

COMMENT ID	SWP REGION	MEETING DATE	COMMENT DATE	SOURCE	CATEGORY	APPLIES TO	PRIORITY	ACTION	ACTION DATE	ACTION DESCRIPTION
43	Cataaqui		7-May-07	L. Landraut	Other	Cataaqui				<p>"stress" does have a specific meaning in the guidance, which is not necessarily the accepted terminology in the water resources field, and the Peer Review team was in favour of changing the wording for the document. As stated above, the references to the guidance are made with "stress" rather than stress.</p> <p>In this case, both meaning are probably covered.</p>

Peer Review Record

for the

Fifth Draft

Submitted October 1, 2007

COMMENT ID	SWP REGION	MEETING DATE	COMMENT DATE	SOURCE	COMMENT	CATEGORY	APPLIES TO	PRIORITY	ACTION	ACTION DATE	ACTION DESCRIPTION
1	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other pg 83, 2nd paragraph PARTIALLY: In the comment I suggested that wording be removed /edited to clarify the text. Suggested removal included 'However, it is expected that the criteria set in the guidelines for modeling will not be met due to lack of useful data.' and 'Permaps, the criteria set in the guidelines for modeling will not be met due to lack of useful data.' Although a few of the edits were made, the aforementioned text was not removed. Clarifying this paragraph would improve the document.		Catarraqui		Completed	Jan 16 2009 - new rev/ Additional text changes made.	
2	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other MapA3.1 pg 95, 5th paragraph CHANGE MADE: Although many have been removed, two potential municipal supplies have been left on the map. As agreed in the August 22, 2007 email from Rob McRae, the remaining 2 potential municipal supplies need to be removed from the map.		Catarraqui		Completed	Jan 16 2009 - new rev/ Actually, only one potential supply is shown on the map. The map has been changed to reflect actual existing supplies.	
3	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other pg 88 of March 30 draft pg 95, 5th paragraph ADDRESSSED: The title of the section, 'Areas of Concern', was not changed. The title could be changed to better reflect the terminology used in the guidance.		Catarraqui		Completed	Jan 16 2009 - new rev/ Change to term, with added disclaimer.	
4	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other pg 93 of March 30 draft CHANGE MADE: The wording has been changed to 'It will also identify the gaps in data that must be filled in order to refine future phases of water budget modeling and any more detailed numeric modeling'.		Catarraqui		No Action Required		No changes needed.
5	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other pg 93, 5th paragraph CHANGE MADE: changed the wording to 'The local (watersheds/subwatershed) water supply is not a supply for the purposes of the Tier 1 Water Budget Report'. Clarifying this statement would improve the document.		Catarraqui		No Action Required		No changes needed.
6	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other MapA3.1 On map A3.1 there is on one current municipal supply, while the text indicates that there are 4. The map should be updated to reflect the text.		Catarraqui		Completed	Jan 16 2009 - new rev/ Actually, pg 75 only lists one inland SWP municipal supply. It lists 4 GW supplies, one of which has been removed from the further work, as it apparently did not meet the MOE guideline to be included. Map has been modified.	
7	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other pg 94, last paragraph ADDRESSSED: The word 'when' was added to the sentence. The specific model selection will be more critical if and when detailed numerical is required. The results of the Conceptual Water Budget (and future phases) should help guide that model selection.		Catarraqui		No Action Required		No changes needed.
8	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other pg 5, Section 1.3, first paragraph ADDRESSSED: the words 'as required' were added to this paragraph.		Catarraqui		No Action Required		No changes needed.
9	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other Comment #9 at the end of the pg 95. The groundwater storage bullet was left in and the following bullet was added: "... It is felt by the Peer Review Team involved in the review of this document that consideration of groundwater storage is critical to the complete examination and understanding of the water budget of the CSPA. However, the guidance documents prepared by the MNR do not include consideration of groundwater storage, and therefore they advocate that it not be explored under the Tier 1 work. The guidance documents prepared by the MNR do not include consideration of groundwater storage, and therefore they advocate that it not be explored under the Tier 1 work. The guidance documents prepared by the MNR do not include consideration of groundwater storage, and therefore they advocate that it not be explored under the Tier 2 scenario storage for drought. In Tier 3 transient modelling – variable pumping and storage.		Catarraqui		No Action Required		This is a note needed by the Peer Review committee. No changes made.

COMMENT ID	SWP REGION	MEETING DATE	COMMENT DATE	SOURCE	OTHER	COMMENT	CATEGORY	APPLIES TO	PRIORITY	ACTION	ACTION DATE	ACTION DESCRIPTION
			Oct 1 2007 revised report submission	L. Landriault	Other	Comment #10 pg 3, 3rd paragraph CHANGE MADE: The wording was changed to 'And, some estimate of the variability of climatic conditions (such as comparison to a low water year or years) is needed to evaluate current conditions, and future change in water supply or demand.' Clarify this statement with respect to what is outlined in the guidance would improve the document.		Catarraqui		No Action Required		No changes needed.
11	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	Comment #11 pg 88, 2nd paragraph ADDRESSED: The word private has been added.		Catarraqui		No Action Required		No changes needed.
12	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	Comment #12 pg 89, 1st paragraph The words, "... though not necessarily as part of the Tier 1 work," have been added. However, a number of references to potential municipal supplies have been left in Sections 6.0 and 9.0. As agreed in the August 22, 2007 email from Rob McRae, these references need to be removed from text.		Catarraqui		Completed	Jan 16 2009 - new rev	Potential supply listing removed.
13	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	Comment #13 pg 89 A number of references to potential municipal supplies have been left in Sections 6.0 and 9.0. As agreed in the August 22, 2007 email from Rob McRae, these references need to be removed from text.		Catarraqui		Completed	Jan 16 2009 - new rev	Potential supply listing removed.
14	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	Comment #14 pg 84 ADDRESSED: The suggested text has been added to the table.		Catarraqui		No Action Required		No changes needed.
15	Catarraqui	Oct 1 2007 revised report submission	Oct 28 2008. The revision process was put on hold given that Tier 1 had started and was taking	L. Landriault	Other	Comment #15 pg 87 in paragraph The heading has been changed to Temporarily, the Conceptual Water Budget is done on an annual basis, but this is not intended to identify specific stressors, as the average annual conditions are expected to result in "surplus to need" water across the watershed, where water in equals water out and there is no change in storage'.... Clarifying this statement with respect to what is outlined in the guidance would improve the document.		Catarraqui		Completed	Jan 16 2009 - new rev	This statement says specifically that this work is not expected to identify stressors, as the guidance states. It is left in to ensure that readers are not confused for that purpose. No changes needed.
16	Catarraqui	Oct 1 2007 revised report submission	Oct 5 2007, but not received until Mar 28 2008.	L. Landriault	Other	Comment #16 pg 94, 2nd paragraph A number of references to potential municipal supplies have been left in Sections 6.0 and 9.0. As agreed in the August 22, 2007 email from Rob McRae, these references need to be removed from text.		Catarraqui		Completed	Jan 16 2009 - new rev	Potential supply listing removed.
17	Catarraqui	Oct 1 2007 revised report submission	Nov 5 2007, cmts prepared Nov 5 2007, but not received until Mar 28 2008.	L. Landriault	Other	A general disclaimer has been added to page 1.		Catarraqui		No Action Required		no change needed.
18	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	The % water demand equation on page 87 of the Oct 1, 2007 document has to be corrected (see page 134 of the guidance)		Catarraqui		Completed	Jan 16 2009 - new rev	changed
19	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	The last statement on page 87 should be edited for clarity. See the guidance for suggest wording for the future scenario at Tier 1.		Catarraqui		No Action Required		
20	Catarraqui	Oct 1 2007 revised report submission		L. Landriault	Other	A disclaimer has been added to page 93 regarding GW storage.		Catarraqui		No Action Required		no change needed.

Peer Review Record

for the

Sixth Draft

Submitted January 22, 2009

COMMENT ID	SWP REGION	MEETING DATE	COMMENT DATE	SOURCE	COMMENT	CATEGORY	APPLIES TO	PRIORITY	ACTION	ACTION DATE	ACTION DESCRIPTION
	Catarraqui		12-May-09	C. VanNighem Other	<p><input type="checkbox"/> The disclaimer identified below has been left in the document. Remove the text highlighted in red font and add the text in blue font. Having outlined that this water budget conforms to the original guidance document and the technical rules, it is unnecessary to state that it does not contain information required for a 'typical' (which is not defined) or any other water budgeting exercise. This statement leads to confusion as to what is meant by 'typical' and is not supported through the peer review process and accepted by the MNR. There should not be any components missing in the context of the technical rules and/or gaps related to the technical rules have been identified and accepted by the Province.</p> <p>o (Pg 4) "The Conceptual Water Budget report has been prepared to specifically meet the requirements of the Ontario Clean Water Act (proclaimed July 2007), as expressed in the document titled "Water Budget and Water Quantity Risk Assessment" and that was prepared by the Ontario Ministry of Natural Resources in March, 2007 and the Technical Rules Assessment Report.</p> <p>As such, it does not contain all of the information that would be expected in a typical water budget document. For complete information, please contact the CRCA.</p> <p>Additional water budget findings about the Catarraqui Source Protection Area will be available in a Tier 1 Water Budget Report."</p>		Catarraqui	Completed	Completed	Revision Submitted May 28 2009	Text changed, as requested.
1	Catarraqui		12-May-09	C. VanNighem Other	<p>As you have already stated in the disclaimer on page 1, this document complies with the guidance document and the technical rules. The disclaimer should not be specific meaning in both the guidance document and the technical rules, continues to be incorrectly represented throughout the text. Stress is evaluated using the % Water Demand equation at Tier 1 and refined in Tier 2. Stress is not evaluated in the Conceptual Understanding. It is important to ensure that key terms used in the technical rules are applied consistently across the province. I have edited the following statements to accurately reflect the use of the term stress. Please make the following changes to the document:</p> <p>o (Pg 3) "Conceptually, the Conceptual Water Budget is done on an annual basis, but it is not intended to identify stressed watersheds specific to stress, as the average annual conditions are expected to result in perceived 'surplus to need' water across the watershed, where water-in equals water-out and there is no change in storage. However, even in an average year, the monthly water budget, or smaller time step budget, may result in water supply not meeting water demand. It is important to note that the average annual conditions may not be representative of the conditions of stress. This could be single year conditions or seasonal conditions, or could be a statistically derived condition. In addition, the Tier 1 Conceptual Water Budget data is configured based on the 'water year' concept. That is, annual refers to the period from October 1 to September 30. This allows snowfall to be considered in the same year as the runoff that is generated from its melting. From a notation perspective, data representing the year 2006 would span from October 1, 2005 to September 30, 2006.</p> <p>o (Pg 5) "The stresses will be identified by examining supply vs. demand. Areas of stress will be those areas where supply may not meet demand. This may be tied to low streamflows, low ground water levels, or the cause of these events."</p> <p>o (Pg 6) "Human inputs and withdrawals are in many cases very small compared to the other terms, and can be neglected, or balance each other out. In the conceptual case, the first balance of the equation is done without human inputs or withdrawals. Human withdrawals are used in this report to approximate stress conditions."</p>		Catarraqui	Completed	Completed	Revision Submitted May 29 2009	Text changed, as requested.

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2	Catarraqui		12-May-09	C. Vanhyghem Other	<p>The peer reviewers signed off on this document and changes to this factors have been modified to fit the CSPAs conditions. It is my understanding that for the purposes of the guidance technical rules that this methodology is appropriate for the Conceptual Understanding. Based on that understanding I've suggested the following edits. However, if this understanding is incorrect, we should schedule a conference call to discuss.</p> <p>o (p927) "in addition, recharge may be estimated using Tables 2 and 3 from MOEE (1997) (Tables 2, 12, 13, 2.14 and 2.16 here), which relates recharge to slope, soil type, and vegetation. This method is not recommended for use in the design of a system effluent prior to reaching the water table, or a receiving water body. The Stormwater Management Planning and Design Manual (MOE, 2003) recommends using this method to account for lost infiltration/recharge from development sites. It is unclear whether this method is best acceptable for the purposes it is being used here. Due to its original design, as well as the fact that the data groupings can vary significantly between watersheds, the CSPAs specific conditions. In some cases, the factors have been modified to fit the CSPAs specific conditions."</p>		Catarraqui		Declined		No change made.
3	Catarraqui		12-May-09	C. Vanhyghem Other	<p>If possible, the bolded statement should be placed within the context of the Conceptual Understanding. The bolded text is not needed if the bolded method is appropriate for the Conceptual Understanding. However, if not indicate that it will be refined at Tier 1.</p> <p>o (p930) "The average infiltration coefficient for the CSPAs is 0.38, with the median value being 0.37. This is not much less from the values calculated previously without considering the thin soil over bedrock (mean of 0.44, median of 0.42). It would appear that this limited change is a function of the method itself, in that it would be expected that the infiltration coefficient would be similar to the values added together. Even when one of the factors would indicate limited infiltration, other two could indicate greater infiltration, resulting in an overall larger infiltration value than expected, or than what occurs in reality. For instance, greater than 40% of the CSPAs is classified as 'flat', and receives an infiltration factor of 0.17. Greater than 45% of the CSPAs is classified as 'woodland' and receives an infiltration factor of 0.2. Where these areas coincide (and given the large proportion of both, it is reasonable to find common), the infiltration factor would be similar to the values described in the table. It is unclear if this is a function of the method used, or a function of the data. This is a major concern with using this method to estimate infiltration."</p>		Catarraqui		Declined		No change made.

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4	Catarraqui		12-May-09	C. VanNighem Other	<p>As mentioned in previous comments it is important to use language that is consistent with the guidance and technical rules. The third sentence has been deleted because it is both inaccurate and confusing. PTW are included as part of the demand term in Tier 1. Also, large PTW can and have been evaluated at Tier 1 to ensure that they are accurate (e.g. the wetland permits). Specific Sites of Concern are not included in the next comments which refer to potential municipal supplies (p 89). These are various areas that Subwatersheds may require more detailed water budget modeling, both from a surface and groundwater perspective. These areas are important because they are not specifically examined in the Conceptual report. Individual PTW, or specific sites of concern, were not within the scope of the initial water budget work and should be investigated further, though not necessarily in the context of the water budget. The water budget work should not have a municipal residential drinking water solution, which may need to be the future, and these areas should also be studied in more detail.</p>		Catarraqui	Completed		May 28 2009	Revision Submitted Text changed, as requested.
5	Catarraqui		12-May-09	C. VanNighem Other	<p>In response to the July 31st, 2008 correspondence from Aia Boyd, she confirms Rob Messervey and Heather Malcolmson's direction that all references to potential municipal supplies are out of scope of this water budget exercise and should be removed from the Conceptual report. The following edits are required to remove references to potential municipal supplies:</p> <ul style="list-style-type: none"> o Figure A6.1 is fine on its own, however, it should not be linked to any discussion of potential municipal supplies (i.e. comment related to pg 94). o (p 89) "In addition, there are areas which currently do not have a municipal residential drinking water system, which may need sites in the future, and these areas should be studied in more detail." o (p 89) "There may be a water/water treatment plant built in Sydneyham in the future water treatment plant intake." o (p 90) "Figure A6.1 shows the density of wells across the CSPA. Those areas that have a high density of wells could, in the future, need or desire municipal water recharges. Given the lack of groundwater information in the CSPA, additional work is required to determine the density of wells in the area. PCMA will be conducting more monitoring wells drilled to produce a more extensive water level data set for recharge monitoring. This additional information will support future water budget work, as well as future drinking water needs expected in the CSPA watersheds." o (p 94) "At this time, there are five inland municipal residential drinking water systems and numerous inland public and municipal intakes and wells. These systems have water densities (Figure 4.1) that are less than some areas that are still under development. The CSPA has a high density of wells, which may be used to establish a municipal water system. The Tier 1 work should help identify whether the system can be constructed with minimal disease, or whether it may be defunct by under a stress to act immediately." o (p 94) "Of the thirteen municipal water supply systems in the CSPA, eight of them are from international waters. The other five are from inland sources, both surface and groundwater. The density of wells in the CSPA is high, and the density of the comments have to be placed in the correct context. For example, the intent of the Conceptual Understanding was to pull together existing data." o (p 93) "However, it is expected that the criteria set in the guidelines for modeling will not be met due to lack of sufficient data. Information gaps have been identified (p 93) "One of the objectives has not necessarily met—investigation of the potential water budget impacts from land use, water use, or changes to the climate." <p>Given that the conceptual report was initiated to look at average conditions for the CSPA, this objective could not be met through these conditions. But, the groundwater has been laid to further explore this work in the Tier 1 or future water budget reports.</p>		Catarraqui	Completed		May 28 2009	Revision Submitted Text changed, as requested.
6	Catarraqui		12-May-09	C. VanNighem Other	<p>Open-ended comments which question the value or success of the Conceptual Understanding were removed from the Conceptual report. The intent of the Conceptual Understanding was to pull together existing data. Information gaps have been identified (p 93) "One of the objectives has not necessarily met—investigation of the potential water budget impacts from land use, water use, or changes to the climate." </p>		Catarraqui	Completed		May 28 2009	Revision Submitted Text changed, as requested.

Peer Review Record

for the

Seventh Draft

Submitted May 28, 2009

Peer_Review_Log 7th Draft

COMMENT ID	SWP REGION	MEETING DATE	COMMENT DATE	SOURCE	COMMENT	CATEGORY	APPLIES TO	PRIORITY	ACTION	ACTION DATE	ACTION DESCRIPTION
1	Catarraqui		15-Sep-09	S. Bates	Draft is fine, other than disclaimer about Peer Review Team review.	Other	Catarraqui		Completed	27-Oct-09	Removed peer review disclaimer.

Peer Review Record

for the

Eight Draft

Submitted October 5, 2009

COMMENT ID	SWP REGION	MEETING DATE	COMMENT DATE	SOURCE	COMMENT	CATEGORY	APPLIES TO	PRIORITY	ACTION	ACTION DATE	ACTION DESCRIPTION
1	Catawaqui		5-Oct-09	E. Watt	Changes look OK.	Other	Catawaqui		No Action Required		
2	Catawaqui		19-Oct-09	M. Robin	Remove "However" from start of section 5. Replace 2nd sentence of groundwater storage note in section 9 with " , even though it is not explicitly considered in the guidance documents. "	Other	Catawaqui		Completed	27-Oct-09	Changed text.
3	Catawaqui		22-Oct-09	D. Burr	Changes look OK.	Other	Catawaqui		No Action Required		
4	Catawaqui		22-Oct-09	B. Hogg	Changes look OK.	Other	Catawaqui		No Action Required		