DRINKING WATER SOURCE PROTECTION
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CTC Source Protection Region
Toronto and Region Source Protection Authority

George Jacoub
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Ministry of the Environment, Conservation and Parks

Submitted online only to Environmental Registry of Ontario (ERO) #019-2219

Re: CTC SPR comments on the 2020 Proposed Amendments to the Director's Technical Rules: Assessment Report under the Clean Water Act, 2006

Dear Mr. Jacoub,

Thank you for the opportunity to provide comments on the proposed amendments to the Director's Technical Rules made under section 107 of the Clean Water Act (ERO #019-2219).

CTC Source Protection Region staff have reviewed the proposed amendments and prepared a summary of comments (attached as Table 1) for consideration by the Ministry of the Environment, Conservation and Parks.

Respectfully yours,

Janet Ivey
CTC SPR Program Manager

Chief Specialist, Watershed Plans and Source Water Protection
Credit Valley Conservation Authority

CC: CTC Source Protection Committee

	A	B	C	D
1	**TABLE 1**			
2				
3	***~~Strikeout~~, means text removed Underlined, means text added as per MECP SWP Branch Track changes PDF**			
4	**Clean Water Act, 2006 #**	**Proposed amendments**	**Footnote Reference**	**Comment**
5	**Part I.1 - Definitions**	1. In these rules,	1-Where Ministry of Environment or Ministry of Environment and Climate Change is used in the rules, it refers to same authority as Ministry of Environment, Conservations and Parks.	
6		(1) the following definitions apply: "managed land" means land to which agricultural source material, commercial fertilizer, ~~or~~ non-agricultural source material, or processed organic waste is applied, excluding compost that meets the requirements for Categories "AA", "A", and "B" compost in Part II of the Compost Standards;	2-Amended in August 2020	Agree. This change helps to clarify the intent of the CWA particularly wrt to pathogens and metals. Suggest adding a link to the relevant categories of the Compost Standards. Suggest also to indicate exemption from the CWA in these standards. (https://www.ontario.ca/page/ontario-compost-quality-standards#section-2). SPA staff should advise the RMOs to review their site specific enumeration notes and indicate to the SPA whether threats should be removed for this revision.
7	**Part I.2 - Assessment Report Contents**	**Significant, moderate or low drinking water threats** 8. The identification of the areas within vulnerable areas where an activity is or would be a significant, moderate or low drinking water threat for the purpose of subclause 15(2)(h)(i) of the Act and subparagraphs 2i and 2ii of subsection 13(1) of O. Reg. 287/07 (General) and where a condition that results from past activities is a significant, moderate or low drinking water threat for the purpose of subclause 15(2)(h)(ii) and subparagraphs 2iii and 2iv of subsection 13(1) of O. Reg. 287/07 (General) shall be completed as follows:		
8		(1) Assign vulnerability scores to highly vulnerable aquifers, ~~significant groundwater recharge areas~~ and wellhead protection areas in accordance with Part VII.	8-Amended in August 2020	Agree with removal of scoring for SGRAs, but don't understand why they are still assigned to HVAs, which by definition, have a an implicit vs of 6
9				This was my question to know why they proposed to remove the vulnerability scoring for SGRAs and Gayle answered it.
10				Agree with this removal of Vulnerability calculations for SGRAs. The SGRAs are relevant to the quantity aspect of sustainable resources (and still captured under Part V.2) while the vulnerability is focused on the quality aspect. Vulnerability scoring is more relevant to Highly vulnerable aquifer assessments. Often these areas overlap in any case as the most vulnerable areas tend to be shallow unconfined areas where recharge is direct and significant. WHPA-Q's and 'Local Areas' also serve to protect water supply/recharge. SGRAs may also be considered as part of Watershed planning targets.
11		**Minimum information**		
12		9. An assessment report shall include the following:		
13		(2) A written description of the work undertaken in accordance with these rules including, (a) information sources for data used in ~~developing~~ the assessment report and the purposes for which information was used	9-Amended in August 2020	Editorial - no comment
14	**Part I.3 - General**	Method and models 10. A method or model used in the ~~preparation of the~~ assessment report shall be representative of the area or thing under study.	10-Amended in August 2020	Editorial - no comment
15	**Part I.4 - Uncertainty analysis – ~~Water quality~~**		11-Amended in August 2020	This was originally entitled Uncertainty - Water quality to differentiate the uncertainty anaylses required for vulneerability from a water quality aspect. I can understand the broader heading but why not then present all of the uncertainty analyses required here? The work it refers to still remain quality aspect.
16		13. An analysis of the uncertainty, characterized by "high" or "low" shall be made in respect of the following:		
17		(5) The assessment of the vulnerability of ~~significant groundwater recharge areas,~~ highly vulnerable aquifers and wellhead protection areas undertaken in accordance with Part VII.	12-Amended in August 2020	Can an HVA have low vulnerability?
18				Agreed.
19		14. The following factors shall be considered in an analysis conducted for the purpose of rule 13:		
20		(1) The distribution, variability, quality and relevance of data used in the ~~preparation of the~~ assessment report.		Editorial
21	**Part I.5 – Alternate Methods or Approaches**			

	A	B	C	D
22		15.1 Despite any provision of these rules, ~~in preparing an assessment report~~ a source protection committee may use an alternate method or approach in the assessment report for gathering information or for performing a task that departs from the method or approach prescribed in these rules ~~if the following conditions are met~~by including the following information in the assessment report:	13- Amended August 2020	Editorial for the section. Agreed
23		(1) the rule that is being departed from;		
24		(3) an explanation of how the method or approach used by the source protection committee to gather information or perform the task is equivalent to or better than the approach or method prescribed in these rules; and		Agreed as this allows for continuous improvement without the adminisitrative burden and time associated with requesting approval (demonstrating all the rquired conditions) for a new approach before implementing.
25		(4) the source protection committee provides the Director with a notice of the alternate method or approach that identifies the rule being departed from and a brief summary of the rationale and explanation referred to in (2) and (3).		A much better approach - currently there is a top-down approach, where the director provides the justifica
26				I assume the notice can be sent at the same time as the amendment and it is for flagging purposes. It is not clear whether the Director must respond prior to the use of the new method. Please clarify.
27	**Part I.6 – Climate Consideration~~Data – Director's Directions~~Water quality**			
28		15.2 For greater certainty, section 15.1 does not relieve the source protection committee from ensuring that an assessment report is ~~prepared~~ made in accordance with an applicable requirement in the Act, the regulations or the terms of reference.	14 Amended August 2020	Editorial
29				Who has the authority to decide on whether a climate impact assessment is required for a particular DWS? Where the SPA are asked to perform the analyses, they will require additional resources and training in applying CO's methodology and working with Envir Canada's model outputs
30		15.3 ~~If, in preparing an assessment report, the source protection committee is required by these rules to consider climate data in making a determination or performing a task, the Director may give directions to the committee for the purpose of ensuring that impacts from climate change are taken into account, including directing the committee to~~ If a source protection committee prepares a climate impact assessment in relation to a wellhead protection area or intake protection zone delineated in the assessment report and the source protection committee intends to use the findings of the impact assessment in the assessment report, the following shall be included in the assessment report	15 Amended August 2020	Agreed. This reduces the administrative and technical burden on the MECP for providing data/direction forclimate change. It allow th local agencies to use localized and sometimes more appropriate/up-to-date information for climate change impact assessment. It is suggested that the MECP, however, not stay too far removed as the authority of approval still remains with the Province. As well, many local agencies will require Provincial assistance as a result of limited resources. The is a role for the Province in leading edge climate change analyses.
31				Where does the climate change vulnerability assessment tool (version 2) fit into this?
32				Agree. Provice should provide climate change projections for each SPR to be consistent with the approach and outcomes

	A	B	C	D
33		~~(1) use a climate data set provided by the Director; or~~ ~~(2) use any climate data gathered by the committee in the manner specified by the Director.~~ (1) An explanation of why specified climate data sets were used as the basis for the climate impact assessment; (2) A summary of the findings of the climate impact assessment; (3) A description of the approach used by the source protection committee to evaluate the vulnerability of a drinking water system to climate impacts identified in the climate impact assessment; and (4) An explanation of the results of the evaluation under subrule (3), including whether the evaluation concluded that the drinking water system is resilient to the climate impacts identified in the climate impact assessment.		All acceptable conditions/ requirements.
34				Agree with this approach
35	**Part II – Watershed Characterization**			Should add the date to the number of users as a reference point. Clause (c)
36		16. The following shall be included in a characterization of a watershed, where the information is available: (3) With respect to drinking water systems, (e) the location of monitoring locations ~~wells~~ related to the system.	16- Amended August 2020	seems redundant - suggested wording "location of monitoring infrastructure related to the system"
37		(9) One or more maps of the percentage of managed lands ~~within, a significant groundwater recharge area~~ Removed	17-Amended August 2020	Agreed.
38		(b) each of the following areas within a vulnerable area:		
39		(x) IPZ-ICA, if any. (xi) WHPA-ICA, if any.	18-Amended August 2020 Introduced in August 2020. With regard to IPZ-ICA and WHPA-ICA in this subrule, one or more maps of the percentage of managed lands / live stock density or percentages of impervious surface areas is required where the drinking water issue identified for IPZ-ICA or WHPA-ICA is a contributing parameter of the drinking water threats activities listed in subrule (9).	IPZ Impact to SPA workload. Need to look at the Rules for IPZ-ICA delineation
40				No technical guidance offered on the methodology (ies) and process to be used to delineate ICAs
41				This will require that foundation studies be undertaken either by third party consultants and / or staff, and will entail data collection, modelling work, analyses, vulnerable area delineation, and detailed explanatory text and mapping. The data collection will include review of Water Treatment Plant historical records, reports and data to identify and assess historical issues, and threat assessment/enumeration. Also, a new IPZ-ICA technical guide is needed for proposed developments outside existing IPZ but have potential of introducing new significant drinking water threats. The technical guide should provide investigation procedure to determine if the proposed development site with the associated drinking water threat will have to be re-classified as IPZ-ICA. Work will also be required to update the Source Protection Plan to address threats to this new vulnerable area. This will entail a significant amount of work.
42		If two or more areas in an area referred to in clause (a) ~~to~~and (eb) have different vulnerability scores, the percentage of managed land may be determined for each of those areas. Mapping the percentage of managed lands is not required for any area in an area mentioned in clause (a) ~~to~~and (eb) where the vulnerability scores for that area are less than those necessary for the following activities to be considered a significant, moderate or low drinking water threat in the Table of Drinking Water Threats: the application of agricultural source material to land, the application of non-agricultural source material to land and the application of commercial fertilizer to land. Each map prepared in accordance with this subrule shall be labelled the "managed land map".19	19- Amended August 2020	Editorial.

	A	B	C	D
43		(10) One or more maps of livestock density for each area referred to in subrule (9). Livestock density shall be determined by dividing the nutrient units generated in each area by the number of acres of agricultural managed land in that area where agricultural source material is applied. If two or more areas in an area referred to in subrule (9) (a) ~~to~~and (~~c~~b) have different vulnerability scores, the livestock density may be determined for each of those areas. Mapping livestock density is not required for any area in an area mentioned in clause (9) (a) ~~to~~and (~~c~~b) where the vulnerability scores for that area are less than those necessary for the following activities to be considered a significant, moderate or low drinking water threat in the Table of Drinking Water Threats: the application of agricultural source material to land, the application of non-agricultural source material to land and the application of commercial fertilizer to land. Each map prepared in accordance with this subrule shall be labelled the "livestock density map"	20-Amended August 2020	Editorial
44		(11) For every highly vulnerable aquifer or each area of a wellhead protection area and intake protection zone identified in clause 9 (b), one or more maps showing the percentage of impervious surface areas where road salt application in those areas is or would be a significant, moderate of low threat as determined in accordance with the Table of Drinking Water Threats. Where an area identified in clause 9 (b) has two or more vulnerability scores, the percentage of impervious surface area may be determined for each sub-area with the same vulnerability score. Each map prepared in accordance with this subrule shall be labelled the “total impervious surface area map”. ~~For each vulnerable area, one or more maps of the percentage of the impervious surface area where road salt can be applied per square kilometre in the vulnerable area. Mapping the percentage of impervious surface area is not required for an area in a vulnerable area where the vulnerability scores for that area is less than the vulnerability score necessary for the application of road salt to be considered a significant, moderate or low threat in the Table of Drinking Water Threats. Each map prepared in accordance with this subrule shall be labelled the "total impervious surface area map".~~	21- Amended August 2020	The current version frequently produces scoring which can fall under the threshold criteria for the identification of a signicant threat - even in areas which have been identified as ICAs for Na and CL. This updated GIS methodology may however result in an increase in the significant threats related to road salt.
45				Agreed. This clause I believe was simply edited for clarity. Focus is on the impervious areas where road salt IS applied as versus where it CAN BE applied.
46				Wording of this rule needs improvement
47		17. Removed.22 ~~For the purposes of subrule 16(11). the location of a square kilometre in a vulnerable area shall be determined by overlaying a 1 kilometre by 1 kilometre grid over the vulnerable area with a node of the grid centred on the centroid of the source protection area.~~	22- Removed	Agreed as unnecessary and overly prescriptive.
48	**Part III – Water Budget**			
49	**Part III.2 – Subwatershed water budgets**	30.1 If, the information required to delineate a local area or to complete a Tier Three water budget in accordance with rule 30 ~~can~~may not be readily ascertained, the assessment report may instead include a description of the steps that will be taken to ascertain the necessary information and complete the Tier 3 work. ~~1) a plan that includes a work schedule for ascertaining the information necessary to delineate the local area or complete the Tier Three water budget, including any additional work that must be carried out under these rules as a result of ascertaining this information; and~~ ~~2) if, after completing the work the source protection committee becomes aware that the assessment report is no longer accurate or complete, an estimate of the date by which the source protection committee expects an updated assessment report would be submitted to the Director under section 19 of the Act.~~	23- Amended August 2020	Gives flexibility to the municipalities but weakens the legislative power to drive the work to occur. Suggest that 'steps' to be taken should be complemented with a deadline cap to ensure the work does not remain in limbo for extended periods. This should be a reportable item in the annual SPP reporting process where relevant.
50	**Part V – Delineation of Vulnerable Areas: Highly Vulnerable Aquifers, Significant Groundwater Recharge Areas and Wellhead Protection Are**			
51	**Part V.3 - Delineation of wellhead protection areas, type I systems**			

	A	B	C	D
52		47. A wellhead protection area for a well associated with a type I system is the area created by combining all of the following areas:		
53		(6) ~~Area WHPA-F, being the area delineated in accordance with the rules in Part VI that apply to the delineation of an IPZ-3, as if an intake for the system were located in the surface water body influencing the well at the point closest in proximity to the well.~~ Removed.	25- Amended August 2020	agree with the removal - was never clear to its intent
54		(7) Area WHPA-ICA, being the issue contributing area in relation to Part XI.1, shall only be delineated where,26 (a) a drinking water issue is identified in accordance with rule 114 in relation to the well, and (b) there is evidence that activities, conditions that result from past activities, and naturally occurring conditions, within this area, contribute to the drinking water issue described in subrule (a).	26-Introduced in August 2020	Agree with the inclusion of "naturally occuring conditions" in the definition, so that this condition will not be applicable in an argument against the delineation of an ICA. However, no technical guidance has been offered on the methodology (ies) and process to be used to delineate ICAs
55				Agree with the inclusion of "naturally occuring conditions" in the definition. How does this tie in with ORMGP's comment wrt WHPA delinations and "long skinny" WHPAs in some of smaller CAs?
56				Good addition. To be consistent with ICAs for wells. This allows for historical issues to be identified and a plan be put in place to address. This will address the key ongoing problems identified by WTPs on the Great Lakes and direct action in hopefully a consistent manner. This has workload impacts to the SPA.
57		48. Despite rule 47, where a zone representing a ten year time of travel was delineated for the well in a report prepared prior to April 30, 2005 and a five year time of travel has never been delineated for the well the wellhead protection area for a well associated with a type I system is the area created by combining all of the following areas:		
58		(6) ~~Area WHPA-F, delineated in accordance with the requirements of subrule 47(6).~~ Removed.	27- Amended Augst 2020	OK. Replaced with IPZ-ICA
59		(7) Area WHPA-ICA, being the issue contributing area in relation to Part XI.1, shall only be delineated where,28 (a) a drinking water issue is identified in accordance with rule 114 in relation to the well, and (b) there is evidence that activities, conditions that result from past activities, and naturally occurring conditions, within this area, contribute to the drinking water issue described in subrule (a).	28-Introduced in August 2020	Agreed. Good addition
60				CVSPA already has ICAs delineated for WHPAs using these rules ..this is not new...perhaps just a name-change (?)
61		50. Removed.29 ~~Despite subrules 47(6) and 48(6), area WHPA-F shall only be added to a wellhead protection area where, (1) the wellhead protection area contains a WHPA-E; (2) a drinking water issue is identified in accordance with Part XI.1 in relation to the well; and (3) the source of the drinking water issue described in subrule (2) originates outside of areas WHPA-A, WHPA-B, WHPA-C, WHPA-C1 if any, WHPA-D and WHPA-E.~~	29- Amended August 2020	
62		50.1 If the information required to delineate a WHPA-E ~~or WHPA-F~~ in accordance with subrule 47(5) or 48(5) may not be readily ascertained, the assessment report may instead include, a description of the steps that will be taken to ascertain the necessary information and complete the work. ~~(1) a plan that includes a work schedule for ascertaining the information necessary to delineate the WHPA-E and F, including any additional work that must be carried out under these rules as a result of ascertaining this information; and (2) if, after completing the work the source protection committee becomes aware that the assessment report is no longer accurate or complete, an estimate of the date by which the source protection committee expects an updated assessment report would be submitted to the Director under section 19 of the Act.~~	30- Amended in August 2020	Again, suggest a timeframe be required of the implementer to ensure timely addressing of this matter.
63	**Part VI – Delineation of Vulnerable Areas: Surface Water Intake Protection Zones**			
64	**Part VI.1 – General**	Classification of intakes		

	A	B	C	D
65		55.1 If the source protection committee is of the opinion that the classification of an intake or planned intake in accordance with rule 55 is not appropriate, the committee may reclassify the intake or planned intake and shall include in the assessment report a rationale and evidence to support the reclassification. ~~The Director may, by written notice, classify an intake or planned intake associated with a type I, II or III system and the classification specified in the notice shall deem to be the classification for the intake or planned intake and any written notice given by the Director under this rule shall be included in the assessment report~~	31- Amended in August 2020	This should ease administrative burden. The classification should be required to be consistent with classifications under instruments such as the SDWA and regulations
66	**Part VI.2 - Area of surface water intake protection zones**			
67		58. A surface water intake protection zone for a surface water intake associated with a type I system or a type II or type III system to which O. Reg. 170/03 (Drinking Water Systems) made under the Safe Drinking Water Act, 2002, O. Reg. 318/08 (Transitional – Small Drinking Water Systems) made under the Health Protection and Promotion Act or O. Reg. 319/08 (Small Drinking Water Systems) made under the Health Protection and Promotion Act applies, is the area created by combining all of the following areas:		
68		(5) Area IPZ-ICA, delineated in relation to the rules in Part XI.1, where applicable.	32-Introduced in August 2020	Editorial to add IPZ-ICA
69	**Part VI.3 - Delineation of IPZ-1**	62.1 The setback delineated in accordance with rule (62) may be extended to other areas within the area delineated in accordance with rule 61, if applicable, which may contribute water to the intake.	33-Introduced in August 2020	Agreed. Makes sense.
70				May require additional work, maximum setback for IPZ1 incuding portion on land is 1000m. Type A
71			34-37 -Amended in March 2017	
72	**Part VI.8 - Delineation of IPZ-ICA**			Per challenges previously experienced with delineation of groundwater (WHPA) ICAs, there ought to be defining criteria agreed by provincial and local stakeholders. For ex..how far are they permitted to extend from L.O...past the IPZ 2 limits? May also have workload implications for SPAs.
73		78.1 Area IPZ-ICA, being the issue contributing area in relation to Part XI.1, shall only be delineated where, (1) a drinking water issue is identified in accordance with rule 114 in relation to the intake; and (2) there is evidence that activities, conditions that result from past activities, and naturally occurring conditions, within this area, contribute to the drinking water issue described in subrule (1).	38- Introduced August 2020	Instruction on the modelling requirements for mapping the ICA. How does this tie in wrt Gayle's comment RE WTPs on the Great Lakes?
74				IPZ-ICA - only delineated if there's degredation to DWS based on water quality monitoring by the municipality
75				Fine…agrees with other amendments. I anticipated some instruction on the limit of the delineated boundary of the ICA and modelling requirements for mapping the ICA?
76			39, 40 - Amended in March 2017	
77	**Part VIII – Vulnerability: Surface Water Intake Protection Zones**			
78	**Part VIII.1 - Vulnerability scores**	86. A vulnerability score shall be assigned to each IPZ-1 and to each area of an IPZ-2 associated with a type A, B, C or D intake and to each area of an IPZ-3 associated with a type C or type D intake.	41- Amended August 2020	Editorial
79		87. The vulnerability score assigned to each IPZ-1, each area of an IPZ-2 and each area of an IPZ-3 associated with a type C or type D intake shall be calculated in accordance with the following formula, B x C Where, B = the area vulnerability factor of the area of the surface water intake protection zone determined in accordance with rules 88 to 93; and C = the source vulnerability factor of the surface water intake determined in accordance with rules 94 to 96.	42- Amended August 2020	Editorial

	A	B	C	D
80				It will be possible to have multiple vulnerability scoring within the IPZ-2, in areas where the soils data and infiltration characteristics imply increased runoff. Currently an IPZ-2 can not have a vulnerability score high enough to meet the threshold for a significant drinking water threat. Can this change with this update?
81				May require additional work.
82	**Part VIII.2 - Area vulnerability factor**	89. One or more area vulnerability factors that are not less than 7 and not greater than 9 shall be assigned to each area within ~~A~~an IPZ-2 ~~shall be assigned an area vulnerability factor that is not less than 7 and not more than 9~~ based on the vulnerability of the area where a higher factor corresponds to a higher vulnerability.	43- Amended August 2020	Language clarification. Fine
83		92. The following shall be considered and documented in determining the area vulnerability factor of ~~an IPZ-2 or of~~ an area within an IPZ-2 or IPZ-3 for the purpose of rule 89 or 90 and an explanation shall be provided on how each affected the determination of the area vulnerability factor of that area	44- Amended August 2020	Editorial
84	**Part XI – Drinking Water Threats: Water Quality**			
85			45- Introduced in March 2017 46-51 Amended March 2017	
86	**Part XI.1 - Describing drinking water issues**	115. Only in respect of a drinking water issue identified in accordance with rule 114, where the drinking water issue is the result of, or partially the result of, anthropogenic causes, the description of the drinking water issue shall include the following information:		
87		(3) The issue contributing area delineated in accordance with subrules 47 (7) or 48 (7) or rule 78.1; ~~area within a vulnerable area where activities, conditions that result from past activities, and naturally occurring conditions may contribute to the parameter or pathogen and this area shall be identified as the "issue contributing area";~~and	52- Amended August 2020	Tying it to Rule 47 and 48, fine.
88				Suggest inclusion of links (electronic doc) to the rules & sub-rules that are being cited /referenced.
89		116. Removed.~~If the information specified by subrules 115(3) or (4) cannot be readily ascertained, the assessment report shall include, (1) a plan that includes a work schedule for ascertaining the information specified by those subrules, including any additional work that must be carried out as a result of ascertaining this information; and (2) if, after completing the work the source protection committee becomes aware that the assessment report is no longer accurate or complete, an estimate of the date by which the source protection committee expects an updated assessment report would be submitted to the Director under section 19 of the Act.~~	53- Amended August 2020	
90	**Part XI.2 - Listing drinking water threats - Activities**	**Activities prescribed to be drinking water threats**		
91		118. The activities prescribed to be drinking water threats for a vulnerable area in paragraphs 1 through 18 and paragraphs 21 to 22 of subsection 1.1(1) of O. Reg. 287/07 (General) may be collectively listed in the assessment report as "the activities prescribed to be drinking water threats in paragraphs 1 through 18 and paragraphs 21 and 22 of subsection 1.1(1) of O. Reg. 287/07 (General)".	54-Amended August 2020	
92		**Other activities**		
93		119. In addition to activities prescribed to be drinking water threats in paragraphs 1 through 18 and paragraphs 21 and 22 of subsection 1.1(1) of O.Reg. 287/07 (General), an activity shall be listed as a drinking water threat for a vulnerable area if,	55- Amended August 2020	
94		(2) an approval is not required to engage in the activity pursuant to any Act (Provincial or Federal); (3) the Director has confirmed in writing that the activity is an activity that can be assessed and addressed as a drinking water threat under the Clean Water Act; and		
95	**Part XI.3 - Listing drinking water threats - Conditions**			
96		**Listing Conditions that result from past activities**		
97		126. If the source protection committee is aware of one of the following conditions that results from past activities, the committee shall list it as a drinking water threat under clause 15(2)(g)(ii) of the Act:	56- Amended August 2020	

	A	B	C	D
98		(1) The presence of a non-aqueous phase liquid in groundwater in a highly vulnerable aquifer, ~~significant groundwater recharge area~~ or wellhead protection area.		Is it not important to monitor the water threats for SGRAs?
99		(3) The presence of a contaminant in groundwater in a highly vulnerable aquifer, ~~significant groundwater recharge area~~ or a wellhead protection area, if the contaminant is listed in Table 2 of the Soil, Ground Water and Sediment Standards, is present at a concentration that exceeds the potable groundwater standard set out for the contaminant in that Table, and the presence of the contaminant in groundwater could result in the deterioration of the groundwater for use as a source of drinking water.	57- Amended August 2020	Is it not important to monitor the water threats for SGRAs?
100			58 Amended in March 2017 59 Introduced in March 2017	
101	**Part XI.5 - Identifying areas for significant, moderate and low drinking water threats - Conditions**	139. For the purpose of rule 138, the hazard rating of a condition that results from a past activity is, (1) if there is evidence that ~~the condition is causing off site contamination~~ the contamination is migrating towards the well or intake and the contamination has the potential to deteriorate the quality of water of the aquifer drinking water source or the surface water drinking water source, the hazard rating is 10	60 Amended in March 2017 61 Amended in August 2020	agree with the clarification. The refininement affords greater protection to drinking water systems
102			62 Amended in March 2017 63 Amended in March 2017	
103		141. Despite anything else in these rules, a condition that results from a past activity is a significant drinking water threat if, (4) there is evidence that ~~the condition is causing off site contamination~~the contamination is migrating towards the well or intake and the contamination has the potential to deteriorate the quality of water of the aquifer drinking water source or the surface water drinking water source or the condition is on the property where the surface water intake, well or monitoring location identified in accordance with subrule 115(2) is located.	64 Amended in March 2017 65 Amended in August 2020	agree with the clarification. The refinement affords greater protection to drinking water systems
104				Agreed.
105	**Proposed Amendments to the Tables of Drinking Water Threats**			
106	**Section 1: Amendments to the drinking water threats circumstances subcategories**		Please enter comments is corresponding cell below	
107		1. Application of Road Salt (page 84)		New circumstance text is confusing wrt an IPZ that is scored 10. It suggests that 10 can never be less than 8% imperviousness but can be greater than 6%. Regardless of if this is an sub area or the full IPZ, the instruction is unclear.
108				Text is unclear with respect to IPZs...needs ro be clarified. What is the threshold criterion for an IPZ scored 10 - is it 6% or 8% ?
109				Can the application of road salt increase the Vfs from 0.5 to 0.7 and who is responsible for this work?
110				Further Clarification and methodology is required in order to determine impacts of the proposed changes? Is the modeling for impervious by entire IPZ, sub areas, or by 1km Grid or a combination of there of. Definition of the sub area would be beneficial.
111				I agree with Kerry M and Gayle SC, the wording of the proposed new circumstance is confusing, particularly in regards to an IPZ.
112		2. Handling and Storage of Road Salt (page 85)		Agree. It is not just the volume stored but how it is stored. This revision makes practical sense.
113				All HVA's in CLOCA already have a vulnerability scoring of 6 based on the AVI.
114				Can the storage of road salt increase the Vfs from 0.5 to 0.7 and who is responsible for this work?
115				Will now capture residential storage, since 25L bags have now been included. This will likely result in new significant drinking water threats, with implicatiosn to threat counts and risk management plans.
116		3. Wastewater Collection Facilities and Associated Parts (page 87)		What if the combined or sanitary sewer is not located in the IPZ or WHPA but the discharge could flow into said zone? Would this require modelling to determine if overflows and discharges from combined and sanitary sewer could impact an IPZ or WHPA E/10? Otherwise good to recognize the additional circumstances for risk. Do the SPA need to enumerate additional threats where these new conditions exist?

	A	B	C	D
117				Implications for City of Toronto where there is a number of combined sewer systems?
118				The scope of the additional work is not clearly understood based on the amendment presented. Suggest that explanatory notes be included as a compendium to the Technical Rule updates. Perhaps a "cheat sheet" showing the differences and new requirements vs. current ones .
119		4. Storm Water Management Facilities and Drainage Systems (page 93)		Specificity with the areas that could qualify for risk (surface water now only the IPZs and WHPA-Es: 8-10 and WHPA:10 vs all land or surface water.) If the facility does not discharge or impact these areas, they are not enumerated? Focus on municipal systems. Additional work to remove threats and re count.
120				Implications for infiltration facilities?
121				The scope of the additional work is not clearly understood based on the amendment presented. Suggest that explanatory notes be included as a compendium to the Technical Rule updates. Perhaps a "cheat sheet" showing the differences and new requirements vs. current ones .
122		5. Wastewater Treatment Facilities and Associated Parts (page 99)		Minimizes/tightens the risk circumstances to focus on discharge for the various parts of the facility.
123		6. Industrial Effluent Discharges (page 103)		Good change to accommodate circumstances where industrial effluent is discharged to land.
124		7. Storage of Snow (page 105)		This change focuses the impact zones to IPZ, WHPA-E/WHPA:10. Why not say WHPA:10 (as in all with score 10) for circumstance 1 for SDWT?
125				new circumstance of 200m2 may result in new significant drinking water threats, impacting threat counts and risk management plans.
126		8. Handling and Storage of DNAPLs (page 107)		Seems to be a good revision as it refines the areas that would see significant impact and brings consistency with Reg 153. May mean enumeration revisions
127				The circumstance tables for pesticide application still say that Atrazine, Dicamba, Dichlorophenoxy Acetic Acid (2,4-D), MCPA (2-methyl-4-chlorophenoxyacetic acid), MCPB (4-(4-chloro-2-methylphenoxy)butanoic acid), Mecoprop, Metalaxyl, Metolachlor or s-Metolachlor are significant threats in a WHPA A when application in an area greater than 10 ha. This is a mathematical impossibility. No matter how hard you try, you can't fit 10 ha. into a 100 m radius circle. A 100 m radius circle has an area of 3.1415926536 ha. Therefore, none of those nasty pesticides are significant threats in a WHPA A. This needs to be corrected. They should make all the nasty pesticide chemicals significant threats in a WHPA A regardless of the area of application. The result would be that pesticide use in the WHPA A would be managed. The way things currently stand they are not significant threats and are therefore not managed. Just as an example of why this is important, some Plans may have prohibited or required risk management plans for pesticide use in WHPA As. For the chemicals listed above, these policies would not apply because they aren't technically significant threats.
128		9. Storage and Handling of NASM (page 108)		New circumstance regarding storage of NASM. Need some clarification/background regarding the need for addition.
129				Editorial correction required - "Significant risk would be identified in IPZs/WHPA-E scored 8 to 10 and WHP
130		10. Application of NASM (page 112)		New circumstance for NASM application that poses risk to water quality (explicitly) and focused on IPZ and WHPAs:10. Non-farm herbivorous animals. Seems good…additional protection but focused on key areas of vunerability.
131		11. Handling and Storage of Fuel (page 116)		Good practical change as indeed storage and handling happens together.
132				Threshold volume changed to 250L, which will likley create new significant drinking water threats. Accordingly, there will be implications to threat counts and risk management plans
133		12. Handling and Storage of Commercial Fertilizer (page 119)		I take I that this circumstance was previously confusing and not associated with the same facility/property? If so this editorial change is fine.
134				Do the new circumstances supercede the previous ones, or add to them?
135		13. Waste Transfer/Processing Sites (page 121)		Removes sites that are NOT approved to receive subject waste under Reg 347 and focuses on key vulnerable areas. Good clarification.
136		14. Waste Generating Facilities (page 123)		Adds non registered sites (waste generating) under the EPA, that generate waste and that could pose a risk but focused in key vulnerable areas. This adds protection capturing all facilities that pose a risk.
137		15. Waste: Application and Storage of Processed Organic Waste or Waste biomass (page 125)		Requirement vs option for assessment of this threat. Viewed as waste vs NASM activity. Separation of tables between application and storage for different levels of risk. Added protection to respond to on the ground assessments. Will require review in the CTC
138		16. Waste: Application and Storage of Hauled Sewage (page 130)		Editorial to capture this as a waste. Good revision to reflect the disposal aspect of the subject waste. Focused to key vulnerabe areas
139		17. General Editorial Amendments (page 131)		Agreed
140				
141	**Overall General Comments**	Any additional issues, gaps or concerns?		A complementary document outlining the intent of each revision would be extremely helpful in reviewing and commenting. It has been awhile since these discussions. Background info is needed.
142				Where are the new rules on the inclusion of Liquifed Nitrogen pipelines as a new water quality threat to IPZs?