



CTC SOURCE
PROTECTION
REGION



CTC SOURCE PROTECTION COMMITTEE

August 5, 2008

Mr. Keith Willson,
Manager, Source Protection Approvals
Ministry of the Environment
Drinking Water Management Division
Source Protection Programs Branch
2 St. Clair Avenue West
Toronto Ontario
M4V 1L5

Dear Mr. Willson:

Comments Re:

EBR Registry Numbers 010-3866 - *Technical rules proposed to be made under the Clean Water Act, 2006 to establish requirements related to the preparation of an assessment report*; 010-3873 - *Proposed Assessment Reports regulation made under the Clean Water Act, 2006*; and 010-3893 - *Proposed Definitions of Words and Expressions Used in the Act regulation made under the Clean Water Act, 2006*

I am pleased to submit these comments on the above captioned proposals, as chair of the CTC source protection committee. At its meeting of July 8, 2008, the CTC source protection committee authorized me, by resolution A #/08, to submit comments in response to the Ministry of the Environment posting of the above proposals, based on the review and recommendations of our technical staff. At our meeting of August 11, 2008, the CTC source protection committee will review these comments for the purposes of endorsing them. A copy of the decision of the committee will be forwarded to you as soon as possible after our August 11 meeting.

Promulgation of the assessment reports regulation, technical rules, and definitions regulation will be an important milestone for us and other source protection committees in completing the assessment reports required for the three source protection areas within the CTC. We wish to congratulate the Ministry on the extensive technical work which has led to these proposals. Our comments and suggestions are intended to make these regulations and rules as clear and useful as possible. My committee will be a very important party in ensuring that the Ministry's vision of developing locally based, technically sound assessment reports and source protection plans is achieved.

General Comments

The following paragraphs set out the major issues we wish to bring to your attention. Appended to this letter is a table of detailed comments with suggestions to address them.

All of these comments are ones that we would request your careful consideration in revising the proposed regulations and rules.

1. *Proposed Assessment Reports regulation made under the Clean Water Act, 2006* - we have no specific comments on this proposed regulation. It should be noted that the CTC SPC has chosen to undertake more than the minimum number of public consultations specified in the Terms of Reference regulation and will likely do so again for the public consultation on our assessment reports. It is also important to recognize that the requirement to publish notices in the newspaper is a costly one in the CTC. The Terms of Reference notice was published once in the Toronto Daily Star and local weekly papers throughout the source protection region at a cost of approximately \$30K. This newspaper coverage was required to adequately reach the more than 4 million residents who live in either the rural and urban areas.
2. *Proposed definitions of words and expressions used in the Act regulation* - it is essential that the list of prescribed activities included in this regulation is sufficiently broad to encompass those which can oppose a significant threat to drinking water. We are recommending that the list of activities be broadened to include cemeteries and activities, which remove overburden or reduce permeability.

Our technical staff has experience, suggesting that cemeteries can pose a threat to water quality. Within our source protection region, there are cemeteries in close proximity to municipal wells. We feel that the potential threat of these need to be evaluated and also to consider whether new cemeteries should be allowed to be established within a close proximity to a municipal well.

The vulnerability of an aquifer to contamination is influenced by the depth of overburden above the well screen. Activities which reduce the amount of overburden, can pose a threat in close proximity to a well. Activities which compact the soil or change the permeability of the overburden can reduce the amount of water which is recharged. This can pose a drinking water threat in areas where there are water quantity stresses. For these reasons, we feel that these activities should be part of the list of prescribed activities.

3. *Technical rules proposed to be made under the Clean Water Act, 2006 to establish requirements related to the preparation of an assessment report* - staff has suggested a number of changes to the technical rules which are described in the attached table. I wish to highlight the several of these in no particular order, which are more general in nature, but this does not diminish the importance of the remainder of the comments which are made in the table.
 - a. Part XI.1 –*Describing drinking water issues*. We do not support the proposal found in (1)(a) that there should be consideration of the ability of the system's water treatment equipment to treat contaminant. This is a fundamental shift away from the principal of source water protection. The efficacy of treatment is the second of the multi-barrier approach, while source water protection is the first barrier. Consideration therefore of treatment efficacy has no place in an assessment for source water protection.
 - b. Part VI.5 *Delineation of IPZ-3*. We support the introduction of this new intake protection zone in considering Great Lakes sources in particular. Based on our experience on the Lake Ontario Collaborative, the most likely drinking water threats will be those posed by large storm events and large

spills. Since the technical rules surrounding the IPZ-3 delineation and type of significant quantities of potential contaminants are new, we would recommend that the Ministry support the pilot work that has been proposed by the Lake Ontario Collaborative to "road-test" some of these new rules. It is better to base the rules on some real-life experience, rather than just preliminary considerations, which your technical staff has advised were the background to the current proposals.

- c. Part III *Water Budget*. Within the CTC source protection region there are several communities, where there is current and/or future potential water quantity stress. Two pilot Tier 3 water budgets are underway, which will help define the technical rules that should be established. We find it difficult to assess the current proposed rules in the absence of completion of these pilot Tier 3 water budgets. This is also true of the proposals to include consideration of climate change scenarios. We feel that it is essential that the province provides more direction on what is required in these future scenarios, including the models to be run in the types of scenarios to be considered. This is an area of emerging science. Under a separate initiative, a considerable amount of work is currently underway or planned within the Toronto and Region Conservation Authority which may help inform the technical rules in the future.
- d. *Absence of consideration of municipal long-term water supply strategy*. In the draft guidance provided by the Ministry in October of 2006, there was consideration of long-term municipal water supply. This requirement is not included in the current proposed rules. We feel that this is a significant oversight, particularly in those areas of the CTC source protection region, where there is already water quantity stress, combined with pressure for population growth through other provincial policies such as Places to Grow. Inclusion of current and future population growth is extremely important in the Tier 3 water budget. We would recommend that the rules clearly require this. Further, it will be important in the Source Protection Plan regulation to provide the source protection committee with the option of making recommendations based on the technical work on the amount of water available for municipal drinking water purposes, considering other uses of the water, such as ecosystem function and other takers.

I wish to thank the Ministry for the opportunity to comment on these proposals, as well as the opportunity which a number of our source protection committee members and technical staff took advantage of in participating in your Roundtables. I know that staff made a number of comments in the workbooks which were handed in at the Roundtables and would ask that you consider those comments as well in your overall assessment of your current proposals.

Yours truly,

Susan Self
Chair, CTC Source Protection Committee.

Attachment.

cc. Members CTC Source Protection Committee
CTC Technical Staff

CTC Source Protection Region Comments

Proposed Rule	Commentary	Suggested Alternative
7.(1) Drinking Water Threats	Reference to rule 24 requiring a water budget to be developed – Too confusing!	
11. Methods & Models	Also too confusing!	
70. Delineation of IPZ -3 (1) the area within each surface water body that (a) may contribute to the intake under extreme storm event conditions up to a 100 year storm event...	There is a need to consider potential major sources of contaminants outside of the IPZ-1 and IPZ-2. The 100 year storm line does extend the IPZs but it would only be by chance that this would include a potential major source of contaminants. We also have seen modeling that shows the IPZ based on the 100 year storm less than 20% larger than an IPZ based on a 10 year storm. Concerns have also been raised that the 100 year storm is ill defined. For tributaries rainfall is the critical element of a storm while in Lake Ontario wind may be more important in terms of moving contaminants to the intakes.	Delineation of the IPZ – 3 using an evidenced based approach. This approach would include investigations and modeling to determine if a source of contaminants in a watershed or along the lake shore could impact drinking water intake(s) in the event of spill. This “evidence” would be used to construct an IPZ – 3. We recognize the need for the Ministry to exercise direction and therefore would suggest that the Director would be given the power to approve the specific proposed “evidence-based” study to be employed in identifying an IPZ 3 area.

Proposed Rule	Commentary	Suggested Alternative
<p>108. Describing Drinking Water Issues. (1) (a) The parameter is present at a concentration...that exceeds...the ODWQS <u>after treatment</u> ...</p>	<p>We recognize the need for a clear definition of a drinking water issue. However, moving the consideration of an issue to <u>after treatment</u> undermines the critical concept of protecting source water as an additional barrier to protect drinking water.</p> <p>Another important consideration is whether the parameter presents an acute health risk or a chronic risk. In the former case, a failure of the water treatment systems is a serious problem. For chronic health risks, a short term failure of a water treatment system poses less health risk.</p>	<p>Consider using ecosystem standards/objectives recognizing that some customization will be needed.</p> <p>In addition consideration of the nature of the risk posed through failure of the treatment system is required to maintain the multi barrier redundancy.</p>
<p>112. Listing of Drinking Water Threats. (2) The above ground storage capacity is equal to for greater than 150,000 L:</p>	<p>This proposed rule is complicated by of the range of potential contaminants. The 150,000 L rule may be appropriate for some contaminants, while other more, or less, toxic compounds likely should have different volumes and some contaminants such as radionuclides are not measured in litres. The Lake Ontario Collaborative has proposed a pilot study to the Ministry that would test the evidence based approach mentioned above applied specifically with respect to testing the suitability of this proposed rule.</p>	<p>Establish a scientific basis for this rule though pilot testing and/or other methods.</p>
<p>12. (3) Map Standards</p>	<p>Reference to legible upon being reduced to ¼ of their original size</p>	<p>Legible (plain & simple)</p>
<p>18. (13) Conceptual Water Budget</p>	<p>Reference to anticipated affects that changes in climate will have on the conceptual water budget set put under this part over the next 25 years – too abstract & cannot be concrete, will only be qualitative</p>	<p>This could be a commentary through provincial direction</p>
<p>Part III Water Budget</p>	<p>Too confusing</p>	<p>Modification of layout i.e., making Tier 3 Water Budget a subject heading (bold, etc.)</p>

Proposed Rule	Commentary	Suggested Alternative
87/88/92. and others. Source Vulnerability Factor.	Factors provided in the Rules would not allow the identification of a significant drinking water threat in an IPZ-1 or an IPZ-2. We understand that only significant drinking water threats need to be identified on the landscape. Therefore we are deducing that no “parcel-by-parcel” analysis is needed for a Great Lakes intake.	Agree with these rules – need confirmation of their implications with respect to “parcel-by-parcel” analysis.
Part IV. 1 Vulnerability Assessment & Delineation, Groundwater	The use of diverse methods introduces inconsistencies when the method usage should make the process seem less & match edges.	Make consulting with neighbouring SPAs a requirement to ensure consistent interpretations & mapping
Part V. 2 Delineation of significant groundwater recharge areas	44. makes reference to using both (1) & (2) This creates potential inconsistencies; (1) is more conservative & covers more geography & is easier to apply as well as protects SGA for each watershed (2) is more ambiguous, overly complex, what is the average, what is the annual precipitation?	Simply use (1)
Part V.4 Delineation of wellhead protection areas, type II & III systems	52. (4) reference to the parcel of land within which the well is situated & the subsurface are under the parcel – depending on where the well is situated, there is no protection of the well, specifically if is in the corner	Minimize the protection area the well, recommend 100m.
Part V. 6 WHPA-Q1 or WHPA-Q2	56. There is no need to combine the qualitative & quantitative. Inconsistency in requirement of rules whereby 55. Stress Tier 1 & 56. Model used Tier3. Link to drinking water quality threat; see table 5, page 45, cell 2, & column 1 to support argument	Should be Tier 3 only
Part VI.6 Transport Pathways	No definition provided	Provide definition within definition section
Part VI. 8 Delineation of IPZ-Q1 & IPZ-Q2	Deals with 100 year storm & Climate Change	
Part VII. 3 Wellhead protection areas	83. use IPZ2 score for vulnerability 84. this is wrong, there is no scoring for vulnerability in WHPA-F	

Proposed Rule	Commentary	Suggested Alternative
Part IX.2 Exposure level, contributing are	Table 4 – Exposure Scenario Requires 2 year & 10 year drought clarification Page 42, quantity, table level (2007)	
Part XI.1 Describing drinking water issues	108. risk management measures treatability	
Part XI.2 Listing Drinking Water Threats-Activities	Table associated page 48, section 111 Need to expand	Need to add: Cemeteries and Activities that impact permeability: 1. removal of overburdened - development of scores relating to the amount of overburdened in relation to the depth of the well; - scoring % overburdened to aquifer -100m zone - WHPA 2. change in permeability near surface water - permeability scores should be higher whether it be WHPA Q1 or Q2 area
Part XI.1 Describing drinking water issues	108. risk management measures treatability but should not be part of the assessment report	
Definitions: Prescribed Drinking Water Threats	Some municipalities in the CTC have had incidents of physical damage of an intake by ships. In addition, threats of contamination (fuel) have accompanied sinkings in the vicinity of intakes.	Consider adding “Intensive shipping/boating” as a prescribed threat - from both a contaminate perspective and a physical perspective

Proposed Rule	Commentary	Suggested Alternative
Definitions: Prescribed Drinking Water Threats	The potential of a radiological spill from a Nuclear facility (generating station, research reactor or a nuclear processing facility) does not appear to be covered in the current definition. Definition “2.” appears to deal only with sewage.	Consider adding “Management of nuclear materials” as a prescribed threat.
Definitions: Prescribed Drinking Water Threats	Several of the prescribed threats are restricted to “storage” or “application” while others use the more general term “management”.	Consider use of the term “management” in those cases where the concern is the presence of a contaminant.
Definitions: Cone of influence	What is the threshold for the cone of influence? What is the “cone of influence?” Require clarification of whether this is modeled or observed (through monitoring exercises)	Define a min threshold by which to define “the cone of influence,” i.e. 1/2m or 50cm.
Definitions: “Ten year drought period” & “two year drought period”	Too vague Both definitions make reference to <u>persistent below average precipitation</u> , what is the average; how can it be persistently below?	Link it to low water triggers (response triggers) as a basis of assessment
Definitions: MISSED Transport pathway	Subject is addressed on page 34, Part VI. 6, but has not been defined	Should be defined within Definition section