

Revisions to the UTRSPA Assessment Report
 Revisions related to threats update

White Cells- original policy text

Grey cells- new policy text

Yellow highlight- area of original policy text to be changed (already reviewed by SPC)

Bright Green highlight- area of new policy text (already reviewed by SPC)

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 – September 12, 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 <i>issue</i> is identified, the <i>activities</i> that contribute to the identified <i>issue</i> and the areas where they occur (within <i>vulnerable areas</i>) must also be identified. For the <i>activities</i> or <i>conditions</i> contributing to <i>issues</i> that are deemed to be <i>significant threats</i> as described above, the <i>risks</i> the <i>activities</i> or <i>conditions</i> pose must be reduced through the source protection plan.	Add text to reflect Woodstock ICA threats identification	
		If an <i>issue</i> is identified, the <i>activities</i> that contribute to the identified <i>issue</i> and the areas where they occur (within <i>vulnerable areas</i>) 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		

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		<p>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 <i>activities</i> or <i>conditions</i> contributing to <i>issues</i> that are deemed to be <i>significant threats</i> as described above, the <i>risks</i> the <i>activities</i> or <i>conditions</i> pose must be reduced through the source protection plan.</p>		
7.1.5	7-17	<p>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.</p>		
		<p>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 exercise 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.</p>		
7.2	7-18	<p>...of assigned vulnerability scores. This applies to <i>intake protection zones</i> and <i>wellhead protection areas</i> only, for drinking water systems identified in the Source Protection Area Terms of Reference. The area and <i>activities</i> contributing to a drinking water quality <i>issue</i> (known to be partially or wholly due to <i>anthropogenic</i> sources) must both be identified. The determination of the sources of identified <i>issues</i> is noted as a data gap in Section 5 - Issues Evaluation of the Assessment Report.</p>		
		<p>...of assigned vulnerability scores. This applies to <i>intake protection zones</i> and <i>wellhead protection areas</i> only, for drinking water systems identified in the Source Protection Area Terms of Reference. The area and <i>activities</i> contributing to a drinking water quality <i>issue</i> (known to be partially or wholly due to <i>anthropogenic</i> 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</p>		

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		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 new information	
7.2.18	7-33	Add new text at the end of the section		
<i>Proposed addition</i>		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	
<i>Proposed section title</i>		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.		
<i>Proposed revision</i>		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		

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		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 revisions		<p>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.</p> <p>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.</p> <p>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.</p>		
		Threats Section Summary		
		Update to reflect revisions to this section		
		System summaries		
		Revise to reflect updated threats inventories		

9.0 Data Gaps and Next Steps

Section	Page	Text	Reason For Change	Changes Made
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Section	Page	Text	Reason For Change	Changes Made
9.1	9-3	Also, as described in Section 7.3, a site-specific <i>risk</i> assessment to confirm the number of locations at which <i>significant threats</i> occur, would be conducted while developing the source protection plans, if needed. The tier 2 work involves the examination of land use <i>activities</i> and the <i>circumstances</i> under which they are undertaken, through site visits and discussions with the landowners. The outcome of the tier 2 <i>risk</i> assessment will be part of a subsequent Assessment Report.		
		Also, as described in Section 7.3, a site-specific <i>risk</i> assessment to confirm the number of locations at which <i>significant threats</i> 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 <i>activities</i> and the <i>circumstances</i> under which they occur, through site visits and discussions with the landowners. The outcome of the site specific <i>risk</i> 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.		