commercial fertilizer	Chemical	A
The handling and storage of pesticide	Chemical	A
The handling and storage of dense non aqueous phase liquids	DNAPL	A, B
The handling and storage of fuel	Chemical	A
The application of fertilizer	Chemical	A
The handling and storage of organic solvents	Chemical	A
The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard	Pathogen	A

Scane Road System		
The handling and storage of fuel	Chemical	A
The application of pesticide	Chemical	A
The application of agricultural source material to land	Pathogen	A
The application of non-agricultural source material to land	Pathogen	A
Number of occurences of significant prescribed drinking water threats		71
Total number of locations of significant prescribed drinking water threats		25*

*some parcels may have more than one activity occurring

Table 7-1 Levels of Threats Related to Pathogens and Chemicals in the Wheatley IPZs

Vulnerable Area	Vulnerability Score	Level of Threat for Activities Related to Pathogens			Level of Threat for Activities Related to Chemicals		
		Significant	Moderate	Low	Significant	Moderate	Low
Wheatley Primary Intake							
IPZ-1	6.0	No	Yes	Yes	No	Yes	Yes
IPZ-2	4.8	No	No	Yes	No	No	Yes
IPZ-3	n/a	No	No	No	Yes*	No	No
Wheatley Emergency Intake							
IPZ-1	7.0	No	Yes	Yes	No	Yes	Yes
IPZ-2	5.6	No	No	Yes	No	No	Yes
IPZ-3	n/a	No	No	No	Yes*	No	No
* storage and handling of fuel in EBA only							

Table 7-14 Significant Threats in the Stoney Point EBA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	IPZ
The handling and storage of fuel	Chemical	3
Number of occurrences of significant prescribed drinking water threats		18
Total number of locations of significant prescribed drinking water threats		18

*some parcels may have more than one activity occurring

Table 7-15 Significant Threats in the Wheatley EBA

Prescribed Drinking Water Threat	Type (Chemical, Pathogen or DNAPL)	IPZ
The handling and storage of fuel	Chemical	1,2,3
Number of occurrences of significant prescribed drinking water threats		16
Total number of locations of significant prescribed drinking water threats		16

*some parcels may have more than one activity occurring

3.6 Section 8 – Great Lakes

Revisions to the section 8 of the LTVSPA AR were based on the revisions made to the UTRSPA AR.

3.7 Section 9– Data Gaps and Next Steps

Section	Page	Text	Reason For Change	Changes Made
9.1	1	These items include work related to threats contributing to issues, Tier 3 Water Budget, Wellhead Protection Area-E (WHPA-E) and WHPA-F associated with Groundwater Under Direct Influence (GUDI) of surface water systems and Intake Protection Zone-3 (IPZ-3).	Remove work that is not relevant to LTVSPA	
		Of the items which allow for work plans to the included the only item which remains relevant to the LTVSPA is work related to threats contributing to issues, While microcystin was identified as an issue under the CWA (rule 115.1) and as such does not allow for the establishment of an ICA, results from further monitoring may in the future suggest that it should be identified as an issue under the rules (114) and an ICA and threats contributing to the issue would then be required.		
9.1	1	The MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Assessment Report as information available at this time indicates that the system does not meet the test in Rule 49 (3). Highgate is currently classified as a GUDI system.	Confirmation that Highgate not GUDI.	
		The MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the approved Assessment Report as information available at that time indicated that the system did not meet the test in Rule 49 (3). Subsequent technical work undertaken by the Municipality of Chatham-Kent has confirmed that Highgate is not a GUDI system.		
9.1	2	It is important that this information be completed in a timely fashion so that it is available to the Source Protection Committee for use in developing the Source Protection Plan. The Source Protection Plan is required to be submitted in August 2012. Filling of the data gaps in early 2011 to be included in an Assessment Report submitted in mid 2011 will allow for the materials to be available to the Source Protection Committee for the development of the Source Protection Plan.	Statement no longer valid	
		Delete section		
9	2	*Table 9-1 Work Plan to fill Data and Analysis Gaps*	Whole Table needs to be updated	
		See revised table below		
9	4	The required consultation is part of a more comprehensive consultation plan being conducted in the Thames-Sydenham and Region involving local and regional consultation on the draft proposed and the proposed Assessment Report, and the technical work that has informed it.	Needs to be changed to reflect current round of consultation.	

Section	Page	Text	Reason For Change	Changes Made
		The required consultation is part of a more comprehensive consultation plan being conducted in the Thames-Sydenham and Region involving local and regional consultation on the draft proposed, proposed, and updated Assessment Reports, and the technical work that has informed these reports.		

Table 9-1 Work Plan to fill Data and Analysis Gaps

Gap	Description	Work Plan	Planned Completion Schedule
Better drainage information	▪ Better drainage information to refine IPZ-2 transport pathways and storm sewersheds	▪ Obtain better drainage information determined through a site-specific (Tier 2) Risk Assessment ▪ Adjustments may be made to IPZ-2 transport pathways and storm sewersheds	Next updated AR
IPZ-3 for Lake Erie Intakes	▪ Gap is allowed in *technical rules*, provided the work plan is included to fill the gap and included in an amended Assessment Report submitted	▪ Continue working with Essex Region Source Protection Authority and its Source Protection Committee to consider extent of IPZ-3 along shoreline ▪ Consider wind events and conditions to be used as the "extreme event" ▪ Delineate extent of contributing subwatersheds with the offshore IPZ-3 ▪ Review land use within the areas to determine if containment specific modelling is required	Next updated AR
Edge matching of HVA and SGRA with neighboring regions	▪ Edge matching of HVA and SGRA with neighboring regions is to be completed in order to form seamless mapping between source protection regions	▪ This work will be considered when neighboring regions' HVA and SGRA maps are complete ▪ Methodologies will be determined in consultation with the neighbouring regions once the extent of the challenges are known. ▪ Dependent on when neighboring regions complete HVA and SGRA maps	Next updated AR
Lake Erie Lake-wide Issues	▪ Regions with drinking water systems using Lake Erie as a source have met together with the system operators to consider lake-wide issues ▪ Group will meet again once Assessment Reports have been completed so that issues have been identified ▪ Potential to establish a more formal working group to consider lake-wide issues if warranted	▪ Continue to collaborate with other regions ▪ Participate in next meeting and working group if established ▪ Focus on algae growth and phosphorous contributions to microcystin levels	Next updated AR
Conditions Assessment	▪ MOE data delivered to consultants, but not all consultants have reviewed or considered it ▪ A few potential conditions have been identified which require further investigation	▪ Have consultants review and report on data distributed by MOE ▪ Request same data for the rest of the vulnerable areas ▪ Investigate potential conditions ▪ Submit report to Source Protection Committee for consideration ▪ Include in amended Assessment Report if appropriate	Next updated AR

Section	Page	Text	Reason For Change	Changes Made
Impact of Climate Change		▪ Little work related to climate change in the Lower Thames Valley Source Protection Area ▪ Work undertaken in Upper Thames River Source Protection Area although focused more on flooding and infrastructure than on water supply ▪ Impact on source water protection is unknown	▪ Revisit this section following the completion of this section in the Upper Thames River Source Protection Area Assessment Report to determine the relevance to the Lower Thames Valley Source Protection Area ▪ Amend Assessment Report if warranted	To be determined
Inland takings drawing from Great Lakes		▪ Determine Inland takings that draw from Great Lakes	▪ Confirm location and watercourse conditions related to water takings near Lake Erie and Lake St. Clair ▪ Recalculate percent water demand ▪ Reassess potential for stress in these areas ▪ Update Assessment Report only if warranted ▪ This work would be dependant on other programs as the potential stress does not impact drinking water systems included in the Terms of Reference, however if updated information becomes available future Assessment Reports should be updated to reflect that information	Subsequent Assessment Report, dependant on other programs
Improved understanding of water use		▪ Use actual water use data in water budget work	▪ Obtain actual water use data from all significant water users through the PTTW reporting system ▪ Requires reassessment after sufficient data has been reported, perhaps when Assessment Report requires future update ▪ This work would be dependant on other programs as the potential stress does not impact drinking water systems included in the Terms of Reference, however if updated information becomes available future Assessment Reports should be updated to reflect that information	Subsequent Assessment Report, dependant on other programs

4 Revisions to the SCRSPA Assessment Report

4.1 Section 1– Introduction and Background

Section	Page	Text	Reason For Change	Changes Made
Cover And Footers		Amended Proposed Assessment Report November 12, 2010 1.0 Introduction and Background Approved	Reflect updated version	
		Updated Assessment Report November 14, 2014 1.0 Introduction and Background		
1.0	1	The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee was to complete an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan is to contain policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.	verb tense change to match the rest of the section	
		The Clean Water Act, 2006 required the establishment of Source Protection Committees to oversee the process locally. The Source Protection Committee developed and consulted on a work plan document called the Terms of Reference and submitted it to the Minister of the Environment for Approval. Based on the approved Terms of Reference the Source Protection Committee completed an Assessment Report and Source Protection Plan. The Assessment Report is a science-based document that forms the basis of the Source Protection Plan. The Plan contains policies to reduce the risk associated with threats to the drinking water sources identified in the Assessment Report.		
1.0	1/2	The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (SPR). The Assessment Reports are to contain detailed information which identify vulnerable areas associated with drinking water systems, assess the level of vulnerability, identify	Verb tense changes	

Section	Page	Text	Reason For Change	Changes Made
		issues related to the drinking water sources, identify activities within those vulnerable areas which pose threats to the systems, and assess the risk due to threats. These Assessment Reports are being completed for the three Source Protection Areas of the Thames-Sydenham and Region SPR as shown in the following Map 1-1.		
		The Clean Water Act, 2006 requires that Assessment Reports be completed for each Source Protection Area with a Source Protection Region (SPR). The Assessment Reports ~~are to~~ contain detailed information which identify vulnerable areas associated with drinking water systems, assess the level of vulnerability, identify issues related to the drinking water sources, identify activities within those vulnerable areas which pose threats to the systems, and assess the risk due to threats. These Assessment Reports have been completed for the three Source Protection Areas of the Thames-Sydenham and Region SPR as shown in the following Map 1-1.		
1.2.2	6	In order to fully define the contents of, and methodologies used in developing Assessment Reports, the Ministry of the Environment (MOE) released *Technical Rules*: *Assessment Report* (December 12, 2008). During the drafting of the Proposed Assessment Report, the Director (MOE) was in the process of amending those *rules* (November 2009). Amendments not addressed in that report are incorporated into the current Amended Proposed Assessment Report.	Ammemded Proposed AR is not the current AR.	
		In order to fully define the contents of, and methodologies used in developing Assessment Reports, the Ministry of the Environment (MOE) released *Technical Rules*: *Assessment Report* (December 12, 2008). During the drafting of the Proposed Assessment Report, the Director (MOE) was in the process of amending those *rules* (November 2009). Amendments not addressed in that report were incorporated into the Amended Proposed Assessment Report and are still reflected in the current Updated Assessment Report.		
1.2.6	8	Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan will contain policies focused on activities which are identified as threats.	Verb tense	
		Following the completion of the Assessment Report, a Source Protection Plan must be developed by the Source Protection Committee. The focus of the Source Protection Plan is to reduce or manage risks to drinking water sources. The Source Protection Plan contains policies focused on activities which are identified as threats.		

Section	Page	Text	Reason For Change	Changes Made
1.2.6	8	Although a regulation defining the scope and content of a Source Protection Plan has not yet been introduced, the province has consulted on a discussion paper which will form the basis for a Source Protection Plan regulation. The discussion paper outlines the nature of the policies which would be described in a future regulation. These policies may include: o education and outreach programs(leading to voluntary risk reduction) o incentive programs (leading to voluntary risk reduction) o land-use planning approaches(e.g. official plans, zoning bylaws, site plan controls, development permits) o new or amended provincial instruments(e.g. Certificates of Approval) o risk management plans o prohibition o restricted land uses. The discussion paper indicates that the more restrictive policies listed above would only be applied to significant drinking water threats. Similarly, the policies related to significant threats are mandatory and must be implemented, whereas the policies related to moderate and low risk drinking water threats leave some discretion to the implementer. The Source Protection Plan may also include various policies related to monitoring.	Regulation now in place	
		Ontario regulation 287/07, among other things, defines the scope and content of a Source Protection Plan The regulation outlines the nature of the policies which would be included in a Source Protection Plan. These policies may include: o education and outreach programs(leading to voluntary risk reduction) o incentive programs (leading to voluntary risk reduction) o land-use planning approaches(e.g. official plans, zoning bylaws, site plan controls, development permits) o new or amended provincial instruments(e.g. Certificates of Approval) o risk management plans o prohibition o restricted land uses. The regulation indicates that the more restrictive policies listed above would only be applied to significant drinking water threats. Similarly, the policies related to significant threats are mandatory and must be implemented, whereas the policies related to moderate and low risk drinking water threats leave some discretion to the implementer. The Source Protection Plan may also include various policies related to monitoring.		
1.3	10	Consultation with First Nations was also undertaken to encourage their participation on the Source Protection Committee. Those discussions continue today in hopes that the available seats on the Source Protection Committee can be filled by appointment of representatives of the eight First Nations in the Region. First Nations involvement in other aspects of the project is also encouraged, including the participation in relevant technical studies and input into the Watershed Characterization Report and Terms of Reference.	Updated First Nations information	

Section	Page	Text	Reason For Change	Changes Made
		Consultation with First Nations was also undertaken to encourage their participation on the Source Protection Committee. Those discussions led to the appointment of three First Nations members on the Source Protection Committee. These members were appointed by the London District Chief's Council to represent the eight First Nations in the Region. First Nations involvement in other aspects of the project was also encouraged, including the participation in relevant technical studies and input into the Watershed Characterization Report and Terms of Reference. A source water protection technical study was completed for the Chippewas of the Kettle and Stony Point December 14, 2011.		
1.3	11	*Table 1-1 SPC members and representation*	Needs to be updated	
		See updated table appended to the end of this change log		
1.4	12	The lead at the St. Clair Region Source Protection Authority is Brian McDougall, Director of Watershed Services.	Jack retired	
		The lead at the Lower Thames Valley Source Protection Authority is Girish Sankar, Manager of Water Resources.		
1.5	13	The Terms of Reference for the St. Clair Region Source Protection Area were approved by the Minister of the Environment on April 20, 2009. This approval set the due date of the Assessment Report one year from the posting of the approval of the Terms of Reference. The report was further amended to produce the current Amended Proposed Assessment Report, due in February 2011	Needs to reflect current AR status	
		The Terms of Reference for the St. Clair Region Source Protection Area were approved by the Minister of the Environment on April 20, 2009. This approval set the due date of the Assessment Report one year from the posting of the approval of the Terms of Reference. The report was further amended to produce the current Amended Proposed Assessment Report dated February 2011. It has since been updated to the current Updated Assessment Report dated November 14, 2014 and submitted for approval in early 2015.		
1.6.1	13	*Update Table 1-4 Addition of text to Kettle and Stony Point First Nation*	Reflect more accurate description of current area	
		* Kettle and Stony Point First Nation area is only reserve area to be included in the assessment report, technical study completed December 14, 2011.		
1.8	16	Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, required a public meeting and posting of the Assessment Report for comment. Two posting	Reflect updated AR	

Section	Page	Text	Reason For Change	Changes Made
		periods were required: one posted by the Source Protection Committee for consultation on the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report was then submitted to the Ministry of the Environment along with comments received in the final posting period. The Director has now approved this Assessment Report. .		
		Regulations require consultation on the Assessment Reports. This consultation, much like that of the Terms of Reference, required a public meeting and posting of the Assessment Report for comment. Two posting periods were required: one posted by the Source Protection Committee for consultation for the draft proposed Assessment Report; and the second posted by the Source Protection Authority for comments on the proposed Assessment Report. The proposed Assessment Report was then submitted to the Ministry of the Environment along with comments received in the final posting period. The Director has now approved this Assessment Report and any revisions to the Assessment Report are referred to as an Updated Assessment Report. As with the Amended Proposed Assessment Report, an Updated Assessment Report requires consultation with those affected by the updates. As some of the current updates are considered broad updates local consultation has been carried out in those areas where new vulnerable areas have been defined. A broad regional consultation has also been planned for the updated Assessment Report which exceeds the requirements for consultation on either the Draft Proposed or Proposed Assessment Report consultation including an open house in each area and a consultation period of approximately a month and a half.	Add consultation for updated AR	
1.8	17	*Table 1-5 Summary of planned SCRSPA Assessment Report Consultation*	No longer relevant	
		Delete table contents but retain table with the following text: Please refer to Assessment Report Consultation in Appendix 4 for details on Assessment Report consultation		
1.9	18	The following schedule describes at high level the work required to complete the remaining work to be included in the Assessment Report and the rest of the Source Protection Planning process.	Update to reflect current status	
		The following schedule describes at high level the work required to complete the Assessment Report and Source Protection Plan and update the Assessment Report and amended the Source Protection Plan before the approval of the first Source Protection Plan for the Thames-Sydenham and Region.		
1.9	17	*Figure 1-1 Source Protection planning schedule overview*	Revise figure?	
		See revised figure appended to this change log		

Section	Page	Text	Reason For Change	Changes Made
1	20	The current report is an Amended Proposed Assessment Report which fills in most of the data gaps identified in the Proposed Assessment Report. Local consultation with those affected by the amendments will be conducted.	AR version	
		The current report is an Updated Assessment Report which fills in many of the data gaps identified in previous Assessment Reports. Local consultation with those affected by the updates will be conducted.		
1.10.1	19/20	While the First Nations have been encouraged to participate in the development of the Assessment Report in a number of ways, to date that participation has been rather limited and very informal in nature. First Nations forums were set up in 2008-2009 across the region. As of January, 2010, two First Nation representatives have been appointed to the Source Protection Committee by the London District Chiefs Council. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. Recently, interest has been expressed in the participation in some of the technical studies, however that work has yet to be initiated. Comments received from the First Nations will be considered by the Source Protection Committee along with others received during this posting.	Revise to reflect more current work	
		The First Nations have been encouraged to participate in the development of the Assessment Report in a number of ways. That participation has been rather limited and very informal in nature. First Nations forums were set up in 2008-2009 across the region. As of January, 2010, two First Nation representatives have been appointed to the Source Protection Committee by the London District Chiefs Council. A First Nations liaison hired by the Conservation Authorities has been instrumental in the involvement of First Nation communities in many aspects of Source Protection Planning. The Chippewas of Kettle & Stony Point First Nation passed a band council resolution requesting that the Minister to include their intake in the Terms of Reference for the region and allow them to undertake the technical work to include Intake Protection Zones for their intake. The source water protection study for the Chippewas of Kettle and Stony Point First Nations intake was completed December 14, 2011. This Assessment Report includes the IPZ 1 and 2 technical work for Kettle and Stony Point Intake. Comments received from the First Nations will be considered by the Source Protection Committee along with others received during this posting.		

Section	Page	Text	Reason For Change	Changes Made
1.10.2	21	As there are a number of data gaps identified in the Assessment Report posted for comment, amendments to the Assessment Report, prior to the submission of the Source Protection Plan in 2012, was anticipated. The Data Gaps section of this report identifies the gaps and discusses plans to fill those gaps. The Assessment Report can be amended at any time that the Source Protection Committee becomes aware of the need to amend the report. Further, changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source Protection Committee. As a result of this new information or understanding, the Source Protection Committee may amend the Assessment Report. Any amendments to the Assessment Report would require consultation of those affected by the amendments. The Source Protection Committee will also need to consider amendments to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan will be established by the Minister in the approval of the Source Protection Plan. Many of the data gaps identified in the Data Gaps and Next Steps section of the Proposed Assessment Report resulted in amendments to the Assessment Report. The current report is an Amended Proposed Assessment Report which fills in these previously identified gaps. The vulnerability and threats assessment tasks related to the West Elgin emergency intake, livestock density and managed lands are included in the current report. Local consultation with those affected by the amendments will be conducted. The terms ‘updated’ or ‘amended’ used throughout the report refers to a future Assessment Report following approval of this Amended Proposed Assessment Report.	Verb tense and reflect the current AR	
		As there were a number of data gaps identified in previous versions of the Assessment Report, updates to the Assessment Report were anticipated. The Data Gaps section of this report identifies the gaps and discusses plans to fill those gaps. The Assessment Report can be updated at any time that the Source Protection Committee becomes aware of the need to update the report. Further, changes in understanding or factors such as land use which may have an impact on the Assessment Report may be brought to the attention of the Source Protection Committee. As a result of this new information or understanding, the Source Protection Committee may update the Assessment Report. Any updates to the Assessment Report would require consultation of those affected by the updates. The Source Protection Committee will also need to consider updates to the Assessment Report when the Source Protection Plan is reviewed. The period for review of the Source Protection Plan is established by the Minister in the approval of the Source Protection Plan. Many of the data gaps identified in the Data Gaps and Next Steps section of the Updated Assessment Report resulted in amendments to the Assessment Report. The current report is an Updated Assessment Report which fills in these previously identified gaps. Local consultation with those affected by the updates will be conducted		

Section	Page	Text	Reason For Change	Changes Made
		The term ‘updated’ or ‘amended’ used throughout the report may refer to a future Assessment Report following approval of this Updated Assessment Report or to this Update Assessment Report itself.		
A11-Glossary				
		Add EBA – Event Based Area And Event Based Area – An area within which an activity is a significant drinking water threat based on event modelling. It may be comprised of parts of IPZ-1, IPZ-2 and IPZ-3		

Table 1-1 SPC members and representation

Chair			Robert Bedggood
Municipalities		Chatham-Kent	Sheldon Parsons
		Lambton	Darrell Randell
		London	Patrick Donnelly
		Middlesex	James Maudsley
		Elgin	Brent Clutterbuck
		Oxford	Pat Sobeski
		Perth, Stratford, St. Marys, Huron	Joe Salter
Sectors	Agriculture		John Van Dorp
			Patrick Feryn
			Don McCabe
	Industry/Commercial		Dean Edwardson
			Earl Morwood
	Aggregate/Oil and Gas	Aggregate and Quarries	Paul Hymus
		Oil and Gas	Hugh Moran
Other			George Marr
			Doug McGee
			Joseph Kerr
			Carl Kennes
			Valerie M'Garry
			John Trudgen
			Charles Sharina
First Nations			Kennon Johnson
			Augustus Tobias
			Darlene Whitecalf
Liaisons		Medical Officers of Health	Jim Reffle
		Province	Teresa McLellan
		Source Protection Authority	Murray Blackie

4.2 Section 3– Water Budget and Water Quantity Stress Assessment

Section	Page	Text	Reason For Change	Changes Made
3.2.4	5	In the Tier 2 Water Budget for the Upper Thames River Source Protection Area, recharge is being calculated using surface water and groundwater models. These models use surficial geology and land use characterized in hydrologic response units. Following the completion of the Tier 2 Water Budget for the Upper Thames River Source Protection Area, the MOEE method will be reapplied to the Lower Thames Valley and St Clair Region Source Protection Areas where detailed computer models are not available. In reapplying the MOEE method, surficial geology will be used in place of soils for constancy with the additional work undertaken in the Tier 2 Water Budget and an improved representation of recharge. This will most likely result in an amendment to the Assessment Report.	Needs to be changed to reflect that this work did occur	
		In the Tier 2 Water Budget for the Upper Thames River Source Protection Area, recharge was calculated using surface water and groundwater models. These models use surficial geology and land use characterized in hydrologic response units. Following the completion of the Tier 2 Water Budget for the Upper Thames River Source Protection Area, the MOEE method was reapplied to the Lower Thames Valley and St Clair Region Source Protection Areas where detailed computer models are not available. The county soils maps used in the Tier 1 analysis are completed to different levels of detail in different counties, and some have been updated more recently than others. As such, there can be discontinuities across county boundaries, and, as they were created mainly for agricultural purposes, they were not completed in urban areas. Surficial geology mapping has the advantage of being continuous across the study area, and includes urban areas. In reapplying the MOEE method, surficial geology was used in place of soils for constancy with the more detailed work undertaken in the Tier 2 Water Budget and an improved representation of recharge.	wording mostly from SCR AR	

Section	Page	Text	Reason For Change	Changes Made
3	11	The Conceptual Water Budget successfully completed the peer review process and the draft has been accepted by the MNR.However, work on the Tier 1 Water Budget was not completed in time to complete the peer review process prior to posting of this draft of the Assessment Report for the Lower Thames Valley Source Protection Area. The material included in this draft of the Assessment Report is based on a final draft submitted to the peer reviewers for their review and comment. Peer review of the work included in this Assessment Report is not a requirement of the technical rules; however the Source Protection Committee relies on the technical experts on the peer review committee to ensure that the work is suitable for the purposes of developing a Source Protection Plan for the area. Due to the peer reviewers having reviewed much of the material as the work progressed, it is not anticipated that changes resulting from the review will have a substantial effect on the stress assessment, the delineation of SGRAs, or the other information presented in this draft of the Assessment Report. It is, however, anticipated that the comments will continue to improve the documentation and interpretation of the work undertaken. Minor changes may be incorporated into the report prior to posting the proposed Assessment Report for consultation. If, however, significant changes are required, the need for these changes will be acknowledged in the next version (the proposed Assessment Report), and dealt with through the amended Assessment Report discussed in other sections.	Needs to reflect outcome of peer review.	
		The Conceptual Water Budget and Tier 1 Water Budget successfully completed the peer review process and hav been accepted by the MN		

Section	Page	Text	Reason For Change	Changes Made
3	17	Rule 44 identifies the criteria for determining whether a recharge area is significant: o theareaannuallyrechargeswatertotheunderlyingaquiferataratethatisgreaterthan the rate of recharge across the whole of the related groundwater recharge area by a factor of 1.15 or more; or o theareaannuallyrechargesavolumeofwatertotheunderlyingaquiferthatis55%or more of the volume determined by subtracting the annual evapotranspiration for the whole of the related groundwater recharge area from the annual precipitation for the whole of the related groundwater recharge area. Table 3-7 below summarizes the recharge and the conditions which must be met for an area within a particular subwatershed to be deemed significant. It is worth noting that in most cases rule 44(1) provides a more conservative criterion for SGRA declaration than does rule 44(2).	Bullets should be labeled with the sub-rule for clarity.	
		Rule 44 identifies the criteria for determining whether a recharge area is significant: 44(1) the area annually recharges water to the underlying aquifer at a rate that is greater than the rate of recharge across the whole of the related groundwater recharge area by a factor of 1.15 or more; or the area annually recharges a volume of water to the underlying 44(2) aquifer that is 55% or more of the volume determined by subtracting the annual evapotranspiration for the whole of the related groundwater recharge area from the annual precipitation for the whole of the related groundwater recharge area. Table 3-7 below summarizes the recharge and the conditions which must be met for an area within a particular subwatershed to be deemed significant. It is worth noting that in most cases rule 44(1) provides a more conservative criterion for SGRA declaration than does rule 44(2).		
3	20	*Table 3-8 Data gaps related to Water Budget and Water Quantity Stress Assessment*	Needs to be updated to reflect work now completed.	
		Remove the following lines in the table Revise SGRAs for consistency with T2 work Completion of the peer review of the T1WB		
		Map 4-8 illustrates the *Significant Groundwater Recharge Areas* in the Lower	Reflect that the	

Section	Page	Text	Reason For Change	Changes Made
		Thames Valley Source Protection Area. The vulnerability of the *SRGAs* is considered in the Vulnerability Assessment section of the Assessment Report. It is, however, important to point out that the *SGRAs* which are coincident with *Highly Vulnerable Aquifers* (*HVA*), will receive a vulnerability score of 6 which can result in a moderate threat, while activities in the other *SGRAs* cannot result in water quality *threats* due to the *vulnerability* score being 4 or less.	SGRA map has been updated	
		Map 4-8 illustrates the *Significant Groundwater Recharge Areas* in the Lower Thames Valley Source Protection Area updated based on surficial geology as discussed above. The vulnerability of the *SRGAs* is considered in the Vulnerability Assessment section of the Assessment Report. It is, however, important to point out that the *SGRAs* which are coincident with *Highly Vulnerable Aquifers* (*HVA*), will receive a vulnerability score of 6 which can result in a moderate threat, while activities in the other *SGRAs* cannot result in water quality *threats* due to the *vulnerability* score being 4 or less.		
3.6	3-19	Table 3-8 summarizes data gaps identified through the Tier 1 Water Budget and Water Quality Stress Assessment. As the *stress* assessment was completed through a Tier 1 Water Budget, it is expected that there would be data gaps. If work was to proceed to a Tier 2 Water Budget, many of these gaps would need to be addressed at that time. As the potential for *stress* has no effect on municipal water systems, additional work is not required through Source Protection Planning. These gaps become more of a problem for other programs, such as the Permit to Take Water Program, which would benefit from results with a lower level of uncertainty.	Reflect that revisions were made to table 3-8	
		Table 3-8 summarizes data gaps identified through the Tier 1 Water Budget and Water Quality Stress Assessment. This table has been updated to reflect the completion of the Tier 1 peer review and improvements to the SGRA. As the *stress* assessment was completed through a Tier 1 Water Budget, it is expected that data gaps would remain. If work was to proceed to a Tier 2 Water Budget, many of these gaps would need to be addressed at that time. As the potential for *stress* has no effect on municipal water systems, additional work is not required through Source Protection Planning. These gaps become more of a problem for		

Section	Page	Text	Reason For Change	Changes Made
		other programs, such as the Permit to Take Water Program, which would benefit from results with a lower level of uncertainty.		
Section 3 summary		Update section summary to reflect changes in section 3		
Maps		Update maps 4-8 and 4-9, 7-1c, 7-2d, 7-3d		

4.3 SCRCA – AR Change Log Section 4

Extended IPZ-3 Delineation

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.5	4-18	The model was used to simulate the contaminant travel within the great lakes and connecting channel while an analytic approach described in MOE's Technical Bulletin was used to consider the dispersion and dilution within the tributaries flowing towards the intakes.	Updates to AR to include extended IPZ-3 delineation.	
		The model was used to simulate the contaminant travel within the great lakes and connecting channel while an analytic approach described in MOE's Technical Bulletin was used to consider the dispersion and dilution within the tributaries flowing towards the intakes. A more recent study (2013) was carried out following recommendation from Baird (2011) to investigate areas outside of the approved IPZ-3 that were likely to result in exceedances following a possible spill. The IPZ-3 boundaries have been revised based in this study.		
4.2.5.1	4-19	…..instances where it was justified to delineate an *IPZ-3*, Baird and Associates recommended extending the delineation to the headwaters and watershed limits of the watercourses, and to include all smaller tributaries between said watercourses and the applicable intake as spills in these locations are expected to result in similar concentrations (above the Ontario Drinking Water Quality Standard) arriving at the intake As specified in the Technical Rules, the Floodplain Regulation Limit was also used in delineating the extent of the *IPZ-3* along subject waterways, where this limit exceeded the 120 metre setback.	Updates to AR to include extended IPZ-3 delineation	
		…..instances where it was justified to delineate an *IPZ-3*, Baird and Associates recommended extending the delineation to the headwaters and watershed limits of the watercourses, and to include all smaller tributaries between said watercourses and the applicable intake as spills in these locations are expected to result in similar concentrations (above the Ontario Drinking Water Quality Standard) arriving at the intake Additional fuel spill locations were added in a recent study (2013) to explore the possibility of contaminants reaching the intake at concentrations greater than the drinking water standard. A revised IPZ-3 has been delineated as shown in Map 4.3b to reflect the results from the study. As specified in the Technical Rules, the Floodplain Regulation Limit was also used in delineating the extent of the *IPZ-3* along subject waterways, where this limit exceeded the 120 metre setback.		
4.2.5.1	4-20	……Baird and Associates recommended extending the delineation to the headwaters and watershed	Updates to AR to	

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		limits of the modelled watercourses and to include all smaller tributaries located between said watercourses and the intakes as spills in these locations are likely to result in similar concentrations (above the Ontario Drinking Water Quality Standard) arriving at the intake. As specified in the Technical Rules, the Floodplain Regulation Limit was also used in delineating the extent of the *IPZ-3* along subject waterways, where this limit exceeds the 120 metre setback.	include extended IPZ-3 delineation	
		……Baird and Associates recommended extending the delineation to the headwaters and watershed limits of the modelled watercourses and to include all smaller tributaries located between said watercourses and the intakes as spills in these locations are likely to result in similar concentrations (above the Ontario Drinking Water Quality Standard) arriving at the intake. Further to the modelling work that was carried by Baird in 2011, three additional spill scenarios were considered in a recent study (2013). One along Talfourd Creek; Baby Creek; and Clay Creek respectively. Scenarios at Highway 40 crossing of Talfourd Creek and Clay Creek were fuel spills (68,000 L gasoline, 2% benzene), however, the spill on Baby creek is a rail tank spill from a rail crossing on Baby Creek (34,000 L, 2% benzene) As specified in the Technical Rules, the Floodplain Regulation Limit was also used in delineating the extent of the *IPZ-3* along subject waterways, where this limit exceeds the 120 metre setback.		
4.2.5.3	4-20	The resultant IPZ-3 delineation was based upon a combination of both phases of work. Refer to Map 4.2b for the IPZ-3 delineation. The sub-areas where the activities are a significant threat are shown as insets in Map 4.2b. The IPZ-3 was truncated at Highway 402 as no spills were modelled to the south of the highway.		
		The resultant IPZ-3 delineation was based upon a combination of both phases of work. The IPZ-3 was truncated at Highway 402 as no spills were modelled to the south of the highway. Further, an EBA was created where an activity becomes a significant drinking water threat based on results from event modelling. Refer to Map 4.2b for EBA. The sub - areas on Map 4.2b corresponds to the fuel based events that are a significant threat within the IPZ-3.		
4.2.5.4	4-21	The Thames Sydenham Region SPC has accepted the Ontario Drinking Water Quality Standard to identify deterioration of raw water quality at the intake. The delineation was based upon two fuel spills from a tanker truck at a road crossing (Highway 402) on each of Cow Creek(1) and Perch Creek(2) as shown in Map 4.3b.	Updates to AR to include extended IPZ-3 delineation	
		The initial delineation was based upon two fuel spills from a tanker truck at a road crossing (Highway 402) on each of Cow Creek(1) and Perch Creek(2) as shown in Map 4.3b.		
4.2.5.4	4-21	As specified in the Technical Rules, the Floodplain Regulation Limit was also used in delineating the extent of the *IPZ-3* along subject waterways, where this Limit exceeds the 120 metre setback. Baird recommended extending the *IPZ-3* delineation to the east to include the drain on Lakeshore Road and all watercourses located between Lakeshore Road and Highway 402 that drain into Lake	Updates to AR to include extended IPZ-3 delineation	

Section / Policy	Page	Text	Reason For Change	Changes Made
		Huron.		
		As specified in the Technical Rules, the Floodplain Regulation Limit was also used in delineating the extent of the *IPZ-3* along subject waterways, where this Limit exceeds the 120 metre setback. The *IPZ-3* delineation to the west of the intake was truncated at the narrow section of the regulation limit as overland flow beyond this location would flow away from this watercourse and therefore away from the Petrolia intake. Baird recommended extending the *IPZ-3* delineation to the east to include the drain on Lakeshore Road and all watercourses located between Lakeshore Road and Highway 402 that drain into Lake Huron.		
4.2.5.4	4-21	This recommendation was based on the expectation that similar concentrations would arrive at the intake from spills on Lakeshore Road and Boonie Doon Creek. Refer to Map 4.3b for the *IPZ-3* delineation.	Updates to AR to include extended IPZ-3 delineation	
		This recommendation was based on the expectation that similar concentrations would arrive at the intake from spills on Lakeshore Road and Boonie Doon Creek. To further investigate Baird's recommendation, a recent study (2013) was conducted using an analytical approach. Four additional spill locations to the east of the intake were considered as shown by spill locations 11, 12, 13, and 14 in Map 4.3b. Spills were diluted to the outlet of the creek using Linear Dispersion modelling as was used in the Baird study. A dilution factor approach was used to calculate the concentration of contaminant from the mouth of tributary to the Petrolia intake. This dilution factor was obtained from the previous IPZ-3 delineation work completed by Baird in 2011 for spills along Perch and Cow Creeks. The use of a dilution factor to calculate concentrations at the intake is an estimate. Utilizing this approach maintained consistency in the current work as this factor was calculated from the previous IPZ-3 work. Further, an EBA was created where an activity becomes a significant drinking water threat based on results from event modelling. Refer to Map 4.3b for EBA. The sub - areas on Map 4.3b corresponds to the fuel based events that are a significant threat within the IPZ-3.		
4.2.5.5	4-22	The modelling work at Wallaceburg was completed in two phases.	Updates to AR to include extended IPZ-3 delineation	
		The initial modelling work at Wallaceburg was completed in two phases.		
4.2.5.5	4-22	This analysis identified that on these Sydenham River branches the 2 year return flows resulted in higher concentration of contaminant being transported to the intake than with the less frequent events (larger flows) used for simulation in other locations.	Updates to AR to include extended IPZ-3 delineation	

Section / Policy	Page	Text	Reason For Change	Changes Made
		The resultant *IPZ-3* delineation was based upon a combination of….		
		This analysis identified that on these Sydenham River branches the 2 year return flows resulted in higher concentration of contaminant being transported to the intake than with the less frequent events (larger flows) used for simulation in other locations. In addition to the above spill scenarios, a more recent study (2013) considered three additional fuel spill (2% Benzene) scenarios, one along Talfourd Creek; Baby Creek; and Clay Creek respectively. The spill locations are identified by 8, 9 and 10 in Map 4.4b. Based on the longitudinal dispersion analysis, the above fuel spills would result in an exceedance of the Ontario Drinking Water Quality Standard benchmark for benzene at the Wallaceburg intake. The resultant *IPZ-3* delineation was based upon a combination of….		
4.2.5.5	4-22	The resultant *IPZ-3* delineation was based upon a combination of…. Map 4.4b shows the IPZ-3 delineation and the sub-areas where the activities are a significant threat.	Updates to AR to include extended IPZ-3 delineation	
		The resultant *IPZ-3* delineation was based upon a combination of both the studies (2011 and 2013). Map 4.4b and 4.4c show the IPZ-3 delineation and the sub-areas where the activities are a significant threat. …. Further, an EBA was created where an activity becomes a significant drinking water threat based on results from event modelling. Refer to Map 4.4b and 4.4c for EBA , the sub-areas correspond to the fuel and fertilizer activities that are a significant threat within the IPZ-3.		
4.2.5.5	4-23	Scenarios modelled do not include these watercourses and therefore are not included as a part of *IPZ-3* delineation.	Editorial change	
		Scenarios modelled do not include these watercourses and therefore they are not included as a part of *IPZ-3* delineation.		
A2-3 (vulnerability section summary)		Edits to reflect the above changes may be required to the vulnerability section summary including figures.	Updates to AR to include extended IPZ-3 delineation	
A3-2 (vulnerability section summary)		Edits to reflect the above changes may be required in the Petrolia system summary including figures.	Updates to AR to include extended IPZ-3 delineation	
A3-3		Edits to reflect the above changes may be required in the Wallaceburg system summary including	Updates to AR to	

Section / Policy	Page	Text	Reason For Change	Changes Made
(vulnerability section summary)		figures.	include extended IPZ-3 delineation	

4.4 Revisions to the SCRSPA Assessment Report – Section 5

Revisions related to Wallaceburg Nitrate Issue

Section	Page	Text	Reason For Change	Changes Made
5.2 Impact of Identifying an Issue	5-6	If an *issue* is identified, the *activities* that contribute to the identified *issue* and the areas where they occur (within *vulnerable areas*, as described above) must also be identified. A third intake protection zone (*IPZ-3*) for surface water intakes may be delineated to include the *activity* and area known to contribute to the drinking water quality *issue*. For the *activities* or *conditions* contributing to *issues* that are deemed to be *significant threats* as described above, the *risks* the *activities* or *conditions* pose must be reduced through the source protection plan.	To document the potential for an issue under the Act and differentiate it from an Issue under the Rules	
		Should an *issue* be identified as per Technical Rule 114, the *issue* contributing area must be delineated as per Rule 115. Also as per rule 115, activities that contribute to the *issue* within the *issue* contributing area must be identified and are deemed to be a *significant risk* to the source of drinking water for those systems included in the Terms of Reference for the SCRSPA. *Significant risks* must be mitigated through the S*ource Protection Plan*. If the information required to delineate the ICA and identify the activities contributing to an issue are not readily ascertained, rule 116 allows for a work schedule to be identified to ascertain the information specified in rule 115. As per Technical Rules 68, 130 and 131, a third intake protection zone (*IPZ-3*) for surface water intakes may be delineated to include the activities and area known to contribute to the drinking water quality *issue*. . In addition to the identification of an issue by rule 114, rule 115.1 allows for the identification of an issue which is not identified in accordance with rule 114. This is often referred to as an issue identified under that Act to differentiate it from an issue identified under the rules (specifically rule 114). Issues identified as per rule 115.1 do not require the delineation of an ICA and cannot have significant threats identified which contribute to the issue. They may however be addressed through specify action policies and be the subject of monitoring and reporting.		
5.2	5-6	Further, *issues* in *HVAs* or *SGRAs* or those linked to a system not identified in the Terms of Reference may lead to the identification of moderate drinking water threats (not significant		

Section	Page	Text	Reason For Change	Changes Made
		threats). Systems not identified in the Terms of Reference may be those included in the source protection planning process through municipal council resolution or by the Minister (MOE).		
		Further, *issues* in *HVAs* or *SGRAs* or those linked to a system not identified in the Terms of Reference may lead to the identification of moderate drinking water threats (not significant threats). Systems not identified in the Terms of Reference may be those included in the source protection planning process through municipal council resolution or by the Minister (MOE). No additional systems in the SCRSPA have been identified in this manner.		
5.3 Issues Evaluation Methodology	5-6	Identifying *issues* is a key step in the overall process of protecting drinking water quality. *Issues* were identified in the St Clair Region Source Protection Area by following the Thames-Sydenham and Region Issues Evaluation Methodology (May 14, 2009), depicted in Figure 5-1. The methodology is provided in Appendix 8.	To document potential for issue under the Act and differentiate from Issue under the Rules	
		Identifying *issues* is a key step in the overall process of protecting drinking water quality. *Issues* were identified in the St Clair Region Source Protection Area by following the Thames-Sydenham and Region Issues Evaluation Methodology (May 14, 2009), depicted in Figure 5-1. This methodology was developed to guide the technical work to assess an issue under the Rules (rule 114). The methodology is provided in Appendix 8.		
Table 5-5		Update to add reference to ICA report	to add reference to SCRCA nitrate ICA work	
		Add to table Issue Contributing Area (ICA) for Wallaceburg Intake, SCRCA, 2014		
Table 5-6		**System: Wallaceburg, Issue : Nitrates** **Description:** In the St. Clair Watershed Characterization report, there were two exceedances of the half MAC of 5 mg/L, identified for nitrate. The elevated levels were in 5.9 mg/L in 1990 and 9.3 mg/L in 1992 (data from 1990 to 2005). Also, nitrates have been identified by the water treatment plant manager as being a significant concern, and hence are considered a drinking water quality issue. It is recommended that additional raw water quality data illustrating the elevated levels of nitrates be analyzed. **Natural or Anthropogenic Source:** Possibly both natural and anthropogenic causes, further investigation required	Inference from the ICA study, 2014	
		System: Wallaceburg, Issue : Nitrates **Description:** In the St. Clair Watershed Characterization report (Dec 2008), there were two exceedances of the half MAC of 5 mg/L, identified for nitrate. Also, nitrates have been identified by the water treatment plant manager as being a significant concern, due to increasing occurrences of events producing elevated nitrate levels in raw drinking water at the intake. The treatment system is not able		

Section	Page	Text	Reason For Change	Changes Made
		to remove nitrate from the source water. As a result Nitrates are considered a drinking water quality issue in the approved Assessment Report and work proceeded to identify the ICA. Modelling was undertaken to assess nitrate contributions from the subwatersheds of the Sydenham River. The Sydenham River flows by the intake when hydraulic conditions result in the reversal of flow north up the Chenal Ecarte past the intake. It was determined that all of the subwatersheds contribute relatively equally to the issue, however there was considerable uncertainty as to the relative contribution of areas connected to the watercourses by transport pathways. Common sources of nitrate include fertilizer and agricultural source material applied to land, septic system and waste water treatment effluent and storm water runoff. Further, through analysis of more recent data it was found that nitrates in the Sydenham River may be leveling off and possibly decreasing. A longer period of record is required to determine if nitrates should continue to be considered an issue for Wallaceburg. Further it became apparent that increasing occurrences in the number of elevated nitrate events may possibly be attributed to more frequent water quality sampling. Without a long term record of frequent sampling it is not possible to determine if the trend suggested by operators is supported in the limited data. The report therefore recommends continued and improved monitoring to allow future assessment of the nitrate issue and delineation of the ICA (if warranted). A work plan to collect and analyze this data is identified in the Work Plan and Data Gaps sections of this report pursuant to rule 116. It is also prudent to determine the outcome of the ongoing Environmental Assessment which is considering alternative drinking water sources and upgrades to infrastructure at the intake and treatment plant. **Natural or Anthropogenic Source:** Both natural and anthropogenic causes.		
System Summary, Wallaceburg		Update to reflect ICA work		
Issues Section Summary		Update to reflect ICA work		
5.6 Work Plan		If a *drinking water* quality *issue* is identified as per Rule 114, the area and the *activity* contributing to a *drinking water* quality *issue* must also be identified as per Rule 115. In the Lower Thames Valley SPA, some of the *issues* are naturally occurring and are therefore understood to not be subject to Rule 115. The sources or causes of the rest of the *issues* are yet to be determined. If more information becomes available to the SPC it may be possible to determine the source or cause of an *issue*. If it is determined that an *issue* (identified as per Rule 114) is wholly or partially due to anthropogenic sources, the work (to identify the area and activities contributing to the *issue*, as per Rule 115), or the work plan (as per rule 116) would be included in a subsequent Assessment Report.	Minor edit	
		If a *drinking water* quality *issue* is identified as per Rule 114, the area and the *activity* contributing to a *drinking water* quality *issue* must also be identified as per Rule 115. In the St Clair Region SPA, some of the *issues* are naturally occurring and are therefore understood to not be subject to Rule 115. The		

Section	Page	Text	Reason For Change	Changes Made
		sources or causes of the rest of the *issues* are yet to be determined with the exception of the nitrate issue for Wallaceburg. If more information becomes available to the SPC it may be possible to determine the source or cause of an *issue*. If it is determined that an *issue* (identified as per Rule 114) is wholly or partially due to anthropogenic sources, the work (to identify the area and activities contributing to the *issue* (as per Rule 115), or the work plan (as per rule 116) would be included in a subsequent Assessment Report.		
5.7 Data Gaps	5-12	As mentioned in Section 5.5, the sources or causes of some of the *issues* are yet to be determined. This is a data gap. Details of how to accomplish this determination is provided in Table 5-7. Filling of this data gap, as more information becomes available to the SPC, may help identify *issues* as per Rule 114, and therefore lead to identifying the area and activity contributing to those *issues* as required by rule 115.	Results from a Recent study of Nitrate issue	
		As mentioned in Section 5.5, the sources or causes of some of the *issues* are yet to be determined. This is a data gap. Details of how to accomplish this determination is provided in Table 5-7. Filling of this data gap, as more information becomes available to the SPC, may help identify *issues* as per Rule 114, and therefore lead to identifying the area and activity contributing to those *issues* as required by rule 115. Through work to delineate and ICA it was determined that the information available left too much uncertainty in the extent of the ICA and the activities contributing to the issue. Further, the analysis of more recent water quality results identify the potential for the nitrate levels in the Sydenham River to be leveling off or possibly declining. It is noted that the source water for this intake is from the St Clair River, however, the intake gets its water from the Sydenham water during flow reversal events. More recent water quality analysis suggest this may be occurring more frequently, however, monitoring has increased in the recent years. Additional data for a longer period of record is required to determine if these events are occurring more frequently. Further, additional monitoring is required to be able to determine if nitrate should remain an issue and to be able to determine the contribution of areas connected to the watercourse by transport pathways such as tile drainage. Monitoring at the intake undertaken by the PUC should also be coordinated with monitoring in the Sydenham River which is undertaken by the SCRCA Efforts to capture water quality during events and areas contributing to the issue under the event should be considered. Additional water quality monitoring should be incorporated into existing programs or added as new programs. As such additional monitoring and analysis is required as identified in the Work Plan section of this report.		
5.7 Data Gaps	5-12	Technical studies on *issues* evaluation for Kettle and Stony Point First Nation intake on Lake Huron commenced in spring 2011. Estimated timeline of completion of that study is provided in Section 9.	Work completed	
		Delete paragraph		
5.7 Data Gaps	Table 5-7	Nitrate is a naturally occurring ion that is part of the global nitrogen cycle and is ubiquitous in the environment. There are two main land uses that have the potential to contribute nitrate to surface water: wastewater treatment plant discharge and agriculture activities. Nitrates are soluble in water and areas that have characteristics for increased potential of runoff	Results from a Recent study of Nitrate issue	

Section	Page	Text	Reason For Change	Changes Made
		generation (clay soil, elevated slope) may allow for nitrates to be transported during spring melt events, high precipitation events or events that cause land to water body drainage (Bhumbla, 2009). The upland vulnerable areas for the Wallaceburg water treatment plant are composed of mainly Thames clay loam, Brookston silt loam, Brookston clay loam and Brookston clay (Agriculture and Agri-Food Canada, 2008) and thus have the characteristics of generating runoff. The manager of the Chatham-Kent Public Utilities Commission indicated concerns pertaining to the increase in nitrate levels at the water treatment plant during spring melt events, high precipitation events when there are no crops in the agricultural fields, or events that cause land to river drainage. The manager noted that the wastewater treatment plant at Wallaceburg was maintaining the required discharge limits for nitrates. Sampling for nitrates in the tributaries discharging near the intake, at the tributary outfalls, sewer outfalls, nearshore and in the intake raw water would need to be conducted to help determine the cause of nitrates. Sampling to establish background levels and to determine levels after events such as high precipitation should be conducted. Reverse flow condtions may also need to be considered.		
		Nitrate is a naturally occurring ion that is part of the global nitrogen cycle and is ubiquitous in the environment. There are two main land uses that have the potential to contribute nitrate to surface water: wastewater discharge (treatment plant or septic systems) and agriculture activities. Nitrates are soluble in water and areas that have characteristics for increased potential of runoff generation (clay soil, elevated slope) may allow for nitrates to be transported during spring melt events, high precipitation events or events that cause land to water body drainage (Bhumbla, 2009). The upland vulnerable areas for the Wallaceburg water treatment plant are composed of mainly Thames clay loam, Brookston silt loam, Brookston clay loam and Brookston clay (Agriculture and Agri-Food Canada, 2008) and thus have the characteristics of generating runoff. The manager of the Chatham-Kent Public Utilities Commission indicated concerns pertaining to the increase in nitrate levels at the water treatment plant during spring melt events, high precipitation events when there are no crops in the agricultural fields, or events that cause land to river drainage. The manager noted that the wastewater treatment plant at Wallaceburg was maintaining the required discharge limits for nitrates. Further monitoring is required to delineate the extent of issue contributing area and identify activities that contribute to the issue. A collaborative effort from Chatham-Kent PUC, St. Clair Region Conservation Authority and MOE should be undertaken to improve existing water quality programs and monitoring efforts should be directed at, but not limited to: event based water quality monitoring, correlation between the various monitoring programs, and contributions through transport pathways. Sampling for nitrates in the tributaries discharging near the intake, at the tributary outfalls, sewer outfalls, nearshore and in the intake raw water would need to be conducted to help determine the		

Section	Page	Text	Reason For Change	Changes Made
		cause of nitrates. Sampling to establish background levels and to determine levels after events such as high precipitation should be conducted. Reverse flow conditions may also need to be considered.		

4.5 Section 7 – Threats and Risk Assessment – Water Quality

Section	Page	Text	Reason For Change	Changes Made
Title page and footers	all	Revised – November 18, 2011 Approved	Reflect this update to the AR	
		Updated – November 14, 2014		
Table 7-1	7-3	Technical Studies on Drinking Water Threats and Risk Assessment	Update to include additional work	
		Add the following reports: Thames-Sydenham and Region, Technical Memo Terry Chapman, Stephan Clark		
Table 7-1		Technical Studies on Drinking Water Threats and Risk Assessment	Update to include Kettle and Stony point study	
	7-3	Kettle and Stony Point Intake : HCCL and Riggs Engineering Ltd. December 14, 2011		
7.1.4	7-15	If an *issue* is identified, the *activities* that contribute to the identified *issue* and the areas where they occur (within *vulnerable areas*, as described above) must also be identified. A third intake protection zone (*IPZ-3*) for surface water intakes may be delineated to include the *activity* and area known to contribute to the drinking water quality *issue*.	Add text to reflect Wallaceburg ICA work	
		If an *issue* is identified, the *activities* that contribute to the identified *issue* and the areas where they occur (within *vulnerable areas*) must also be identified. A nitrate Issue has been identified for the Wallaceburg intake as described in section 5. Through work to delineate and ICA it was determined that the information available left too much uncertainty in the extent of the ICA and the activities contributing to the issue. Further, the analysis of more recent water quality results identify the potential for the nitrate levels in the Sydenham River to be leveling off or possibly declining. Additional data for period of record is required to determine if these events are occurring more frequently. Further, additional monitoring is required to be able to determine if nitrate should remain an issue and to be able to determine the contribution of areas connected to the watercourse by transport pathways such as tile drainage. A workplan is therefore included in section 5 which suggests the issue be re-evaluated in a future update to the SPP. A third intake protection zone (IPZ-3) may be needed, as part of a subsequent update to this AR, to include the activity and area known to contribute to the drinking water quality issue.		
7.1.6	7-17	In the Thames-Sydenham and Region, a comprehensive *threat* and *risk* assessment for *IPZ-3* has not been completed. However the spills scenarios used to delineate an *IPZ-3* based on event specific modelling were also used to identify *activities* that could be *significant threats*. The events based modelling is described in detail in Section 4.2.5.	Threat inventory work	
		In the Thames-Sydenham and Region, a comprehensive *threat* assessment for *IPZ-3* has been completed. This work was completed by CA staff using similar methodologies to the previous inventory work. It was generally completed as a desktop exercise with drive-by inspections where appropriate.		

Section	Page	Text	Reason For Change	Changes Made
		Numbers of locations of significant drinking water threats provided in the tables 7-5 in the following section are based on this inventory work. It will be important that site inspection as part of routine compliance monitoring or threats verification be undertaken by Risk Management Inspectors as part of the implementation of the SP		
7.2	7-18	The *Source Protection Committee* has not identified any '*other*' (not *prescribed*) *activities* or *circumstances* (not in the *tables of drinking water threats*) at this point. However, the *Source Protection Committee* has expressed a concern to the *MOE* over the *risks* associated with the transportation of materials through pipelines or other corridors.	Approval of local threats letter	
		The *Source Protection Committee* has identified '*other*' (not *prescribed*) *activities* or *circumstances* (not in the *tables of drinking water threats*) based on results of event based studies undertaken, and a request was made to the Director to add the transportation of fuel through pipelines as a 'local threat' in the updated Assessment Report. The letter identifying transportation of fuel and fertilizer and transportation of liquid petroleum products through pipelines as local drinking water quality threats, is attached in Appendix 10		
7.2.2	7-20	Further, there are no locations or activities that 'are or would be' significant threats within the Petrolia *IPZ-1* and *IPZ-2*, the *LAWSS IPZ-2*, the Wallaceburg *IPZ-2,* and the *HVA* and *SGRA*. This is due to the range of vulnerability scores in these areas.	Threats inventory work in IPZ-3	
		Further, there are no locations or activities that 'are or would be' significant threats within the Petrolia *IPZ-1* and *IPZ-2*, the *LAWSS IPZ-2*, the Wallaceburg *IPZ-2,* and the *HVA* and *SGRA*. This is due to the range of vulnerability scores in these areas. The significant threats in the IPZ-3 areas are event based threats and more information on this is provided in section 7.2.7.		
		Table 7-5, 7-7, 7-9 and 7-11 to be updated	Update to reflect new information	
		see revised tables appended to this change log		
Table 7-5	7-20			
		Updated Table for KSP: *see tables appended to this change log*		
7.2.6	7-23	New section:	2011 Technical study	
		7.2.6.Threats in Kettle and Stony Point Intake – *see text appended to this change log*		
New table 7-12 and 7-13		New Tables		
		See tables 7-12 and 7-13 appended to this change log		
Table 7-12	7-23	Change table number to 7-14	Accommodate new section	
7.2.6	7-24	Revise Section Number to 7.2.7	Accommodate new section	
7.2.7	7-25	Revise Section Number 7.2.8	Accommodate new tables	

Section	Page	Text	Reason For Change	Changes Made
7.2.7	7-25	30,000 Kg	Correct an error in the quantity that was modelled i	
		34,000 Kg		
7.2.7	7-26	The spill modelling scenarios were selected as a starting point to assess the extent of the area where spills could pose a significant risk to these drinking water sources. More work needs to be undertaken to determine if other activities could be considered *significant drinking water threats* in these areas. Also, the areas within the delineated *IPZs* need to be assessed to determine if there are additional locations where fixed or transportation related threats should be identified as *significant threats*. Further, additional spill scenarios (location, contaminant type and volumes) need to be assessed to determine if the area of the *IPZ-3* should be extended beyond those delineated as per Section 4.2.5. This work would be undertaken as part of the policy development or implementation stages of Source Protection Planning and would be reflected in subsequent updates to this Assessment Report.		
		The Spill modelling scenarios were selected as a starting point to assess the extent of the area where spill could pose a significant risk to these drinking water sources. In 2013, additional work was undertaken to include other event based areas (EBA) and to assess the extent of the IPZ-3 to include the entire EBA. Based on the results from this study the IPZ-3 has been revised to include the entire EBA. Further, additional spill scenarios (location, contaminant type and volumes) need to be assessed to determine if the area of IPZ-3 should be extended beyond those delineated. This work may be undertaken in the future and would be reflected in a subsequent update to this Assessment Report.		
7.2.8	7-26	New Paragraph “Local Threats”		
		The modelled scenarios included spills from fixed fuel storage tanks and fuel tanker trucks activities, at various locations. If modelling indicated that the contaminant considered reached the intake and exceeded a the maximum allowable concentration, then the activity would be considered a significant threat. Fixed fuel storage tanks are considered ‘prescribed’ drinking water quality threats, as they are included under the activity of ‘handling and storage of fuel’ in the MOE Drinking Water Threats Tables. However the transportation of fuel (such as by tanker trucks) is not an activity listed in these Threats Tables. Based on results of event based approach undertaken, a request was made to the Director to add the transportation of fuel as a ‘local threat’ in the Updated Assessment Report. The letter identifying transportation of fuel and fertilizer and transportation of liquid petroleum products through pipelines as local drinking water quality threat, is attached in Appendix 10. This work confirms that spills in these locations can reach the intakes. The modelling considered a limited number of scenarios and is based on specific events and conditions. It therefore does not		

Section	Page	Text	Reason For Change	Changes Made
		represent all possible situations. Although the analysis did not confirm that ODWQS would be exceeded at LAWSS it did identify that the spill would reach the intake. Similarly smaller volumes, while not identified as a SDWT, would under the correct conditions result in a drinking water impairment at the intake. While the areas delineated are used for the purposes of delineating an EBA within which significant drinking water threat policies would apply, areas outside of this EBA would, under the correct conditions, contribute concentrations to the intake which could exceed ODWQS. It is therefore important that an abundance of caution be used in and beyond these areas to report and respond to spills.		
7.3 Tier 2 Risk Assessment	7-27	A tier 2, or site-specific, risk assessment to confirm the number of locations at which significant threats occur, would be conducted while developing the source protection plans, if needed. As part of the consultation on this assessment report, those who are believed to be engaging in a significant threat will be notified. This will allow their participation in the tier 2 risk assessment. The tier 2 work involves the examination of land use activities and the circumstances under which they are undertaken, through site visits and discussions with the landowners. The outcome of the tier 2 risk assessment will be part of a future Assessment Report.		
Proposed revision		7.3 Site-Specific Risk Assessment A site-specific risk assessment to confirm the existence of significant threats will be necessary as part of implementation. Although additional efforts have been made to verify significant threats, this has not included on site verification of the threat. Although this level of effort was considered as part of the threats verification, it would still be necessary during implementation. Further it will also be necessary as part of compliance monitoring for part IV implementation in both locations where significant threats have been identified and those where threats have not been identified. This is due in part to the potential for activities and circumstance to change at any location without any regulatory approval process. As part of the consultation on this assessment report, those who are believed to be engaging in a significant threat will be notified.		
7.4 Data Gaps	7-26	This work would be part of a subsequent Assessment Report.		
Proposed revisions		This work would be part of a subsequent Assessment Report. If a drinking water quality issue is identified at a well or intake as per Rule 114 and is known to be partially or wholly due to anthropogenic causes, the area and the activity contributing to a drinking water quality issue must also be identified as per Rule 115. In the St. Clair SPA, some of the issues are naturally occurring and are therefore understood to not be subject to Rule 115. Nitrates have been identified as partially or wholly anthropogenic for the Wallaceburg Intake. Through work to delineate and ICA it was determined that the information available left too much uncertainty in the extent of the ICA and the activities contributing to the issue. Further, the analysis of more recent water quality results identify the potential for the nitrate levels in the Sydenham River to be leveling off or possibly declining. Additional data for period of record is required to determine if these events are		

Section	Page	Text	Reason For Change	Changes Made
		occurring more frequently. Further, additional monitoring is required to be able to determine if nitrate should remain an issue and to be able to determine the issue contribution areas. This will need to be reassessed in subsequent updates to the Assessment Report. If an ICA is established the threats contributing to the issue will need to be inventoried and reported in this section in a subsequent update to the assessment report.		
7.4	7-27	studies for the Kettle and Stony Point First Nation intake on Lake Huron commenced in spring 2011. Estimated timeline for the completion of that study is provided in Section 9.	Update to reflect new information	
		Technical studies for the Kettle and Stony Point First Nation intake on Lake Huron has been completed and included in this updated assessment report.		
Appendix 11	A11-3	• EBA – Event Based Area • Event Based Area – An area within which an activity is a significant drinking water threat based on event modelling. It may be comprised of parts of IPZ-1, IPZ-2 and IPZ-3	Terminology change	

SCRCA – AR Change Log Section 7 Update

Local Threats

Section / Policy	Page	Text	Reason For Change	Changes Made
7.2.9	7-27	None	Updates to AR to include Local Threats.	
7.2.9	7-27	The modeled scenarios included spills from fixed fuel storage tanks and fuel tanker trucks activities, at various locations. If modeling indicated that the contaminant considered reached the intake and exceeded a certain benchmark, then the activity would be considered a significant threat. Fixed fuel storage tanks are considered 'prescribed' drinking water quality threats, as they are included under the activity of 'handling and storage of fuel' in the MOE Drinking Water Threats Tables. However the transportation of fuel (such as by tanker trucks) is not an activity listed in these Threats Tables. Based on results of event based approach undertaken, a request was made to the Director to add the transportation of fuel as an 'other' or Updated/Amended Proposed Assessment Report. The letter identifying transportation of fuel and fertilizer and transportation of liquid petroleum products through pipelines as local drinking water quality threat, is attached in Appendix 10.		

4.6 Section 8– Great Lakes

Revisions to the section 8 of the LTVSPA AR were based on the revisions made to the UTRSPA AR.

Section	Page	Text	Reason For Change
8.3.1	8-4	The Great Lakes Water Quality Agreement (*GLWQA*), first signed in 1972 and renewed in 1978, expresses the commitment of Canada and the United States to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin Ecosystem and includes a number of objectives and guidelines to achieve these goals. In 1987, a Protocol was signed to help develop and implement Remedial Action Plans (*RAPs*) and Lakewide Management Plans (*LaMPs*). RAPs focus on the geographic Areas of Concern (*AOCs*), which are identified under the Canada-Ontario Agreement Respecting Great Lakes Water Quality described in Section 8.2.2. LaMPs are designed to improve the environmental quality of the open waters of each of the Great Lakes. In accordance with the GLWQA, the goal of the Lake Erie LaMP is to restore and protect the beneficial uses of Lake Erie, with a focus on the beneficial-use impairments listed in the Agreement. Ecosystem objectives specific to Lake Erie are established to guide LaMP efforts toward defined endpoints. In 1994, nine conservation authorities created a co-operative agreement to combine the strengths of their individual, long-term community partnerships across the Lake Erie Basin, and improve the ability to work with provincial and federal governments. The group established is called the Federation of Conservation Authorities of Lake Erie, or *FOCALErie*, and is comprised of the Essex Region, Lower Thames Valley, Upper Thames River, St. Clair Region, Catfish Creek, Kettle Creek, Long Point Region, Grand River and Niagara Peninsula Conservation Authorities. *FOCALErie* supports the Lake Erie *LaMP* through projects such as public involvement and Lake Erie basin geographic information system compilation and updates. The City of London and neighbouring communities in the *UTRSPA* receive water from Lake Huron and Lake Erie intakes located outside the SPA. It is important to note that *FOCALErie* provides a mechanism for Conservation Authorities including the Upper Thames River CA to deal with other, broader Great Lakes concerns and to coordinate watershed planning and implementation activities at a scale beyond their individual watershed boundaries. As mentioned before, the Thames River originates in the *UTRSPA* and continues to flow through the *LTVSPA* where it outlets into Lake St. Clair, which in turn outlets into Lake Erie. The Great Lakes Water Quality Agreement (*GLWQA*) has been considered in the Lower Thames Valley Source Protection Area Assessment Report. Under the Great Lakes Water Quality Agreement, the Four Agency Management Committee established a framework for binational coordination of environmental issues on Lake St. Clair (U.S. Environmental Protection Agency, Environment Canada, Ontario Ministry of Environment, Michigan Department of Environmental Quality. 2004). It is called the Lake St. Clair Management Plan. Lake St. Clair intakes in the Essex Region SPA supply some communities in the Lower Thames Valley Source Protection Area.	Update status of agreement
Proposed revision		Negotiations to amend the GLWQA were launched in early 2010. On February 12, 2013, the Governments of Canada and the United States ratified the Great Lakes Water Quality Agreement of 2012. The Agreement facilitates binational action on threats to water quality and ecosystem health. Under the	

		Great Lakes Water Quality Agreement, the governments of Canada and the United States agreed "to restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem". This is accomplished in part through the development and implementation of binational Lakewide Management and Action Plans (LAMPs) for each lake. Through the development of issue related strategies, the LAMP will identify actions required to restore and protect the lakes and evaluate the effectiveness of those actions. The Thames-Sydenham and Region Source Protection Region is straddled by Lakes Erie and Huron. Lake Erie's ecosystem and economy are threatened by algal blooms that have become a regular occurrence throughout the Western basin of the lake during summer months, leading to poor aesthetics, recreational beach closures and reduced tourism revenue. The blooms are attributed primarily to excessive nutrient inputs from urban and rural land uses. In addition, Lake Erie water quality is affected by habitat loss and degradation and the introduction of non-native aquatic and terrestrial plant species. The top priority for Lake Erie Lakewide Action and Management Plan (LAMP) partners is to address excess algal blooms by reducing nutrient inputs to the lake. The Lake Erie LAMP is coordinated by a committee of water quality and natural resource managers from both Canada and the United States, with participation from federal, provincial, state and local governments that have a role in implementation. Although no formal Lakewide Management Plan exists for Lake Huron, the Lake Huron Binational Partnership was formed in 2002 to meet commitments in the Canada-United States Great Lakes Water Quality Agreement for lakewide management. The Partnership facilitates information sharing, sets priorities, and coordinates binational environmental protection and restoration activities. The U.S. Environmental Protection Agency, Environment Canada, Michigan Departments of Natural Resources and Environmental Quality, and the Ontario Ministries of Environment and Natural Resources form the core of the Partnership. The Lake Huron Binational Partnership focuses on key priorities and on the ground actions that help to improve and protect the overall quality of Lake Huron including controlling non-point source pollution and improving fish spawning and nursery habitat.	
8.3.1		A Lakewide Management Plan is yet to be established for Lake Huron. In 2004, a report was prepared entitled Lake Huron Bi-national Partnership Action Plan and is described based on information from http://www.epa.gov/glnpo/lakehuron/LH%202004.pdf. This plan does provide an overview of issues and recommends actions to address these issues. The approach to Lake Huron differs from the Lake-wide Management Plans (LaMPs) of Lakes Superior, Michigan, Erie and Ontario in that there has been no systematic assessment of beneficial use impairments, identification of causes, definition of critical pollutants, determination of chemical sources and loadings, and release of a report for comment. The alternative approach focuses on areas of obvious importance, such as identified Areas of Concern, tackles these as priorities in the first action plans, and will expand over time to include other activities that investigate the less severe or obvious issues in the lake. Through the GLWQA, three Areas of Concern in the Lake Huron basin are identified none of which are in the UTRSPA. Under the Action Plan, three priority issues - contaminants in fish and wildlife; biodiversity and ecosystem change; fish and wildlife habitat - were given priority for immediate action while other issues will be tracked and added as the Partnership pursues this process of updating and expanding activities over time. Other Lake Huron concerns include: low water levels, botulism, cormorant populations, blue-green algae blooms, aquaculture, the spread of	Update status of agreement

		exotic non-native species such as the Common Reed Grass (Australius phragmities), emerging contaminants and global climate change. The 2008-2010 Action Plan tracks progress on issues identified in the previous cycle, including contaminants in fish, changes in food web structure and protection of critical habitat, and has been expanded to address emerging issues, such as observed increases in nearshore algae and diseases such as botulism (http://www.epa.gov/glnpo/huron.html).	
Proposed Revision		Areas of Concern (AOC) are locations within the Great Lakes identified as having experienced high levels of environmental harm. Under the 1987 Great Lakes Water Quality Agreement between Canada and the United States, 43 such areas were identified, 12 of which were Canadian and 5 of which were shared binationally. The 2012 Great Lakes Water Quality Agreement reaffirms both countries' commitments to restoring water quality and ecosystem health in Great Lakes Areas of Concern. The St. Clair River, a binational AOC is located within the Thames-Sydenham and Region Source Protection Region. In order to improve the environmental conditions of the AOC, a Remedial Action Plan (RAP) has been developed for the St. Clair River. The St. Clair River RAP is a partnership between Canadian and U.S. federal governments, provincial (Ontario) and state (Michigan) governments, with cooperation from the public and stakeholders through the St. Clair Binational Public Advisory Committee. Environment Canada and the Ontario Ministry of the Environment and Climate Change are the lead government agencies for the Canadian side of the St. Clair River Remedial Action Plan. The St. Clair Region Conservation Authority is working with these agencies to assist in the local implementation of the plan.	
8.3.2		The Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem	Future update
		This agreement has been negotiated but has not received final sign off. This text should be revised following final signoff	

4.7 Section 9 – Data Gaps

Section / Policy	Page	Text	Reason For Change	Changes Made
9.1	1	These items include work related to threats contributing to issues, Tier 3 Water Budget, Wellhead Protection Area, WHPA-E and WHPA-F associated with Groundwater Under Direct Influence (GUDI) of surface water and Intake Protection Zone-3 (IPZ-3) for surface water intakes.	Addition of ICA work to SCRSPA	
		These items include work related to the delineation of *threats* relating to *issues* contributing areas, Tier 3 Water Budget, *Wellhead Protection Area*, *WHPA-E* and *WHPA-F* associated with *Groundwater Under Direct Influence* (*GUDI*) of surface water and *Intake Protection Zone-3* (*IPZ-3*) for surface water intakes.		
9.1	2	Data gaps, data limitations, analysis gaps and any data or information that were not available at the time of this publication will be incorporated into an Amended Assessment Report planned for mid-2011 where time and budget allow.	Reference to updated Assessment Reports	
		While some data gaps were addressed in the Amended Assessment Report of November 2011 as well as in this Amended Assessment Report dated November 2014, additional gaps have been identified in Table 9-1 as requiring further review and will be incorporated into a future Assessment Report where time and budget allow**.**		
9.1	2	The Source Protection Plan is required to be submitted in August 2012.	Date reference updated	
		The Source Protection Plan was submitted in November 2012.		
9		Table 9-1 Work Plan to fill Data and Analysis Gaps	Updated table to reflect changes in data gaps	
		See revised table below		

Table 9-1 Work Plan to fill Data and Analysis Gaps

Gap	Description	Work Plan	Planned Completion Schedule
Drainage information	▪ Better drainage information to refine IPZ-2 transport pathways and storm sewersheds for the LAWSS, Petrolia and Wallaceburg intakes ▪ Drainage information to refine Wallaceburg intake IPZ-2 up-tributary extents, for channels connecting Running Creek and Chenal Ecarte ▪ Information regarding the flow of water from St. Anne Island into the Chenal Ecarte has been collected; however additional drainage information would be required to denote specific areas which could provide water to the intake within the two hour time of travel, to help delineate the upland extent of Wallaceburg intake IPZ-2	▪ Obtain better drainage information determined through a site-specific (Tier 2) Risk Assessment for the LAWSS, Petrolia and Wallaceburg intakes ▪ Adjustments may be made to IPZ-2 up-tributary extents, transport pathways and storm sewersheds for the LAWSS, Petrolia and Wallaceburg intakes ▪ Delineate upland extent of Wallaceburg intake IPZ-2 on St. Anne Island side of the Chenal Ecarte	Dependent upon submission of a subsequent Assessment Report
Pump information	▪ Location, drainage area and pump regimes of pump located at the west end of Cram Drain, to refine the Wallaceburg intake IPZ-2	▪ Obtain information on Cram Drain pump to further refine Wallaceburg intake upland IPZ-2	Dependent upon submission of a subsequent Assessment Report
Additional analysis for LAWSS, Petrolia and Wallace-burg IPZ-3	▪ Additional work will assist in identifying significant threats in the IPZs and in possibly extending the delineated IPZ-3s	▪ Consider additional spill modelling scenarios (contaminant type, location, volume) through the events based modelling approach	Dependent upon submission of a subsequent Assessment Report
Edge matching of HVA and SGRA with neighbouring regions	▪ Edge matching of HVA and SGRA with neighbouring regions is to be completed in order to form seamless mapping between source protection regions	▪ This work will be considered when neighbouring regions' HVA and SGRA maps are complete ▪ Methodologies will be determined in consultation with the neighbouring regions once the extent of the challenges are known	Dependent on when neighbouring regions complete HVA and SGRA maps
Conditions Assessment	▪ MOE data delivered to consultants, but not all consultants have reviewed or considered it ▪ A few potential conditions have been identified which require further investigation	▪ Have consultants review and report on data distributed by MOE ▪ Request same data for the rest of the vulnerable areas ▪ Investigate potential conditions ▪ Submit report to Source Protection Committee for consideration ▪ Include in a subsequent Assessment Report if appropriate	Dependent upon submission of a subsequent Assessment Report
Impact of Climate Change	▪ Little work related to climate change in the St. Clair Region Source Protection Area ▪ Work undertaken in Upper Thames River Source Protection Area although focused more on flooding and infrastructure than on water supply ▪ Impact on source water protection is unknown	▪ Revisit this section following the completion of this section in the Upper Thames River Source Protection Area Assessment Report to determine the relevance to the St. Clair Region Source Protection Area ▪ Amend Assessment Report if warranted	To be determined

Table 9-1 Work Plan to fill Data and Analysis Gaps

Gap	Description	Work Plan	Planned Completion Schedule
Inland takings drawing from Great Lakes and connecting channels	▪ Determine Inland takings that draw from Great Lakes and connecting channels	▪ Confirm location and watercourse conditions related to water takings near Lake St. Clair, Lake Huron and the St. Clair River ▪ Recalculate percent water demand ▪ Reassess potential for stress in these areas ▪ Update Assessment Report only if warranted ▪ This work would be dependent on other programs as the potential stress does not impact drinking water systems included in the Terms of Reference, however, if updated information becomes available, future Assessment Reports should be updated to reflect that information	Subsequent Assessment Report, dependent on other programs
Improved under-standing of water use	▪ Use actual water use data in water budget work	▪ Obtain actual water use data from all significant water users through the PTTW reporting system ▪ Requires reassessment after sufficient data has been reported, perhaps when Assessment Report requires future update ▪ This work would be dependent on other programs as the potential stress does not impact drinking water systems included in the Terms of Reference, however, if updated information becomes available, future Assessment Reports should be updated to reflect that information	Subsequent Assessment Report, dependent on other programs
Issues Contributing Area for Wallaceburg	▪ Delineate area relating to the issue of elevated Nitrate levels at Wallaceburg water intake	▪ Staff continue to carry out modelling exercise to identify cause and extent of Nitrate issues relating to Wallaceburg	Subsequent Assessment Report, dependent on other programs

Implementer Assessment Report Consultation Comments and Revisions

The following comments were received from MOECC and MNRF as part of consultation on the Updated AR. Note that the page numbering included in the comments and revisions are approximate and may be affected by the changes.

From	AR	Comment	Response	Action
MOECC	UTRSPA	Please make sure that the submitted UAR: 1) Includes all technical and scientific rationale that supports the delineation of Issue Contributing Areas.	We believe that this has been done. The technical report prepared by Matrix has been summarized in section 5.6. Additional detail is available in the technical report which was provided to MOECC upon request. When more specific comments are received indicating what if any information was not copied over to the AR staff will work with MOECC to determine appropriate revisions which will facilitate approval.	None at this time
MOECC	UTRSPA	2) Lists and enumerates all existing threats within the ICA that are contributing to the Nitrate Issue.	Table 7-26a lists and enumerates threats in the ICA which contribute to the Issue.	None at this time
MOECC	UTRSPA	3) Lists all drinking water threats that contribute or would contribute to the Nitrate Issue within the ICA.	Add a bulleted list or table to indicate all those prescribed drinking water threats which list Nitrogen as a chemical of concern. This is included in Oxford's report table 1.1 and in addition to those inventoried in the ICA it would include waste disposal, snow storage, NASM application and storage	Include Table 1.1 from the Oxford ICA threats report in section
UTRCA	UTRSPA LTVSPA	-UTRCA AR Table 7-26a is not in List of Tables in Table of Contents -check that Table of Contents in all documents have been updated -LTVCA AR Table 7-12, 7-14, 7-15 not in List of Tables in Table of Contents	Agree missing tables should be added to the lists of tables	Revise and regenerate list of tables
MNRF	UTRSPA	Page 3-14 • This section refers to the peer review process and should be updated to reflect the current status of this work. The Tier 2 water budget is complete and has been signed off by the peer review committee as has the Tier 3 assessment.	Revise as suggested	Revise
MNRF	UTRSPA	Page 3-16 • The second paragraph on this page would benefit from some clarification in the wording with respect to scenarios being run for each tier. Specifically, the wording related to the Tier 3 scenarios should be clarified to reflect the updated version of the technical rules. MNRF/MOECC can provide some suggestions for wording.	Revise with wording provided by MNRF/MOECC	Revise
MNRF	UTRSPA	Page 3-22 • The map reference is incorrect in first paragraph. Reference should be made to Map 3-7 instead of Map 3-6.	Revise as suggested	Revise

From	AR	Comment	Response	Action
MNRF	UTRSPA	Page 3-24 • The typo in first paragraph "draught" should be *'drought'*	Revise as suggested	Revise
MNRF	UTRSPA	Page 3-24 • In the final paragraph of Section 3.4.2, the statement *"As a result, the Local Area was assigned a Low risk level"* should be revised to "… the Local Areas were …".	Revise as suggested	Revise
MNRF	UTRSPA	Section 3.4.2 • Overall this section is a high level summary of the Tier 3 Assessment with references back to the Tier 3 Local Area Risk Assessment reports which have been made available in their entirety. This UAR section would benefit from clarification by including some additional key information to help the reader understand the Tier 3 assessment. Some items to consider including are: • A description/definition of WHPA-Q1 and WHPA-Q2 as they are the vulnerable areas (text from Matrix 2014 report) • A table of the scenarios that are undertaken in the Tier 3 Assessment (Table 4.1 from Matrix 2014 report) • A reference to Map 3-7 that shows the locations of the Local Area Assessments • A table of results of the scenarios (Table 4.4 from the Matrix 2014 report)	Revise as suggested	Revise

The following revisions to the updated AR have resulted from the above comments

Section	Page	Text Before Revision Text After Revision	Reason for Revision	Status
5.6	5-15	The activities associated with agriculture (fertilizer and ASM), residential development (septic effluent) and wetlands (decaying organic material) are known sources of nitrate in groundwater which are present in the WHPA. Agriculture is the dominant land use in the WHPAs and application of nitrate fertilizers has been increasing in Canada since the 1950s. Nitrate contributions from septic systems and decaying organic materials were assumed to be negligible given the small land area within the WHPAs and typical loadings associated with these features	Revised to address comments made by MOECC	done
		The activities associated with agriculture (fertilizer and ASM), residential development (septic effluent) and wetlands (decaying organic material) are known sources of nitrate in groundwater which are present in the WHPA. Agriculture is the dominant land use in the WHPAs and application of nitrate fertilizers has been increasing in Canada since the 1950s. Nitrate contributions from septic systems and decaying organic materials were assumed to be negligible given the small land area within the WHPAs and typical loadings associated with these features. *Insert Table 1.1 from the Oxford ICA Threats Assessment report* The prescribed drinking water threats within the ICA which contribute to the nitrate issue are enumerated in section 7.2.18		
7.1.4	7-16	If an issue is identified, the activities that contribute to the identified issue and the areas where they occur (within vulnerable areas) must also be identified. A nitrate issue has been identified for the Woodstock rural wellfields (Thorton and Tabor) as described in Section 5. An Issue Contributing Area (ICA) has been delineated for the Tabor wellfield and the activities contributing to the issue have been identified and included in the numbers of locations of significant drinking water threats included in the following sections.	Revised to address comments made by MOECC	done
		If an issue is identified, the activities that contribute to the identified issue and the areas where they occur (within vulnerable areas) must also be identified. A nitrate issue has been identified for the Woodstock rural wellfields (Thorton and Tabor) as described in Section 5. An Issue Contributing Area (ICA) has been delineated for the Tabor wellfield and the activities contributing to the		

Section	Page	Text Before Revision Text After Revision	Reason for Revision	Status
		issue have been identified and included in the numbers of locations of significant drinking water threats included in section 7.2.18.		
3.3.5	3-14	The Conceptual and Tier 1 Water Budgets have both successfully completed the peer review process and the drafts have been accepted by the MNR. Work on the Tier 2 Water Budget has been reviewed at various stages. The comments of the peer reviewers have been considered in revised reports, for all of the various stages of the work, including: model selection, integrated model calibration, SGRA determination and stress assessment for the various scenarios required. Final peer review acceptance of the Tier 2 Water Budget is anticipated to be completed during the posting of this report. The material included in this draft of the Assessment Report is based on final drafts of the Tier 2 analyses submitted to the peer reviewers for their review and comment and comments received on that material. Peer review of the work included in this Assessment Report is not a requirement of the technical rules; however the Source Protection Committee relies on the technical experts on the peer review committee to ensure that the work is suitable for the purposes of developing a Source Protection Plan for the area. The Ministry of Natural Resources also relies on the peer review process as part of its review and acceptance of the water budget work. Due to the peer reviewers having reviewed much of the material as the work progressed, it is not anticipated that changes resulting from the review will have a substantial effect on the stress assessment, the delineation of SGRAs, or the other information presented in this Assessment Report. It is however, anticipated that the comments will continue to improve the documentation and interpretation of the work undertaken. Minor changes may be incorporated into the report prior to posting the Assessment Report for consultation.	Revised to address comments made by MNRF	done
		The Conceptual, Tier 1, 2 and 3 Water Budgets have successfully completed the peer review process and the drafts have been accepted by the MNR. Peer review of the work included in this Assessment Report is not a requirement of the technical rules; however the Source Protection Committee relies on the technical experts on the peer review committee to ensure that the work is suitable for the purposes of developing a Source Protection Plan for the area. The Ministry of Natural Resources also relies on the peer review process as part of its review and acceptance of the water budget work.		

Section	Page	Text Before Revision Text After Revision	Reason for Revision	Status
3.4	3-16	… The intent of scenario analysis is to ensure subwatersheds which exhibit a low potential for stress under average conditions will not be pushed to a higher level by increased future municipal demand, or by drought. The subwatersheds in the UTRSPA to which ….	Revised to address comments made by MNRF	done
		… The intent of scenario analysis is to ensure subwatersheds which exhibit a low potential for stress under average conditions will not be pushed to a higher level by increased future municipal demand, or by drought. The scenarios modelled in each tier of the water budget analysis are prescribed in the Technical Rules (MOE, 2009). These are further described and outlined in the water budget reports which are include as supplemental document with the Assessment Report and Source Protection Plan. In Tier 2 those scenarios (described in Table 1 of the Technical Rules) focused on the stress on the watershed within which the system is located. The scenarios included normal or average conditions while considering future and planned system demand. They also considered panned or built out land use. The scenarios also considered variable supply represented by certain drought conditions. In Tier 3 the scenarios focused on the exposure of the system to various demand and supply scenarios described in Table 4 of the Technical Rules. The scenarios again included historical climate conditions as well as specified drought conditions from historical records. They also included current and future demand scenarios and land use reflective of both the current and future situations. These scenarios and the various combinations assessed are described in detail in the water budget reports and Technical Rules and presented in Table 3.8. The subwatersheds in the UTRSPA to which ….		
3.4.2	3-23	These systems are illustrated in Map 3-6	Revised to address comments made by MNRF	done
		These systems are illustrated in Map 3-7		
3.4.2	3-24	…The scenarios include various combinations of average annual and draught conditions under current, and future demands. The scenarios also include consideration of the effects of future development on recharge. Each of the	Revised to address comments made by MNRF	done

Section	Page	Text Before Revision Text After Revision	Reason for Revision	Status
		scenarios are assessed to determine whether the water levels in the wells are drawn down below a level at which they are safe to continue to operate (Safe Additional Available Drawdown).		
		…The scenarios include various combinations of average annual and drought conditions under current, and future demands. The scenarios also include consideration of the effects of future development on recharge. Each of the scenarios are assessed to determine whether the water levels in the wells are drawn down below a level at which they are safe to continue to operate (Safe Additional Available Drawdown).		
3.4.2	3-24	Despite the indication of potential stress in earlier investigations, none of the six had issues meeting their water quantity requirements. The 6 systems were classified as having a Low Risk Level. As a result, the Local Area was assigned a "Low" Risk level. This is largely due to an abundance of capacity in municipal supply wells; also due to low anticipated growth and low forecast increase in water demand, as well as an abundance of additional water in municipal supply wells.	Revised to address comments made by MNRF	done
		Despite the indication of potential stress in earlier investigations, none of the six had issues meeting their water quantity requirements. The 6 systems were classified as having a Low Risk Level. As a result, the Local Areas were assigned a "Low" Risk level. This is largely due to an abundance of capacity in municipal supply wells; also due to low anticipated growth and low forecast increase in water demand, as well as an abundance of additional water in municipal supply wells.		
3.2.4	3-24	…Each of the scenarios are assessed to determine whether the water levels in the wells are drawn down below a level at which they are safe to continue to operate (Safe Additional Available Drawdown). Based on the results of the Risk Assessment modelling scenarios …	Revised to address comments made by MNRF. Table 4.4 was referenced in the Matrix reports rather than including the tables in their entirety from all 3 reports due to the size of the tables and amount of detail which it would include in this summary of the results.	done
		…Each of the scenarios are assessed to determine whether the water levels in the wells are drawn down below a level at which they are safe to continue to operate (Safe Additional Available Drawdown). *Insert table 4.1 from Matrix, 2014* A Local Area was delineated surrounding the municipal supply wells in the		

Section	Page	Text Before Revision Text After Revision	Reason for Revision	Status
		Study Area. This area was delineated as outlined in the Province's Technical Rules (MOE 2008) based on a combination of 1) the cone of influence of the municipal wells (WHPA-Q1), and 2) land areas where recharge has the potential to have a measurable impact on water levels at the municipal wells (WHPA-Q2). GUDI systems, such as St Marys, also have an upstream contributing area (similar to an IPZ-Q1) as they rely on surface water supply from upstream as part of the ground water supply. Map 3-7 illustrates these vulnerable areas.. Based on the results of the Risk Assessment modelling scenarios, provided in Tables 4.4 of each Tier 3 Water Budget and Water Quantity Risk Assessment (Matrix, 2014), …		
List of Tables		Regenerate to include additional tables and correct page numbers. Update revision date in footer.	Revised to address comments made by MOECC	done
Footers	Sections 3, 5, 7	Revise to indicate revision date March 5, 2015	Reflect revised sections	done
		Upper Thames River Assessment Report Revised – March 5, 2015		

Implementer Assessment Report Consultation Comments and Revisions

The following comments were received from MOECC as part of consultation on the Up**dated AR.**

From	AR	Comment	Response	Action
MOECC	LTVSPA	1) Page 4.2- Sec 4.1: "***Peer review*** *for work initiated following the completion of the peer review process, including theIPZ-3 work, was provided by* ***technical staff*** *at the Ministry of Environment and Climate Change,…*". • Please re-word this sentence to reflect that MOECC staff helped the SPAs to understand the technical requirements and science. MOECC cannot peer-review technical work and approve it at the same time- this is a conflict of interest.	Agreed, we should revise to more accurately describe the MOECC role.	Revise wording as suggested
MOECC	LTVSPA	2) Page 4-12- Sec. 4.2.5.1 • This section needs to mention that the delineation of the EBA (15,000L) encompasses all components of IPZs for the Wheatley intake, as indicated in Essex UAR. Similar wording used for Stoney Point can be used here.	Agreed, we should revise as requested.	Revise as suggested
MOECC	LTVSPA	3) Page 4-13: "*The spill location is shown on* ***Map 4-3b***". • This map does not show the spill location. Please update the map or refer to the location mapped in Essex UAR.	Agreed we can add the spill locations from ERCA. to Map 4-3b.	Revise mapping to show spill location
MOECC	LTVSPA	4) Page 4-14- Sec. 4.2.5.2: "*The modelling completed for the* ***Wheatley IPZ-3*** *followed the general approach outlined in the MOE Technical Bulletin (July 2009).*" • This should read "…completed for Stoney Point IPZ-3…" This section is for the Stoney Point Intake, not the Wheatley Intake.	Agree this should be corrected	Revise as suggested
MOECC	LTVSPA	5) Page 4-17, 1st paragraph • Please mention that the regulation limits were not used for the IPZ-3 delineation based on the SPC request and the Director's approval letter (Include in Appendix).	Agreed the suggested text can be added and the Director's approval letter should replace our letter which was included as a placeholder for the director's letter not yet received	Revise as suggested
MOECC	LTVSPA	6) Page 4-18, 2nd paragraph: it states "*transport pathways* ***were not*** *considered in the EBA delineations*". • This statement is a bit misleading because the EBA encompasses IPZ-1, 2 and 3 completely, i.e. the EBAs include all components of the IPZs. On page 4-19 (Area Vulnerability factor for IPZ-3 for Stoney Point), it states that the upland areas of IPZ-3 are agricultural areas and most of the area is tile drained. Tile drainages are transport pathways. Therefore, to clarify, please re-word the statement above or remove the term transport pathways.	Revise the statement to provide more clarity that transport pathways such as agricultural tile draining was not use to extend IPZ-3 as was done for IPZ-2.	Revise as per response

From	AR	Comment	Response	Action
MOECC	LTVSPA	7) Page 4-22, top paragraph: "***Similarily**, even though intakes on Lake St. Clair are considered **Type C** and not Great Lakes intakes, the Vulnerability Scores start at 6.3 and decrease from there.*" • Lake St. Clair Intakes are type D intake, not C. • Correct typo for "Similarily"	Agreed these errors should be corrected	Revise as suggested
MOECC	LTVSPA	8) Page 7-14, Sec. 7.1.2 • Please include a statement or a table to show that the local threats approved by the director can result in low or moderate threats based on the vulnerability scores assigned with each IPZ. This statement or table would complete and align with the last statement that Event Based modelling would be used to identify local threats as SDWT.	The tables in A-10 indicate where the local threat is a significant, moderate or low threat. An additional statement can be added to indicate that the local threat has been added to the tables in A-10 and indicates where the local threat may be considered a significant, moderate or low threat. This paragraph should also be updated to reflect that the director's letter was received and is included in appendix 13.	Revise as suggested in response
MOECC	LTVSPA	9) Map 7-8 • The table attached with this map indicates that SDWTs are identified in IPZ-1s and 2s scored 6 and lower for chemical and pathogen threats. These scores would/could result in moderate and low threats only; the EBA part of the map is correct. Please re-arrange this table to avoid any confusion. • Options include using the same table as used for Stoney Point Intake (map 7-9) OR mentioning that SDWT are only identified for fuel threats in the EBA.	Revise the table included in the map to indicate no significant threats in IPZ-1,2 as the EBA indicates where modelled significant threats may be identified. This is consistent with the way these threats have been dealt with in map 7-9 and in the SCR AR.	Revise map as noted
MOECC	LTVSPA	10) IPZ-3 segments for Stoney point have vulnerability scores less than 8 which means no SDWT can be identified. However, managed land, livestock density and % of impervious areas etc. still need to be calculated, as required by the rules, which would result in low and moderate threats. The UAR indicates that the calculations were not completed and will be in the future; this has been assigned as a data gap (Sec. 7.4).	The comment does not suggest that this needs to be corrected before approval. If necessary staff can work with MOECC to determine the appropriate time to undertake this work. If it needs to be completed before submission it will delay the submission of this AR for approval.	Determine when it would be appropriate to fill this gap.
UTRCA	UTRSPA LTVSPA	-check that Table of Contents in all documents have been updated -LTVCA AR Table 7-12, 7-14, 7-15 not in List of Tables in Table of Contents	Agree missing tables should be added to the lists of tables	Revise and regenerate list of tables

The following revisions to the updated AR have resulted from the above comments

Section	Page	Text Before Revision Text After Revision	Reason for Revision	Status
4.1	4-2	… Peer review for work initiated following the completion of the peer review process, including the IPZ-3 work, was provided by technical staff at the Ministry of Environment and Climate Change, ongoing involvement of the project teams of the Thames-Sydenham and Region and Essex Region and the Technical Advisory committee formed by the Thames-Sydenham and Region SPC. The peer review process added considerable value to the technical report by ensuring that the work was well documented.	Changes to address MOECC comments during consultation	done
		…Work initiated following the completion of the peer review process, including the IPZ-3 work, was undertaken with assistance from technical staff at the Ministry of Environment and Climate Change to ensure that the was undertaken with a thorough understanding of the technical requirements and science. Also ongoing involvement of the project teams of the Thames-Sydenham and Region and Essex Region and the Technical Advisory Committee formed by the Thames-Sydenham and Region SPC provided additional peer review of the work. The peer review process added considerable value to the technical report by ensuring that the work was well documented.		
4.2.5.1	4-12	As specified in the Technical Rules, the IPZ-3 extends on to the land a distance of 120 metres, or to the Floodplain Regulation Limit whichever is greater (as long as water from the land actually flows to the watercourse). Transport pathways were not considered in the IPZ-3 delineations. The extent of the Wheatley IPZ-3 is shown on Map 4-3b.	Changes to address MOECC comments during consultation	done
		As specified in the Technical Rules, the IPZ-3 extends on to the land a distance of 120 metres, or to the Floodplain Regulation Limit whichever is greater (as long as water from the land actually flows to the watercourse). While the IPZ-3 extends the IPZ to include the extent of the Event Based Area (EBA) the EBA also includes the areas of IPZ-1 and IPZ-2. Transport pathways were not considered in the IPZ-3 delineations. The extent of the Wheatley IPZ-3 is shown on Map 4-3b.		
4.2.5.2	4-15	In the case of the Stoney Point intake, the concern is fuel spills and the parameter chosen to model was the benzene component of the fuel. The modelling completed for the Wheatley IPZ-3 followed the general approach outlined in the MOE Technical Bulletin (July 2009). The modelling used to delineate the IPZ-3s for Essex Region Source Protection Area Lake St. Clair	Changes to address MOECC comments during consultation	done

		tributaries will not be discussed in this report as the IPZ-3 delineation in the Lower Thames Valley Source Protection Area is not dependant on that work.		
		In the case of the Stoney Point intake, the concern is fuel spills and the parameter chosen to model was the benzene component of the fuel. The modelling completed for the Stoney Point IPZ-3 followed the general approach outlined in the MOE Technical Bulletin (July 2009). The modelling used to delineate the IPZ-3s for Essex Region Source Protection Area Lake St. Clair tributaries will not be discussed in this report as the IPZ-3 delineation in the Lower Thames Valley Source Protection Area is not dependant on that work.		
	4-18	As specified in the Technical Rules, the IPZ-3 (and therefore the EBA) extends on to the land a distance of 120 metres, or to the Floodplain Regulation Limit whichever is greater, as long as water from the land actually flows into the watercourse. The extensive diking system though this area limits the extent to which the IPZ-3 extends onto the land. Throughout much of the downstream portion of the Thames River and Big Creek watersheds, the 34,000 L EBA only extends to the top of the dike, not the full 120 m nor to the Regulation Limit.		
		As specified in the Technical Rules, the IPZ-3 (and therefore the EBA) extends on to the land a distance of 120 metres, or to the Floodplain Regulation Limit whichever is greater, as long as water from the land actually flows into the watercourse. The extensive diking system though this area limits the extent to which the IPZ-3 extends onto the land. As a result the director granted the SPC permission to use an alternative method to better delineate the extent of the EBA and IPZ-3. This resulted in not extending the IPZ-3 to the regulatory limit, but rather extending only to the top of the dykes as demonstrated by the event based modelling discussed above. The Director's letter is included in Appendix 13. Throughout much of the downstream portion of the Thames River and Big Creek watersheds, the 34,000 L EBA only extends to the top of the dike, not the full 120 m nor to the Regulation Limit.		
4.2.5	4-19	Transport pathways were not considered in the EBA delineations. The extent of the Stoney Point EBAs are shown on Map 4-10.		
		Transport pathways such as agricultural tile drainage were not used to extend the EBA inland beyond regulatory limits or the 120 m setback as was done in IPZ-2. The extent of the Stoney Point EBAs are shown on Map 4-10.		
4.2.6	4-23	Similarily, even though intakes on Lake St. Clair are considered Type C and not Great Lakes intakes, the Vulnerability Scores start at 6.3 and decrease		

		from there. Consequently, there can be no significant threats in the IPZ-3 based on the Vulnerability Scoring.		
		Similarly, even though intakes on Lake St. Clair are considered Type D and not Great Lakes intakes, the Vulnerability Scores start at 6.3 and decrease from there. Consequently, there can be no significant threats in the IPZ-3 based on the Vulnerability Scoring.		
Maps	Map 4-3b	Page 4-13 indicates "The spill location is shown on Map 4-3b", however This map does not show the spill location. The map was updated to show the spill location.	Changes to address MOECC comments during consultation	
Maps	Map 7-8	Revise the table included in the map to indicate no significant threats in IPZ-1,2 as the EBA indicates where modelled significant threats may be identified. Correct the vulnerability score. Correct where threats can be moderate and low.	Changes to address MOECC comments during consultation	
	Maps 7-1a, 7-2a, 7-3a	Calculate and map ML, LD and PI for the parts of IPZ-3 which need to be assessed.	Changes to address MOECC comments during consultation	
7.1.1 (Managed Lands)	7-10	The percentage of managed land area within a vulnerable area is the sum of agricultural managed land and non-agricultural managed land, divided by the total area of all land within a vulnerable area, multiplied by 100. This was undertaken for each part of the WHPA and IPZ where the vulnerability could result in the activities being a drinking water threat. This evaluation has not been completed for IPZ-3. Where a parcel of managed land is partially within a vulnerable area, only the portion of the parcel within the vulnerable area is used in the calculations.	Changes to address MOECC comments during consultation	done
		The percentage of managed land area within a vulnerable area is the sum of agricultural managed land and non-agricultural managed land, divided by the total area of all land within a vulnerable area, multiplied by 100. This was undertaken for each part of the WHPA and IPZ where the vulnerability could result in the activities being a drinking water threat. This evaluation was completed for parts of the IPZ-3 where the application of ASM, NASM or commercial fertilizer could be a threat. Where a parcel of managed land is partially within a vulnerable area, only the portion of the parcel within the vulnerable area is used in the calculations.		
7.1.2	7-14	Other activities may be listed as threats only if the Source Protection Committee identifies them as drinking water threats, and similar to the		

		prescribed threats, if the hazard score is greater than 4 and the risk score calculated is greater than 40, and if the hazard score (calculated based on certain criteria set out in the technical rules) is agreed upon by the Director (MOE). This information is included in the Director's letter which can be found in Appendix 13 MOE communications. Event based modelling may be used to determine if these other activities (local threats), or prescribed drinking water threats, are considered significant drinking water threats.		
		Other activities may be listed as threats only if the Source Protection Committee identifies them as drinking water threats, and similar to the prescribed threats, if the hazard score is greater than 4 and the risk score calculated is greater than 40, and if the hazard score (calculated based on certain criteria set out in the technical rules) is agreed upon by the Director (MOE). These other activities may be considered low, moderate or significant drinking water threats based on the vulnerability score of the area and the hazard score included in the Director's letter which can be found in Appendix 13 MOE communications. The tables included in Appendix 10 indicate in which areas these other activities can be considered threats. Event based modelling may be used to determine if these other activities (local threats), or prescribed drinking water threats, are considered significant drinking water threats.		
7.4		Impervious, managed lands and livestock density calculations and associated threats identification and risk assessment have not been completed for IPZ-3. This is only necessary for the IPZ-3 related to the type D intake at Stoney Point. This work when completed will not identify any significant threats due to the vulnerability score of these areas.	Changes to address MOECC comments during consultation	done
		Paragraph deleted		
		Regenerate lists of Tables and Tables of contents. Add captions for Tables 7-12, 7-14 and 7-15. Revise date in the footer.	Changes to address MOECC comments during consultation	done

SCRCA – AR Change Log

As a result of the following comments received from the MOECC during consultation on the amended proposed SPP and updated AR the changes below are included in the Updated Assessment Report (March 5, 2015) submitted for approval.

Comments

MOECC	SCRSPA	1) Page 7-13, Sec. 7.1.2 *1.* Please include a statement or a table to show that the local threats approved by the director can result in low or moderate threats based on the vulnerability scores assigned with each IPZ. This statement or table would complete and align with the last statement that Event Based modelling would be used identify local threats as SDWT.	The tables in A-10 indicate where the local threat is a significant, moderate or low threat. An additional statement can be added to indicate that the local threat has been added to the tables in A-10 and indicates where the local threat may be considered a significant, moderate or low threat.	Revise as suggested in response
MOECC	SCRSPA	2) Table 7-6 and Table 7-10 *2.* Please insert the asterisk (*) for IPZ-1 and 2 as well. The way it is shown now may indicate that the EBA is limited only to IPZ-3, but it actually encompasses all IPZs. The way table 7-8 is shown would work for table 7-6. Same comment applies to table 7-10.	Add additional asterisks as suggested	Revise as suggested
MOECC	SCRSPA	3) Maps 4-4c (Transportation of Fertilizer [ToF] Local threat) for Wallaceburg 3. ToF has been approved as a local threat, Director's approval letter dated Sept 2011, where Nitrogen (N) in the form of Nitrate (NO_3) is the parameter of concern under the condition that fertilizer contains NO_3 as Urea Ammonia Nitrate. A spill of ToF (modelled), as shown in the consultant report, resulted in identification of SDWT at specific locations mapped in map 4-4c. This identification was based on, as stated in the consultant report, the ODWS for Nitrite (NO_2) instead of Nitrate (NO_3). The ODWSs for NO_3 and NO_2 are 10mg/l and 1mg/l, respectively. Given the consultant modelling results, the locations mapped in map 4-4c would not result in a SDWT if the NO_3 threshold was used. Please clarify and revise where necessary to address the comment.	The differences between nitrate and nitrite should be adequately documented in the AR including the volumes which result in exceedances for each parameter. While we have requested that the province consider adding nitrite to the director's letter and also allowing it to be used for the storage and handling, they have indicated that currently only nitrate is considered and that further review has not yet occurred. Staff are not optimistic that this will change prior to AR approval. Thus two options are presented for SPC consideration: 1. Document that the activity at the volumes analysed are not SDWT as they did not result in an exceedance of nitrate. 2. Document the larger quantity (currently estimated to be 3x larger but requiring more detailed calculations) which would result in a SDWT With either option, if MOECC allows nitrite to be considered the AR would have to be revised to document the smaller quantity before approval of the AR.	To be determined by SPC
UTRCA	SCRSPA	It would be helpful if the Significant Threat Policy Applicability	Mapping is provided in section 4 (ie maps 4-Xa, b,	None

	LTVSPA	Mapping for Intake Protection Zones were updated to show the EBA volumes. This could be done by adding a different solid colour for each of the volumes, behind the cross hatching of the EBA. Unfortunately the other SDWT areas (red and orange) would need to be on top of this layer, but they are relatively small areas compared to the other parts of the EBA.	c which shows each EBA separately. In order to revise as suggested , we would also need to differentiate between fuel and fertilizer in the SCRCA. This would also not adequately represent that the EBAs overlap and policy applies to multiple quantities (although the lowest could be represented).	
SCRCA	SCRSPA	Map 4-1 needs to be updated to include the new EBA	This revision was able to be included in the AR before it was posted for consultation.	none

Change Log

Legend
White Cells- original text
Grey cells- new text
Yellow highlight- area of original text to be changed
Bright Green highlight- area of new text

Section / Policy	Page	Text	Reason For Change	Changes Made
Table of Content and List of Tables		Page numbers in the table of contents and list of tables have been updated to ensure that they reference the correct page numbers in locations where revisions to the text have been made.	Reflect the addition of text in sections 4 and 7 as documented below. Revision date has not been changed.	done
Section 3	All page footers in section	St. Clair Region Assessment Report Updated – Nove 4.0 Vulnerability Assessment www.sourcewaterp Page 2	Correct improper page footers. As no changes have been made to text the revision date in this section has not been revised.	done
		St. Clair Region Assessment Report Updated – Nove 3.0 Water Budget and Water Quantity Stress Assessment www.sourcewaterp Page 2		
Section 4	All page footers in section	St. Clair Region Assessment Report Updated – Noven 4.0 Vulnerability Assessment www.sourcewaterpr Page 4-23	Correct page numbering which continues from section 3. Change version date to document that the	done

Section / Policy	Page	Text	Reason For Change	Changes Made
			section has been updated.	
		St. Clair Region Assessment Report Revised – M 4.0 Vulnerability Assessment www.sourcewaterpro Page 4-1		
4.2.5.5	4-45, 4-46	It was recommended to extend the delineation approximately 7 km north of Corunna as a spill within this area is expected to result in similar concentrations (above the Ontario Drinking Water Quality Standard) arriving at the intake. Model results showed that the fertilizer spill at Sombra ferry crossing resulted in exceedance of the Ontario Drinking Water Quality Standard benchmark of 1mg/l for Nitrite (as nitrogen) at the Wallaceburg intake. The second phase involved simulating a fertilizer spill at the Tupperville Bridge crossing on the East Sydenham as shown by spill location (6) in Map 4.4.b, and longitudinal dispersion analysis along the North Sydenham River as represented by spill location (7) in Map 4.4b. Based on the model results, the fertilizer spill at Tupperville Bridge did not result in an exceedance of the Ontario Drinking Water Quality Standard benchmark of 1mg/l for Nitrite (as nitrogen) at the Wallaceburg intake……..	Updates to AR to include extended IPZ-3 delineation.	
		Model results showed that a fertilizer spill of 34,000 Kg (46% Nitrogen) at Sombra ferry crossing resulted in exceedance of the Ontario Drinking Water Quality Standard benchmark of 1mg/l of Nitrite (as nitrogen) at the Wallaceburg intake. The Table of drinking water threats refer to Nitrogen (potentially interpreted as either Nitrate or Nitrite) as a potential threat, however, based on discussion with MOECC, the Ontario Drinking Water Standard for Nitrate was considered and not Nitrite. Also, the Director's letter (included in Appendix 13) identifies Nitrate as the parameter of concern for the transportation of fertilizer as a drinking water threat. This lead to calculating the appropriate fertilizer spill that would result in exceedance of Nitrate at the intake. An extrapolated spill of 124,000 Kg (3.64 times that of Nitrate) of 46% Nitrogen was calculated to result in an exceedance of ODWQS of Nitrate (10 mg/L) at the Wallaceburg intake. It should be noted that a spill of a different fertilizer (other than 46%) with similar nitrogen content would also be considered as a significant threat to the Wallaceburg Intake, however the mass of the fertilizer which would be considered a significant drinking water threat would be dependent on the Nitrogen content. Given the complex cycle of Nitrogen, the concentrations provided in the consultant report have also been compared to the ODWSs for Nitrite (NO_2), 1mg/l, and it was found that 34,000 kg could possibly result in an exceedance for Nitrite however, based on the above noted discussions with MOECC this amount of fertilizer is not considered a significant drinking water threat. The second phase involved simulating a fertilizer spill at the Tupperville Bridge crossing on the East Sydenham as shown by spill location (6) in Map 4.4.b, and longitudinal dispersion analysis along the North Sydenham River as represented by spill location (7) in Map 4.4b. Based on the model results, the fertilizer spill at Tupperville Bridge did not result in an exceedance of the Ontario Drinking Water Quality Standard benchmark of 1mg/l for Nitrite (as nitrogen) at the Wallaceburg intake. As such a spill quantity for Nitrate has not been	Additional review of Consultant's report	Done

Section / Policy	Page	Text	Reason For Change	Changes Made
		calculated.		
Section 7	All page footers in section	St. Clair Region Assessment Report Updated – Nove 7.0 Threats and Risk Assessment – Water Quality www.sourcewaterp Page 4	Change version date to document that the section has been updated.	done
		St. Clair Region Assessment Report Revised – M 7.0 Threats and Risk Assessment – Water Quality www.sourcewaterp Page 4		
7.1.2	7-14	The Clean Water Act also allows the *Source Protection Committee* to include activities that they consider being drinking water threats but are not prescribed *drinking water threats*, upon approval of the Director.		
		The Clean Water Act also allows the *Source Protection Committee* to include activities that they consider being drinking water threats but are not prescribed drinking water threats. This requires approval of the Director. These are called other activities (Rule 119) and are often referred to as local threats. The Source Protection Committee can also identify additional circumstances (not already in the tables of drinking water threats) under which they consider the activity to be a prescribed drinking water threat. The *Source Protection Committee* is considering a few such other activities, as discussed in Section 7.2.9. The SPC considered including geothermal systems (harnessing underground temperature), pipelines and transportation (shipping, rail or road transport of materials). Only transportation (of fuel and fertilizer) and pipelines (fuel) were requested based on the results of event based modelling which is discussed further in section 7.2.8 and 7.2.9.	Statement added to indicate that the local threat has been added to the tables in A-10 and indicates where the local threat may be considered a significant, moderate or low threat.	Done
7.1.2	7-14	Other activities may be listed as threats only if the Source Protection Committee identifies them as drinking water threats, and similar to the prescribed threats, if the hazard score is greater than 4 and the risk score calculated is greater than 40. The hazard score must be calculated based on certain criteria set out in the technical rules, and further must be agreed upon by the Director (MOE).		
		Other activities may be listed as threats only if the Source Protection Committee identifies them as drinking water threats, and similar to the prescribed threats, if the hazard score is greater than 4 and the risk score calculated is greater than 40. The hazard score must be calculated based on certain criteria set out in the technical rules, and further must be agreed upon by the Director (MOE). Based on the hazard score and vulnerability score of an area, these local threats may be considered a low, moderate or significant drinking water threat. The tables in appendix 10 identify where these activities are considered low, moderate or significant threats to drinking water. Event based modelling allows the threat to be considered a significant drinking water threat irrespective of the vulnerability score of the area as the modelling demonstrates its effect on the intake.		
Table 7-6, Table 7-10	7-23, 7-24	No previous text included in AR tables		
		* Event modelled threats are significant in the EBA within IPZ-1, 2 and 3 (Added to tables as required)	Includes IPZ-1,2 and 3 in EBA areas	Done
7.2.8	7-27	A fertilizer spill of 34,000 kg of Urea (46% Nitrogen) was modelled at the Sombra ferry		

Section / Policy	Page	Text	Reason For Change	Changes Made
		crossing at St. Clair River and was found to result in the deterioration of the drinking water source. Thus, spills of other fertilizers with similar nitrogen content would also be considered a *significant threat* in this part of the Wallaceburg *IPZs.*		
		A fertilizer spill of 124,000 kg of Urea (46% Nitrogen) was modelled at the Sombra ferry crossing at St. Clair River and was found to result in the deterioration of the drinking water source. Thus, spills of other fertilizers with similar nitrogen content would also be considered a *significant threat* in this part of the Wallaceburg *IPZs.*	Updated quantity as outlined in Section 4.2.5.5	Done
MAP 4-1	Appendix 1 - Maps	Map 4-1 needs to be updated to the new EBA region	Reflect changes in the EBR delineation not included prior to consultation	Done
MAP 4-4c	Appendix 1 - Maps	Update fertilizer quantity to 124,000kg	To be consistent with revised text	Done

SPP Volume II Suggested Changes Post-Consultation

Table 1 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09

Policy Approach/Tool	Implementation timing
Specify action (S22(6))	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act (S39)	On the effective date of SPP, as specified in the CWA
Land Use Planning: • Official Plan updates (S40(1))	3 years from the effective date of SPP or at the time of the next OP review whichever is first
Land Use Planning: • Zoning by-laws (S42)	2 years from the passing of the OP
Existing Prescribed Instruments (S43(1))	3 years from the effective date of the SPP
Future (new) Prescribed Instruments (S39(7))	On the effective date of SPP, as specified in the CWA
Part IV Risk Management Plans for *existing* activities (S58)	Section 58 policies would apply to existing activities on a date specified in a notice provided by the RMO, to a person who is engaged in the activity. The date shall not be less than 120 days after the notice is given (as per s58(4)).
Part IV Risk Management Plans for *future* activities (S58(1))	On the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *existing* activities (S57(2))	180 days from the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *future* activities (S57(1))	On the effective date of the SPP, as specified in the CWA
Part IV Restricted Land Use provisions (S59(1))	On the effective date of the SPP, as specified in the CWA

Table 2 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09

Policy Approach/Tool	Implementation timing
Specify action (S22(6))	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act (S39)	On the effective date of SPP, as specified in the CWA
Land Use Planning: • Official Plan updates (S40(1))	3 years from the effective date of SPP or at the time of the next OP review whichever is first
Land Use Planning: • Zoning by-laws (S42)	3 years from the passing of the OP
Existing Prescribed Instruments (S43(1))	3 years from the effective date of the SPP
Future (new) Prescribed Instruments (S39(7))	On the effective date of SPP, as specified in the CWA
Part IV Risk Management Plans for *existing* activities (S58)	Section 58 policies would apply to existing activities on a date specified in a notice provided by the RMO, to a person who is engaged in the activity. The date shall not be less than 120 days after the notice is given (as per s58(4)).
Part IV Risk Management Plans for *future* activities (S58(1))	On the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *existing* activities (S57(2))	180 days from the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *future* activities (S57(1))	On the effective date of the SPP, as specified in the CWA
Part IV Restricted Land Use provisions (S59(1))	On the effective date of the SPP, as specified in the CWA

Section	Page	Text	Reason for Change	Changes Made
OC-1.02		**Implementation Timing** Except as set out below, or as otherwise prescribed by the Clean Water Act, the policies contained in this Source Protection Plan shall come into effect on the date of the posting of the notice of approval of this Source Protection Plan on the Environmental Registry. 1. For policies written pursuant to Section 43(2) of the Clean Water Act (prescribed instruments), amendments to existing prescribed instruments shall be completed within three (3) years from the effective date of the Source Protection Plan; 2. For policies written pursuant to Section 40(2) and Section 42 of the Clean Water Act (Official Plan conformity), amendments to the Official Plan required to conform with the policies of this SPP shall be initiated by the *County* within three (3) years from the effective date of the Source Protection Plan, or as part of the next Official Plan Review undertaken in accordance with Section 26 of the Planning Act, whichever comes first. Amendments to Zoning By-laws required to conform with the significant threat policies shall be initiated by the *Area Municipalities* within two (2) years of the adoption of the Official Plan conformity amendments; 3. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan; and 4. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs and education and outreach) shall be implemented within two (2) years of the effective date of the Source Protection Plan.		
OC-1.02		**Implementation Timing** Except as set out below, or as otherwise prescribed by the Clean Water Act, the policies contained in this Source Protection Plan shall come into effect on the date of the posting of the notice of approval of this Source Protection Plan on the Environmental Registry. 1. For policies written pursuant to Section 43(2) of the Clean Water Act (prescribed instruments), amendments to existing prescribed instruments shall be completed within three (3) years from the effective date of the Source Protection Plan; 2. For policies written pursuant to Section 40(2) of the Clean Water Act (Official Plan conformity), amendments to the Official Plan required to conform with the policies of this SPP shall be initiated by the County as soon as possible after the effective date of the SPP with the goal of being adopted within three (3) years of the effective date of the SPP. For policies written pursuant to Section 42 of the Clean Water Act (Zoning By-law conformity), amendments to Zoning By-laws required to conform with the policies of this Source Protection Plan shall be initiated as soon as possible after the effective date of the SPP and adopted by the Area Municipalities within three (3) years of the effective date of the above noted amendments to the Official Plan; 3. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan; and 4. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs and education and outreach) shall be implemented within two (2) years of the effective date of the Source Protection Plan. 5. If an activity was engaged in at a particular location before this Source Protection Plan takes effect and the Risk Management Official gives notice to a person who is engaged in the activity	Change based on MMAH comment	Policy text change

Section	Page	Text	Reason for Change	Changes Made
		at that location (as per Sec. 58(4) of the CWA, 2006), the policies written pursuant to Section 58 shall apply on and after a date specified in the notice that is at least 120 days after the date notice is given.		
Policy 1.03		**Transitional Provisions** 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under Subsection 34(10) of the Planning Act; b. A site plan under Subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act, a significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. 3. Despite the definition of existing and the provisions contained in Sections 1 and 2 of policy OC-1.03, where a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered as new or future from that point forward.		

Section	Page	Text	Reason for Change	Changes Made
		4. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.		
Policy 1.03		**Transitional Provisions** 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under Subsection 34(10) of the Planning Act; b. A site plan under Subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act, a significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. This provision shall cease to apply at such time as a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, following which any significant drinking water threat activity not so documented shall be considered as new or future from that point forward.	Change based on ongoing discussion with MOECC	Policy text change

Section	Page	Text	Reason for Change	Changes Made
		3. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.		
OC-1.05		**Official Plan and Zoning By-law Amendment(s)** The *County* shall amend the Official Plan and the *Area Municipalities* shall amend their respective Zoning By-laws to: 1. Identify the WHPAs and/or ICAs in which a significant drinking water threat could occur; 2. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; 3. Identify the significant drinking water threats that are prohibited through Prescribed Instruments, or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan; and, 4. Incorporate any other amendments required to conform with the significant drinking water threat-specific land use policies or to have regard to the low and/or moderate threat-specific land use policies identified in this Source Protection Plan.		
OC-1.05		**Official Plan and Zoning By-law Amendment(s)** The *County* shall amend the Official Plan and the *Area Municipalities* shall amend their respective Zoning By-laws to: 1. Identify the WHPAs and/or ICAs in which a significant drinking water threat could occur; 2. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by the policies contained in the Source Protection Plan; 3. Identify the significant drinking water threats that are prohibited through Prescribed Instruments, or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan; 4. Incorporate any other amendments required to conform with the significant drinking water threat-specific land use policies or to have regard to the low and/or moderate threat-specific land use policies identified in this Source Protection Plan; and, 5. Incorporate a cross-reference indicating an applicant cannot make a planning application unless it includes a notice issued by the risk management official, as set out in Section 59(1) of the CWA and Section 62 of O.Reg. 287.07.	Change based on MMAH comment	Policy text change
OC-2.06		**New Septic Systems or Holding Tanks - Prohibition (Land Use Planning)** For new septic systems or new septic system holding tanks regulated under the Ontario Building Code Act, with the exception of: ☐ those required for a municipal water supply well or		

Section	Page	Text	Reason for Change	Changes Made
		☐ those located within an ICA, but outside of a WHPA A or B with a vulnerability score of 10, where these activities would be a significant drinking water threat, the County shall amend their Official Plan and the Area Municipalities shall amend their respective Zoning By-laws to prohibit uses, buildings or structures that would require a new septic system or septic system holding tank within such areas so that these activities never become significant drinking water threats.		
OC-2.06		**New Septic Systems or Holding Tanks - Prohibition (Land Use Planning)** For new septic systems or new septic system holding tanks regulated under the Ontario Building Code Act, with the exception of: ☐ those required for a municipal water supply well or ☐ those located within an ICA, but outside of a WHPA A or B with a vulnerability score of 10, where these activities would be a significant drinking water threat, the Area Municipalities shall amend their respective Zoning By-laws to prohibit uses, buildings or structures that would require a new septic system or septic system holding tank to be located within the above noted significant drinking water threat areas so that these activities never become significant drinking water threats.	Change based on MMAH comment	Policy text change
OC-1.11		**OC-1.11 Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall place Source Protection advisory signage, where municipal arterial roads are located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10. Such signage shall be consistent with the design developed by the Province in collaboration with the SPA and municipalities would be responsible for the purchase, installation and maintenance of such signs.		
OC-1.11		**OC-1.11 Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall consider placing Source Protection advisory signage, where municipal arterial roads are located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10. Such signage shall be consistent with the design developed by the Province in collaboration with the SPA and municipalities would be responsible for the purchase, installation and maintenance of such signs.	Change based on MTO comment on Provincial signage policy	Policy text change
OC-2.15		**Application of Agricultural Source Material - Management** For any new or existing application of agricultural source material to land outside of a WHPA 'A', where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be or never becomes a significant drinking water threat. The requirements of the Risk		

Section	Page	Text	Reason for Change	Changes Made
		Management Plan will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the Nutrient Management Act, but may also include any modifications or additional requirements deemed necessary or appropriate by the Risk Management Official.		
OC-2.15		**Application of Agricultural Source Material - Management** For any new or existing application of agricultural source material to land outside of a WHPA 'A', where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be or never becomes a significant drinking water threat. The requirements of the Risk Management Plan will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the Nutrient Management Act, but may also include any modifications or additional requirements deemed necessary or appropriate by the Risk Management Official. Any Prescribed Instrument issued under the Nutrient Management Act that is created, amended or used for the purposes of obtaining an exemption from a risk management plan under section 61 of O. Reg. 287/07, shall incorporate terms and conditions that, when implemented, manage the activities they regulate such that those activities cease to be, or never become, a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions, including the Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.	Change based on OMAFRA comment	Policy text change
OC-2.17		**Storage of Agricultural Source Material - Management** For storage of agricultural source material, where such storage is: • existing; or • new and located within an ICA, but outside of a WHPA-A or B with a vulnerability score of 10, and, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking		

Section	Page	Text	Reason for Change	Changes Made
		water threat. The requirements of the Risk Management Plan will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the Nutrient Management Act, but may also include any modifications or additional requirements deemed necessary or appropriate by the Risk Management Official, particularly where such activity is located within an ICA.		
OC-2.17		**Storage of Agricultural Source Material - Management** For storage of agricultural source material, where such storage is: • existing; or • new and located within an ICA, but outside of a WHPA-A or B with a vulnerability score of 10, and, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking water threat. The requirements of the Risk Management Plan will generally be based on the requirements of a Nutrient Management Plan and/or Strategy under the Nutrient Management Act, but may also include any modifications or additional requirements deemed necessary or appropriate by the Risk Management Official, particularly where such activity is located within an ICA. Any Prescribed Instrument issued under the Nutrient Management Act that is created, amended or used for the purposes of obtaining an exemption from a risk management plan under section 61 of O. Reg. 287/07, shall incorporate terms and conditions that, when implemented, manage the activities they regulate such that those activities cease to be, or never become, a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions, including the Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.	Change based on OMAFRA comment	Policy text change
OC-2.21		**Application of Commercial Fertilizer to Land - Management** For the existing or future application of commercial fertilizer to land, on properties zoned for		

Section	Page	Text	Reason for Change	Changes Made
		any other use than residential, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking water threat.		
OC-2.21		**Application of Commercial Fertilizer to Land - Management** For the existing or future application of commercial fertilizer to land, on properties zoned for any other use than residential, where this activity is, or would be, a significant drinking water threat, it shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be, or never becomes, a significant drinking water threat. Any Prescribed Instrument issued under the Nutrient Management Act that is created, amended or used for the purposes of obtaining an exemption from a risk management plan under section 61 of O. Reg. 287/07, shall incorporate terms and conditions that, when implemented, manage the activities they regulate such that those activities cease to be, or never become, a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions, including the Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.	Change based on OMAFRA comment	Policy text change
OC-2.40		**The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard - Management** For the existing or future use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard, where these activities are, or would be, a significant drinking water threat, they shall be designated for the purpose of Section 58 of the Clean Water Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be or never becomes a significant drinking water threat.		
OC-2.40		**The Use of Land as Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard - Management** For the existing or future use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm animal yard, where these activities are, or would be, a significant drinking water threat, they shall be designated for the purpose of Section 58 of the Clean Water	Change based on OMAFRA comment	Policy text change

Section	Page	Text	Reason for Change	Changes Made
		Act and a Risk Management Plan shall be required to manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument issued under the Nutrient Management Act that is created, amended or used for the purposes of obtaining an exemption from a risk management plan under section 61 of O. Reg. 287/07, shall incorporate terms and conditions that, when implemented, manage the activities they regulate such that those activities cease to be, or never become, a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions, including the Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.		
OC-3.02		**New Prescribed Instruments Related to Moderate and Low Threats - Management** To reduce the risk to municipal drinking water sources from new activities that would be: • subject to one or more Prescribed Instruments; and • located in areas where the activity would be a moderate or low drinking water threat; the province should consider incorporating terms and conditions. These terms and conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate these terms and conditions should reduce the risk.		
OC-3.02		**New Prescribed Instruments Related to Moderate and Low Threats - Management** To reduce the risk to municipal drinking water sources from new activities that would be: • subject to one or more Prescribed Instruments; and • located in areas where the activity would be a moderate or low drinking water threat; the province should consider incorporating terms and conditions. These terms and conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate these terms and conditions should reduce the risk.	Change based on MTO comment	No change to policy text MTO removed from sidebar

Section	Page	Text	Reason for Change	Changes Made
OC-5.08		**OC-5.08 Monitoring Guidance** The Upper Thames River Conservation Authority, in collaboration with the Source Protection Committee, the St. Clair Region Conservation Authority, and Lower Thames Valley Conservation Authority, and the policy implementers, shall develop, and when appropriate update, monitoring and reporting guidance that will outline the specific contents and format of the monitoring report. This guidance shall be available February 1 of the year prior to the due date for the monitoring report. This guidance shall be adhered to by all implementers of monitoring policies contained in this Source Protection Plan when preparing and submitting the required monitoring report.		
OC-5.08		**OC-5.08 Monitoring Guidance** The Upper Thames River Conservation Authority, in collaboration with the Source Protection Committee, the St. Clair Region Conservation Authority, and Lower Thames Valley Conservation Authority, and the policy implementers, shall develop, and when appropriate update, monitoring and reporting guidance that will outline the specific contents and format of the monitoring report. This guidance shall be available February 1 of the year prior to the due date for the monitoring report. This guidance shall be followed by all implementers of monitoring policies contained in this Source Protection Plan when preparing and submitting the required monitoring report.	MOECC asked for policy wording to be softened as they can no regulate formatting requirements for reporting.	Policy text edit
OC-5.09	new			
OC-5.09	new	**Annual Reporting – MTO** Ministry of Transportation and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy OC-5.08 where that guidance identifies items required to meet provincial reporting requirements of the implementer or SPA. Aspects of the guidance which are beyond that which is necessary to satisfy provincial reporting requirements shall be considered in submitting the monitoring reports. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.	MTO question from Jan 9 email asking if Oxford had a monitoring policy for their provincial signage policy	Policy created

SPP Volume III Suggested Changes Post-

Table 1 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09

Policy Approach/Tool	Implementation timing
Specify action (S22(6))	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act (S39)	On the effective date of SPP, as specified in the CWA
Land Use Planning: • Official Plan updates (S40(1))	3 years from the effective date of SPP or at the time of the next OP review whichever is first
Land Use Planning: • Zoning by-laws (S42)	2 years from the passing of the OP
Existing Prescribed Instruments (S43(1))	3 years from the effective date of the SPP
Future (new) Prescribed Instruments (S39(7))	On the effective date of SPP as specified in the CWA
Part IV Risk Management Plans for *existing* activities (S58)	120 days from the effective date of the SPP, as specified in the CWA
Part IV Risk Management Plans for *future* activities (S58(1))	On the effective date of the SPP as specified in the CWA
Part IV Prohibitions of *existing* activities (S57(2))	180 days from the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *future* activities (S57(1))	On the effective date of the SPP, as specified in the CWA
Part IV Restricted Land Use provisions (S59(1))	On the effective date of the SPP, as specified in the CWA

Table 2 Implementation Timing for SPP Policies, as established by the Clean Water Act or Policy 1.09

Policy Approach/Tool	Implementation timing
Specify action (S22(6))	2 years from effective date of SPP
Education and Outreach Incentives (S22(7))	2 years from effective date of SPP
Decisions under the Planning and Condominium Act (S39)	On the effective date of SPP, as specified in the CWA
Land Use Planning: • Official Plan updates (S40(1))	3 years from the effective date of SPP or at the time of the next OP review whichever is first
Land Use Planning: • Zoning by-laws (S42)	2 years from the passing of the OP
Existing Prescribed Instruments (S43(1))	3 years from the effective date of the SPP
Future (new) Prescribed Instruments (S39(7))	On the effective date of SPP as specified in the CWA
Part IV Risk Management Plans for *existing* activities (S58)	Section 58 policies would apply to existing activities on a date specified in a notice provided by the RMO, to a person who is engaged in the activity. The date shall not be less than 120 days after the notice is given (as per s58(4)).
Part IV Risk Management Plans for *future* activities (S58(1))	On the effective date of the SPP as specified in the CWA
Part IV Prohibitions of *existing* activities (S57(2))	180 days from the effective date of the SPP, as specified in the CWA
Part IV Prohibitions of *future* activities (S57(1))	On the effective date of the SPP, as specified in the CWA
Part IV Restricted Land Use provisions (S59(1))	On the effective date of the SPP, as specified in the CWA

Section / Policy	Page	Text	Reason For Change	Changes Made
Policy 1.02	13	**Provincial Signage** In accordance with Section 22 (7) of the Clean Water Act, the Ministry of Transportation, in collaboration with the Ministry of Environment as well as in consultation with Source Protection Authorities (SPAs), shall design signage, to the appropriate Provincial standards, to identify the locations of Wellhead Protection Areas (WHPA) and Intake Protection Zones (IPZ). The Ministry of Transportation should manufacture, install and maintain the signs along Provincial highways within WHPA with a vulnerability score of 10, within an IPZ with a vulnerability score of 8 or higher, or within an IPZ-3.		
Policy 1.02	13	**Provincial** In accordance with Section 22 (7) of the Clean Water Act, the Ministry of Transportation, in collaboration with the Ministry of Environment as well as in consultation with Source Protection Authorities (SPAs), should design signage, to the appropriate Provincial standards, to identify the locations of Wellhead Protection Areas (WHPA) and Intake Protection Zones (IPZ). The Ministry of Transportation should manufacture, install and maintain the signs along Provincial highways within WHPA with a vulnerability score of 10, within an IPZ with a vulnerability score of 8 or higher, or within an IPZ-3.	Change based on MTO comment	Policy text change
Policy 1.03	13	**Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall place signage, where municipal arterial roads located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10, within an Intake Protection Zone (IPZ) with a vulnerability score of 8 or higher, or within an IPZ-3. Municipalities would be responsible for the purchase, installation and maintenance of signs consistent with the design developed by the Province in collaboration with the SPA in accordance with policy 1.02.		
Policy 1.03	13	**Municipal Signage** As part of an overall education and outreach program within each Source Protection Area (SPA), Municipalities shall consider placing signage, where municipal arterial roads located within Wellhead Protection Areas (WHPA) with a vulnerability score of 10, within an Intake Protection Zone (IPZ) with a vulnerability score of 8 or higher, or within an IPZ-3. Municipalities would be responsible for the purchase, installation and maintenance of signs consistent with the design developed by the Province in collaboration with the SPA in accordance with policy 1.02.	Change based on MTO comment on policy 1.02	Policy text change
Policy 1.06	15	**General Land Use Planning** All planning decisions shall be in conformity with those policies that address significant drinking water threats as per Section 39 (1) (a) of the Clean Water Act. All planning decisions shall have regard to those policies that address low and moderate drinking water threats as per Section 39 (1) (b) of the Clean Water Act.		

Section / Policy	Page	Text	Reason For Change	Changes Made
		At minimum, the Municipalities shall amend the Official Plan and Zoning By-laws to: a. Identify the vulnerable areas in which a significant drinking water threat could occur; b. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by those policies; c. Identify the significant drinking water threats that are prohibited through Prescribed Instruments, or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan; and d. Incorporate any other amendments required to conform with the significant drinking water or to have regard to the low and/or moderate threat specfic land use policies identified in this Source Protection Plan.		
Policy 1.06	15	**General Land Use Planning** All planning decisions shall be in conformity with those policies that address significant drinking water threats as per Section 39 (1) (a) of the Clean Water Act. All planning decisions shall have regard to those policies that address low and moderate drinking water threats as per Section 39 (1) (b) of the Clean Water Act. At minimum, the Municipalities shall amend the Official Plan and Zoning By-laws to: a. Identify the vulnerable areas in which a significant drinking water threat could occur; b. Indicate that within the areas identified, any use or activity that is, or would be, a significant drinking water threat is required to conform with all applicable Source Protection Plan policies and, as such, may be prohibited, restricted or otherwise regulated by the policies contained in the Source Protection Plan; c. Identify the significant drinking water threats that are prohibited through Prescribed Instruments, or Section 57 of the Clean Water Act, in accordance with the significant drinking water threat-specific policies contained in this Source Protection Plan; d. Incorporate any other amendments required to conform with the significant drinking water threat-specific land use policies or to have regard to the low and/or moderate threat-specific land use policies identified in this Source Protection Plan; and, e. Incorporate a cross-reference indicating an applicant cannot make a planning application unless it includes a notice issued by the risk management official, as set out in Section 59(1) of the CWA and Section 62 of O.Reg. 287.07.	Change based on MMAH comment Change based on MOECC comment	Policy text change
Policy 1.09	17	**Implementation Timing** Except as set out below, within another policy within this Source Protection Plan, or as otherwise prescribed by the Clean Water Act, the policies contained in the Source Protection Plan shall come into effect on the effective date of the Source		

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		Protection Plan. 1. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan. 2. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs, education and outreach) programs shall be implemented within two (2) years of the effective date of the Source Protection Plan. 3. Policies written pursuant to Section 40(2) and Section 42 of the Clean Water Act (deadlines for Official Plan conformity through policy 1.06), shall establish the following implementation timing: a. Updates to Official Plans shall be initiated as soon as possible after the effective date of the Source Protection Plan with a goal to be completed within three (3) years of the effective date of the Source Protection Plan or as part of the Official Plan review where it occurs first; and b. Updates to zoning By-laws shall be initiated as soon as possible after the effective date of the Source Protection Plan with a goal to be completed within two (2) years of the effective date of the Source Protection Plan or if Official Plan amendments are required, within two (2) years of the completion of the Official Plan amendments. 4. Policies written pursuant to Section 43(2) of the Clean Water Act (CWA) (prescribed instrument), regarding the amendment to the prescribed instruments shall conform to the Source Protection Plan within three (3) years of the effective date of the Plan. 5. If an activity was engaged in at a particular location before this Source Protection Plan takes effect and the Risk Management Official gives notice to a person who is engaged in the activity at that location (as per Sec. 58(4) of the CWA, 2006), the policies written pursuant to Section 58 shall apply on and after a date specified in the notice.		
Policy 1.09	17	**Implementation Timing** Except as set out below, within another policy within this Source Protection Plan, or as otherwise prescribed by the Clean Water Act, the policies contained in the Source Protection Plan shall come into effect on the effective date of the Source Protection Plan. 1. Policies written pursuant to Section 22(6) of the Clean Water Act (other contents), shall be implemented within two (2) years of the effective date of the Source Protection Plan. 2. Policies written pursuant to Section 22(7) of the Clean Water Act (incentive programs, education and outreach) programs shall be implemented within two (2) years of the effective date of the Source Protection Plan. 3. Policies written pursuant to Section 40(2) and Section 42 of the Clean Water Act (deadlines for Official Plan and Zoning by-law conformity through policy 1.06), shall establish the following implementation timing: a. Updates to Official Plans shall be initiated as soon as possible after the effective date of the Source Protection Plan with the goal of being adopted within three (3)	Change based on MMAH comment Change based on MOECC comment	Policy text change

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		years of the effective date of the Source Protection Plan; and b. Updates to Zoning by-laws shall be initiated as soon as possible after the effective date of the Source Protection Plan and be adopted within three (3) years of the effective date of the Source Protection Plan or, where amendments to the Official Plan are required to implement the SPP policies, within three (3) years of the effective date of those Official Plan amendments. 4. Policies written pursuant to Section 43(2) of the Clean Water Act (CWA) (prescribed instrument), regarding the amendment to the prescribed instruments shall conform to the Source Protection Plan within three (3) years of the effective date of the Plan. 5. If an activity was engaged in at a particular location before this Source Protection Plan takes effect and the Risk Management Official gives notice to a person who is engaged in the activity at that location (as per Sec. 58(4) of the CWA, 2006), the policies written pursuant to Section 58 shall apply on and after a date specified in the notice that is at least 120 days after the date the notice is given.		
Policy 1.10		**Transitional Provisions** Transitional Matters 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under subsection 34(10) of the Planning Act; b. A site plan under subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act, a significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies.		

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		The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. 3. Despite the definition of existing and the provisions contained in Sections 1 and 2 of the transitional matters policies, where a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, any significant drinking water threat activity not so documented shall be considered as new or future from that point forward. 4. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.		
Policy 1.10		**Transitional Provisions** Transitional Matters 1. Despite the definition of existing, where development is being proposed by one or more of the following applications: a. A site-specific amendment to a zoning by-law under subsection 34(10) of the Planning Act; b. A site plan under subsection 41(4) of the Planning Act; or c. A building permit under the Building Code Act, a significant drinking water threat activity that is to be established as part of the proposed development may be considered existing for the purposes of complying with the applicable significant drinking water threat policies, provided that: • The application was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect; and • The applicant has certified to the satisfaction of the implementing body named in the applicable significant drinking water threat policy that a particular significant	Change based on MOECC comment	Policy text edit

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		drinking water threat activity is specifically intended to be undertaken as a part of the proposed development. Where further development approvals are required to establish the development and related significant drinking water threat activity proposed by such application, that activity may also be considered as existing for the purposes of determining whether those subsequent approvals comply with the applicable significant drinking water threat policies. The above noted transition provisions shall cease to apply where any of the approvals or applications required to implement the proposed development have been denied by the applicable approval authority and/or, where applicable, the relevant appeal body, or have lapsed or been withdrawn. 2. Despite the definition of existing, where a significant drinking water threat activity is directly related to a land use permitted by existing zoning and does not require any approvals under the Planning Act or Ontario Building Code Act to be lawfully established on a property, such activity shall be considered existing for the purposes of compliance with the applicable significant drinking water threat policies. This provision shall cease to apply at such a time as a Risk Management Official or Inspector has conducted a property-specific assessment and documented the significant drinking water threat activities undertaken or established on a property as of that point in time, following which any significant drinking water threat activity not so documented shall be considered as new or future from that point forward. 3. Despite the definition of existing, where a significant drinking water threat activity is being proposed by way of a new or amended prescribed instrument, it shall be considered existing for the purposes of complying with the applicable significant drinking water threat policies provided that the application for the new or amended prescribed instrument was deemed to be complete by the applicable approval authority as of the date this Source Protection Plan takes effect.		
Policy 2.05		**2.05 Future Waste Disposal Sites - Prohibition** With the exception of the following waste disposal site threat subcategories: • storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or • storage of hazardous or liquid industrial waste, future waste disposal sites shall be prohibited so that they never become a significant drinking water threat. This policy shall apply to vulnerable areas where this activity would be a significant drinking water threat. Where this activity is subject		

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		to Environmental Compliance Approvals (ECAs), the Province (Ministry of Environment (MOE)) shall prohibit this activity through the ECAs.		
Policy 2.05		**2.05 Future Waste Disposal Sites - Prohibition** With the exception of the following waste disposal site threat subcategories: • storage of wastes described in clauses (p), (q), (r), (s), (t), or (u) of the definition of hazardous waste, or in clause (d) of the definition of liquid industrial waste; or • storage of hazardous or liquid industrial waste, where this activity would be a significant drinking water threat future waste disposal sites shall be designated for the purposes of Section 57 of the Clean Water Act so that so that the activity ceases to be or never becomes a significant drinking Where this activity is subject to Environmental Compliance Approvals (ECAs), the Province (Ministry of Environment (MOE)) shall prohibit this activity through the ECAs.	Change based on MOECC comment	Policy text edit
Policy 2.06	22	**Prescribed Instrument Amendment Fees** The Province (Ministry of Environment) should consider waiving application fees in instances where Prescribed Instruments (PI) are required to be amended for the sole reason of satisfying the policies in this Plan.		
Policy 2.06	22	**Prescribed Instrument Amendment Fees** The Province should consider waiving application fees in instances where Prescribed Instruments (PI) are required to be amended for the sole reason of satisfying the policies in this Plan.	Change based on MOECC comment	Policy text change
Policy 2.15	24	**Future Septic Systems - Prohibition (Land Use Planning)** For new septic systems or new septic system holding tanks regulated under the Ontario Building Code Act, with the exception of: • those required for a municipal water supply facilities, where these activities would be a significant drinking water threat, the Municipalities shall amend their Official Plan and Zoning By-laws to prohibit uses, buildings or structures that would require a new septic system or septic system holding tank within such areas so that these activities never become significant drinking water threats.		
Policy	24	**Future Septic Systems - Prohibition (Land Use Planning)**	Change based on MMAH	Policy text change

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2.15		For new septic systems or new septic system holding tanks, with the exception of: • those required for a municipal water supply facilities, where these activities would be a significant drinking water threat, Municipalities shall amend their Official Plan and Zoning By-laws to prohibit uses, buildings or structures that would require a new septic system or septic system holding tank to be located within the above noted significant drinking water threat areas so that these activities never become significant drinking water threats.	comment Change based on MOECC comment	
Policy 2.18	25	**Septic Systems - Compliance Monitoring** For septic systems or septic system holding tanks subject to an Environmental Compliance Approval (ECA) that are a significant drinking water threat, the Province (Ministry of Environment) shall develop a compliance monitoring program. The compliance monitoring should include inspection of the system to ensure that it: • continues to function as designed; • meets applicable design standards; and • is being properly maintained. Priorities for the compliance monitoring program should include areas where known septic failures have been identified and areas where older systems have not recently been inspected. Systems found to be deficient are required to undertake improvements to be in compliance. Where the system is subject to a mandatory inspection, as per conditions in the ECA as outlined in policy 2.14, the compliance monitoring program may consider a certificate produced by a qualified person as proof that the system has been inspected and is properly functioning.		
Policy 2.18	25	**Septic Systems - Compliance Monitoring** For septic systems or septic system holding tanks subject to an Environmental Compliance Approval (ECA) that are a significant drinking water threat, the Province (Ministry of Environment) should develop a compliance monitoring program. The compliance monitoring should include inspection of the system to ensure that it: • continues to function as designed; • meets applicable design standards; and • is being properly maintained. Priorities for the compliance monitoring program should include areas where known septic failures have been identified and areas where older systems have not recently been inspected. Systems found to be deficient are required to undertake	Change based on MOECC comment	Policy text edit

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		improvements to be in compliance. Where the system is subject to a mandatory inspection, as per conditions in the ECA as outlined in policy 2.14, the compliance monitoring program may consider a certificate produced by a qualified person as proof that the system has been inspected and is properly functioning.		
Policy 2.21	25	**Application of Agricultural Source Material (ASM) to Land - Management** To reduce the risk to municipal drinking water sources from the application of agricultural source material (ASM), this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to the Application of ASM that is created, or amended, shall be consistent with this policy.		
Policy 2.21	25	**2.21 Application of Agricultural Source Material (ASM) to Land - Management** To reduce the risk to municipal drinking water sources from the application of agricultural source material (ASM), this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to the Application of ASM that is created, amended, or used as part of a notice for the purpose of a Section 61 exemption, shall manage the activity so that it ceases to be or never becomes a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions. This review is expected to include Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans.	Change based on OMAFRA comment	Policy text change

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		Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.		
Policy 2.22	26	**Storage of Agricultural Source Material (ASM) - Management** To reduce the risk to municipal drinking water sources from the storage of agricultural source material (ASM) where ASM is or would be stored in a nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. NMA principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA. Any Prescribed Instrument related to the Storage of ASM, that is created, or amended, shall be consistent with this policy.		
Policy 2.22		**Storage of Agricultural Source Material (ASM) - Management** To reduce the risk to municipal drinking water sources from the storage of agricultural source material (ASM) where ASM is or would be stored in a nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. NMA principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA.	Change based on OMAFRA comment	Policy text change

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		Any Prescribed Instrument related to the Storage of ASM that is created, amended, or used as part of a notice for the purpose of a Section 61 exemption, shall manage the activity so that it ceases to be or never becomes a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions. This review is expected to include Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.		
Policy 2.24		**Existing Non-Agricultural Source Material (NASM) Storage - Management** To reduce the risk to municipal drinking water sources from the handling and storage of non-agricultural source material (NASM) where NASM is stored in an existing nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed where it is a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. NMA principles (including NMA prohibitions) shall form the basis of the Risk Management Plan, provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA. Any Prescribed Instrument related to existing NASM Storage, that is amended, shall be consistent with this policy.		
Policy 2.24		**2.24 Existing Non-Agricultural Source Material (NASM) Storage - Management** To reduce the risk to municipal drinking water sources from the handling and storage of non-agricultural source material (NASM) where NASM is stored in an existing nutrient storage facility as defined under the Nutrient Management Act (NMA), this activity shall be managed where it is a significant drinking water threat.	Change based on OMAFRA comment	Policy text change

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		This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. NMA principles (including NMA prohibitions) shall form the basis of the Risk Management Plan, provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be a significant drinking water threat. The Risk Management Plan shall not allow at or above grade temporary field nutrient storage sites as defined under the NMA. Any Prescribed Instrument related to existing NASM Storage amended, or used as part of a notice for the purpose of a Section 61 exemption, shall manage the activity so that it ceases to be a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions. This review is expected to include Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.		
Policy 2.26		**Application of Commercial Fertilizer - Management** To reduce the risk to municipal drinking water sources from the application of commercial fertilizer, this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to the Application of Commercial Fertilizer,that is created or amended, shall be consistent with this policy.		

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Policy 2.26		**2.26 Application of Commercial Fertilizer - Management** To reduce the risk to municipal drinking water sources from the application of commercial fertilizer, this activity shall be managed where it is or would be a significant drinking water threat. This activity shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan, provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to the Application of Commercial Fertilizer that is created, or amended, or used as part of a notice for the purpose of a Section 61 exemption, shall manage the activity so that it ceases to be a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions. This review is expected to include Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07.	Change based on OMAFRA comment	Policy text change
Policy 2.45		**Handling and Storage of DNAPL - Education and Outreach** To reduce the risk to municipal drinking water sources from existing handling and storage of dense non-aqueous phase liquids in concentrations typical of household use, where this activity is, or would be, a significant drinking water threat, municipalities, in collaboration with the Conservation Authority, the Ministry of Environment, and/or wherever possible other bodies, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can		

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		be identified and handled and disposed of in a manner so that the activity would cease to be or never become a significant drinking water threat. This policy shall be initiated within one (1) year of the effective date of the Source Protection Plan.		
Policy 2.45		**Handling and Storage of DNAPL - Education and Outreach** To reduce the risk to municipal drinking water sources from the handling and storage of dense non-aqueous phase liquids in concentrations typical of household use, where this activity is, or would be, a significant drinking water threat, municipalities, in collaboration with the Conservation Authority, the Ministry of Environment, and/or wherever possible other bodies, shall develop and implement an education and outreach program directed at the owners and/or occupants of such properties. The program may include, but not necessarily be limited to, the provision of education material and information about the nature of the threat, how DNAPLs can be identified and handled and disposed of in a manner so that the activity would cease to be or never become a significant drinking water threat. This policy shall be initiated within one (1) year of the effective date of the Source Protection Plan.	Change based on MOECC comment	Policy text edit
Policy 2.51	34	**Agricultural Source Material (ASM) Generation Through Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard** To reduce the risk to municipal drinking water sources from the existing or future use of land for livestock grazing, pasturing, an outdoor confinement area, or a farm-animal yard, these activities shall be managed where they are a significant drinking water threat. These activities shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Where, in the opinion of the Risk Management Official, a future livestock grazing land, pasture land, outdoor confinement area, or farm-animal yard is of such size that it cannot be managed, the Risk Management Plan may restrict the size so that the activity ceases to be or never becomes a significant drinking water threat.		
Policy 2.51	34	**Agricultural Source Material (ASM) Generation Through Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard** To reduce the risk to municipal drinking water sources from the existing or future use of land for livestock grazing, pasturing, an outdoor confinement area, or a farm-animal yard, these activities shall be managed where they are a significant drinking	Change based on OMAFRA comment	Policy text change

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		water threat. These activities shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Nutrient Management Act principles (including NMA prohibitions) shall form the basis of the Risk Management Plan provided the Risk Management Official is satisfied these principles adequately manage the activity so that it ceases to be or never becomes a significant drinking water threat. Where, in the opinion of the Risk Management Official, a future livestock grazing land, pasture land, outdoor confinement area, or farm-animal yard is of such size that it cannot be managed, the Risk Management Plan may restrict the size so that the activity ceases to be or never becomes a significant drinking water threat. Any Prescribed Instrument related to ASM Generation Through Livestock Grazing or Pasturing Land, an Outdoor Confinement Area or a Farm Animal Yard that is created, amended, or used as part of a notice for the purpose of a Section 61 exemption, shall manage the activity so that it ceases to be or never becomes a significant drinking water threat. OMAFRA is expected to review all Prescribed Instruments issued under the Nutrient Management Act in areas where the activities they regulate are, or would be, significant drinking water threats to ensure the Prescribed Instruments contain such terms and conditions. This review is expected to include Prescribed Instruments that are not directly created or issued by OMAFRA, such as Nutrient Management Plans. Further, OMAFRA and other Prescribed Instrument creators/issuers are expected to consult with the Risk Management Official with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act to ensure the activities they regulate cease to be or never become significant drinking water threats. However, nothing in this policy grants the Risk Management Official authority to specify requirements for a prescribed instrument issued under the Nutrient Management Act, or where a person is seeking an exemption from a risk management plan under section 61 of O.Reg 287/07		
Policy 3.03		**New Prescribed Instruments Related to Moderate and Low Threats - Management** To reduce the risk to municipal drinking water sources from new activities that would be: • subject to one or more Prescribed Instruments; and • located in areas where the activity would be a moderate or low drinking water threat; the province should consider incorporating terms and conditions. These terms and		

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		conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate these terms and conditions should reduce the risk.		
Policy 3.03		**New Prescribed Instruments Related to Moderate and Low Threats - Management** To reduce the risk to municipal drinking water sources from new activities that would be: • subject to one or more Prescribed Instruments; and • located in areas where the activity would be a moderate or low drinking water threat; the province should consider incorporating terms and conditions. These terms and conditions, when implemented, should manage the activity such that it does not become a Significant Drinking Water Threat. Where appropriate these terms and conditions should reduce the risk.	Change based on MTO comment	No change to policy text MTO removed from sidebar
Policy 5.02		**Monitoring Guidance** The Upper Thames River Conservation Authority, in collaboration with the Source Protection Committee, the St. Clair Region Conservation Authority, and Lower Thames Valley Conservation Authority, and the policy implementers, shall develop, and when appropriate update, monitoring and reporting guidance that will outline the specific contents and format of the monitoring report. This guidance shall be available February 1 of the year prior to the due date for the monitoring report. This guidance shall be adhered to by all implementers of monitoring policies contained in this Source Protection Plan when preparing and submitting the required monitoring report.		
Policy 5.02		**Monitoring Guidance** The Upper Thames River Conservation Authority, in collaboration with the Source Protection Committee, the St. Clair Region Conservation Authority, and Lower Thames Valley Conservation Authority, and the policy implementers, shall develop, and when appropriate update, monitoring and reporting guidance that will outline the specific contents and format of the monitoring report. This guidance shall be available February 1 of the year prior to the due date for the monitoring report. All monitoring reports submitted by policy implementers shall be consistent with this guidance. This guidance shall be followed by all implementers of monitoring policies contained in this Source Protection Plan when preparing and submitting the required monitoring report.	Change based on MOECC comment	Policy text edit
5.03		**5.03 Ontario Ministry of Agriculture, Food and Rural Affairs Monitoring and Reporting**		

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		Ministry of Agriculture, Food and Rural Affairs and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
5.03		**5.03 Ontario Ministry of Agriculture, Food and Rural Affairs Monitoring and Reporting** Ministry of Agriculture, Food and Rural Affairs and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02 where that guidance identifies items required to meet provincial reporting requirements of the implementer or SPA. Aspects of the guidance which are beyond that which is necessary to satisfy provincial reporting requirements shall be considered in submitting the monitoring reports. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.	Change based on MOECC comment	Policy text edit
5.04		**5.04 Ministry of Environment Monitoring and Reporting** Ministry of Environment, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source		

Section / Policy	Page	Text	Reason For Change	Changes Made
		Protection Plan.		
5.04		**5.04 Ministry of Environment Monitoring and Reporting** Ministry of Environment, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02 where that guidance identifies items required to meet provincial reporting requirements of the implementer or SPA. Aspects of the guidance which are beyond that which is necessary to satisfy provincial reporting requirements shall be considered in submitting the monitoring reports. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.	Change based on MOECC comment	Policy text edit
5.05		**5.05 Ministry of Natural Resources Monitoring and Reporting** Ministry of Natural Resources, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
5.05		**5.05 Ministry of Natural Resources Monitoring and Reporting** Ministry of Natural Resources, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02 where that guidance identifies items required to meet provincial reporting requirements of the implementer or SPA. Aspects of the guidance which are beyond that which is necessary to satisfy provincial reporting requirements shall be considered in submitting the monitoring reports. Monitoring reports are to be submitted by	Change based on MOECC comment	Policy text edit

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5.06		**5.06 Ministry of Transportation Monitoring and Reporting** Ministry of Transportation and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
5.06		**5.06 Ministry of Transportation Monitoring and Reporting** Ministry of Transportation and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02 where that guidance identifies items required to meet provincial reporting requirements of the implementer or SPA. Aspects of the guidance which are beyond that which is necessary to satisfy provincial reporting requirements shall be considered in submitting the monitoring reports. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.	Change based on MOECC comment	Policy text edit
5.07		**5.07 Conservation Authority Monitoring and Reporting** Conservation Authorities, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Source Protection Authority. The information submitted to the Source Protection Authority shall be consistent with the guidance		

Section / Policy	Page	Text	Reason For Change	Changes Made
		developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
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5.08		**5.08 Municipal Monitoring and Reporting** Municipalities, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
5.08		**5.08 Municipal Monitoring and Reporting** Municipalities, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these	Change based on MOECC comment	Policy text edit

Section / Policy	Page	Text	Reason For Change	Changes Made
		monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02 where that guidance identifies items required to meet provincial reporting requirements of the implementer or SPA. Aspects of the guidance which are beyond that which is necessary to satisfy provincial reporting requirements shall be considered in submitting the monitoring reports. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
5.09		**5.09 Planning Approval Authority Monitoring and Reporting** Planning Approval Authorities, and all other implementers, shall establish monitoring programs as per Section 45 of the Clean Water Act. The information collected through these monitoring programs shall be included in a monitoring report that shall be submitted annually to the Upper Thames River Conservation Authority. The information submitted to the Conservation Authority shall be consistent with the guidance developed pursuant to policy 5.02. Monitoring reports are to be submitted by February 1 of each year following the first anniversary of the effective date of the Source Protection Plan. Monitoring reports shall include information since the submission of the previous monitoring report to December 31 of the year previous to the deadline for report submission. For the first report, the information shall include information from the effective date of the Source Protection Plan.		
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		include information from the effective date of the Source Protection Plan.		

SPP Explanatory Document Suggested Changes Review

Table 1 Thames-Sydenham and Region Source Protection Committee Threat Discussion Paper Organization

Threat Type	Associated Threats
Waste Disposal and Sewage Threats	The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act • Application of untreated septage to the land • Other waste disposal sites (e.g. landfarming of petroleum refining waste, landfilling of hazardous waste, landfilling of municipal waste, landfilling of solid non-hazardous industrial or commercial waste, storage of hazardous waste, injection of liquid industrial waste, PCB storage)
	The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage • Discharge of untreated stormwater from stormwater retention pond • Sewage treatment plant effluent, storage of sewage and sanitary sewers and related pipes • Septic systems and holding tanks • Industrial effluent
Agricultural Threats	Application and storage of agricultural source material (ASM)
	Application, handling and storage of non-agricultural source material (NASM)
	Application, handling and storage of commercial fertilizer
	Application, handling and storage of pesticides
	The use of land as livestock, grazing or pasturing land, an outdoor confinement area or farm-animal yard
Chemical Threats	Handling and storage of fuel
	Handling and storage of dense non-aqueous phase liquids (DNAPL)
	Handling and storage of organic solvent
Transportation	Application, handling and storage of road salt
	Storage of snow
	Spills prevention, spills contingency and emergency response plans
Water Quantity	
Transport Pathways	Transport pathways (wells and other transport pathways)
Local Threats	Transportation of fuel and fertilizer along transportation corridors and the transportation of petroleum through pipelines
Threats not in SPR	The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act • Storage, treatment and discharge of tailings from mines
	The management of runoff that contains chemicals used in the de-icing of aircraft

Table 1Thames-Sydenham and Region Source Protection Committee Threat Discussion Paper Organization

Threat Type	Associated Threats
Waste Disposal and Sewage Threats	The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the Environmental Protection Act • Application of untreated septage to the land • Other waste disposal sites (e.g. landfarming of petroleum refining waste, landfilling of hazardous waste, landfilling of municipal waste, landfilling of solid non-hazardous industrial or commercial waste, storage of hazardous waste, injection of liquid industrial waste, PCB storage)
	The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage • Discharge of stormwater • Sewage treatment plant effluent, storage of sewage and sanitary sewers and related pipes • Septic systems and holding tanks

Threat Type	Associated Threats
	• Industrial effluent
Agricultural Threats	Application and storage of agricultural source material (ASM)
	Application, handling and storage of non-agricultural source material (NASM)
	Application, handling and storage of commercial fertilizer
	Application, handling and storage of pesticides
	The use of land as livestock, grazing or pasturing land, an outdoor confinement area or farm-animal yard
Chemical Threats	Handling and storage of fuel
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	The management of runoff that contains chemicals used in the de-icing of aircraft

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1.4	10	Pre-consultation took place within the Thames-Sydenham and Region during April 1, 2012 to June 1, 2012. Consultation on the draft Source Protection Plan occurred in August and September, 2012 and the proposed Source Protection Plan consultation occurred in November to December 2012.		
1.4	10	Pre-consultation prior to consultation on the draft proposed Source Protection Plan took place within the Thames-Sydenham and Region during April 1, 2012 to June 1, 2012. Consultation on the draft proposed Source Protection Plan occurred in August and September, 2012 and the proposed Source Protection Plan consultation occurred in November and December 2012. Comments received from stakeholders and the Province, during consultation on the proposed Source Protection Plan, resulted in additional revisions to the proposed Source Protection Plan. The resulting version was referred to as the amended proposed Source Protection Plan. Pre-consultation on this amended proposed Source Protection Plan took place within the Thames-Sydenham and Region from October 15, 2014 to November 4, 2014. Consultation on the amended proposed Source Protection Plan occurred from December 19, 2015 to January 22, 2015. Additional comments were received from the province as they continued to review proposed revisions. These comments were addressed previous to re-	Additional consultation was undertaken on new versions of the SPP	Text edit

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		submission of the Source Protection Plan.		
4.1.1	19	In general, education and outreach is intended to be used to complement other, more directive policy tools and approaches. Where specific education and outreach programs are the primary risk management measures for addressing a particular significant threat activity or for implementation of other SPP policies, they are discussed in the sections specific to those policies.		
4.1.1	19	In general, education and outreach is intended to be used to complement other, more directive policy tools and approaches. Where specific education and outreach programs are the primary risk management measures for addressing a particular significant threat activity or for implementation of other SPP policies, they are discussed in the sections specific to those policies. Including activities contributing to an issue is an important focus of education and outreach in specific parts of the region. Where an Issue Contributing Area (ICA) has been delineated, the activities contributing to the issue are significant drinking water threats and are addressed through other policies. In these areas education and outreach is important to support other implementation efforts (such as at the Woodstock rural wells). Microsytin LR was identified as an issue under the Act (as per rule 115.1) at some Lake Erie intakes in the Lower Thames Valley and Essex Region Source Protection Areas. Microcystins are toxins produced by blue-green algae. While microcystins have been identified in the source water during various events, only very small amounts were found in treated drinking water, well below the drinking water standard (Maximum Allowable Concentration or MAC) and the half MAC used to screen issues. As discussed in the LTVSPA Assessment Report, the data assessed did not support it being identified as an issue under the technical rules (114). The activities contributing to the issue would be those which contribute nutrients (most importantly phosphorous) to Lake Erie. If an issue contributing area was to be delineated it would extend well beyond the local watersheds extending across international boundaries and into adjacent great lakes basins. It is not an issue which can be addressed through a single SPP or even through cooperation of neighbouring regions. At this time education and outreach, in conjunction with monitoring efforts, are being used by themselves to address this issue. It is however important that education and outreach include messages in these areas where nutrients contribute to the Lake Erie algae problem. These messages should focus on promotion of best management practices which reduce nutrients being delivered to Lake Erie and focus on what can be done locally. It will be important to draw the connection between what happens on the land, how it can affect algal growth and how it can impact a drinking water source. While it is a problem whose solutions need to extend beyond the Source Protection Region it will be important that local actions be promoted and acknowledged through education and outreach focused across the entire Source Protection Region.	MOECC requested additional information added to Explanatory Document to explain how the microcystins would be covered under the general education policy.	Additional text added
4.1.4	22	Official Plans need to be updated to meet legislative requirements under the *Planning Act*. The *Planning Act* requires this to occur every 5 years to ensure that Official Plans are in conformity with provincial plans and consistent with the Provincial Policy Statement. These		

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		conformity exercises can be quite extensive and time consuming and may also be drawn out by appeals. To ensure that municipalities incorporate Source Protection Policies into their land use planning documents as soon as possible, the SPC directed that required updates to Official Plans are to be initiated as soon as possible after the effective date of the Source Protection Plan (SPP) with a goal to be completed within three (3) years of the effective date of the SPP or as part of the next Official Plan review, whichever occurs first. Similarly, required updates to Zoning by-laws should also be undertaken as soon as possible, with a goal to be completed within two (2) years of the approval of the updates to the Official Plan, if updates are required. If updates to the Official Plan are not required it is intended that the any updates to the zoning bylaws be initiated as soon as possible with a goal to be completed within 2 years of the effective date of the Source Protection Plan.		
4.1.4	22	Official Plans need to be updated to meet legislative requirements under the *Planning Act*. The *Planning Act* requires this to occur every 5 years to ensure that Official Plans are in conformity with provincial plans and consistent with the Provincial Policy Statement. These conformity exercises can be quite extensive and time consuming and may also be drawn out by appeals. To ensure that municipalities incorporate Source Protection Policies into their land use planning documents as soon as possible, the SPC directed that required updates to Official Plans are to be initiated as soon as possible after the effective date of the Source Protection Plan (SPP) with a goal to be adopted within three (3) years of the effective date of the SPP or as part of the next Official Plan review, whichever occurs first. Similarly, required updates to Zoning by-laws should also be initiated as soon as possible, and adopted within three (3) years of the approval of the updates to the Official Plan, if updates are required. If updates to the Official Plan are not required it is intended that any updates to the zoning bylaws be initiated as soon as possible with a goal to be adopted within 3 years of the effective date of the Source Protection Plan.	MMAH comment requesting timing for zoning bylaw updates be closer in line with the Planning Act resulted in ZBL updates changing to 3 years.	Change of timing
4.15	25	The first of these transitional circumstances pertains to activities that are associated with a development that is being proposed as part of one or more development applications (e.g. zoning, site plan and/or building permit) as of the date the SPP takes effect. For example, an applicant may have obtained all required local development approvals for a particular use and associated significant threat activity and commenced construction of the related buildings and facilities, but not yet be engaged in the activity, when the Source Protection Plan comes into effect. If the significant threat activity associated with the proposed development (e.g. fuel storage) was prohibited by the Source Protection Plan, that activity would not be able to be engaged in at that location notwithstanding that the proponent had invested considerable time, money and effort in preparing the material to support the applications and possibly even preparing the site and constructing a building. Therefore, the SPC determined that it would be fair and reasonable to establish transitional policies to allow a significant threat activity that was clearly intended to be established as part of a formal development proposal prior to the effective date of the SPP, to be evaluated as existing for the purposes of applying the SPP policies. It was determined that if one or more of these applications had been submitted and deemed to be complete as of the date of SPP approval, and the applicant has formally declared that one or more significant threat activities are being proposed as part of the		

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		development, that would constitute a sufficient commitment to the establishment of the threat activity to give it transitional consideration. For similar reasons, the SPC also included transitional provisions for significant threat activities proposed through a complete application for a prescribed instrument submitted prior to the effective date of the SPP.		
4.15	25	The first of these transitional circumstances pertains to activities that are associated with a development that is being proposed as part of one or more development applications (e.g. zoning, site plan and/or building permit) as of the date the SPP takes effect. For example, an applicant may have obtained all required local development approvals for a particular use and associated significant threat activity and commenced construction of the related buildings and facilities, but not yet be engaged in the activity, when the Source Protection Plan comes into effect. If the significant threat activity associated with the proposed development (e.g. fuel storage) was prohibited by the Source Protection Plan, that activity would not be able to be engaged in at that location notwithstanding that the proponent had invested considerable time, money and effort in preparing the material to support the applications and possibly even preparing the site and constructing a building. Therefore, the SPC determined that it would be fair and reasonable to establish transitional policies to allow a significant threat activity that was clearly intended to be established as part of a formal development proposal prior to the effective date of the SPP, to be evaluated as existing for the purposes of applying the SPP policies. It was determined that if one or more of these applications had been submitted and deemed to be complete as of the date of SPP approval, and the applicant has formally declared, as part of the application process, that one or more significant threat activities are being proposed as part of the development, that would constitute a sufficient commitment to the establishment of the threat activity to give it transitional consideration. For similar reasons, the SPC also included transitional provisions for significant threat activities proposed through a complete application for a prescribed instrument submitted prior to the effective date of the SPP.	MOECC comments requesting further clarification of the transitional policies in the explanatory document	Additional text added for clarification
4.15	26	The second transitional circumstance pertains to uses and associated activities that could be established on a property in accordance with existing zoning, with no further local development approvals (e.g. Planning Act or building permit). A number of prescribed significant threat activities (e.g. storage and handling of commercial fertilizer, pesticides, organic solvents, DNPALs etc.) would not likely require a building permit or any other form of local approval to be established on a property, even after the SPP comes into effect. This is most likely in cases where there are existing buildings and structures on a property that are suitable for the proposed use (e.g. storage of DNAPLs in an existing industrial building). For example, a proponent may have purchased or leased a property zoned for industrial purposes and containing existing industrial buildings, with the specific intent of operating a new industry that requires the handling and storage of DNAPLs as an essential part of their process. Given that there would not likely be any local planning or building permit approvals required, it is quite likely that the proponent would not be aware that their operation involves a significant threat activity regulated by the SPP policies, especially if the local planning documents (OP and Zoning) have not yet been updated to identify the areas and activities that are subject to the SPP policies. Similarly, in such circumstances it may also be very		

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		difficult for the implementing body for a particular policy to confirm whether such activity was established after the effective date of the SPP. For these reasons, the SPC determined that it would be fair and reasonable to give transitional consideration to such activities in such circumstances. However, the SPC also believed it was important to include the provision that at such time as a Risk Management Official/Inspector has visited the site and documented the threat activities at that time, any activities not documented as existing will thereafter be considered future. The intent is that once such inspection has occurred, the owner/operator could no longer claim to be unaware of the SPP restrictions on significant threat activities and the RMO would also have conclusive documentation of the threats that were existing at that point in time. In effect, this would provide a certain 'window' of time for such activities to be established after approval of the SPP and still be evaluated as existing threats. The intent is that the RMO/RMI on-site inspections and existing threat documentation will be conducted as soon as possible after the SPPs are approved. However, given that they will likely be completed on a prioritized basis, the duration of the 'window' for each affected property will vary.		
4.15	26	The second transitional circumstance pertains to uses and associated activities that could be established on a property in accordance with existing zoning, with no further local development approvals (e.g. Planning Act or building permit). A number of prescribed significant threat activities (e.g. storage and handling of commercial fertilizer, pesticides, organic solvents, DNPALs etc.) would not likely require a building permit or any other form of local approval to be established on a property, even after the SPP comes into effect. This is most likely in cases where there are existing buildings and structures on a property that are suitable for the proposed use (e.g. storage of DNAPLs in an existing industrial building). For example, a proponent may have purchased or leased a property zoned for industrial purposes and containing existing industrial buildings, with the specific intent of operating a new industry that requires the handling and storage of DNAPLs as an essential part of their process. Given that there would not likely be any local planning or building permit approvals required, it is quite likely that the proponent would not be aware that their operation involves a significant threat activity regulated by the SPP policies, especially if the local planning documents (OP and Zoning) have not yet been updated to identify the areas and activities that are subject to the SPP policies. Similarly, in such circumstances it may also be very difficult for the implementing body for a particular policy to confirm whether such activity was established or undertaken after the effective date of the SPP. For these reasons, the SPC determined that it would be fair and reasonable to give transitional consideration to such activities in such circumstances. However, the SPC also believed it was important to include the provision that at such time as a Risk Management Official/Inspector has visited the site and documented the threat activities at that time, any activities not documented as existing will thereafter be considered future. The intent is that once such inspection has occurred, the owner/operator could no longer claim to be unaware of the SPP restrictions on significant threat activities and the RMO would also have conclusive documentation of the threats that were existing at that point in time. In effect, this would provide a certain 'window' of time for such activities to be established after approval of the SPP and still be evaluated as existing threats. The intent is that the RMO/RMI on-site inspections and existing threat	MOECC comments requesting further clarification of the transitional policies in the explanatory document	Additional text added for clarification

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		documentation will be conducted as soon as possible after the SPPs are approved. However, given that they will likely be completed on a prioritized basis, the duration of the 'window' for each affected property will vary.		
4.15	26	Transition provisions were developed by Oxford County in collaboration with other municipalities in the Lake Erie Region, MOE and the staff and Source Protection Committee of the Thames-Sydenham and Region.		
4.15	26	Transition provisions were developed by Oxford County in collaboration with other municipalities in the Lake Erie Region, MOE and the staff and Source Protection Committee of the Thames-Sydenham and Region. During consultation MOECC suggested that minor variances be added to the list of applicable items being provided with transitional provisions. In developing this policy Oxford considered including minor variances and determined that they are unlikely to be related to the establishment of a new significant drinking water threat on a property. Even if they were, one of the other municipal approvals (e.g. site plan or building permit) would typically be required and those applications are addressed in the transitional provisions. Given the short processing time frames for minor variance applications, it was determined that in the rare instance that a minor variance application involving a significant drinking water threat activity was submitted in the time leading up to the effective date of the plan, the proponent could simply submit the related building permit and/or site plan application and be subject to the transition provision. As this was not identified as a concern by other municipalities during consultation it was decided not to revise this policy to include minor variances.	MOECC comments requesting further clarification of the transitional policies in the explanatory document	Additional text added for clarification
4.2.2	41	…….RMO will work closely with OMAFRA staff to determine how such principles should be applied.		
4.2.2	41	…….RMO will work closely with OMAFRA staff to determine how such principles should be applied. During the consultation process OMAFRA staff indicated that it is the intention of OMAFRA to also work closely with the RMO with respect to any modifications or requirements that may need to be incorporated into the Prescribed Instruments under the Nutrient Management Act. It is the expectation of the SPC that this PI review process will take into account the following Source Water Protection considerations: • that certified preparers receive updated training related to source protection to better understand significant drinking water threat activities and how to properly manage those threats so they are no longer considered significant • that there be communication and coordination between RMO and OMAFRA/certified preparers so that there is consistency between RMPs and PIs for the same threats within the same vulnerable areas, and to ensure there are similarities in how each of these bodies will determine if the test for ceases to be a significant threat is met • that OMAFRA issue all S.61 statements of conformity related to the NMA or provide	OMAFRA provided comments wanting to clarify the role of the RMO vs. OMAFRA in regards to PIs under the Nutrient Management Act. Further info was added to the explanatory document as a result of those comments.	Additional text added

Section / Policy	Page	Text	Reason For Change	Changes Made
		guidance to certified preparers when issuing the S.61 statement of conformity for PI's where OMAFRA is not the issuer.		
4.2.2	39	The SPC felt that there was a substantially greater likelihood of a leak or spill occurring related to temporary storage. For permanent storage, regulatory controls allow for the implementation and confirmation of structural risk management measures and also serve as an opportunity to ensure that procedural controls and other preventative measures are in place to adequately manage the risks. Temporary facilities do not benefit from these same opportunities, making it a difficult activity to manage. Further, temporary facilities do not generally have the same investment in infrastructure that would be associated with a permanent storage facility. To adequately mitigate the risks related to temporary storage, more prohibitive measures were determined to be necessary. For this reason, Policies 2.22, 2.24, and 2.27 all require that Risk Management Plans shall prohibit temporary storages. Prohibition of temporary facilities was not specifically identified in the Oxford RMP policies for these activities as Oxford was of the opinion that prohibition of such activities would be effectively achieved through the requirements of the RMP.		
4.2.2	39	The SPC felt that there was a substantially greater likelihood of a leak or spill occurring related to temporary storage. For permanent storage, regulatory controls allow for the implementation and confirmation of structural risk management measures and also serve as an opportunity to ensure that procedural controls and other preventative measures are in place to adequately manage the risks. Temporary facilities do not benefit from these same opportunities, making it a difficult activity to manage. Further, temporary facilities do not generally have the same investment in infrastructure that would be associated with a permanent storage facility. To adequately mitigate the risks related to temporary storage, more prohibitive measures were determined to be necessary. For this reason, Policies 2.22, 2.24, and 2.27 all require that Risk Management Plans shall prohibit temporary storages. Prohibition of temporary facilities was not specifically identified in the Oxford RMP policies for these activities (O.C.-2.17, 2.19, 2.22) as Oxford was of the opinion that prohibition of such activities would be effectively achieved through the requirements of the RMP.	No reference to Oxford policies	Added reference to policies 'O.C.-2.17, 2.19, and 2.22'.

Table 10: Prescribed Instrument Policy additional rationale

Threat	Policy Number	Threat Status	Rationale	Change
Waste Disposal Sites	2.04 (1799) 2.05 (1805) OC-2.01 (3201) OC-2.03 (3239)	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was determined to be the most appropriate approach for the same reasons as outlined in the rationale provided for the uses of Section 57 prohibition for future occurrences of this threat that are not subject to an ECA. Management through a review and, if necessary amendment of the ECA was deemed most appropriate for existing waste disposal sites. The Thames-Sydenham Region included dense non-aqueous phase liquids (DNAPLs) and organic solvents within this policy related to waste disposal sites since they must be managed throughout their life cycles (collection, storage, transportation, treatment, recovery, and disposal). This was identified as a "gap" not covered through the other DNAPL policies. Further it is important that implementers are aware that DNAPLs are significant threats in areas where Waste Disposal would not otherwise be a significant threat.	
Waste Disposal Sites	2.04 (1799) 2.05 (1805) OC-2.01 (3201) OC-2.03 (3239)	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was generally determined to be the most appropriate approach for the same reasons as outlined in the rationale provided for the uses of Section 57 prohibition for future occurrences of this threat that are not subject to an ECA, with the exception of the storage of hazardous and liquid industrial waste. Management through a review and, if necessary amendment of the ECA, or where no ECA is required, a risk management plan was deemed most appropriate for existing waste disposal sites and for new storage of hazardous and liquid industrial waste sites that do not require an ECA, for the reasons indicated in the Section 58 policy rationale table.	All aspects of the DNAPL and organic solvent life cycles are now dealt with in DNAPL and organic solvent policies, so removed from this policy.
Stormwater Management	2.07 (1640) 2.08 (1641) OC-2.12 (3210) OC-2.13 (3211)	Existing and Future	Discharge of stormwater is a signficiant threat under certain circumstances related to drainage area, land use and chemicals of concern. In addition to these consideration in the review and approval of prescribed instruments it is important to understand that snow melt water may contaminate stormwater where the storage of snow and road salt is a significant threat. These threats also need to be considered in the approvals and review process of Stormwater facilities. It is important to note that the areas and circumstances where these threats are significant may differ slightly from those areas where stormwater discharge is considered a significant threat. Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was generally determined to be the most appropriate approach. The one exception to future prohibition through the ECA process is for ICA areas within the County of Oxford. For stormwater management facility discharge for a facility with a drainage area <=100 ha and predominately rural, residential and/or agricultural land uses management through the ECA is used. Given that these facilities can be significant threats in an ICA for nitrates regardless of the drainage area of the facility and the ICAs in the County affect a substantially larger area and number of properties than the WHPA A & B with a vulnerability score of 10, it was determined that it would be more reasonable to manage future occurrences of such threats through the ECA process. It should be noted that the areas affected by the ICAs for nitrates in the County	

Threat	Policy Number	Threat Status	Rationale	Change
			are all predominately comprised of rural, residential and/or agricultural land uses, which is why the policy distinction for such facilities in an ICA only pertains to those land uses. Management through a review and, if necessary amendment of the ECA, was deemed most appropriate for existing stormwater management facilities.	
Discharge of Stormwater	2.07 (1640) 2.08 (1641) OC-2.12 (3210) OC-2.13 (3211)	Existing and Future	Discharge of stormwater is a signficiant threat under certain circumstances related to drainage area, land use and chemicals of concern. In addition to these consideration in the review and approval of prescribed instruments it is important to understand that snow melt water may contaminate stormwater where the storage of snow and road salt is a significant threat. These threats also need to be considered in the approvals and review process of Stormwater facilities. It is important to note that the areas and circumstances where these threats are significant may differ slightly from those areas where stormwater discharge is considered a significant threat. Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activity through the ECA process was generally determined to be the most appropriate approach. The one exception to future prohibition through the ECA process is for ICA areas within the County of Oxford. For stormwater management facility discharge for a facility with a drainage area <=100 ha and predominately rural, residential and/or agricultural land uses management through the ECA is used. Given that these facilities can be significant threats in an ICA for nitrates regardless of the drainage area of the facility and the ICAs in the County affect a substantially larger area and number of properties than the WHPA A & B with a vulnerability score of 10, it was determined that it would be more reasonable to manage future occurrences of such threats through the ECA process. It should be noted that the areas affected by the ICAs for nitrates in the County are all predominately comprised of rural, residential and/or agricultural land uses, which is why the policy distinction for such facilities in an ICA only pertains to those land uses. Management through a review and, if necessary amendment of the ECA, was deemed most appropriate for existing stormwater management facilities.	
Sewage	2.09 (1642) 2.10 (1643) 2.11 (1745) 2.12 (1644) 2.13 (1746) 2.14 (1646) 2.19 (1650)	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activities through the ECA process was generally determined to be the most appropriate approach. The one exception to future prohibition through the ECA process is for sanitary sewers and pipes, which will be managed. For the most part, tools established under Part IV of the Clean Water Act do not apply to activities linked with the establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. The SPC decided that to be consistent with the objective to ensure prescribed drinking water threats never becomes or ceases to be a significant threat, PI policies should be developed. To do this, the SPC felt that the available regulatory framework of Environmental Compliance Approvals (ECA) was appropriate. The Ministry of Environment has regulated sewage works with ECA since the early 1970s and this seemed an appropriate solution when it came to the sub-threats that have been prescribed under this threat category. The SPC decided that ECA should be amended with conditions that, when implemented, would prohibit the	

Threat	Policy Number	Threat Status	Rationale	Change
	2.20 (1651) OC-2.07 (3205) OC-2.08 (3206) OC-2.09 (3207) OC-2.10 (3208) OC-2.11 (3209)		activity in vulnerable areas. The SPC decided that it did not want to outline specific conditions within these policies because it would hamper the flexibility of the issuer. Management through a review and, if necessary amendment of the ECA, was deemed most appropriate for existing activities.	
Sewage	2.09 (1642) 2.10 (1643) 2.11 (1745) 2.12 (1644) 2.13 (1746) 2.13.1 (4661) 2.14 (1646) 2.19 (1650) 2.20 (1651) OC-2.07 (3205) OC-2.08 (3206) OC-2.09 (3207) OC-2.10 (3208) OC-2.11 (3209)	Existing and Future	Although the Environmental Compliance Approval process is considered to be rigorous, prohibition of future activities through the ECA process was generally determined to be the most appropriate approach. The one exception to future prohibition through the ECA process is for sanitary sewers and pipes, which will be managed. For the most part, tools established under Part IV of the Clean Water Act do not apply to activities linked with the establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage. The SPC decided that to be consistent with the objective to ensure prescribed drinking water threats never becomes or ceases to be a significant threat, PI policies should be developed. To do this, the SPC felt that the available regulatory framework of Environmental Compliance Approvals (ECA) was appropriate. The Ministry of Environment has regulated sewage works with ECA since the early 1970s and this seemed an appropriate solution when it came to the sub-threats that have been prescribed under this threat category. The SPC decided that ECA should be amended with conditions that, when implemented, would prohibit the activity in vulnerable areas. The SPC decided that it did not want to outline specific conditions within these policies because it would hamper the flexibility of the issuer. For septic systems approved through the prescribed instruments, the committee did specify some things which could be included as conditions for existing septic systems. One important condition was the requirement for regular inspection of the system. This could be accomplished through the compliance monitoring program discussed in 2.18 or it could be done through a condition requiring that the owner have a qualified person complete an inspection and document whether the system is functioning as intended. It is intended that between these two policies an inspection program for septic systems regulated through the PI would be established that meets the same objectives as the inspection program required by the OBC. Management through a review and, if necessary amendment of the ECA, was deemed most appropriate for existing activities.	New policy # and section added
Fuel	2.41 (1671) 2.42	Existing and Future	Although activities of aggregate extraction at pits and quarries do not contribute chemicals or pathogens to drinking water sources, the Source Protection Committee (SPC) felt that the Aggregate Resources Act could be used to manage the storage of fuel in aggregate operations. To	

Threat	Policy Number	Threat Status	Rationale	Change
	(1672)		be consistent with the objective to ensure that prescribed drinking water threats never become or cease to be a significant threat, the SPC decided that a policy should be developed using Prescribed Instruments (PI). The SPC felt that the most appropriate use of the Aggregate Resources Act would be to put conditions on site plans that, when implemented, would locate fuel storage and handling outside of the area where it would be significant threat to drinking water. Where this is not feasible, the conditions shall manage the activity so that it would no longer be a significant threat. Back-up generators and other liquid powered devices for water works require fuel storage; however, the Source Protection Committee (SPC) felt that this situation was missing when considering Environmental Compliance Approvals (ECA) issued by the Province. The SPC decided to address this "gap" by developing a policy using Prescribed Instruments (PI). PI issued by the province through various ministries set out terms and conditions that are designed to protect the environment or human health. PI policies are intended to reduce the risk to municipal drinking water sources by managing those risks associated with an activity that has been identified as a drinking water threat in the associated Assessment Report. The SPC felt that this approach would be consistent with the objective to ensure that prescribed drinking water threats never become or cease to be a significant drinking water threat.	
Application and Handling and Storage of Non-agricultural Source Materials (NASM)	OC-2,18 (1748) OC-2.19 (1650) OC-2.20 (1651)	Existing and Future	Oxford County chose to apply the PI tool for NASM while TSR choose not to rely exclusively on the PI. Oxford County determined that since the application (both existing and future) and new storage of NASM appears to be comprehensively regulated by the applicable Prescribed Instruments (no gaps or exceptions were identified), these existing regulatory tools were the most appropriate for achieving the desired prohibition of such activities where they would be a significant threat. The Tables of Drinking Water Threats identify the circumstances and vulnerable areas where these activities are a significant threat to drinking water sources While the NMA prohibits the application or storage of NASM within 100 m of a well (WHPA-A), the NMA does not require a similar prohibition for WHPA-B with a vulnerability score of 10. The NMA's use of prohibition within 100 m from a well pre-dated the establishment of WHPA travel time based zones and vulnerability scoring and ICAs for nitrates which provides well specific information upon which to base local Source Protection policy decisions. Under the Clean Water Act, the tables of drinking water threats identify that the risk and level of threat posed by this activity is the same within areas with a vulnerability score of 10. In fact, areas in WHPA-B with a vulnerability score of 10 have a high intrinsic vulnerability, while many of the WHPA-As actually have moderate or low intrinsic vulnerability. As such, areas in WHPA-B with a vulnerability score of 10 may be considered more vulnerable than many WHPA-As, even though they have the same vulnerability score. Therefore, based on the Clean Water Act science, it was determined that the most appropriate and consistent policy approach would be to prohibit these significant threat activities within both the WHPA-A, (as per the NMA) and the WHPA-B, with a vulnerability score of 10 (where application of	

Threat	Policy Number	Threat Status	Rationale	Change
			NASM is not currently prohibited under the NMA). This prohibition was also applied to vulnerable areas within an ICA for Nitrates in Oxford, as it was determined to be appropriate to prohibit any threats that could contribute to an identified nitrate issue wherever possible and reasonable. The same policy approach has been applied to both existing and future occurrences of this threat, given that NASM application does not occur on an on-going basis on the same parcel of land and, therefore, in effect there can be no application of NASM that would be considered 'existing' under the Oxford definition. Given that existing storage of NASM was not identified, or suspected, in significant threat areas in Oxford, prohibition of existing NASM storage was not deemed to be necessary. However, it was determined that managing future storage of NASM was not appropriate, when prohibition of future NASM storage was both a reasonable and more precautionary policy approach, particularly given the limited area of agricultural land that would be affected within Oxford, much of which is owned by the County. Prohibition prevents the establishment of new significant threats of this type and, therefore, provides the most certainty in achieving the overall goal of protecting municipal drinking water systems.	

Section / Policy	Page	Text	Reason For Change	Changes Made
4.2.4	48	As the implementation of this policy relies on a Zoning By-law change it is subject to the implementation timing policies (OC-1.02, 1.09). OC-1.02 requires any Zoning By-law updates to be completed within 2 years of the SPP effective date or 2 years after an OP update and policy 1.09 requires any Zoning By-law updates to be completed within 3 years of the SPP effective date or 3 years after an OP update. This gives landowners of the affected parcels ample time to secure permitting for a septic system prior to policy 2.15 coming into effect, and with a septic system in place or already permitted, it would be considered an existing activity and no longer subject to policy 2.15.		
4.2.4	48	As the implementation of this policy relies on a Zoning By-law change it is subject to the implementation timing policies (OC-1.02, 1.09). OC-1.02 requires any Zoning By-law updates to be completed within 3 years of the SPP effective date or 3 years after an OP update and policy 1.09 requires any Zoning By-law updates to be completed within 3 years of the SPP effective date or 3 years after an OP update. This gives landowners of the affected parcels ample time to secure permitting for a septic system prior to policy 2.15 coming into effect, and with a septic system in place or already permitted, it would be considered an existing activity and no longer subject to policy 2.15.	Implementation timing has been changed due to MMAH comments	Change to text
4.2.7	46	Unlike the other specify action inspection policies noted above, Policy 2.17 has a legal effect of conform with. While inspection of septic systems are outlined in the Building		

Section / Policy	Page	Text	Reason For Change	Changes Made
		Code Act 1992 S.O. 1992 C.23, the SPC wanted it to be noted that older systems, those closest to wellheads and in areas where failures are suspected, should be top priorities.		
4.2.7	46	Unlike the other specify action inspection policies noted above, Policy 2.17 has a legal effect of conform with. While inspection of septic systems is required by the Building Code Act 1992 S.O. 1992 C.23, the SPC wanted it to be noted that older systems, those closest to wellheads and in areas where failures are suspected, should be top priorities. The SPC also wanted to have a similar inspection program for septic systems approved by MOECC through their Environmental Compliance Approvals (ECA). Larger septic systems have a greater potential to affect municipal wells due to the volume of sewage that they treat, therefore it is important that they be subject to similar inspections as the smaller systems. It is reasonable to expect that an inspection program be instituted for the larger systems as there are fewer of them within the areas where they would be significant threats. For these reasons policy 2.18 suggests that MOECC consider an inspection program which focuses on systems which are a significant drinking water threats. While the policy does not have a conform with legal effect, the SPC would like to have required conformity with this policy due to the importance that they place on this in addressing the existing large septic systems that are significant threats. While the above noted inspection program is one way to ensure that large septic systems are functioning as intended, policy 2.14 includes mandatory system inspection as one of the possible terms or conditions that MOECC may include when reviewing and amending existing prescribed instruments for septic systems. While the committee has chosen to leave the ministry the flexibility to apply the terms and conditions that they feel are most effective in each situation, they felt strongly that regular inspection was one which should be implemented, whether through conditions on the PI or through the compliance monitoring program discussed above. By including inspection as a condition on the instrument it would be possible to require the owner of the system to have a qualified person undertake an inspection and provide certification, in a form approved by the province, that the system functions as designed and meets or exceeds provincial regulations. The compliance monitoring program identified above could then be scaled back but would still be needed.	Additional clarification was requested from MOECC	Text added

Table 11 Supplementary Specify Action Policies

Threat	Policy Number	Policy Description	Threat Status	Rationale	Change
Storage of snow	2.37(1761)	Prohibition of snow storage in aggregate operations	Future and Existing	The Ministry of Natural Resources under the Aggregate Resources Policy Manual Policy A.R. 5.00.14 (salt storage and snow dumps on licensed/permitted sites) prohibits the storage of snow in aggregate operations. A policy was developed as a reminder of this regulation.	
				No change	
Handling and storage of fuel	2.43(1768) OC-2.46 (3265)	Removal of abandoned fuel storage tanks	Future and Existing	Fuel can enter into surface water or groundwater via spills. There had been a "gap" identified regarding the removal of abandoned fuel tanks. Specify Action was the best approach to address this. The same effective date is being used for both existing and future for this policy. The rationale behind that is that for this policy future mean newly found rather than newly created, so it was determined that it was not feasible to immediately remove fuel tanks on abandoned properties as soon as the Province is made aware of them.	
Handling and storage of fuel	2.43(1768) OC-2.46 (3265)	Removal of abandoned fuel storage tanks	Future and Existing	Fuel can enter into surface water or groundwater via spills. There had been a "gap" identified regarding the removal of fuel tanks on abandoned properties. Specify Action was the best approach to address this. For this policy, future means newly found rather than newly created. It is not reasonable to expect immediate removal of fuel tanks on abandoned properties. The policy is intended to suggest the MOECC seek to have tanks removed or otherwise remediated when they become aware of them. It is not intended to imply that MOECC is expected to proactively seek the location of fuel tanks on abandoned properties and remove them. The use of the term 'shall consider' also allows the ministry the flexibility in the case where the appropriate course of action would be to empty, leaving the tank in place and appropriately remediate it.	Additional clarification on the intent of this policy

Section / Policy	Page	Text	Reason For Change	Changes Made
4.5	51	It was also realized that a level of consistency in the monitoring reports was essential. To achieve this consistency, it was determined that a guidance document was necessary. This guidance is to be developed by the Conservation Authorities in collaboration with the policy implementer as outlined in Policies 5.02 and OC-5.08. This document would outline specific contents and format of the monitoring report and is intended to obtain meaningful information without being unduly onerous.		
4.5	51	It was also realized that a level of consistency in the monitoring reports was essential. To achieve this consistency, it was determined that a guidance document was necessary. This guidance is to be developed by the Conservation Authorities in collaboration with the policy implementer as outlined in Policies 5.02 and OC-5.08. Through consultation, concerns that the guidance required by policy 5.02 might be	Further clarification provided on the monitoring guidance policy based on MOECC comments	Additional clarification on the intent of this policy

Section / Policy	Page	Text	Reason For Change	Changes Made
		unilaterally amended were identified. A revision to the policy was made to reflect that any revisions to the guidance be done in consultation with the implementers as was already identified related to the development of the guidance. It will be important that the CA develop this guidance document in such a way that it allows the CA to meet its obligations under the Act without creating undue hardship on policy implementers. It will also be important that the local guidance document reflect what provincial reporting capabilities are so that implementers are not faced with unique reporting requirements in each region. It is hoped that this guidance would rely heavily on provincial requirements, identifying what implementers will need to provide in order for the SPA to meet their reporting requirements. This guidance would outline specific contents and format of the monitoring report and is intended to obtain meaningful information without being unduly onerous. Format will most likely require than an electronic document be submitted in a form similar to other implementers so that the implementer reports can be easily compiled and summarized to meet provincial reporting requirements. To address concerns that the guidance would require overly onerous reporting, the policy was revised to reflect that implementers are only required to be consistent with those aspects of the guidance which are needed to allow the SPA to meet its reporting requirements. Implementers are required to consider other aspects of the guidance in submitting their monitoring reports. This guidance is important to ensure that the SPA receives information which allows them to summarize and provide the information required by the Act and regulations in a timely manner. At the time of the submission of this SPP provincial guidance was not yet available providing details on reporting requirements. As a result these details could not be referred to in policy. In the absence of the provincial details, this guidance will allow the SPA and implementers to work together collaboratively, to develop guidance which can be used to meet the needs of the implementers and the SPA. In addition to developing the guidance through this process it will have the added benefit that the collaborative efforts will result in a better understanding of the needs and the information to be collected and submitted.		

Source Protection Plan Volumes II & III Changes for Approval

Section / Policy	Page	Text	Reason For Change	Changes Made
OC-2.41	Vol 2 p35	**Existing Application of Untreated Septage to the Land – Inspections** To reduce the risk to municipal drinking water sources from existing land application of untreated septage, where this activity is, or would be, a significant drinking water threat, the Province (Ministry of Environment) should consider source protection information as a criterion when setting inspection targets and priorities.		
OC-2.41	Vol 2 p35		MOECC pointed out that the text of the policy is not conststent with the sidebar (sidebar indicates the policy is existing and future).	After speaking with Oxford County staff future has been removed from the sidebar, policy text remains unchanged.
2.30	Vol 3 p32	**Application of Pesticides – Management** The application of pesticides to land shall be managed so that it ceases to be or never becomes a significant drinking water threat. This policy shall apply to pesticides identified within the Provincial Drinking Water Threats Tables, in areas where this activity is, or would be, a significant drinking water threat. Pesticide application shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Further, all Pesticide Permits issued under the Pesticide Act (existing and new) shall prohibit the use of pesticides which would be a significant drinking water threat.		
2.30	Vol 3 p32	**Application of Pesticides – Management & Prohibition** The application of pesticides to land shall be managed so that it ceases to be or never becomes a significant drinking water threat. This policy shall apply to pesticides identified within the Provincial Drinking Water Threats Tables, in areas where this activity is, or would be, a significant drinking water threat. Pesticide application shall be designated for the purposes of Section 58 of the Clean Water Act and a Risk Management Plan shall be required. Further, all Pesticide Permits issued under the Pesticide Act (existing and new) shall prohibit the use of pesticides which would be a significant drinking water threat.	MOECC pointed out that the text of the title of the policy is not conststent with the text and the sidebar (both indicate the policy is existing and future).	Prohibition added to title

Revisions to the LTVSPA Assessment Report – Section 5
to address requested changes prior to approval

Yellow highlight- area of original text to be changed
Bright Green highlight- area of new text

Section	Page	Text	Reason For Change	Changes Made
Table 5-5		Row 1 used different terminology to refer to the Chatham/South Kent intake Row 3 makes no reference to including information on Chatham/South Kent intake	Address MOECC approval concerns of inadequate documentation of microcystin issue at Chatham/South Kent	Revise table 5-5
		Row 1 revise to: Wheatley, Chatham/South Kent intakes Row 3 revise to Wheatley and Chatham/South Kent intakes		
Table 5.6		Add Microcystin issue		
		System: Chatham/South Kent Issue: Microcystin Brief Description: Microcystin LR, a neurotoxin, is released, when certain algae cells (blue-green) break down. If left intact the algae is able to be removed, with the microcystin remaining contained in the cells, through common filtration methods. Changes to water treatment processes are made to reduce the likelihood that cells would be ruptured before being removed from the water. For the past few years raw and treated water are tested during the algae bloom season for microcystin. Phosphorous is the limiting nutrient for algae growth and as such contributes to the growth of algae. Microcystin levels were reviewed for Chatham/South Kent and other intakes in the western basin of Lake Erie. (Microcystin data is available while micocystin LR data is not widely available as microcystin LR is only tested if microcystin levels are elevated) In the 3 years of data reviewed, a single occurance of the half MAC and several levels of microcystin above the detection limit were measured in the raw water while treated water levels remain barely detectable at Chatham/South Kent. Although available data does not allow for a trend to be established, it is commonly though that the frequency and severity of algae blooms are getting worse. Although the levels did not satisfy the issues evaluation process developed to satisfy rule 114, Microcystin is however identified as an issue under the		

Section	Page	Text	Reason For Change	Changes Made
		CWA as per rule 115.1. It is recommended that monitoring efforts be continued and improved to coordinate the various monitoring programs. Further, it is recommended that monitoring and research be continued into the relationship between microcystin and phosphorous levels. Natural or Anthropogenic: Anthropogenic factors (local and international) contribute excessive phosphorous which make it possible for excessive algae growth.		
Table of Contents and List of Tables			pages containing sections and tables adjusted due to pagination	
Appendix 4		Assessment Report Consultation Addendum Updated Assessment Report Consultation Comments Consultation comments will be added to this section following the completion of the consultation on this Updated Assessment Report and prior to submission to the MOECC for approval.	Comments now available and are part of submission package	Revise to provide location of comments
		Consultation comments on the updated Assessment Report may be found in the change logs with the related revisions to the document. Change logs, compiled from all Assessment Reports and the Source Protection Plan, are bound separate from this Assessment Report and included as a supplemental document in the Source Protection Plan.		
System Summary, Chatham/South Kent		Update to reflect microcystin		
Issues Section Summary		Update to reflect microcystin		

Revisions to the SCRSPA Assessment Report – Section 7
to address requested changes prior to approval

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Bright Green highlight- area of new text

Section	Page	Text	Reason For Change	Changes Made
7.1.1.2	7-10	Both managed land and agricultural managed lands are to be delineated within each of the vulnerable areas (individually for each IPZ-1, IPZ-2 and IPZ-3 as well as for HVA and SGRA).	MOECC comment during approval	Revised as requested
		Both managed land and agricultural managed lands are to be calculated within each of the vulnerable areas (individually for each IPZ-1, IPZ-2 and IPZ-3 as well as for HVA and SGRA).		
7.1.1.4	7-11	Table 1 of the MOE tables of drinking water threats requires that the maps for both percentage of managed lands and livestock density be considered when evaluating the circumstances with regard to each of the thresholds for land application of nutrients.	MOECC comment during approval	Revised as requested
		Table 1 of the MOE tables of drinking water threats requires that both percentage of managed lands and livestock density be considered when evaluating the circumstances with regard to each of the thresholds for land application of nutrients.		
Appendix 4		Assessment Report Consultation Addendum Updated Assessment Report Consultation Comments Consultation comments will be added to this section following the completion of the consultation on this Updated Assessment Report and prior to submission to the MOECC for approval.	Comments now available and are part of submission package	Revise to provide location of comments
		Consultation comments on the updated Assessment Report may be found in the change logs with the related revisions to the document. Change logs, compiled from all Assessment Reports and the Source Protection Plan, are bound separate from this Assessment Report and included as a supplemental document in the Source Protection Plan.		

Revisions to the UTRSPA Assessment Report – Section 7
to address requested changes prior to approval

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Bright Green highlight- area of new text

Section	Page	Text	Reason For Change	Changes Made
7.1.1	7-11	Livestock density is to be delineated within each of the vulnerable areas (individually for each WHPA-A, WHPA-B, WHPA-C, WHPA-D, WHPAE, WHPA-F, as well as for HVA and SGRA). Mapping the livestock density is not required where the vulnerability score for an area is less than the vulnerability score necessary for the activity to be considered a threat in the Table of Drinking Water Threats.	MOECC comment during approval	Revised as requested
		Livestock density is to be calculated within each of the vulnerable areas (individually for each WHPA-A, WHPA-B, WHPA-C, WHPA-D, WHPAE, WHPA-F, as well as for HVA and SGRA). Mapping the livestock density is not required where the vulnerability score for an area is less than the vulnerability score necessary for the activity to be considered a threat in the Table of Drinking Water Threats.		
Appendix 4		Assessment Report Consultation Addendum Updated Assessment Report Consultation Comments Consultation comments will be added to this section following the completion of the consultation on this Updated Assessment Report and prior to submission to the MOECC for approval.	Comments now available and are part of submission package	Revise to provide location of comments
		Consultation comments on the updated Assessment Report may be found in the change logs with the related revisions to the document. Change logs, compiled from all Assessment Reports and the Source Protection Plan, are bound separate from this Assessment Report and included as a supplemental document in the Source Protection Plan.		