

UPDATES AND AMENDMENTS TO THE APPROVED LOWER THAMES VALLEY AMENDED PROPOSED ASSESSMENT REPORT
as per MOE letter dated Dec. 20, 2010, on the LTVSPA Updated Workplan)

No.	Update	Description of Change Made	Sections Changed
1	Modelling of extension of the Lake St. Clair IPZ-3 up the Thames River into the Lower Thames Valley SPA	The work on modeling the Essex Region SPA's Lake St. Clair IPZ-3s up the Thames River into the Lower Thames Valley SPA is anticipated to be completed by the end of May 2011. The results will be part of a subsequent AR for the Lower Thames Valley SPA.	Section 4.2.1: Table 4-1, Section 4.2.5, Section 4.2.7, Section 4.6, Section 7.4, Section 9: Table 9-1, Section summary 4, Section summary 7: data gaps text, Section summary 9: Table 1, Appendix 12 (list of references), Appendix 1: list of maps and new IPZ-3 maps
2	Delineation of wellhead protection areas (WHPAs) E and F for the following drinking water systems (DWS): Middlesex County (Fanshawe, Dorchester DWSs); and Municipality of Chatham-Kent (Highgate DWS)	As per the Dillon Consulting Ltd April 2011 report, WHPA-Es were delineated and assessed for the Dorchester, Fanshawe and the St. Marys well systems. WHPA-F were not required since the systems did not meet either Technical Rule 50 (2) or (3), For these systems, refer to the Upper Thames River SPA assessment report. As well, the MOE directed that the workplans for WHPA-E and WHPA-F for the Highgate system not be included in the Lower Thames Valley AR as information available at this time indicates that the system does not meet the test in Technical Rule 49 (3). This was already noted in the approved Amended Proposed AR. The Highgate well systems were removed from the list of GUDI studies referred to in other ARs.	No change needed.

No.	Amendment/Other	Description of Change Made	Sections Changed
1	Update the Significant Groundwater Recharge Area (SGRA) delineated based on surficial geology mapping that was used for Tier 2 water budgets for the Upper Thames Valley SPA	<p>The original recharge calculations used County soil maps as one of the inputs, and these maps are not continuous across county lines and were not completed in urban areas. Through the Tier 2 Water Budget in the UTRSPA, it was identified that the Surficial Geology would provide a better representation of recharge and a continuous surface to base recharge calculations on. A new recharge map was created using surficial geology. As well, it is noted in the AR that overlaying the groundwater vulnerability onto the SGRAs creates “overlay artifacts” or “sliver polygons”. This occurs where the boundary of a contiguous groundwater vulnerability area falls close to the boundary of the SGRA. Since the datasets do not perfectly align to each other, the slight gaps and overlaps between the boundaries create small, uniquely valued polygons. In some cases, these polygons will be assigned a Vulnerability Score of 6 (i.e. potential for Low Threats) but have areas less than 1 square meter in size. This should be considered in policy development and implementation.</p>	Section 3.5, Section 4.5, Maps 4-8, 4-9, 7-1c, 7-2d, 7-3d, Section summary 4: Fig. 4

2	Pasture and outdoor confinement area threats	<p>From the MOE table of drinking water threats, the pasture and outdoor confinement area threats can result in potential significant threats (chemical) in IPZs of vulnerability scores 9 or 10, and in WHPAs with scores of 10. There are only two areas within the LTV SPA that need to be examined for threats of this type, the Highgate and Ridgetown WHPA-As. Additional analysis was done by LTVCA staff in March 2011, by examining MPAC property information and 2006 aerial photography. It was confirmed that there are no animal operations within the the Highgate WHPA, and that there are 2 properties identified as pasture land threats (chemical) in the Ridgetown WHPA-A. These 2 properties were previously identified as significant pathogen threats for the same prescribed threat. Therefore the number of locations of significant threats does not change for the Highgate and Ridgetown systems. However it is now noted that the pasture land related significant threats in the Ridgetown WHPA-A are not only pathogen type, but also chemical type.</p>	Section 7.2.5 (table 7-10), Appendix 12
3	Indicate that planned work for a local tier 2 risk assessment has not taken place for this AR version since significant drinking water threats will be verified when the source protection plan is being developed.	The AR is revised to indicate that the tier 2 (site specific) risk assessment, to confirm significant threats, would be conducted while developing source protection plans (2012) if needed.	Section 7.1.5, Section 7.3, Section 9: Table 9-1, Section Summary 7: tier 2 text, Section Summary 9: Table 1, All system summaries

4	<p>The statement in section 7.1.4: “According to Rule 131, activities in vulnerable areas that contribute to drinking water quality issues are deemed significant drinking water threats regardless of assigned vulnerability scores”, can be misleading to the reader. It will help clarify the Technical Rules by indicating that this statement only applies to issues in WHPA and IPZ vulnerable areas for systems in the Terms of Reference (ToR). It may also be helpful to indicate that issues are considered moderate drinking water threats when they are linked to a system not identified in the ToR or are located in a HVA/SGRA area.</p>	<p>These clarifications are provided in the AR: According to Rules 114, 115, 131 and 141, activities or conditions that contribute to drinking water quality issues (known to be partially or wholly due to anthropogenic sources), are deemed significant drinking water threats regardless 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. 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).</p>	<p>Section 7.1.4, Section 5.2. Section Summary 5: Impact of Identifying an Issue, Section Summary 7: Threats Arising from Issues.</p>
5	<p>Minor editorial</p>	<p>Minor editorial changes throughout the AR</p>	<p>Throughout the AR</p>