Revisions to the LTVSPA Assessment Report – Section 3

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 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	

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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.		

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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 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	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		

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		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		